

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934

For the Fiscal Year Ended December 31, 2021

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934

Commission File Number 1-16463



PEABODY ENERGY CORPORATION

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation or organization)

13-4004153
(I.R.S. Employer Identification No.)

701 Market Street, St. Louis, Missouri
(Address of principal executive offices)

63101-1826
(Zip Code)

(314) 342-3400
(Registrant's telephone number, including area code)

Securities Registered Pursuant to Section 12(b) of the Act:

Title of Each Class
Common Stock, par value \$0.01 per share

Trading Symbol(s)
BTU

Name of Each Exchange on Which Registered
New York Stock Exchange

Securities Registered Pursuant to Section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer
Non-accelerated filer Smaller reporting company
Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

Aggregate market value of the voting and non-voting common equity held by non-affiliates (stockholders who are not directors or executive officers) of the Registrant, calculated using the closing price on June 30, 2021: Common Stock, par value \$0.01 per share, \$645.5 million.

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Section 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court. Yes No

Number of shares outstanding of each of the Registrant's classes of Common Stock, as of February 11, 2022: Common Stock, par value \$0.01 per share, 133,607,136 shares outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Company's Proxy Statement to be filed with the Securities and Exchange Commission in connection with the Company's 2022 Annual Meeting of Shareholders (the Company's 2022 Proxy Statement) are incorporated by reference into Part III hereof. Other documents incorporated by reference in this report are listed in the Exhibit Index of this Form 10-K.

CAUTIONARY NOTICE REGARDING FORWARD-LOOKING STATEMENTS

This report includes statements of Peabody's expectations, intentions, plans and beliefs that constitute "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended (the Securities Act), and Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act), and are intended to come within the safe harbor protection provided by those sections. These statements relate to future events or Peabody's future financial performance. The Company uses words such as "anticipate," "believe," "expect," "may," "forecast," "project," "should," "estimate," "plan," "outlook," "target," "likely," "will," "to be" or other similar words to identify forward-looking statements.

Without limiting the foregoing, all statements relating to Peabody's future operating results, anticipated capital expenditures, future cash flows and borrowings, and sources of funding are forward-looking statements and speak only as of the date of this report. These forward-looking statements are based on numerous assumptions that Peabody believes are reasonable, but are subject to a wide range of uncertainties and business risks, and actual results may differ materially from those discussed in these statements. These factors include but are not limited to those described in Part I, Item 1A. "Risk Factors." Such factors are difficult to accurately predict and may be beyond the Company's control.

When considering these forward-looking statements, you should keep in mind the cautionary statements in this document and in the Company's other Securities and Exchange Commission (SEC) filings. These forward-looking statements speak only as of the date on which such statements were made, and the Company undertakes no obligation to update these statements except as required by federal securities laws.

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Note: The words "Peabody" or "the Company" as used in this report, refer to Peabody Energy Corporation or its applicable subsidiary or subsidiaries. Unless otherwise noted herein, disclosures in this Annual Report on Form 10-K relate only to the Company's continuing operations.

When used in this filing, the term "ton" refers to short or net tons, equal to 2,000 pounds (907.18 kilograms), while "tonne" refers to metric tons, equal to 2,204.62 pounds (1,000 kilograms).

PART I

Item 1. **Business.**

Overview

Peabody is a leading producer of metallurgical and thermal coal. At December 31, 2021, the Company owned interests in 17 active coal mining operations located in the United States (U.S.) and Australia, including a 50% equity interest in Middlemount Coal Pty Ltd. (Middlemount). In addition to its mining operations, the Company markets and brokers coal from other coal producers, both as principal and agent, and trades coal and freight-related contracts.

Segment and Geographic Information

As of December 31, 2021, Peabody reports its results of operations primarily through the following reportable segments: Seaborne Thermal Mining, Seaborne Metallurgical Mining, Powder River Basin Mining, Other U.S. Thermal Mining and Corporate and Other. Refer to Part II, Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" for additional information regarding the Company's segments. Note 24. "Segment and Geographic Information" to the accompanying consolidated financial statements is incorporated herein by reference and also contains segment and geographic financial information.

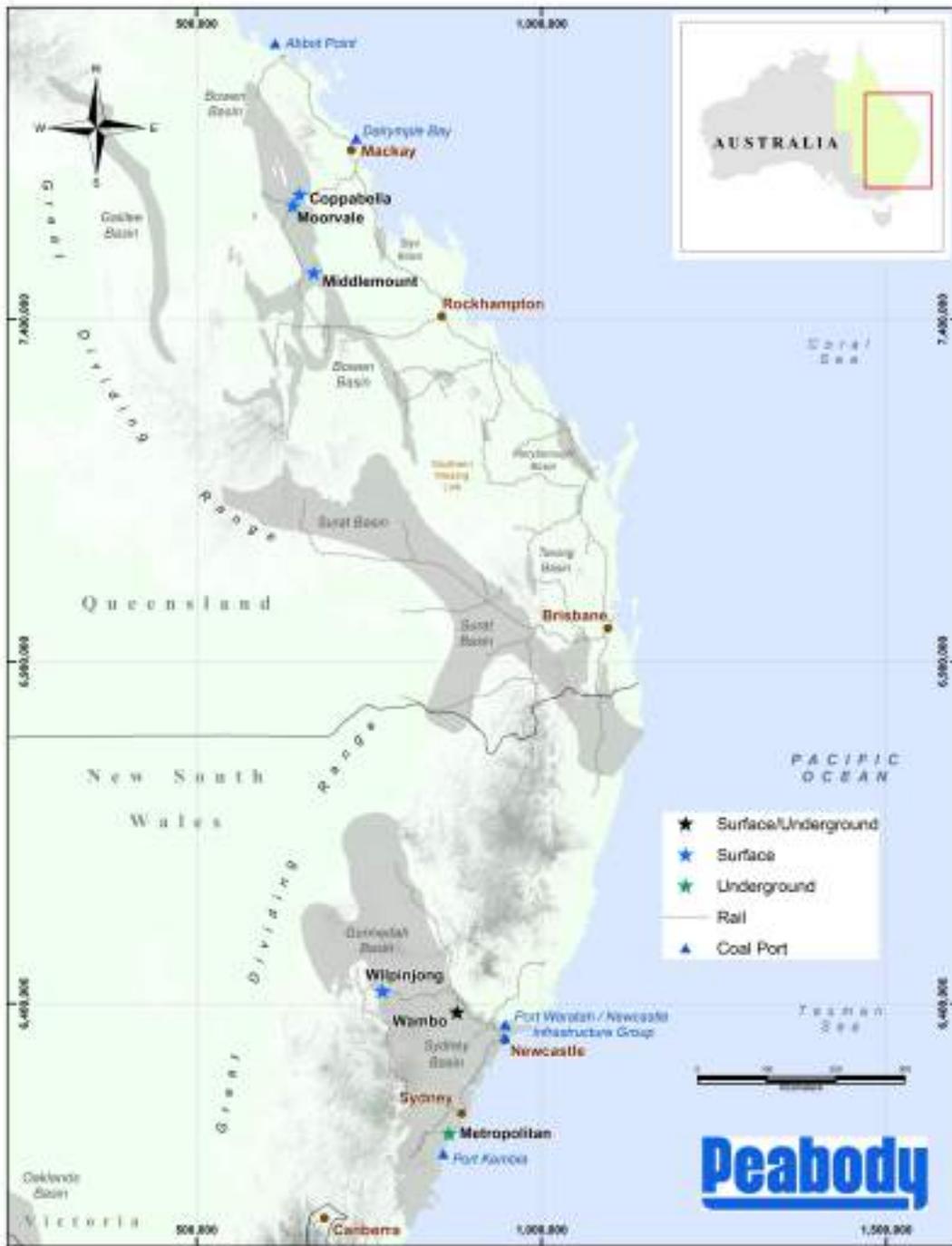
Mining Locations

The maps that follow display Peabody's active mine locations as of December 31, 2021. Also shown are the primary ports that the Company uses for its coal exports and the Company's corporate headquarters in St. Louis, Missouri.

U.S. Locations



Australian Locations



The table below summarizes information regarding the operating characteristics of each of the Company's mines in the U.S. and Australia. The mines are listed within their respective mining segment in descending order, as determined by tons produced in 2021.

Segment/Mining Complex	Location	Mine Type	Mining Method	Coal Type	Primary Transport Method	Processing Plants	Production		
							Year Ended December 31,		
							2021	2020	2019
							(Tons in millions)		
Seaborne Thermal Mining									
Wilpinjong	New South Wales	S	D, T/S	T	R, EV	Yes	13.2	14.2	14.1
Wambo Open-Cut ⁽¹⁾	New South Wales	S	T/S	T	R, EV	Yes	2.4	4.0	3.4
Wambo Underground ⁽²⁾	New South Wales	U	LW	T, C	R, EV	Yes	1.4	1.5	2.2
Seaborne Metallurgical Mining									
Coppabella ⁽³⁾	Queensland	S	DL, D, T/S	P	R, EV	Yes	2.1	2.2	2.4
Moorvale ⁽³⁾	Queensland	S	D, T/S	C, P, T	R, EV	Yes	1.3	1.2	1.7
Metropolitan ⁽⁴⁾	New South Wales	U	LW	C, P, T	R, EV	Yes	1.0	1.0	1.5
Shoal Creek ⁽⁵⁾	Alabama	U	LW	C	B, EV	Yes	0.1	0.6	1.9
Millennium ⁽⁶⁾	Queensland	S	HW	C, P	R, EV	No	—	0.1	0.6
Middlemount ⁽⁷⁾	Queensland	S	D, T/S	C, P	R, EV	Yes	—	—	—
Powder River Basin Mining									
North Antelope Rochelle	Wyoming	S	DL, D, T/S	T	R	No	62.8	66.1	85.3
Caballo	Wyoming	S	D, T/S	T	R	No	13.9	11.6	12.6
Rawhide	Wyoming	S	D, T/S	T	R	No	11.6	9.5	10.1
Other U.S. Thermal Mining									
Bear Run	Indiana	S	DL, D, T/S	T	Tr, R	Yes	6.0	5.2	6.8
El Segundo/Lee Ranch	New Mexico	S	DL, D, T/S	T	R	No	3.7	4.6	5.5
Wild Boar	Indiana	S	D, T/S, HW	T	Tr, R, R/B, T/B	Yes	2.4	2.0	2.5
Gateway North	Illinois	U	CM	T	Tr, R, R/B, T/B	Yes	1.8	1.8	3.0
Twentymile	Colorado	U	LW	T	R, Tr	Yes	1.7	1.2	2.6
Francisco Underground	Indiana	U	CM	T	R	Yes	1.5	1.6	2.0
Somerville Central ⁽⁶⁾	Indiana	S	DL, D, T/S	T	R, R/B, T/B, T/R	No	—	0.4	1.2
Kayenta ⁽⁸⁾	Arizona	S	DL, T/S	T	R	No	—	—	3.8
Wildcat Hills Underground ⁽⁸⁾	Illinois	U	CM	T	T/B	No	—	—	1.4
Cottage Grove ⁽⁸⁾	Illinois	S	D, T/S	T	T/B	No	—	—	0.1

Legend:

S	Surface Mine	B	Barge
U	Underground Mine	Tr	Truck
HW	Highwall Miner	R/B	Rail to Barge
DL	Dragline	T/B	Truck to Barge
D	Dozer/Casting	T/R	Truck to Rail
T/S	Truck and Shovel	EV	Export Vessel
LW	Longwall	T	Thermal/Steam
CM	Continuous Miner	C	Coking
R	Rail	P	Pulverized Coal Injection

⁽¹⁾ In December 2020, the United Wambo Joint Venture, an unincorporated joint venture between Peabody and Glencore plc, began joint production. The tons shown reflect Peabody's proportionate share throughout the years. The Company's 50% joint venture interest is subject to an outside non-controlling ownership interest.

⁽²⁾ Majority-owned mine in which there is an outside non-controlling ownership interest.

⁽³⁾ Peabody owns a 73.3% undivided interest in an unincorporated joint venture that owns the Coppabella and Moorvale mines. The tons shown reflect its share.

⁽⁴⁾ The mine was idled in the fourth quarter of 2020. The mine restarted production in the second quarter of 2021.

⁽⁵⁾ The mine was idled in the fourth quarter of 2020. The mine restarted production in November 2021.

⁽⁶⁾ The mine ceased production during 2020.

⁽⁷⁾ Peabody owns a 50% equity interest in Middlemount, which owns the Middlemount Mine. Because Middlemount is accounted for as an unconsolidated equity affiliate, the table above excludes tons produced from that mine, which totaled 2.0 million, 1.6 million and 1.4 million tons, respectively (on a 50% basis).

⁽⁸⁾ The mine ceased production in 2019.

Refer to the Reserves and Resources tables within Item 2. "Properties," which is incorporated by reference herein, for additional information regarding coal reserves and resources, and product characteristics associated with each mine.

Coal Supply Agreements

Customers. Peabody's coal supply agreements are primarily with electricity generators, industrial facilities and steel manufacturers. Most of the Company's sales from its mining operations are made under long-term coal supply agreements (those with initial terms of one year or longer and which often include price reopener and/or extension provisions). A smaller portion of the Company's sales from its mining operations are made under contracts with terms of less than one year, including sales made on a spot basis. Sales under long-term coal supply agreements comprised approximately 84%, 89% and 88% of the Company's worldwide sales from its mining operations (by volume) for the years ended December 31, 2021, 2020 and 2019, respectively.

For the year ended December 31, 2021, Peabody derived 26% of its revenues from coal supply agreements from its five largest customers. Those five customers were supplied primarily from 17 coal supply agreements (excluding trading and brokerage transactions) expiring at various times from 2022 to 2026. Peabody's largest customer in 2021 contributed revenue of approximately \$258 million, or approximately 8% of Peabody's total revenues from coal supply agreements, and has contracts expiring at various times from 2022 to 2025.

Backlog. Peabody's sales backlog, which includes coal supply agreements subject to price reopener and/or extension provisions, was approximately 283 million and 264 million tons of coal as of January 1, 2022 and 2021, respectively. Contracts in backlog have remaining terms ranging from one to nine years and represent approximately two years of production based on the Company's 2021 production volume of 126.9 million tons. Approximately 57% of its backlog is expected to be filled beyond 2022.

Seaborne Mining Operations. Revenues from Peabody's Seaborne Thermal Mining and Seaborne Metallurgical Mining segments represented approximately 50%, 42% and 45% of its total revenues from coal supply agreements for the years ended December 31, 2021, 2020 and 2019, respectively, during which periods the coal mining activities of those segments contributed respective amounts of 18%, 19% and 17% of its sales volumes from mining operations. The Company's production is primarily sold into the seaborne thermal and metallurgical markets, with a majority of those sales executed through annual and multi-year international coal supply agreements that contain provisions requiring both parties to renegotiate pricing periodically. Industry commercial practice, and Peabody's typical practice, is to negotiate pricing for seaborne thermal coal contracts on an annual, spot or index basis and seaborne metallurgical coal contracts on a bi-annual, quarterly, spot or index basis. For its seaborne mining operations, the portion of sales volume under contracts with a duration of less than one year represented 45% in 2021.

U.S. Thermal Mining Operations. Revenues from Peabody's Powder River Basin Mining and Other U.S. Thermal Mining segments, in aggregate, represented approximately 50%, 58% and 55% of its revenues from coal supply agreements for the years ended December 31, 2021, 2020 and 2019, respectively, during which periods the coal mining activities of those segments contributed respective aggregate amounts of approximately 82%, 81% and 83% of its sales volumes from mining operations. The Company expects to continue selling a significant portion of coal production from its U.S. thermal mining segments under existing long-term supply agreements. Certain customers utilize long-term sales agreements in recognition of the importance of reliability, service and predictable coal prices to their operations. The terms of coal supply agreements result from competitive bidding and extensive negotiations with customers. Consequently, the terms of those agreements may vary significantly in many respects, including price adjustment features, price reopener terms, coal quality requirements, quantity parameters, permitted sources of supply, treatment of environmental constraints, extension options, force majeure and termination and assignment provisions. Peabody's approach is to selectively renew, or enter into new, long-term supply agreements when it can do so at prices and terms and conditions it believes are favorable. However, recent trends indicate that customers may be less likely to enter into long-term supply agreements prospectively, driven by the reduced utilization of plants and plant retirements, fluidity of natural gas pricing and the increased use of renewable energy sources.

Transportation

Methods of Distribution. Coal consumed in the U.S. is usually sold at the mine with transportation costs borne by the purchaser. Peabody's U.S. mine sites are typically adjacent to a rail loop; however, in limited circumstances coal may be trucked to a barge site or directly to customers. Title predominately passes to the purchaser at the rail or barge, as applicable. Peabody's U.S. and Australian export coal is usually sold at the loading port, with purchasers paying ocean freight. In each case, the Company usually pays transportation costs from the mine to the port, including any demurrage costs (fees paid to third-party shipping companies for loading time that exceeded the stipulated time).

The Company believes it has good relationships with U.S. and Australian rail carriers and port and barge companies due, in part, to its modern coal-loading facilities and the experience of its transportation coordinators. Refer to the table in the foregoing "Mining Locations" section for a summary of transportation methods by mine.

Export Facilities. Peabody has generally secured its ability to transport coal in Australia through rail and port contracts and access to five east coast coal export terminals that are primarily funded through take-or-pay arrangements (refer to the "Liquidity and Capital Resources" section in Part II, Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" for additional information on its take-or-pay obligations). In Queensland, seaborne thermal and metallurgical coal from the Company's mines is exported through the Dalrymple Bay Coal Terminal, in addition to the Abbot Point Coal Terminal used by its joint venture Middlemount Mine. In New South Wales, the Company's primary ports for exporting thermal and metallurgical coal are at Port Kembla and Newcastle, which includes both the Port Waratah Coal Services terminal and the terminal operated by Newcastle Coal Infrastructure Group. Peabody has secured its ability to transport coal from its Shoal Creek Mine under barge and port contracts; the primary port is the McDuffie Terminal in Mobile, Alabama, which the Company utilizes without a take-or-pay arrangement.

Peabody's U.S. thermal mining operations exported less than 1% of its annual tons sold during both the years ended December 31, 2021 and 2019. No tons were exported during the year ended December 31, 2020. The primary ports used for U.S. thermal exports are the United Bulk Terminal near New Orleans, Louisiana, the St. James Stevedoring Anchorages terminal in Convent, Louisiana and the Kinder Morgan terminal near Houston, Texas.

Suppliers

Mining Supplies and Equipment. The principal goods Peabody purchases in support of its mining activities are mining equipment and replacement parts, diesel fuel, ammonium-nitrate and emulsion-based explosives, off-the-road tires, steel-related products (including roof control materials), lubricants and electricity. Peabody has many well-established, strategic relationships with its key suppliers of goods and does not believe that it is overly dependent on any of its individual suppliers.

In situations where Peabody has elected to concentrate a large portion of its purchases with one supplier, it has been to take advantage of cost savings from larger volumes of purchases, benefit from long-term pricing for parts and ensure security of supply. Supplier concentration related to the Company's mining equipment also allows it to benefit from fleet standardization, which in turn improves asset utilization by facilitating the development of common maintenance practices across its global platform, enhancing its flexibility to move equipment between mines and reduce working capital through inventory optimization.

Surface and underground mining equipment demand and lead times have increased in recent periods. Peabody consistently uses its global leverage with major suppliers and comprehensive planning processes to ensure security of supply to meet the requirements of its active mines.

Services. Peabody also purchases services at its mine sites, including services related to maintenance for mining equipment, construction, temporary labor, use of explosives and various other requirements. Peabody does not believe that it has undue operational or financial risk associated with its dependence on any individual service providers.

Competition

Demand for coal and the prices that the Company will be able to obtain for its coal are highly competitive and influenced by factors beyond the Company's control, including but not limited to global economic conditions; the demand for electricity and steel; the cost of alternative sources; the impact of weather on heating and cooling demand; taxes and environmental regulations imposed by the U.S. and foreign governments.

Thermal Coal. Demand for Peabody's thermal coal products is impacted by economic conditions; demand for electricity, which is impacted by energy efficient products; and the cost of electricity generation from coal and alternative forms of generation. Regulatory policies and environmental, social and governance considerations can also have an impact on generation choices and coal consumption. The Company's products compete with producers of other forms of electricity generation, including natural gas, oil, nuclear, hydro, wind, solar and biomass, that provide an alternative to coal use. The use and price of thermal coal is heavily influenced by the availability and relative cost of alternative fuel sources and the generation of electricity utilizing alternative fuels, with customers focused on securing the lowest cost fuel supply in order to coordinate the most efficient utilization of generating resources in the economic dispatch of the power grid at the most competitive price.

In the U.S., natural gas is highly competitive (along with other alternative fuel sources) with thermal coal for electricity generation. The competitiveness of natural gas has been strengthened by accelerated growth in domestic natural gas production and new natural gas combined cycle generation capacity. The Henry Hub Natural Gas Prompt Price averaged \$3.72 per mmBtu in 2021, versus \$2.13 and \$2.53 per mmBtu in 2020 and 2019, respectively. In addition, the competitiveness of other alternative fuel sources for electricity generation has been strengthened by the growth of government subsidized renewable energy generation. These pressures, coupled with increasing regulatory burdens, have contributed to a significant number of coal plant retirements. During 2021, approximately 8 gigawatts of U.S. coal power capacity was retired, and since 2010, U.S. coal power capacity has fallen by approximately thirty-two percent.

Internationally, thermal coal also competes with alternative forms of electricity generation. The competitiveness and availability of natural gas, liquefied natural gas, oil, nuclear, hydro, wind, solar and biomass varies by country and region. Seaborne thermal coal consumption is also impacted by the competitiveness of delivered seaborne thermal coal supply from key exporting countries such as Indonesia, Australia, Russia, Colombia, the U.S. and South Africa, among others. In addition, seaborne thermal coal import demand can be significantly impacted by the availability of domestic coal production, particularly in the two leading coal import countries, China and India, among others.

In addition to its alternative fuel source competitors, Peabody's principal U.S. direct coal supply competitors (listed alphabetically) are other large coal producers, including Alliance Resource Partners; American Consolidated Natural Resources, Inc.; Arch Resources, Inc.; CONSOL Energy; Eagle Specialty Materials LLC; Foresight Energy; Hallador Energy; Kiewit; and Navajo Transitional Energy Company LLC, among others. Major international direct coal supply competitors (listed alphabetically) include Adaro Energy; Anglo American plc; BHP; Bumi Resources; China Shenhua Energy; Coal India Limited; Drummond Company; Glencore; South32; SUEK; Whitehaven Coal Limited; and Yancoal Australia Ltd, among others.

Metallurgical Coal. Demand for Peabody's metallurgical coal products is impacted by economic conditions; government policies; demand for steel; and competing technologies used to make steel, some of which do not use coal as a manufacturing input, such as electric arc furnaces. The Company competes on the basis of coal quality and characteristics, delivered energy cost (including transportation costs), customer service and support and reliability of supply.

Seaborne metallurgical coal import demand can be significantly impacted by the availability of domestic coal production, particularly in leading metallurgical coal import countries such as China, among others, and the competitiveness of seaborne metallurgical coal supply from leading metallurgical coal exporting countries of Australia, the U.S., Russia, Canada, Mongolia and Mozambique, among others.

Major international direct competitors (listed alphabetically) include Anglo American; Arch Resources, Inc.; BHP; Foxleigh; Glencore; Jellinbah; KRU; Teck Resources; Warrior Met Coal; Whitehaven Coal Limited; and Yancoal Australia Ltd, among others.

Cybersecurity Risk Management

Peabody uses digital technology to conduct its business operations and engage with its customers, vendors and partners. As the Company implements newer technologies such as cloud, analytics, automation and "internet of things," the threats to its business operations from cyber intrusions, denial of service attacks, manipulation and other cyber misconduct affecting both the Company and its partners' technologies increase. To address the risk, the Company continues to evolve its risk management approach in an effort to continually assess and improve its cybersecurity risk detection, deterrence and recovery capabilities. Peabody's cybersecurity strategy emphasizes reduction of cyber risk exposure and continuous improvement of its cyber defense and resilience capabilities. These include: (i) proactive management of cyber risk to ensure compliance with contractual, legal and regulatory requirements, (ii) performing due diligence on third parties to ensure they have sound cybersecurity practices in place, (iii) ensuring essential business services remain available during a business disruption, (iv) implementing data policies and standards to protect sensitive company information and (v) exercising cyber incident response plans and risk mitigation strategies to address potential incidents should they occur.

During 2021, a software vendor that provides cloud services to the Company for its payroll function suffered a significant ransomware attack. The Company's mitigation actions were adequate to avoid significant operational disruptions or material financial losses.

Human Capital

Peabody had approximately 4,900 employees as of December 31, 2021, including approximately 3,900 hourly employees. Additional information on its employees and related labor relations matters is contained in Note 21. "Management — Labor Relations" to the accompanying consolidated financial statements, which information is incorporated herein by reference. Peabody endeavors to engage with its organized workforce and foster strong relationships with those organizations built on trust and communication, which was evidenced in 2021 by successful labor negotiations at its Shoal Creek, Wambo and Metropolitan Mines.

As of December 31, 2021, approximately 3,300 of Peabody's employees are located in the U.S., with the remainder primarily located in Australia. About 94% of its team members work for mine operations in the U.S. and Australia, while the remaining are employed at its global headquarters in St. Louis or other business offices.

Peabody strives to create a strong, united workforce with a commitment to safety as a way of life. In 2021, the Company achieved a global safety incidence rate of 1.18 incidents per 200,000 hours worked, which was 56% better than the 2020 U.S. industry average incidence rate of 2.69 incidents per 200,000 hours worked per the Mine Safety and Health Administration (MSHA).

Peabody strives to offer an inclusive work environment and engages, recognizes and develops employees. Peabody seeks a workforce that is comprised of diverse backgrounds, thoughts and experiences as a means to drive innovation and excellence within its business, and has formalized inclusion programs and training in policy and practice. The Company strives to attract and retain the best people, develop their potential and align their skills to important initiatives and activities. Peabody believes in fostering an inclusive work environment built on mutual trust, respect and engagement. Peabody invests in its employees through health and wellness programs, competitive total rewards and development opportunities. Peabody actively seeks employees' feedback, including through surveys and focus groups on its employee value proposition.

The typical Peabody employee has approximately eight years of experience with the company, and more than 51% of all Peabody employees remain employed with the company for more than five years. The Company offers a variety of learning events, including mentoring and development programs to aid its employees in their career growth. During the past five years, approximately 32% of open positions and 72% of director and above positions have been filled by internal candidates through promotions and lateral career development opportunities.

Information About Our Executive Officers

Set forth below are the names, ages and positions of Peabody's executive officers. Executive officers are appointed by, and hold office at the discretion of, Peabody's Board of Directors, subject to the terms of any employment agreements.

Name	Age ⁽¹⁾	Position ⁽¹⁾
James C. Grech	60	President and Chief Executive Officer
Mark A. Spurbeck	48	Executive Vice President and Chief Financial Officer
Scott T. Jarboe	48	Chief Administrative Officer and Corporate Secretary
Darren R. Yeates	61	Executive Vice President and Chief Operating Officer
Marc E. Hathhorn	51	President - U.S. Operations
Jamie Frankcombe	61	President - Australian Operations
Patrick J. Forkin III	63	Senior Vice President - Corporate Development and Strategy

⁽¹⁾ As of February 11, 2022.

James C. Grech was named Peabody's President and Chief Executive Officer in June 2021. He has over 30 years of experience in the natural resources industry. Mr. Grech served as Chief Executive Officer and a member of the Board of Directors of Wolverine Fuels, LLC, a thermal coal producer and marketer based in Sandy, Utah, from July 2018 until May 2021. Prior to joining Wolverine Fuels, LLC, Mr. Grech served as President of Nexus Gas Transmission from October 2016 to July 2018, and previously held the position of Chief Commercial Officer and Executive Vice President of Consol Energy. Mr. Grech brings a strong operational, commercial and financial background in both mining and other energy business operations and has extensive utilities and capital markets experience. He serves as a director of Blue Danube. Mr. Grech holds a Bachelor of Science in Electrical Engineering from Lawrence Technological University and an MBA from the University of Michigan.

Mark A. Spurbeck was named Peabody's Executive Vice President and Chief Financial Officer in June 2020, after serving in an interim capacity from January 2020 through June 2020. He oversees finance, treasury, tax, internal audit, financial reporting, financial planning, risk and mine finance, corporate accounting functions, investor relations and corporate communications, information technology and shared services. Mr. Spurbeck has more than 25 years of accounting and financial experience, most recently serving as the Company's Senior Vice President and Chief Accounting Officer from early 2018 to January 2020. Prior to joining Peabody, Mr. Spurbeck served as Vice President of Finance and Chief Accounting Officer at Coeur Mining, Inc., a diversified precious metals producer, from March 2013 to January 2018. He also previously held multiple financial positions at Newmont Mining Corporation, a leading gold and copper producer, First Data Corporation, a financial services company, and Deloitte LLP, an international accounting, tax and advisory firm. Mr. Spurbeck is a Certified Public Accountant and holds a Bachelor's Degree in Accounting from Hillsdale College.

Scott T. Jarboe was named Peabody's Chief Administrative Officer and Corporate Secretary in November 2021 after serving as Chief Legal Officer and Corporate Secretary since March 2020. He leads the Company's global human resources, legal, government affairs, and ethics and compliance functions. Mr. Jarboe joined Peabody in 2010 and has served in a variety of legal roles. Previously, Mr. Jarboe practiced law with Husch Blackwell LLP and Bryan Cave LLP. Mr. Jarboe holds a Bachelor of Arts Degree from the University of Kansas, a Master's Degree from the University of Missouri – Kansas City and a Juris Doctor degree from Washington University School of Law.

Darren R. Yeates was named Peabody's Executive Vice President and Chief Operating Officer in October 2020. He has executive responsibility for operations, sales and marketing and technical services. Mr. Yeates has over 35 years of mining industry experience. From May 2018 to December 2019, Mr. Yeates served as Chief Operating Officer of MACH Energy Australia, a developer and supplier of thermal coal to both the Australian domestic and Asian export markets. From January 2014 until June 2016, Mr. Yeates served as the Chief Executive Officer of GVK Hancock Coal, a joint venture developing the vast potential of the Galilee Basin in Central Queensland. Prior to that, he spent over 22 years with Rio Tinto, a global mining group, including as Acting Managing Director and Chief Operating Officer for Coal Australia, General Manager Ports and Infrastructure for Pilbara Iron and General Manager Tarong Coal. Prior to joining Rio Tinto, Mr. Yeates worked for six years for BHP, a mining, metals and petroleum company, in coal operations and metalliferous exploration. Mr. Yeates has a Bachelor of Engineering (Mining) from the University of Queensland, a Graduate Diploma in Management from the University of Central Queensland and a Graduate Diploma of Applied Finance and Investment from the Securities Institute of Australia. He has an Executive MBA from the Monash Mt Eliza Business School and is a Fellow of the Australian Institute of Company Directors.

Marc E. Hathhorn was named Peabody's President - U.S. Operations in November 2021. He has executive responsibility for the Company's U.S. operating platform, which includes overseeing the areas of health and safety, operations, product delivery and support functions. Mr. Hathhorn has more than 30 years of experience in mining engineering and operations in North and South America and in Australia. Mr. Hathhorn joined Peabody in 2011 as Senior Vice President - Midwest Operations, and subsequently served as Group Executive - Americas Operations Support from 2013 to 2016, Group Executive - Americas Operations from 2016 to 2019 and President - Australian Operations until assuming his current role. Previously, Mr. Hathhorn held various leadership positions with Drummond LTD in South America, including Mine Operations Superintendent, Port Manager, and Vice President - Mining Operations. Prior to joining Drummond LTD, Mr. Hathhorn held various engineering and supervisory positions with Newmont Gold Corporation. Mr. Hathhorn holds a Bachelor of Science Degree in Mining Engineering from the University of Idaho, College of Mines.

Jamie Frankcombe was named Peabody's President - Australian Operations in November 2021. He has executive responsibility for the Company's Australian operating platform, which includes overseeing the areas of health and safety, environment, people, operational performance and product delivery. He is a senior mining executive with 30 years of experience in developing and managing large-scale open cut and underground coal, iron ore, copper and gold mines in Australia, Indonesia, Asia and the Americas. Prior to joining Peabody, Mr. Frankcombe served as Deputy Managing Director for Phu Bia Mining in Laos managing the Phu Kham (copper & gold) and Ban Houayxai (gold & silver) operating assets from June 2021 to November 2021. Prior to that, Mr. Frankcombe served as Integration Team Lead with Aurelia Metals Ltd from November 2020 to April 2021 with the responsibility of integrating the Dargues Gold Mine project and operations into the Aurelia Metals Ltd portfolio. Prior to that, he spent seven years as Chief Operating Officer for Whitehaven Coal Mining Ltd., overseeing operational and safety leadership of four open cut coal mines and one underground mine. In addition, he served as a director of Coal Services Pty Ltd. from September 2017 to July 2021. Mr. Frankcombe holds an Honours Degree in Engineering (Mining) and a Masters in Business Administration (Technology).

Patrick J. Forkin III joined Peabody in 2010 and was named Senior Vice President - Corporate Development and Strategy in November 2017. He has executive responsibility for mergers and acquisitions, portfolio management, global strategy, U.S. thermal coal sales and renewable energy development. Mr. Forkin has an extensive background in corporate finance, the energy industry, mergers and acquisitions and equity market research. Prior to joining Peabody, Mr. Forkin was in senior leadership roles at a U.S. solar development company and investment banking firms specializing in renewable and conventional energy. He spent the first nine years of his career at Deloitte LLP. Mr. Forkin holds a Bachelor of Science degree in Accountancy from the University of Illinois at Urbana-Champaign and is a Certified Public Accountant (inactive).

Regulatory Matters — U.S.

Federal, state and local authorities regulate the U.S. coal mining industry with respect to matters such as employee health and safety, permitting and licensing requirements, air quality standards, water pollution, plant and wildlife protection, the reclamation and restoration of mining properties after mining has been completed, the discharge of materials into the environment, surface subsidence from underground mining and the effects of mining on groundwater quality and availability. In addition, the industry is affected by significant requirements mandating certain benefits for current and retired coal miners. Numerous federal, state and local governmental permits and approvals are required for mining operations. Peabody believes that it has obtained all permits currently required to conduct its present mining operations.

The Company endeavors to conduct its mining operations in compliance with all applicable federal, state and local laws and regulations. However, because of extensive and comprehensive regulatory requirements, violations during mining operations occur from time to time in the industry.

Mine Safety and Health

Peabody is subject to health and safety standards both at the federal and state level. The regulations are comprehensive and affect numerous aspects of mining operations, including training of mine personnel, mining procedures, blasting, the equipment used in mining operations and other matters.

MSHA is the entity responsible for monitoring compliance with the federal mine health and safety standards. MSHA employs various enforcement measures for noncompliance, including the issuance of monetary penalties and orders of withdrawal from a mine or part of a mine.

In Part I, Item 4. "Mine Safety Disclosures" and in Exhibit 95 to this Annual Report on Form 10-K, the Company provides additional details on MSHA compliance.

Black Lung (Coal Workers' Pneumoconiosis)

Under the U.S. Black Lung Benefits Revenue Act of 1977 and the Black Lung Benefits Reform Act of 1977, as amended in 1981, each U.S. coal mine operator who was the last to employ a claimant for a cumulative year of employment, with the last day worked for the operator after July 1, 1973, must pay federal black lung benefits and medical expenses to claimants whose claims for benefits are allowed. Coal mine operators must also make payments to a trust fund for the payment of benefits and medical expenses to claimants who last worked in the coal industry prior to July 1, 1973. Historically, very few of the miners who sought federal black lung benefits were awarded these benefits; however, the approval rate has increased following implementation of black lung provisions contained in the Affordable Care Act. The Affordable Care Act included significant changes to the federal black lung program including an automatic survivor benefit paid upon the death of a miner with an awarded black lung claim and establishes a rebuttable presumption with regard to pneumoconiosis among miners with 15 or more years of coal mine employment that are totally disabled by a respiratory condition.

The trust fund has been funded by an excise tax on U.S. production. As a result of legislation enacted in December of 2020, the excise tax rates were set at 4.4% of the gross sales price not to exceed \$1.10 per ton of underground coal and \$0.55 per ton of surface coal for the year ending December 31, 2021. This enacted legislation expired on December 31, 2021 and the excise tax rates reverted back to 2% of the gross sales price not to exceed \$0.50 per ton of underground coal and \$0.25 per ton of surface coal. On December 2, 2021 the Government Accountability Office (GAO) published a report titled "Black Lung Benefits Program: Continued Inaction on Coal Operator Self-Insurance Increases Financial Risk to Trust Fund." This report notes that the Department of Labor (DOL) took some steps to improve its oversight of self-insured coal mine operators, but these efforts were complicated by the COVID-19 pandemic. The GAO states in the report that the DOL has not taken necessary action to prevent additional benefit liabilities from being transferred to the trust fund and recommends that the DOL act on recommendations made in 2020. Subsequently, the Office of Workers' Compensation Programs (OWCP) indicated that it plans to issue a Notice of Proposed Rulemaking in the upcoming months to update its regulations authorizing coal producers to self-insure and for determining appropriate security amounts, and that it plans to solicit public comments for that proposal. A change in requirements for security posted to self-insure black lung liabilities could result in the Company being required to post additional security for its obligations. OWCP recently requested the Company to refile its application for self-insurance.

Peabody recognized expense related to the tax of \$51.5 million, \$53.3 million and \$31.4 million for the years ended December 31, 2021, 2020 and 2019, respectively.

Environmental Laws and Regulations

Peabody is subject to various federal, state, local and tribal environmental laws and regulations. These laws and regulations place substantial requirements on its coal mining operations, and require regular inspection and monitoring of its mines and other facilities to ensure compliance. The Company is also affected by various other federal, state, local and tribal environmental laws and regulations that impact its customers.

Surface Mining Control and Reclamation Act. In the U.S., the Surface Mining Control and Reclamation Act of 1977 (SMCRA), which is administered by the Office of Surface Mining Reclamation and Enforcement (OSMRE), established mining, environmental protection and reclamation standards for surface mining and underground mining. Mine operators must obtain SMCRA permits and permit renewals for mining operations from the OSMRE or from the respective state regulatory authority. Where state regulatory agencies have adopted federal mining programs under SMCRA, the state becomes the primary regulatory authority, with oversight from OSMRE. States in which Peabody has active mining operations have achieved primacy control of enforcement through federal authorization. In Arizona, where Peabody will be performing reclamation work on tribal lands, the Company is regulated by the OSMRE because the tribes do not have SMCRA authorization.

SMCRA provides for three categories of bonds: surety bonds, collateral bonds and self-bonds. A surety bond is an indemnity agreement in a sum certain payable to the regulatory authority, executed by the permittee as principal and which is supported by the performance guarantee of a surety corporation. A collateral bond can take several forms, including cash, letters of credit, first lien security interest in property or other qualifying investment securities. A self-bond is an indemnity agreement in a sum certain executed by the permittee or by the permittee and any corporate guarantor made payable to the regulatory authority.

The Company's total reclamation bonding requirements in the U.S. were \$1,054.5 million as of December 31, 2021. The bond requirements for a mine represent the calculated cost to reclaim the current operations of a mine if it ceased to operate in the current period. The cost calculation for each bond must be completed according to the regulatory authority of each state or OSMRE. The Company's asset retirement obligations calculated in accordance with generally accepted accounting principles for its U.S. operations were \$518.6 million as of December 31, 2021. The bond requirement amount for the Company's U.S. operations significantly exceeds the financial liability for final mine reclamation because the asset retirement obligation liability is discounted from the end of the mine's economic life to the balance sheet date in recognition that the final reclamation cash outlay is projected to be a number of years away. The bond amount, in contrast with the asset retirement obligation, presumes reclamation begins immediately, as well as different assumptions related to the cost of equipment and services utilized in the reclamation process.

After a permit application is prepared and submitted to the regulatory agency, it goes through a completeness and technical review. Public notice of the proposed permit is given for a comment period before a permit can be issued. Regulatory authorities have considerable discretion in the timing of the permit issuance and the public has the right to comment on and otherwise engage in the permitting process, including public hearings and through intervention in the courts. Before a SMCRA permit is issued, a mine operator must submit a bond or other form of financial security to guarantee the performance of reclamation bonding requirements.

In situations where the Company's coal resources are federally owned, the U.S. Bureau of Land Management oversees a substantive exploration and leasing process. If surface land is managed by the U.S. Forest Service, that agency serves as the cooperating agency during the federal coal leasing process. Federal coal leases also require an approved federal mining permit under the signature of the Assistant Secretary of the Department of the Interior.

The SMCRA Abandoned Mine Land Fund requires a fee on all coal produced in the U.S. The proceeds are used to rehabilitate lands mined and left unreclaimed prior to August 3, 1977 and to pay health care benefit costs of orphan beneficiaries of the Combined Fund created by the Coal Industry Retiree Health Benefit Act of 1992. The fee amount can change periodically based on changes in federal legislation. Pursuant to the Tax Relief and Health Care Act of 2006, from October 1, 2012 through September 30, 2021, the fee was \$0.28 and \$0.12 per ton of surface-mined and underground-mined coal, respectively. As a result of the Abandoned Mine Land Reclamation Amendments of 2021, which Congress enacted on November 15, 2021 as part of the Infrastructure Investment and Jobs Act, from October 1, 2021 through September 30, 2034, the fee is \$0.224 and \$0.096 per ton of surface-mined and underground-mine coal, respectively. The Company recognized expense related to the fees of \$27.0 million, \$28.4 million and \$36.5 million for the years ended December 31, 2021, 2020 and 2019, respectively.

Clean Air Act (CAA). The CAA, enacted in 1970, and comparable state and tribal laws that regulate air emissions affect the Company's U.S. coal mining operations both directly and indirectly.

National Ambient Air Quality Standards (NAAQS). The CAA requires the United States Environmental Protection Agency (EPA) to review national ambient air quality standards every five years to determine whether revision to current standards are appropriate. As part of this recurring review process, the EPA in 2020 proposed to retain the ozone standards promulgated in 2015, including current secondary standards, and subsequently promulgated final standards to this effect. Fifteen states and other petitioners have filed a petition for review of the rule in the United States Court of Appeals for the D.C. Circuit (D.C. Circuit). The litigation is currently in abeyance following a motion filed by the EPA to allow for review of the standards.

The EPA also proposed in 2020 to retain the particulate matter (PM) standards last revised in 2012. On December 18, 2020, the EPA issued a final rule to retain both the primary annual and 24-hour PM standards for fine particulate matter (PM_{2.5}) and the primary 24-hour standard for coarse particulate matter (PM₁₀) and secondary PM₁₀ standards. This rule has also been challenged in the D.C. Circuit by several states and environmental organizations. The case is currently in abeyance following a motion filed by the EPA to allow for review of the standards.

More stringent PM or ozone standards would require new state implementation plans to be developed and filed with the EPA and may trigger additional control technology for mining equipment or result in additional challenges to permitting and expansion efforts. This could also be the case with respect to other NAAQS for nitrogen dioxide (NO₂) and sulfur dioxide (SO₂), although these standards are not subject to a statutorily-required review until 2023 for NO₂ and 2024 for SO₂.

Final NSPS for Fossil Fuel-Fired Electricity Utility Generating Units (EGUs). The EPA promulgated a final rule to limit carbon dioxide (CO₂) from new, modified and reconstructed fossil fuel-fired EGUs under Section 111(b) of the CAA on August 3, 2015, and published it in the Federal Register on October 23, 2015.

This rule requires that newly-constructed fossil fuel-fired steam generating units achieve an emission standard for carbon dioxide of 1,400 lb carbon dioxide per megawatt-hour gross output (CO₂/MWh-gross). The standard (known as the Best System of Emission Reduction (BSER)) is based on the performance of a supercritical pulverized coal boiler implementing partial carbon capture, utilization and storage (CCUS). Modified and reconstructed fossil fuel-fired steam generating units must implement the most efficient generation achievable through a combination of best operating practices and equipment upgrades, to meet an emission standard consistent with best historical performance. Reconstructed units must implement the most efficient generating technology based on the size of the unit (supercritical steam conditions for larger units, to meet a standard of 1,800 lb CO₂/MWh-gross, and subcritical conditions for smaller units to meet a standard of 2,000 lb CO₂/MWh-gross).

Numerous legal challenges to the final rule were filed in the D.C. Circuit. Sixteen separate petitions for review were filed, and the challengers include 25 states, utilities, mining companies (including Peabody), labor unions, trade organizations and other groups. The cases were consolidated under the case filed by North Dakota (D.C. Cir. No. 15-1381). Four additional cases were filed seeking review of the EPA's denial of reconsideration petitions in a final action published in the May 6, 2016 Federal Register entitled "Reconsideration of Standards of Performance for Greenhouse Gas Emissions From New, Modified, and Reconstructed Stationary Sources: Electric Generating Units; Notice of final action denying petitions for reconsideration." Pursuant to an order of the court, these cases remain in abeyance, subject to requirements for the EPA to file 90-day status reports.

On December 20, 2018, the EPA proposed to revise the 2015 NSPS to modify the minimum requirements for newly constructed coal-fired units from partial carbon capture and storage to efficiency-based standards. (83 Fed. Reg. 65,424 (Dec. 20, 2018)). In contrast to the 2015 rule, the proposed rule defined BSER as the most efficient demonstrated steam cycle in combination with the best operating practices. The EPA indicated that the primary reason for revising BSER was the high cost and limited geographic availability of carbon capture and storage technology. Status reports filed with the D.C. Circuit in *North Dakota v. EPA* indicate that litigation on the 2015 rule should remain in abeyance pending the EPA's action on the 2018 proposed rule.

EPA Regulation of Greenhouse Gas Emissions from Existing Fossil Fuel-Fired EGUs. On October 23, 2015, the EPA published a final rule in the Federal Register regulating greenhouse gas emissions from existing fossil fuel-fired electric generation units (EGUs) under Section 111(d) of the CAA (80 Fed. Reg. 64,662 (Oct. 23, 2015)). The rule (known as the Clean Power Plan or CPP) established emission guidelines for states to follow in developing plans to reduce greenhouse gas emissions from existing fossil fuel-fired EGUs. The CPP required that the states individually or collectively create systems that would reduce carbon emissions from any EGU located within their borders by 28% in 2025 and 32% in 2030 (compared with a 2005 baseline).

The EPA subsequently proposed to repeal the CPP and in August 2018 issued a proposed rule to replace the CPP, with the Affordable Clean Energy (ACE) Rule. In June 2019, the EPA issued a combined package that finalized the CPP repeal rule as well as the replacement rule, ACE. The ACE rule sets emissions guidelines for greenhouse gas emissions from existing EGUs based on a determination that efficiency heat rate improvements constitute the Best System of Emission Reduction (BSER). The EPA's final rule also revises certain regulations to give the states greater flexibility on the content and timing of their state plans.

Based on the EPA's final rules repealing and replacing the CPP, petitioners in the D.C. Circuit matter seeking review of CPP, including the Company, filed a motion to dismiss, which the court granted in September 2019.

Numerous petitions for review challenging the ACE Rule were filed in the D.C. Circuit and subsequently consolidated. In January 2021, a 3-judge panel of the D.C. Circuit vacated and remanded the ACE Rule to the EPA, including its repeal of the CPP and amendments to the implementing regulations that extended the compliance timeline.

On October 29, 2021, the Supreme Court granted certiorari in four matters seeking review of the D.C. Circuit's opinion vacating the ACE rule and invalidating the repeal of the CPP. In granting certiorari, the Supreme Court consolidated the cases to consider the breadth of the EPA's scope pursuant to 42 U.S.C. Section 7411(d) of the CAA, specifically, issues pertaining to whether the EPA is limited to issuing standards for *existing sources* achievable through demonstrated technology and methods applied to such sources, or whether the EPA may also issue nationwide "performance standards" that can apply to the electric generation sector (such as cap and trade) which could effectively restructure the nation's energy system. The Company will continue to monitor the consolidated matters.

EPA's Greenhouse Gas Permitting Regulations for Major Emission Sources. In May 2010, the EPA published final rules requiring permitting and control technology requirements for greenhouse gases under the Prevention of Significant Deterioration (PSD) and Title V permitting programs that apply to stationary sources of air pollution. The EPA determined that these requirements were "triggered" by the EPA's prior regulation of greenhouse gases from motor vehicles. These rules were subsequently upheld by the D.C. Circuit on June 26, 2012. On June 23, 2014, however, the U.S. Supreme Court ruled that the EPA could not require PSD and Title V permitting for greenhouse gases emitted from stationary sources if those sources were not otherwise considered to be "major sources" of conventional pollutants for purposes of PSD and Title V (known as Step 2 sources). In accordance with that decision, the D.C. Circuit vacated the federal regulations that implemented Step 2 of the Greenhouse Gas Tailoring Rule in 2015. Subsequently, the EPA removed the vacated elements from its rules to ensure that neither the PSD nor Title V rules require a source to obtain a permit solely because the source emits or has the potential to emit greenhouse gases above the applicable thresholds. The EPA therefore no longer has the authority to conduct PSD permitting for Step 2 sources, nor can the EPA approve provisions submitted by a state for inclusion in its state implementation plan providing this authority.

Cross State Air Pollution Rule (CSAPR) and CSAPR Update Rule. In 2011, the EPA finalized the CSAPR, which requires the District of Columbia and 27 states from Texas eastward (not including the New England states or Delaware) to reduce power plant emissions that cross state lines and significantly contribute to ozone and/or fine particle pollution in other states. In 2016, the EPA published the final CSAPR Update Rule which imposed additional reductions in nitrogen oxides (NO_x) beginning in 2017 in 22 states subject to CSAPR.

In October 2020, the EPA proposed a rule to address a previous D.C. Circuit remand of the CSAPR Update Rule and in April 2021, the EPA published a final rule in the Federal Register which imposed further reductions of NO_x emissions in 12 states that were subject to the original 2016 rule.

In the same rule, the EPA determined that 9 states did not significantly contribute to downwind nonattainment and/or maintenance issues and therefore did not require additional emission reductions. In order to implement reductions in the 12 identified states, the EPA issued Federal Implementation Plans to lower state ozone season NO_x budgets in 2021 to 2024, although limited emission trading can be used for compliance and states have the ability to replace federal plans with revised state plans that are no less stringent. A petition for review challenging the 2021 rule has been filed in the D.C. Circuit and briefing in this litigation commenced in November 2021, but this does not stay the effectiveness of the rule.

Mercury and Air Toxic Standards (MATS). The EPA published the final MATS rule in the Federal Register in 2012. The MATS rule revised the new source performance standards (NSPS) for NO_x, SO₂ and PM for new and modified coal-fueled electricity generating plants, and imposed maximum achievable control technology (MACT) emission limits on hazardous air pollutants (HAPs) from new and existing coal-fueled and oil-fueled electric generating plants. MACT standards limit emissions of mercury, acid gas HAPs, non-mercury HAP metals and organic HAPs.

In 2020, the EPA issued a final rule reversing a prior finding and determined that it is not "appropriate and necessary" under the CAA to regulate HAP emissions from coal- and oil-fired power plants. This rule also finalized residual risk and technology review standards for the coal- and oil-fired EGU source category. Both actions were challenged in the D.C. Circuit but this litigation was placed in abeyance. In 2021 EPA sent a draft rule to the Office of Management and Budget for review regarding reconsideration of the "appropriate and necessary" finding as well as residual risk and technology review standards for coal- and oil-fired EGUs.

Regional Haze. The Clean Air Act contains a national visibility goal for the "prevention of any future, and the remedying of any existing, impairment of visibility in Class I areas which impairment results from manmade air pollution." The EPA promulgated comprehensive regulations in 1999 requiring all states to submit plans to address regional haze that could affect 156 national parks and wilderness areas, including requirements for certain sources to install the best available retrofit technology and for states to demonstrate "reasonable progress" towards meeting the national visibility goal. States are required to revise plans every 10 years.

Federal Coal Leasing Moratorium. The Executive Order on Promoting Energy Independence and Economic Growth (EI Order), signed on March 28, 2017, lifted the Department of Interior's federal coal leasing moratorium and rescinded guidance on the inclusion of social cost of carbon in federal rulemaking. Following the EI Order, the Interior Secretary issued Order 3349 ending the federal coal leasing moratorium. Environmental groups took the issue to court (District of Montana) and in April 2019, the Court held the lifting of the moratorium triggered National Environmental Policy Act (NEPA) review. On May 22, 2020, the Court held that the Department of the Interior's issuance of an Environmental Assessment and Finding of No Significant Impact (FONSI) remedied the prior NEPA violations. Environmental groups have since amended their complaint to challenge the Environmental Assessment and FONSI, and the litigation remains pending.

Clean Water Act (CWA). The CWA of 1972 directly impacts U.S. coal mining operations by requiring effluent limitations and treatment standards for wastewater discharge from mines through the National Pollutant Discharge Elimination System (NPDES). Regular monitoring, reporting and performance standards are requirements of NPDES permits that govern the discharge of water from mine-related point sources into receiving waters.

The U.S. Army Corps of Engineers (Corps) regulates certain activities affecting navigable waters and waters of the U.S., including wetlands. Section 404 of the CWA requires mining companies to obtain permits from the Corps to place material in or mine through jurisdictional waters of the U.S.

States are empowered to develop and apply water quality standards. These standards are subject to change and must be approved by the EPA. Discharges must either meet state water quality standards or be authorized through available regulatory processes such as alternate standards or variances. Standards vary from state to state. Additionally, through the CWA Section 401 certification program, state and tribal regulators have approval authority over federal permits or licenses that might result in a discharge to their waters. State and tribal regulators consider whether the activity will comply with their water quality standards and other applicable requirements in deciding whether or not to certify the activity. Although the EPA issued a final rule in 2020 that effectively could have in effect limited state and tribal regulators' authority by allowing the EPA to certify projects over state or tribal regulator objections in some circumstances, as a result of litigation developments this year, the 1971 certification rule is currently back in effect. The EPA plans to issue another proposal in 2022 to update the 1971 rule.

New Source Review (NSR). The Clean Air Act imposes permitting requirements when a new source undergoes construction or when an existing source is reconstructed or undergoes a major modification. These requirements are contained in the Clean Air Act's prevention of significant deterioration (PSD) and Nonattainment New Source Review (NNSR) programs, generally referred to as NSR. On August 4, 2020, the EPA released a guidance memorandum concerning implementation of plantwide applicability limitations (PALs) (Guidance on Plantwide Applicability Limitation Provisions Under the New Source Review Regulations). PALs allow sources to make physical and operational changes under a plantwide emission limit without "triggering" NSR.

The EPA has also taken action on a number of different rules and guidance affecting the interpretation and application of NSR. In a final rule (83 Fed. Reg. 57,324 (Nov. 15, 2018)), the EPA completed reconsideration of a 2009 petition to clarify when certain actions must be "aggregated" for purposes of determining whether these actions are part of a single project to which NSR applies. The EPA has additionally published guidance on the definition of "ambient air" (Revised Policy on Exclusions from "Ambient Air," Dec. 2, 2019) and guidance concerning when multiple air pollution-emitting activities may be considered to be "adjacent" so that they should be considered to be a single source (Interpreting "Adjacent" for New Source Review and Title V Source Determinations in All Industries Other Than Oil and Gas, Nov. 26, 2019). Additional memorandum and applicability determinations have also been made that address other NSR issues. These rules, guidance and memorandum may therefore affect the construction, reconstruction and modification of sources and the level of pollution control requirements that will be necessary on a case-by-case basis.

CWA Definition of "Waters of the United States". In January 2020 the EPA and the Army Corps of Engineers (Corps) finalized the Navigable Waters Protection Rule to revise the definition of "Waters of the United States" and thereby establish the scope of federal regulatory authority under the CWA. On August 30, 2021, a federal court in Arizona vacated the Navigable Waters Protection Rule, and on September 3, 2021, the EPA and the Corps announced that they had "halted implementation" of the rule nationwide and that they are interpreting "Waters of the United States" consistent with the pre-2015 regulatory framework. On December 7, 2021, the agencies published the first of two rulemaking proceedings to formally repeal the Navigable Waters Protection Rule, codify the pre-2015 regulatory framework, and then build upon that framework. The agencies plan to issue the second proposal in 2022, but the exact timing is unclear.

Effluent Limitations Guidelines for the Steam Electric Power Generating Industry. On September 30, 2015, the EPA published a final rule setting new or additional requirements for various wastewater discharges from steam electric power plants. The rule set zero discharge requirements for some waste streams, as well as new, more stringent limits for arsenic, mercury, selenium and nitrogen applicable to certain other waste streams. On October 13, 2020, the EPA issued a final rule revising the technology-based effluent limitations guidelines and standards for the steam electric power generating point source category applicable to flue gas desulfurization wastewater and bottom ash transport water. However, on August 3, 2021, the EPA announced it is undertaking a supplemental rulemaking to "strengthen certain discharge limits" applicable to steam electric power plants. As finalized, the revised effluent limitations guidelines could significantly increase costs for many coal-fired steam electric power plants.

National Environmental Policy Act (NEPA). NEPA, signed into law in 1970, requires federal agencies to review the environmental impacts of their decisions and issue either an environmental assessment or an environmental impact statement. Peabody must provide information to agencies when it proposes actions that will be under the authority of the federal government. The NEPA process involves public participation and can involve lengthy timeframes. The White House Council on Environmental Quality issued a final rule comprehensively updating and modernizing its longstanding NEPA regulations on July 16, 2020. That final rule sought to reduce unnecessary paperwork, burdens and delays, promote better coordination among agency decision makers, and clarify scope of NEPA reviews, among other things. States and environmental groups have filed several lawsuits challenging the final rule. On October 7, 2021, however, CEQ published a proposed rule announcing a two-phase rulemaking process to generally restore the pre-2020 NEPA regulations before more broadly revisiting the 2020 rule.

Resource Conservation and Recovery Act (RCRA). RCRA, which was enacted in 1976, affects U.S. coal mining operations by establishing “cradle to grave” requirements for the treatment, storage and disposal of hazardous wastes. Typically, the only hazardous wastes generated at a mine site are those from products used in vehicles and for machinery maintenance. Coal mine wastes, such as overburden and coal cleaning wastes, are not considered hazardous wastes under RCRA.

Subtitle C of RCRA exempted fossil fuel combustion wastes from hazardous waste regulation until the EPA completed a report to Congress and made a determination on whether the wastes should be regulated as hazardous. On December 19, 2014, the EPA announced the final rule on coal combustion residuals (CCR or coal ash). As finalized, the rule continues the exemption of CCR from regulation as a hazardous waste, but does impose new requirements at existing CCR surface impoundments and landfills that will need to be implemented over a number of different time-frames in the coming months and years, as well as at new surface impoundments and landfills. Generally, EPA-imposed requirements will increase the cost of CCR management, but not as much as if the rule had regulated CCR as hazardous.

Proposed Rule for Disposal of CCR from Electric Utilities; Federal CCR Permit Program and Revisions to Closure Requirements. On February 20, 2020, as required by the Water Infrastructure Improvements for the Nation Act, the EPA proposed a federal permitting program for the disposal of CCR in surface impoundments and landfills. Under the proposal, the EPA would directly implement the permit program in Indian Country, and at CCR units located in states that have not submitted their own CCR permit program for approval. The proposal includes requirements for federal CCR permit applications, content and modification, as well as procedural requirements. The comment period for the EPA's proposal ended on April 20, 2020. Although EPA had planned to finalize this rule in 2021, the EPA now expects to issue a final rule around October 2022. Separately, on August 28, 2020, the EPA finalized certain amendments to its 2015 CCR rule to partially address the D.C. Circuit's 2018 decision holding that certain provisions of that rule were not sufficiently protective. The EPA is still deciding how to further revise the 2015 rule to address the remainder of the court decision. Initially the EPA had planned to issue a proposal in mid-2021, but the EPA now expects to issue the proposal rule in September 2022. Generally, EPA-imposed requirements will increase the cost of CCR management, but not as much as if the rule had regulated CCR as hazardous.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Although generally not a prominent environmental law in the coal mining sector, CERCLA, which was enacted in 1980, nonetheless may affect U.S. coal mining operations by creating liability for investigation and remediation in response to releases of hazardous substances into the environment and for damages to natural resources. Under CERCLA, joint and several liabilities may be imposed on waste generators, site owners or operators and others, regardless of fault.

Toxic Release Inventory. Arising out of the passage of the Emergency Planning and Community Right-to-Know Act in 1986 and the Pollution Prevention Act passed in 1990, the EPA's Toxic Release Inventory program requires companies to report the use, manufacture or processing of listed toxic materials that exceed established thresholds, including chemicals used in equipment maintenance, reclamation, water treatment and ash received for mine placement from power generation customers.

Endangered Species Act (ESA). The ESA of 1973 and counterpart state legislation is intended to protect species whose populations allow for categorization as either endangered or threatened. Changes in listings or requirements under these regulations could have a material adverse effect on Peabody's costs or its ability to mine some of its properties in accordance with its current mining plans. During the Trump Administration, the Departments of the Interior and Commerce issued finalized five rules aiming to streamline and update the ESA. But in June 2021, agencies announced their plan to revise, rescind, or reinstate the rules that were finalized (or withdrawn) during the Trump Administration that conflict with the Biden Administration's objectives.

Use of Explosives. Peabody's surface mining operations are subject to numerous regulations relating to blasting activities. Pursuant to these regulations, it incurs costs to design and implement blast schedules and to conduct pre-blast surveys and blast monitoring. The storage of explosives is subject to strict federal regulatory requirements. The U.S. Bureau of Alcohol, Tobacco and Firearms (ATF) regulates the use of explosive blasting materials. In addition to ATF regulation, the Department of Homeland Security is expected to finalize an ammonium nitrate security program rule. On July 30, 2019, the OSMRE officially withdrew its decision to initiate rulemaking related to emissions generated from blasting at coal mining operations. The decision cited its lack of statutory authority and the sufficiency of the existing regulatory framework.

Federal Report on Climate Change. On November 23, 2018, the U.S. Global Change Research Program, a working group comprised of 13 U.S. governmental departments and agencies, issued the Fourth National Climate Assessment. The report lists the observed effects of "increasing greenhouse gas concentrations on Earth's climate" and enumerates the impacts of those observed effects. The report also discusses the alternatives for reducing the impacts of climate-related risks, including through mitigation and adaptation. While there are no explicit regulatory actions that flow from the issuance of the report, both the legislative and executive branches of government may rely on its conclusions to shape and justify policies and actions going forward. A Fifth National Climate Assessment is currently in development with an anticipated publication date in 2023.

Regulatory Matters — Australia

The Australian mining industry is regulated by Australian federal, state and local governments with respect to environmental issues such as land reclamation, water quality, air quality, dust control, noise, planning issues (such as approvals to expand existing mines or to develop new mines) and health and safety issues. The Australian federal government retains control over the level of foreign investment and export approvals. Industrial relations are regulated under both federal and state laws. Australian state governments also require coal companies to post deposits or give other security against land which is being used for mining, with those deposits being returned or security released after satisfactory reclamation is completed.

Mining Tenements and Environmental. In Queensland and New South Wales, the development of a mine requires both the grant of a right to extract the resource and an approval which authorizes the environmental impact. These approvals are obtained under separate legislation from separate government authorities. However, the application processes run concurrently and are also concurrent with any native title or cultural heritage process that is required. The environmental impacts of mining projects are regulated by state and federal governments. Federal regulation will only apply if the particular project will significantly impact a matter of national environmental significance (for example, a water resource, an endangered species or particular protected places). Environmental approvals processes involve complex issues that, on occasion, require lengthy studies and documentation.

In February 2019, the New South Wales (NSW) Land and Environment Court (LEC) upheld the government's denial of a planning approval for a non-Peabody coal mining project (*Gloucester Resources Limited v. Minister for Planning*). Although the approval was refused for other reasons, the judge in that case discussed 'Scope 3' greenhouse gas emissions resulting from the consumption of coal to be mined under the proposed project. Such emissions are often raised as a ground of objection to Australian mining projects, including Peabody's mining projects. For example, in a subsequent LEC decision (*Australian Coal Alliance Incorporated v. Wyong Coal Pty Ltd*), the approval of a coal mining project was confirmed after such emissions had been considered by the relevant authority. In August 2019, Peabody and Glencore received approval from the NSW Independent Planning Commission (IPC) for the United Wambo project, subject to conditions (Export Conditions) requiring the joint venture to prepare an Export Management Plan setting out protocols for using all reasonable and feasible measures to ensure that any coal extracted from the mine that is to be exported from Australia is only exported to countries that are parties to the Paris Agreement (as defined below) or countries that the NSW Planning Secretary considers to have similar policies for reducing greenhouse gas emissions. The IPC subsequently approved another non-Peabody coal mining project (Rix's Creek) without any Export Conditions. In October 2019, the NSW government introduced into Parliament proposed amendments to legislation and policy that would, if passed, have the effect of invalidating Export Conditions imposed on future NSW planning approvals, as well as no longer requiring consent authorities to consider 'downstream emissions' when assessing developments for the purposes of mining, petroleum production or extractive industry. The NSW government has announced changes to the IPC and planning system process which aims to improve timeframes and efficiencies for project approvals and providing more clarity on the IPC's role in determining applications including seeking guidance on government policy. In June 2020, the NSW Government released its Strategic Statement on Coal Exploration and Mining in NSW which provides a high level framework for the government's policy approach to the future of the coal sector, as well as details of a streamlined strategic release process. The strategy identifies some potential areas for possible new coal exploration, areas that are ruled out for coal mining and areas where new coal exploration can only occur adjacent to an existing coal title via the Operational Allocation process. In December 2020, the NSW Government finalized and published the Guideline for the Competitive Allocation of Coal, which details the process for considering areas for coal exploration and allocating them by public tender.

In Queensland, laws and regulations related to mining include, but are not limited to, the Mineral Resources Act 1989, Environmental Protection Act 1994 (EP Act), Environmental Protection Regulation 2008, Planning Act 2016, Coal Mining Safety and Health Act 1999, Minerals and Energy Resources (Common Provisions) Act 2014, Explosives Act 1999, Aboriginal Cultural Heritage Act 2003, Water Act 2000, State Development and Public Works Organisation Act 1971, Queensland Heritage Act 1992, Transport Infrastructure Act 1994, Nature Conservation Act 1992, Vegetation Management Act 1999, Biosecurity Act 2014, Land Act 1994, Regional Planning Interests Act 2014, Fisheries Act 1994 and Forestry Act 1959. Under the EP Act, policies have been developed to achieve the objectives of the law and provide guidance on specific areas of the environment, including air, noise, water and waste management. State planning policies address matters of Queensland state interest, and must be adhered to during mining project approvals. The Mineral Resources Act 1989 was amended effective September 27, 2016 to include significant changes to the management of overlapping coal and coal seam gas tenements, and the coordination of activities and access to private and public land. In November 2016, amendments to the EP Act and the Water Act 2000 became effective that facilitate regulatory scrutiny of the environmental impacts of underground water extraction during the operational phase of resource projects for all tenements yet to commence mineral extraction. The 'chain of responsibility' provisions of the EP Act, which became effective in April 2016, allow the regulator to issue an environmental protection order (EPO) to a related person of a company in two circumstances: (a) if an EPO has been issued to the company, an EPO can also be issued to a related person of the company (at the same time or later); or (b) if the company is a high risk company (as defined in the EP Act), an EPO can be issued to a related person of the company (whether or not an EPO has also been issued to the company). A guideline has been issued that provides more certainty to the industry on the circumstances in which an EPO may be issued.

In New South Wales, laws and regulations related to mining include, but are not limited to, the Mining Act 1992, Work Health and Safety (Mines) Act 2013, Coal Mine Subsidence Compensation Act 2017, Environmental Planning and Assessment Act 1979 (EPA Act), Environmental Planning and Assessment Regulations 2000, Protection of the Environment Operations Act 1997, Contaminated Land Management Act 1997, Explosives Act 2003, Water Management Act 2000, Water Act 1912, Radiation Control Act 1990, Biodiversity Conservation Act 2016 (BC Act), Heritage Act 1977, Aboriginal Land Rights Act 1983, Crown Land Management Act 2016, Dangerous Goods (Road and Rail Transport) Act 2008, Fisheries Management Act 1994, Forestry Act 2012, Native Title (New South Wales) Act 1994, Biosecurity Act 2015, Roads Act 1993 and National Parks & Wildlife Act 1974.

Under the EPA Act, environmental planning instruments must be considered when approving a mining project development application. Decision makers review the significance of a resource and the state and regional economic benefits of a proposed coal mine when considering a development application on the basis that it is an element of the "public interest" consideration contained in the relevant legislation. Effective from March 1, 2018, the EPA Act was amended to introduce a number of changes to planning laws in New South Wales. The EPA Act was further amended in June 2018 to revoke a process for modifying development approvals under the former Section 75W of the EPA Act. As a result, new development approvals will need to be obtained unless the proposed project will be substantially the same development as it was when the development approval was last modified under Section 75W, in which case the existing development approval can be modified. If a new development approval is required then this could take additional time to achieve.

On August 25, 2017, the BC Act commenced in New South Wales and imposes a revised framework for the assessment of potential impacts on biodiversity that may be caused by a development, such as a proposed mining project. The BC Act requires these potential impacts on biodiversity to be offset in perpetuity, by one or more of the following means: securing land based offsets and retiring biodiversity credits, making a payment into a biodiversity conservation fund or in some cases through mine site ecological rehabilitation. The data collected from the biodiversity impact assessment process is inputted into a new offsets payment calculator in order to determine the amount payable by the proponent to offset the impacts. The proposed development can only proceed once the biodiversity offset obligations have been satisfied.

Environment Protection and Biodiversity Conservation Amendment (Standards and Assurance) Bill 2021. On February 25, 2021 the Commonwealth Government introduced the Environment Protection and Biodiversity Conservation Amendment (Standards and Assurance) Bill 2021 into Parliament, which proposes amendments to the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) following the release of the Final Report of the Independent Review of the Act undertaken by Professor Graeme Samuel (the Samuel Review) that made 38 recommendations for short and long-term reforms, and ultimately calls for a complete overhaul of the existing legislative framework by 2022, to be undertaken in several tranches, with a strong focus on the setting of National Environmental Standards, assurance and compliance, data availability and management, and indigenous engagement. The bill responds to some of the recommendations for immediate reform made in the Samuel Review, and seeks to: establish a framework for the making, varying, revoking and application of National Environmental Standards; apply the National Environmental Standards to bilateral agreements with States and Territories; and establish an Environment Assurance Commissioner to monitor and audit bilateral agreements and other processes under the EPBC Act. The bill passed the Australian Parliament's House of Representatives in June 2021 and is now under consideration by the Australian Senate.

Mining Rehabilitation (Reclamation). Mine reclamation is regulated by state-specific legislation. As a condition of approval for mining operations, companies are required to progressively reclaim mined land and provide appropriate bonding, or, in certain circumstances (see below in relation to the Mineral and Energy Resources (Financial Provisioning) Act 2018), make alternative financial contributions to the relevant state government as a safeguard to cover the costs of reclamation in circumstances where mine operators are unable to do so. Self-bonding is not permitted. Peabody's mines provide financial assurance to the relevant authorities which is calculated in accordance with current regulatory requirements. This financial assurance is in the form of cash, surety bonds or bank guarantees which are supported by a combination of cash collateral, deeds of indemnity and guarantee and letters of credit issued under the Company's credit facility and accounts receivable securitization program. The Company operates in both the Queensland and New South Wales state jurisdictions.

Peabody's reclamation bonding requirements in Australia were \$240.2 million as of December 31, 2021. The bond requirements represent the states' calculated cost to reclaim the current operations of a mine if it ceases to operate in the current period less any discounts agreed with the state. The cost calculation for each bond must be completed according to the regulatory authority of each state. The costs associated with the Company's Australian asset retirement obligations are calculated in accordance with U.S. generally accepted accounting principles and were \$201.2 million as of December 31, 2021. The total bonding requirements for the Company's Australian operations differ from the calculated costs associated with the asset retirement obligations because the costs associated with asset retirement obligations are discounted from the end of the mine's economic life to the balance sheet date in recognition of the economic reality that reclamation is conducted progressively and final reclamation is projected to be a number of years away, whereas the bonding amount represents the states' calculated cost of reclamation if a mine ceases to operate immediately as well as different costs assumptions.

New South Wales Reclamation. The Mining Act 1992 (Mining Act) is administered by the Department of Planning and Environment and the New South Wales Resources Regulator, and authorizes the holder of a mining tenement to extract a mineral subject to obtaining consent under the EPA Act and other auxiliary approvals and licenses.

Through the Mining Act, environmental protection and reclamation are regulated by conditions in all mining leases including requirements for the submission of a mining operations plan (MOP) prior to the commencement of operations. All mining operations must be carried out in accordance with the MOP which describes site activities and the progress toward environmental and reclamation outcomes and are updated on a regular basis or if mine plans change. The mines publicly report their reclamation performance on an annual basis.

In support of the MOP process, a reclamation cost estimate is calculated periodically to determine the amount of bond support required to cover the cost of reclamation based on the extent of disturbance during the MOP period.

Under significant reforms proposed by the NSW Resources Regulator in October 2020, all new and existing mines in NSW will be regulated by new standard rehabilitation conditions. The conditions will apply to all new and existing mining leases and focus on transparently requiring progressive mine site rehabilitation throughout the life of the mine. The draft Mining Amendment (Standard Conditions of Mining Leases - Rehabilitation) Regulation 2020 has been released for consultation. The new conditions would apply to all new mining leases and would be introduced into existing mining leases over a 12 to 24 month transition period. The conditions require (amongst other things) that the leaseholder must rehabilitate land and water in the mining area that is disturbed by activities under the mining lease as soon as reasonably practicable after the disturbance occurs. The proposed rehabilitation management plan for the mining area which must be prepared for large mines is intended to replace the current approach of preparing a mining operation plan.

Queensland Reclamation. The EP Act is administered by the Department of Environment and Science, which authorizes environmentally relevant activities such as mining activities relating to a mining lease through an Environmental Authority (EA). Environmental protection and reclamation activities are regulated by conditions in the EA. All mining operations must be carried out in a manner so as to ensure compliance with the conditions in the EA. The mines submit an annual return reporting on their EA compliance.

In November 2018, the Queensland government passed the Mineral and Energy Resources (Financial Provisioning) Act 2018 providing for a new financial assurance (FA) framework and new progressive rehabilitation requirements. The new FA framework creates a pooled fund covering most mines and most of the total industry liability, plus other options for providing FA if not part of the pooled fund (for example, allowing insurance bonds or cash). The percentage rate of the total rehabilitation cost payable into the pooled fund will take into account the financial strength of the holder of the EA for the mine and the project strength of the mine. The total rehabilitation cost is determined using an updated rehabilitation cost calculator, which no longer provides for discounting. The commencement date for the new FA framework was April 1, 2019 and there is a transitional period during which Peabody will move each of its mines in Queensland into the new FA framework.

The new progressive rehabilitation requirements commenced on November 1, 2019 and require each mine, within a three-year transitional period, to establish a schedule of rehabilitation milestones covering the life of the mine, and any significant changes to the timing of rehabilitation will require regulatory approval. If there is to remain an area within the mine that does not have a post-mining land use (referred to as a non-use management area or NUMA) then each such NUMA will need to pass a public interest evaluation test as part of the approval process. An example of a NUMA is the void that remains after open-cut mining activities have been completed. Under the legislation, each current mine is exempt from the requirement to justify its NUMAs to the extent that its current approvals provide for such areas. The Company is of the view that there will not be a need to seek any further regulatory approvals for any of the NUMAs at any of its Queensland mines.

Residual Risks. On August 20, 2020, the Environmental Protection and Other Legislation Amendment Act (Queensland) 2020 (EPOLA Act) became law amending the residual risk framework that aims to ensure that any remaining risks on former resource sites are appropriately identified, costed and managed. On completion of all mining activities, the holder of the EA for the mine can apply to surrender the EA once all conditions, requirements and rehabilitation obligations have been met. When approving the surrender, the government can request a residual risk payment from the holder of the EA for the mine to cover potential rehabilitation or maintenance costs incurred after the surrender has been accepted. It contemplates two approaches for determining residual risk payments. Depending on the level of risk of a particular site, a cost calculator tool might be used or a panel of appropriately qualified experts might undertake a qualitative and quantitative risk assessment.

Federal Reclamation. In February 2017, the Australian Senate established a Committee of Inquiry into the rehabilitation of mining and resources projects as it relates to Commonwealth responsibilities, for example, under the Environment Protection and Biodiversity Conservation Act 1999. The Committee released their report in March 2019. The Committee was unable to reach unanimous agreement on a set of recommendations. It is unclear the extent to which the report will impact policy reform at a federal government level.

Native Title and Cultural Heritage. Since 1992, the Australian courts have recognized that native title to lands and water, as recognized under the laws and customs of the Aboriginal inhabitants of Australia, may have survived the process of European settlement. These developments are supported by the federal Native Title Act which recognizes and protects native title, and under which a national register of native title claims has been established. Native title rights do not extend to minerals; however, native title rights can be affected by mining activities unless those rights have previously been extinguished, thereby requiring negotiation with the traditional owners (and potentially the payment of compensation) prior to the grant of certain mining tenements. There is also federal and state legislation to prevent damage to Aboriginal cultural heritage and archaeological sites.

Following the May 2020 destruction of caves at the Juukan Gorge in the Pilbara region of Western Australia by an iron ore mining operation, the Federal Government established a Senate Inquiry. The Inquiry's terms of reference included reviewing the effectiveness and adequacy of state and federal laws in relation to Aboriginal and Torres Strait Islander cultural heritage in each of the Australian jurisdictions; and how these cultural heritage laws might be improved to guarantee the protection of culturally and historically significant sites. Following an interim report released on December 9, 2020, the Joint Standing Committee on Northern Australia released its final report on October 18, 2021. The final report sets out three key findings and eight recommendations, including that a new framework for cultural heritage protection be implemented at a national level by way of new legislated national minimum standards for State and Territory laws. The recommendations also include that a review of the *Native Title Act 1993* (Cth) be undertaken to address inequalities in the negotiating position of Aboriginal and Torres Strait Islander peoples in the future act regime, including the 'right to negotiate' process which is associated with the grant of certain mining tenements. Any legislation passed as a result of the recommendations in the final report could potentially impact the Company's current and future mining tenements and operations.

Occupational Health and Safety. State legislation requires Peabody to provide and maintain a safe workplace by providing safe systems of work, safety equipment and appropriate information, instruction, training and supervision. In recognition of the specialized nature of mining and mining activities, specific occupational health and safety obligations have been mandated under state legislation specific to the coal mining industry. There are some differences in the application and detail of the laws, and mining operators, directors, officers and certain other employees are all subject to the obligations under this legislation.

In September 2020, Safe Work Australia (SWA) published its revised Workplace Exposure Standards (WES) for coal dust and silica based on toxicological information and other monitoring data. SWA have recommended exposure limits of 1.5 mg/m³ for coal dust (to apply from October 2022) and 0.05 mg/m³ for silica (to apply as soon as possible). In Queensland, a new workplace exposure standard for respirable crystalline silica (eight hour time-weighted average airborne concentration of 0.05 milligrams per cubic meter (mg/m³)) took effect from July 1, 2020. In New South Wales, the new respirable crystalline silica workplace exposure standard of 0.05 mg/m³ commenced on July 1, 2020. The respirable coal dust workplace exposure standard of 2.5 mg/m³ was reduced to 1.5 mg/m³ on February 1, 2021 and mines need to report exceedances of the new exposure standard to the NSW Resources Regulator from this date. NSW is the first mining jurisdiction in Australia to implement an exposure standard for diesel particulate matter with the exposure standard of 0.1 mg/m³ which became enforceable on February 1, 2021.

In addition, as part of a broader review of workplace exposure standards, SWA is currently considering a proposal to reduce the time weighted average (TWA) Workplace Exposure Standard (WES) for carbon dioxide (CO₂) in Australian coal mines from 12,500 ppm to 5,000 ppm. Currently there is a separate TWA for CO₂ in coal mines however SWA proposes to remove this to align with a general industry standard. If implemented, the change has the potential to affect underground mines operating in CO₂ rich coal seams, including the primary coal seam of the Company's Metropolitan Mine. Importantly, a minimum three-year transition period applies for any change to standards.

On July 1, 2020, the *Resources Safety and Health Queensland Act 2020* became effective. It establishes Resources Safety and Health Queensland (RSHQ) as a statutory body designed to ensure independence of the mining safety and health regulator. RSHQ includes inspectorates for coal mines, mineral mines and quarries, explosives and petroleum and gas. The new law seeks to enhance the role of advisory committees to identify, quantify and prioritize safety and health issues in the mining and quarrying industries. It also provides for an independent Work Health and Safety Prosecutor to prosecute serious offenses under resources safety legislation.

On May 20, 2020, the Queensland Parliament passed a bill into law that introduces the criminal offense of 'industrial manslaughter' for executive officers, individuals who are "senior officers" and companies in the mining industry. Individuals now face a maximum prison sentence of 20 years and companies could be fined up to approximately \$13 million Australian dollars. This new law became effective July 1, 2020. The bill also introduced the requirement for statutory role holders to be employees of the coal mine operator entity with an 18-month transition period ending November 25, 2022.

Industrial Relations. A national industrial relations system, the Fair Work Act and National Employment Standards, administered by the federal government applies to all employers and employees. The matters regulated under the national system include general employment conditions, unfair dismissal, enterprise bargaining, bullying claims, industrial action and resolution of workplace disputes. Most of the hourly workers employed in the Company's mines are also covered by the Black Coal Mining Industry Award and company specific enterprise agreements approved under the national system.

National Greenhouse and Energy Reporting Act 2007 (NGER Act). The NGER Act imposes requirements for corporations meeting a certain threshold to register and report greenhouse gas emissions and abatement actions, as well as energy production and consumption as part of a single, national reporting system. The Clean Energy Regulator administers the NGER Act. The federal Department of Environment and Energy is responsible for NGER Act-related policy developments and review.

On July 1, 2016, amendments to the NGER Act implemented the Emissions Reduction Fund Safeguard Mechanism. From that date, large designated facilities such as coal mines were issued with a baseline for their covered emissions and must take steps to keep their emissions at or below the baseline or face penalties.

The National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015 outlines key elements of a responsible emitter's duty to avoid an excess emissions situation and provides detail on how it can meet that requirement. The Rule was amended between 2019 and 2021 to transition responsible emitters to new baseline setting arrangements. From the start of the 2020-21 compliance year, baselines must use prescribed production variables (an example being run of mine coal) and default emissions intensity values (being values set by the Government to represent the industry average emissions intensity of production over five years) unless specific exemptions apply (such as a facility having site-specific values set).

Queensland Royalty. As part of the Queensland Government's 2019-20 Budget, the Government committed to freeze royalty rates on coal and minerals for three years, provided companies voluntarily contribute to a Resource Community Infrastructure Fund (the Fund) over this three-year period. The Government contributes \$30 million Australian dollars towards the Fund, with companies voluntarily contributing \$70 million Australian dollars. Peabody's contribution to the Fund was approximately \$522,000 Australian dollars for the 2020-21 financial year and \$713,000 Australian dollars for the 2019-20 financial year. Peabody's contribution is expected to further decrease in year three based on an expected reduction in production at its Queensland mines.

New South Wales Royalty. In New South Wales, the royalty applicable to coal is charged as a percentage of the value of production (total revenue less allowable deductions). This is equal to 6.2% for deep underground mines (coal extracted at depths greater than 400 meters below ground surface), 7.2% for underground mines and 8.2% for open-cut mines.

Sydney Water Catchment Areas. In November 2017, the New South Wales government established an independent expert panel (Panel) to advise the Department of Planning, Industry and Environment (DPIE) on the impact of underground mining activities in Sydney's water catchment areas, including at the Company's Metropolitan Mine. The Panel issued its final report in October 2019. The final report makes findings and recommendations concerning mining activities and effects across the catchment as a whole.

The DPIE considered the recommendations in the Panel's final report and in April 2020 announced that it had accepted all 50 recommendations in the Panel's report, and that it has established an interagency taskforce to implement a detailed action plan during 2020. The action plan includes: ensuring there is a net gain for the metropolitan water supply by requiring more offsetting from mining companies; establishing a new independent expert panel to advise on future mining applications in the catchment; strengthening surface and groundwater monitoring; improving access to and transparency of environmental data; adopting a more stringent approach to the assessment and conditioning of future mining proposals to minimize subsidence impacts; reviewing and updating current and potential future water losses from mining in line with the best available science; introducing a licensing regime to properly account for any water losses; and undertaking further research into mine closure planning to reduce potential long-term impacts.

Risks Related to Global Climate Change

Peabody recognizes that climate change is occurring and that human activity, including the use of fossil fuels, contributes to greenhouse gas (GHG) emissions. The Company's largest contribution to GHG emissions occurs indirectly, through the coal used by its customers in the generation of electricity and the production of steel (Scope 3). To a lesser extent, the Company directly and indirectly contributes to GHG emissions from various aspects of its mining operations, including from the use of electrical power and combustible fuels, as well as from the fugitive methane emissions associated with coal mines and stockpiles (Scopes 1 and 2).

Peabody's board of directors and management believe that coal is essential to affordable, reliable energy and will continue to play a significant role in the global energy mix for the foreseeable future. Peabody views technology as vital to advancing global climate change solutions, and the company supports advanced coal technologies to drive continuous improvement toward the ultimate goal of net-zero emissions from coal.

The board of directors has ultimate oversight for climate-related risk and opportunity assessments, and has delegated certain aspects of these assessments to subject matter committees of the board. In addition, the board and its committees are provided regular updates on major risks and changes, including climate-related matters. The senior management team champions the strategic objectives set forth by the board of directors and Peabody's global workforce turns those objectives into meaningful actions.

Management believes that the Company's external communications, including environmental regulatory filings and public notices, U.S. Securities and Exchange Commission filings, its annual Environmental, Social and Governance Report, its website and various other stakeholder-focused publications provide a comprehensive picture of the Company's material risks and progress. All such communications are subject to oversight and review protocols established by Peabody's board of directors and executive leadership team.

The Company faces risks from both the global transition to a net-zero emissions economy and the potential physical impacts of climate change. Such risks may involve financial, policy, legal, technological, reputational and other impacts as the Company meets various mitigation and adaptation requirements.

The transition to a net-zero emissions economy is driven by many factors, including, but not limited to, legislative and regulatory rulemaking processes, campaigns undertaken by non-governmental organizations to minimize or eliminate the use of coal as a source of electricity generation, and the ESG-related policies of financial institutions and other private companies. The Company has experienced, or may in the future experience, negative effects on its results of operations due to the following specific risks as a result of such factors:

- Reduced utilization or closure of existing coal-fired electricity generating plants;
- Electricity generators switching from coal to alternative fuels, when feasible;
- Increased costs associated with regulatory compliance;
- Unfavorable impact of regulatory compliance on supply and demand fundamentals, such as limitations on financing or construction of new coal-fueled power stations;
- Uncertainty and inconsistency in rulemaking processes related to periodic governmental administrative and policy changes;
- Unfavorable costs of capital and access to financial markets and products due to the policies of financial institutions;
- Disruption to operations or markets due to anti-coal activism and litigation; and
- Reputational damage associated with involvement in GHG emissions.

With respect to the potential or actual physical impacts of climate change, the Company has identified the following specific risks:

- Disruption to water supplies vital to mining operations;
- Disruption to transportation and other supply chain activities;
- Damage to the Company's, customers' or suppliers' plant and equipment, or third-party infrastructure, resulting from weather events or changes in environmental trends and conditions; and
- Electrical grid failures and power outages.

While the Company faces numerous risks associated with the transition to a net-zero emissions economy and the physical impacts of climate change, certain opportunities may also emerge, such as:

- Heightened emphasis among multiple stakeholders to develop high-efficiency, low-emissions (HELE) technologies and carbon capture, use and storage (CCUS) technologies;
- Increased steel demand related to construction and other infrastructure projects related to climate change concerns; and
- The relative expense and reliability of renewable energy sources compared to coal may encourage support for balanced-source energy policies and regulations.

Global climate issues continue to attract public and scientific attention. Numerous reports, such as the Fourth and the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, have also engendered concern about the impacts of human activity, especially fossil fuel combustion, on global climate issues. In turn, increasing government attention is being paid to global climate issues and to GHG emissions, including emissions of carbon dioxide from coal combustion by power plants. There have been significant developments in federal and state legislation and regulation and international accords regarding climate change. Such developments are described below in the section "Regulations Related to Global Climate Change" within this Item 1.

The enactment of future laws or the passage of regulations regarding emissions from the use of coal by the U.S., some of its states or other countries, or other actions to limit such emissions, could result in electricity generators switching from coal to other fuel sources. Further, policies limiting available financing for the development of new coal-fueled power stations could adversely impact the global demand for coal in the future. The potential financial impact on Peabody of such future laws, regulations or other policies will depend upon the degree to which any such laws or regulations force electricity generators to diminish their reliance on coal as a fuel source. That, in turn, will depend on a number of factors, including the specific requirements imposed by any such laws, regulations or other policies, the time periods over which those laws, regulations or other policies would be phased in, the state of development and deployment of CCUS technologies as well as acceptance of CCUS technologies to meet regulations and the alternative uses for coal. Higher-efficiency coal-fired power plants may also be an option for meeting laws or regulations related to emissions from coal use. Several countries, including major coal users such as China, India and Japan, included using higher-efficiency coal-fueled power plants in their plans under the Paris Agreement. The Company believes HELE and CCUS technologies should be part of the solution to achieve substantial reductions in GHG emissions and should be broadly supported and encouraged, including through eligibility for public funding from national and international sources. In addition, CCUS merits targeted deployment incentives, like those provided to other low-emission sources of energy.

From time to time, the Company's board of directors and management attempt to analyze the potential impact on the Company of as-yet-unadopted, potential laws, regulations and policies. Such analyses require significant assumptions as to the specific provisions of such potential laws, regulations and policies which sometimes show that if implemented in the manner assumed by the analyses, the potential laws, regulations and policies could result in material adverse impacts on the Company's operations, financial condition or cash flows. Such analyses cannot be relied upon to reasonably predict the quantitative impact that future laws, regulations or other policies may have on the Company's results of operations, financial condition or cash flows.

Regulations Related to Global Climate Change

In the U.S., Congress has considered legislation addressing global climate issues and greenhouse gas emissions, but to date, no such legislation has been signed into law. While it is possible that the U.S. will adopt legislation in the future, the timing and specific requirements of any such legislation are uncertain. In the absence of new U.S. federal legislation, the EPA has taken steps to regulate greenhouse gas emissions pursuant to the CAA. In response to the 2007 U.S. Supreme Court ruling in *Massachusetts v. EPA*, the EPA commenced several rulemaking projects as described under "Regulatory Matters - U.S." In particular, in 2015, the EPA announced final rules (known as the CPP) for regulating carbon dioxide emissions from existing and new fossil fuel-fired EGUs. Twenty-seven states and governmental entities, as well as utilities, industry groups, trade associations, coal companies (including Peabody), and other entities, challenged the CPP in federal court. Implementation of the CPP was stayed by the U.S. Supreme Court pending resolution of its legal challenges. In October 2017, the EPA proposed to change its legal interpretation of section 111(d) of the CAA, the authority that the agency relied on for the original CPP. The EPA relied on the proposed reinterpretation until August 2018, when it proposed the Affordable Clean Energy Rule (the ACE Rule) to replace the CPP with a system where states would develop emissions reduction plans using BSER measures (essentially efficiency heat rate improvements), and the EPA would approve the state plans if they use EPA-approved candidate technologies. Changes in the NSR program were also proposed to allow efficiency improvements to be made without triggering NSR requirements. In September 2019, the ACE Rule, which provides states with the flexibility to regulate on a plant-by-plant basis with a focus on coal-fired EGUs, became effective and the CPP was repealed. Proposed revisions to the regulations under the NSR program that were part of the ACE proposal were separated and the EPA indicated that it intends to take final action on the proposed NSR program reforms at a later date. Following the effectiveness of the ACE Rule, the case challenging the CPP in federal court was dismissed as being moot. On January 19, 2021, the D.C. Circuit Court of Appeals held that the ACE Rule and its repeal of the CPP were to be vacated and remanded to the EPA. It also vacated amendments to the implementing regulations that extended the compliance timeline.

At the same time, a number of states in the U.S. have adopted programs to regulate greenhouse gas emissions. For example, 10 northeastern states (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont) entered into the Regional Greenhouse Gas Initiative (RGGI) in 2005, and Pennsylvania is expected to join in 2022. RGGI is a mandatory cap-and-trade program to cap regional carbon dioxide emissions from power plants. Six mid-western states (Illinois, Iowa, Kansas, Michigan, Minnesota and Wisconsin) and one Canadian province have entered into the Midwestern Regional Greenhouse Gas Reduction Accord (MGGRA) to establish voluntary regional greenhouse gas reduction targets and develop a voluntary multi-sector cap-and-trade system to help meet the targets. It has been reported that, while the MGGRA has not been formally suspended, the participating states are no longer pursuing it. Seven western states (Arizona, California, Montana, New Mexico, Oregon, Utah and Washington) and four Canadian provinces entered into the Western Climate Initiative (WCI) in 2008 to establish a voluntary regional greenhouse gas reduction goal and develop market-based strategies to achieve emissions reductions. However, in November 2011, the WCI announced that six states had withdrawn from the WCI, leaving California and four Canadian provinces as the remaining members. Of those five jurisdictions, only California and Quebec have adopted greenhouse gas cap-and-trade regulations to date and both programs have begun operating. Many of the states and provinces that left WCI, RGGI and MGGRA, along with many that continue to participate, have joined the new North America 2050 initiative, which seeks to reduce greenhouse gas emissions and create economic opportunities in ways not limited to cap-and-trade programs.

Several other U.S. states have enacted legislation establishing greenhouse gas emissions reduction goals or requirements. In addition, several states have enacted legislation or have in effect regulations requiring electricity suppliers to use renewable energy sources to generate a certain percentage of power or that provide financial incentives to electricity suppliers for using renewable energy sources. Some states have initiated public utility proceedings that may establish values for carbon emissions.

Increasingly, both foreign and domestic banks, insurance companies and large investors are curtailing or ending their financial relationships with fossil fuel-related companies. This has had adverse impacts on the liquidity and operations of coal producers.

Peabody participated in the Department of Energy's Voluntary Reporting of Greenhouse Gases Program until its suspension in May 2011, and the Company regularly discloses information regarding its production-related emissions in its annual Environmental, Social and Governance Report. The vast majority of the Company's emissions are generated by the operation of heavy machinery to extract and transport material at its mines and fugitive emissions from the extraction of coal.

The Kyoto Protocol, adopted in December 1997 by the signatories to the 1992 United Nations Framework Convention on Climate Change (UNFCCC), established a binding set of greenhouse gas emission targets for developed nations. The U.S. signed the Kyoto Protocol but it has never been ratified by the U.S. Senate. Australia ratified the Kyoto Protocol in December 2007 and became a full member in March 2008. There were discussions to develop a treaty to replace the Kyoto Protocol after the expiration of its commitment period in 2012, including at the UNFCCC conferences in Cancun (2010), Durban (2011), Doha (2012) and Paris (2015). At the Durban conference, an ad hoc working group was established to develop a protocol, another legal instrument or an agreed outcome with legal force under the UNFCCC, applicable to all parties. At the Doha meeting, an amendment to the Kyoto Protocol was adopted, which included new commitments for certain parties in a second commitment period, from 2013 to 2020. In December 2012, Australia signed on to the second commitment period. During the UNFCCC conference in Paris, France in late 2015, an agreement was adopted calling for voluntary emissions reductions contributions after the second commitment period ends in 2020 (the Paris Agreement). The agreement was entered into force on November 4, 2016 after ratification and execution by more than 55 countries, including Australia, that account for at least 55% of global greenhouse gas emissions. On January 20, 2021, the U.S. reentered the Paris Agreement by accepting the agreement and all of its articles and clauses, after having announced its withdrawal from the agreement in November 2019.

In October 2017, the Australian Federal Government released a plan aimed at delivering an affordable and reliable energy system that meets Australia's international commitments to emissions reduction. The plan was referred to as the National Energy Guarantee (NEG) and was aimed at changing the National Electricity Market and associated legislative framework. The NEG was abandoned by the Australian government in September 2018. Following the outcome of the federal election in May 2019, the federal government confirmed it will not revive the former NEG policy. Instead, the government will pursue a new energy and climate change policy, which includes a \$2 billion Australian dollars investment in projects to bring down Australia's greenhouse gas emissions. The Climate Solutions Fund is an extension of the former Emissions Reduction Fund. The government has confirmed that it remains committed to meeting Australia's Paris Agreement targets but that the focus of energy policy will be on driving down electricity prices.

Available Information

Peabody files or furnishes annual, quarterly and current reports (including any exhibits or amendments to those reports), proxy statements and other information with the SEC. These materials are available free of charge through the Company's website (www.peabodyenergy.com) as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. Information included on the Company's website does not constitute part of this document. These materials may also be accessed through the SEC's website (www.sec.gov).

In addition, copies of the Company's filings will be made available, free of charge, upon request by telephone at (314) 342-7900 or by mail at: Peabody Energy Corporation, Peabody Plaza, 701 Market Street, St. Louis, Missouri 63101-1826, attention: Investor Relations.

Item 1A. Risk Factors.

The Company operates in a rapidly changing environment that involves a number of risks. The following discussion highlights some of these risks and others are discussed elsewhere in this report. These and other risks could materially and adversely affect the Company's business, financial condition, prospects, operating results or cash flows. The following risk factors are not an exhaustive list of the risks associated with the Company's business. New factors may emerge or changes to these risks could occur that could materially affect its business.

Risks Associated with Peabody's Operations

The Company's profitability depends upon the prices it receives for its coal.

The Company operates in a competitive and highly regulated industry that has at times experienced strong headwinds. Current pricing levels of both seaborne and domestic coal products may not be sustainable in the future. Declines in coal prices could materially and adversely affect the Company's operating results and profitability and the value of its coal reserves and resources.

Coal prices are dependent upon factors beyond the Company's control, including:

- the demand for electricity and capacity utilization of electricity generating units (whether coal or non-coal);
- changes in the fuel consumption and dispatch patterns of electric power generators, whether based on economic or non-economic factors;
- the proximity, capacity and cost of transportation and terminal facilities;
- competition with and the availability, quality and price of coal and alternative fuels, including natural gas, fuel oil, nuclear, hydroelectric, wind, biomass and solar power;
- governmental regulations and taxes, including tariffs or other trade restrictions as well as those establishing air emission standards for coal-fueled power plants or mandating or subsidizing increased use of electricity from renewable energy sources;
- the strength of the global economy;
- the global supply and production costs of thermal and metallurgical coal;
- the demand for steel, which may lead to price fluctuations in the monthly and quarterly repricing of the Company's metallurgical coal contracts;
- weather patterns, severe weather and natural disasters;
- regulatory, administrative and judicial decisions, including those affecting future mining permits and leases;
- competing technologies used to make steel, some of which do not use coal as a manufacturing input, such as electric arc furnaces; and
- technological developments, including those related to alternative energy sources, those intended to convert coal-to-liquids or gas and those aimed at capturing, using and storing carbon dioxide.

Thermal coal accounted for the majority of the Company's coal sales by volume during 2021 and 2020, with the vast majority of these sales to electric power generators. The demand for coal consumed for electric power generation is affected by many of the factors described above, but primarily by (i) the overall demand for electricity; (ii) the availability, quality and price of competing fuels, such as natural gas, nuclear fuel, oil and alternative energy sources; (iii) utilization of all electricity generating units (whether using coal or not), including the relative cost of producing electricity from multiple fuels, including coal; (iv) stringent environmental and other governmental regulations; (v) other sociopolitical views on coal; and (vi) the coal inventories of utilities. Gas-fueled generation has displaced and could continue to displace coal-fueled generation (particularly from older, less efficient coal-fueled generation units) as current and potentially increasing regulatory costs and other factors impact the operating decisions of electric power generators. In addition, some electric power generators have made decisions to close coal-fueled generation units given ongoing pressure to shift away from coal generation. Many of the new power plants in the U.S. may be fueled by natural gas because gas-fired plants have been less expensive to construct, permits to construct these plants are easier to obtain based on emissions profiles and electric power generators may face public and governmental pressure to generate a larger portion of their electricity from natural gas-fueled units and alternative energy sources. Increasingly stringent regulations along with stagnant electricity demand in recent years have also reduced the number of new power plants being built. In recent years, these trends have reduced demand for the Company's coal and the related prices. Lower demand for coal consumed by electric power generators could reduce the volume of thermal coal that the Company sells and the prices that it receives for the thermal coal, thereby reducing its revenues and adversely impacting its earnings and the value of its coal reserves and resources.

The Company produces metallurgical coal that is used in the global steel industry. Metallurgical coal accounted for approximately 22% and 17% of its revenues in 2021 and 2020, respectively. Changes in governmental policies and regulations and changes in the steel industry, including the demand for steel, could reduce the demand for the Company's metallurgical coal. Lower demand for metallurgical coal in international markets could reduce the amount of metallurgical coal that the Company sells and the prices that it receives for the metallurgical coal, thereby reducing its revenues and adversely impacting its earnings and the value of its coal reserves and resources.

The balance between coal demand and supply, factoring in demand and supply of closely related and competing fuel sources, both domestically and internationally, could materially reduce coal prices and therefore materially reduce the Company's revenues and profitability. The Company competes with other fuel sources used for electricity generation, such as natural gas and renewables. The Company's seaborne products compete with other producers as well as other fuel sources. Declines in the price of natural gas could cause demand for coal to decrease and adversely affect the price of coal. Sustained periods of low natural gas prices or low prices for other fuels may also cause utilities to phase out or close existing coal-fueled power plants or reduce construction of new coal-fueled power plants. In the U.S., no new coal-fueled power plants are being constructed or reopened after closure. These closures could have a material adverse effect on demand and prices for the Company's coal, thereby reducing its revenues and materially and adversely affecting its business and results of operations.

If a substantial number of the Company's long-term coal supply agreements, including those with its largest customers, terminate, or if the pricing, volumes or other elements of those agreements materially adjust, its revenues and operating profits could suffer if the Company is unable to find alternate buyers willing to purchase its coal on comparable terms to those in its contracts.

Most of the Company's sales are made under coal supply agreements, which are important to the stability and profitability of its operations. The execution of a satisfactory coal supply agreement is frequently the basis on which the Company undertakes the development of coal reserves and resources required to be supplied under the contract, particularly in the U.S. For the year ended December 31, 2021, the Company derived 26% of its revenues from coal supply agreements from its five largest customers. Those five customers were supplied primarily from 17 coal supply agreements (excluding trading and brokerage transactions) expiring at various times from 2022 to 2026.

Many of the Company's coal supply agreements contain provisions that permit the parties to adjust the contract price upward or downward at specified times. The Company may adjust these contract prices based on inflation or deflation, price indices and/or changes in the factors affecting the cost of producing coal, such as taxes, fees, royalties and changes in the laws regulating the mining, production, sale or use of coal. In a limited number of contracts, failure of the parties to agree on a price under those provisions may allow either party to terminate the contract. The Company may experience reductions in coal prices in new long-term coal supply agreements replacing some of its expiring contracts. Coal supply agreements also typically contain force majeure provisions allowing temporary suspension of performance by the Company or the customer during the duration of specified events beyond the control of the affected party. Some coal supply agreements allow customers to vary the volumes of coal that they are required to purchase during a particular period, and where coal supply agreements do not explicitly allow such variation, customers sometimes request that the Company amend the agreements to allow for such variation. Most of its coal supply agreements contain provisions requiring the Company to deliver coal meeting quality thresholds for certain characteristics such as Btu, sulfur content, ash content, volatile matter, coking properties, grindability and ash fusion temperature. Failure to meet these specifications could result in economic penalties, including price adjustments, the rejection of deliveries or termination of the contracts. Moreover, some of these agreements allow the Company's customers to terminate their contracts in the event of changes in regulations affecting the coal industry that restrict the use or type of coal permissible at the customer's plant or increase the price of coal beyond specified limits.

On an ongoing basis, the Company discusses the extension of existing agreements or entering into new long-term agreements with various customers, but these negotiations may not be successful and these customers may not continue to purchase coal from the Company under long-term supply agreements.

The operating profits the Company realizes from coal sold under supply agreements depend on a variety of factors. In addition, price adjustment and other contract provisions may increase its exposure to short-term coal price volatility. If a substantial portion of the Company's coal supply agreements were modified or terminated, it could be materially adversely affected to the extent that it is unable to find alternate buyers for its coal at the same level of profitability. Prices for coal vary by mining region and country. As a result, the Company cannot predict the future strength of the coal industry overall or by mining region and cannot provide assurance that it will be able to replace existing long-term coal supply agreements at the same prices or with similar profit margins when they expire. In addition, the Company's revenue could be adversely affected by a decline in customer purchases (including contractually obligated purchases) due to lack of demand and oversupply, cost of competing fuels and environmental and other governmental regulations.

Risks inherent to mining could increase the cost of operating the Company's business, and events and conditions that could occur during the course of its mining operations could have a material adverse impact on the Company.

The Company's mining operations are subject to conditions that can impact the safety of its workforce, delay coal deliveries or increase the cost of mining at particular mines for varying lengths of time. These conditions include:

- elevated gas levels;
- fires and explosions, including from methane gas or coal dust;
- accidental mine water discharges;
- weather, flooding and natural disasters;
- hazardous events such as roof falls and high wall or tailings dam failures;
- seismic activities, ground failures, rock bursts or structural cave-ins or slides;
- key equipment failures;
- unavailability of equipment or parts;
- variations in coal seam thickness, coal quality, the amount of rock and soil overlying coal deposits and geologic conditions impacting mine sequencing;
- delays in moving its longwall equipment;
- unexpected maintenance problems; and
- unforeseen delays in implementation of mining technologies that are new to its operations.

The Company maintains insurance policies that provide limited coverage for some of the risks referenced above, which may lessen the impact associated with these risks. However, there can be no assurance as to the amount or timing of recovery under its insurance policies in connection with losses associated with these risks.

The Company's take-or-pay arrangements could unfavorably affect its profitability.

The Company has substantial take-or-pay arrangements with its port access and rail transportation providers, predominately in Australia, totaling \$1.2 billion, with terms ranging up to 21 years, that commit the Company to pay a minimum amount for the delivery of coal even if those commitments go unused. The take-or-pay provisions in these contracts sometimes allow the Company to apply amounts paid for subsequent deliveries, but these provisions have limitations and the Company may not be able to apply all such amounts so paid in all cases. Also, the Company may not be able to utilize the amount of capacity for which it has previously paid. Additionally, the Company may continue to deliver coal during times when it might otherwise be optimal to suspend operations because these take-or-pay provisions effectively convert a variable cost of selling coal to a fixed operating cost.

The Company may not recover its investments in its mining, exploration and other assets, which may require the Company to recognize impairment charges related to those assets.

The value of the Company's assets have from time to time been adversely affected by numerous uncertain factors, some of which are beyond its control, including unfavorable changes in the economic environments in which it operates; declining coal-fired electricity generation; lower-than-expected coal pricing; technical and geological operating difficulties; an inability to economically extract its coal reserves and resources; and unanticipated increases in operating costs. During the year ended December 31, 2020, the Company recorded \$1,487.4 million of impairment charges related to such factors, as further described in Note 3. "Asset Impairment" to the accompanying consolidated financial statements. These factors may trigger the recognition of additional impairment charges in the future, which could have a substantial impact on the Company's results of operations.

Because of the volatile and cyclical nature of coal markets, it is reasonably possible that the Company's current estimates of projected future cash flows from its mining assets may change in the near term, which may result in the need for adjustments to the carrying value of its assets.

The Company could be negatively affected if it fails to maintain satisfactory labor relations.

As of December 31, 2021, the Company had approximately 4,900 employees (excluding employees that were employed at operations classified as discontinued), which included approximately 3,900 hourly employees. The Company is party to labor agreements with various labor unions that represent certain of its employees. Such labor agreements are negotiated periodically, and, therefore, the Company is subject to the risk that these agreements may not be able to be renewed on reasonably satisfactory terms. Approximately 34% of its hourly employees were represented by organized labor unions and generated approximately 16% of its coal production for the year ended December 31, 2021. Relations with its employees and, where applicable, organized labor are important to the Company's success. If some or all of its current non-union operations were to become unionized, the Company could incur an increased risk of work stoppages, reduced productivity and higher labor costs. Also, if the Company fails to maintain good relations or successfully negotiate contracts with its employees who are represented by unions, the Company could potentially experience labor disputes, strikes, work stoppages, slowdowns or other disruptions in production that could negatively impact its profitability.

The Company could be adversely affected if it fails to appropriately provide financial assurances for its obligations.

U.S. federal and state laws and Australian laws require the Company to provide financial assurances related to requirements to reclaim lands used for mining; to pay federal and state workers' compensation, such as black lung liabilities; to provide financial assurances for coal lease obligations; and to satisfy other miscellaneous obligations. The primary methods the Company uses to meet those obligations are to provide a third-party surety bond or a letter of credit. As of December 31, 2021, the Company had \$1,463.7 million of outstanding surety bonds and \$452.6 million of letters of credit with third parties in order to provide required financial assurances for post-mining reclamation, workers' compensation and other insurance obligations, coal lease-related and other obligations and performance guarantees, in addition to collateral for sureties.

The Company's financial assurance obligations may increase or become more costly due to a number of factors, and surety bonds and letters of credit may not be available to the Company, particularly in light of some banks and insurance companies' announced unwillingness to support thermal coal producers and other fossil fuel companies. Alternative forms of financial assurance such as self-bonding have been severely restricted or terminated in most of the regions where its mines reside. The Company's failure to retain, or inability to obtain, surety bonds, bank guarantees or letters of credit, or to provide a suitable alternative, could have a material adverse effect on it. That failure could result from a variety of factors including:

- lack of availability, higher expense or unfavorable market terms of new surety bonds, bank guarantees or letters of credit; and
- inability to provide or fund collateral for current and future third-party issuers of surety bonds, bank guarantees or letters of credit.

As further described in "Liquidity and Capital Resources" of Part II, Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations," in November 2020, the Company entered into a surety transaction support agreement with the providers of its surety bond portfolio. The Company's failure to provide adequate collateral, or abide by other terms in the agreement, could invalidate the agreement and materially and adversely affect its business and results of operations.

The Company's failure to maintain adequate bonding would invalidate its mining permits and prevent mining operations from continuing, which could result in its inability to continue as a going concern.

The Company's mining operations are extensively regulated, which imposes significant costs on it, and future regulations and developments could increase those costs or limit its ability to produce coal.

The coal mining industry is subject to regulation by federal, state and local authorities with respect to matters such as:

- workplace health and safety;
- limitations on land use;
- mine permitting and licensing requirements;
- reclamation and restoration of mining properties after mining is completed;
- the storage, treatment and disposal of wastes;
- remediation of contaminated soil, sediment and groundwater;
- air quality standards;
- water pollution;
- protection of human health, plant-life and wildlife, including endangered or threatened species and habitats;
- protection of wetlands;
- the discharge of materials into the environment; and
- the effects of mining on surface water and groundwater quality and availability.

Regulatory agencies have the authority under certain circumstances following significant health and safety incidents to order a mine to be temporarily or permanently closed. In the event that such agencies ordered the closing of one of the Company's mines, its production and sale of coal would be disrupted and it may be required to incur cash outlays to re-open the mine. Any of these actions could have a material adverse effect on the Company's financial condition, results of operations and cash flows.

New legislation, regulations or orders related to the environment or employee health and safety may be adopted and may materially adversely affect the Company's mining operations, its cost structure or its customers' ability to use coal. New legislation or administrative regulations (or new interpretations by the relevant government of existing laws, regulations and approvals), including proposals related to the protection of the environment or the reduction of greenhouse gas emissions that would further regulate and tax the coal industry, may also require the Company or its customers to change operations significantly or incur increased costs. Some of the Company's coal supply agreements contain provisions that allow a purchaser to terminate its contract if legislation is passed that either restricts the use or type of coal permissible at the purchaser's plant or results in specified increases in the cost of coal or its use. These factors and legislation, if enacted, could have a material adverse effect on the Company's financial condition and results of operations.

For additional information about the various regulations affecting the Company, see the sections entitled "Regulatory Matters —U.S." and "Regulatory Matters —Australia."

The Company's operations may impact the environment or cause exposure to hazardous substances, and its properties may have environmental contamination, which could result in material liabilities to the Company.

The Company's operations currently use hazardous materials and generate limited quantities of hazardous wastes from time to time. A number of laws, including CERCLA and RCRA in the U.S. and similar laws in other countries where the Company operates, impose liability relating to contamination by hazardous substances. Such liability may involve the costs of investigating or remediating contamination and damages to natural resources, as well as claims seeking to recover for property damage or personal injury caused by hazardous substances. Such liability may arise from conditions at formerly, as well as currently, owned or operated properties, and at properties to which hazardous substances have been sent for treatment, disposal or other handling. Liability under RCRA, CERCLA and similar state statutes is without regard to fault, and typically is joint and several, meaning that a person may be held responsible for more than its share, or even all, of the liability involved.

The Company may be unable to obtain, renew or maintain permits necessary for its operations, or the Company may be unable to obtain, renew or maintain such permits without conditions on the manner in which it runs its operations, which would reduce its production, cash flows and profitability.

Numerous governmental permits and approvals are required for mining operations. The permitting rules, and the interpretations of these rules, are complex, change frequently and are often subject to discretionary interpretations by regulators, all of which may make compliance more difficult or impractical. As part of this permitting process, when the Company applies for permits and approvals, it is required to prepare and present to governmental authorities data pertaining to the potential impact or effect that any proposed exploration for or production of coal may have upon the environment. The public, including non-governmental organizations, opposition groups and individuals, have statutory rights to comment upon and submit objections to requested permits and approvals (including modifications and renewals of certain permits and approvals) and otherwise engage in the permitting process, including bringing citizens' lawsuits to challenge the issuance of permits, the validity of environmental impact statements or the performance of mining activities. In recent years, the permitting required for coal mining has been the subject of increasingly stringent regulatory and administrative requirements and extensive litigation by environmental groups.

Additionally, the Company's operations may be affected by sites within or near mining areas that have cultural heritage significance to indigenous peoples, and its mining permits may be rescinded or modified, or its mining plans may be voluntarily adjusted, to mitigate against adverse impacts to such sites.

The costs, liabilities and requirements associated with these permitting requirements and any related opposition may be extensive and time-consuming and may delay commencement or continuation of exploration or production which would adversely affect the Company's coal production, cash flows and profitability. Further, required permits may not be issued or renewed in a timely fashion or at all, or permits issued or renewed may be conditioned in a manner that may restrict the Company's ability to efficiently and economically conduct its mining activities, any of which would materially reduce its production, cash flows and profitability.

Concerns about the impacts of coal combustion on global climate are increasingly leading to conditions that have affected and could continue to affect demand for the Company's products or its securities and its ability to produce, including increased governmental regulation of coal combustion and unfavorable investment decisions by electricity generators.

Global climate issues continue to attract public and scientific attention. Numerous reports, including the Fourth and the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, have also engendered concern about the impacts of human activity, especially fossil fuel combustion, on global climate issues. In turn, increasing government attention is being paid to global climate issues and to emissions of greenhouse gases, including emissions of carbon dioxide from coal combustion by power plants.

The enactment of future laws or the passage of regulations regarding emissions from the use of coal by the U.S., some of its states or other countries, or other actions to limit such emissions, could result in electricity generators switching from coal to other fuel sources. Further, policies limiting available financing for the development of new coal-fueled power stations could adversely impact the global demand for coal in the future. The potential financial impact on Peabody of such future laws, regulations or other policies will depend upon the degree to which any such laws or regulations force electricity generators to diminish their reliance on coal as a fuel source. That, in turn, will depend on a number of factors, including the specific requirements imposed by any such laws, regulations or other policies, the time periods over which those laws, regulations or other policies would be phased in, the state of development and deployment of CCUS technologies as well as acceptance of CCUS technologies to meet regulations and the alternative uses for coal. Higher-efficiency coal-fired power plants may also be an option for meeting laws or regulations related to emissions from coal use. Several countries, including major coal users such as China, India and Japan, included using higher-efficiency coal-fueled power plants in their plans under the Paris Agreement.

From time to time, the Company's board of directors and management attempt to analyze the potential impact on the Company of as-yet-unadopted, potential laws, regulations and policies. Such analyses require significant assumptions as to the specific provisions of such potential laws, regulations and policies which sometimes show that if implemented in the manner assumed by the analyses, the potential laws, regulations and policies could result in material adverse impacts on the Company's operations, financial condition or cash flows. Such analyses cannot be relied upon to reasonably predict the quantitative impact that future laws, regulations or other policies may have on the Company's results of operations, financial condition or cash flows.

Numerous activist groups are devoting substantial resources to anti-coal activities to minimize or eliminate the use of coal as a source of electricity generation, domestically and internationally, thereby further reducing the demand and pricing for coal, and potentially materially and adversely impacting the Company's future financial results, liquidity and growth prospects.

Several non-governmental organizations have undertaken campaigns to minimize or eliminate the use of coal as a source of electricity generation in the U.S. and across the globe. In an effort to stop or delay coal mining activities, activist groups have brought lawsuits challenging the issuance of individual coal leases, and challenging the federal coal leasing program more broadly. Other lawsuits challenge historical and pending regulatory approvals, permits and processes that are necessary to conduct coal mining operations or to operate coal-fueled power plants, including so-called "sue and settle" lawsuits where regulatory authorities in the past have reached private agreements with environmental activists that often involve additional regulatory restrictions or processes being implemented without formal rulemaking.

The effect of these and other similar developments has made it more costly and difficult to maintain the Company's business. These cost increases and/or substantial or extended declines in the prices the Company receives for its coal due to these or other factors could reduce its revenue and profitability, cash flows, liquidity, and value of its coal reserves and resources, and could result in material losses.

The Company's trading and hedging activities do not cover certain risks and may expose it to earnings volatility and other risks.

In addition to coal price volatility, the Company is currently subject to price volatility on diesel fuel utilized in its mining operations and the Australian dollar. The Company may in the future enter into hedging arrangements, including economic hedging arrangements, to manage these risks or other exposures.

Some of these hedging arrangements may require the Company to post margin based on the value of the related instruments and other credit factors. If the fair value of its hedge portfolio moves significantly, or if laws, regulations or exchange rules are passed requiring all hedge arrangements to be exchange-traded or exchange-cleared, the Company could be required to post additional margin, which could negatively impact its liquidity.

If the assumptions underlying the Company's asset retirement obligations for reclamation and mine closures are materially inaccurate, its costs could be significantly greater than anticipated.

The Company's asset retirement obligations primarily consist of spending estimates for surface land reclamation and support facilities at both surface and underground mines in accordance with federal and state reclamation laws in the U.S. and Australia as defined by each mining permit. These obligations are determined for each mine using various estimates and assumptions including, among other items, estimates of disturbed acreage as determined from engineering data, estimates of future costs to reclaim the disturbed acreage and the timing of these cash flows, which is driven by the estimated economic life of the mine and the applicable reclamation laws. These cash flows are discounted using a credit-adjusted, risk-free rate. The Company's management and engineers periodically review these estimates. If its assumptions do not materialize as expected, actual cash expenditures and costs that the Company incurs could be materially different than currently estimated. Moreover, regulatory changes could increase the Company's obligation to perform reclamation, mine closing and post-closure activities. The resulting estimated asset retirement obligation could change significantly if actual amounts change significantly from its assumptions, which could have a material adverse effect on its results of operations and financial condition.

The Company's future success depends upon its ability to continue acquiring and developing coal reserves and resources that are economically recoverable.

The Company's recoverable reserves and resources decline as it produces coal. The Company has not yet applied for the permits required or developed the mines necessary to use all of its reserves and resources. Moreover, the amount of coal reserves and resources described in Part I, Item 2. "Properties" involves the use of certain estimates and those estimates could be inaccurate. Actual production, revenues and expenditures with respect to its coal reserves and resources may vary materially from estimates.

The Company's future success depends upon it conducting successful exploration and development activities or acquiring properties containing economically recoverable reserves and resources. The Company's current strategy includes increasing its reserves and resources through acquisitions of government and other leases and producing properties and continuing to use its existing properties and infrastructure. In certain locations, leases for oil, natural gas and coalbed methane reserves are located on, or adjacent to, some of the Company's reserves and resources, potentially creating conflicting interests between it and lessees of those interests. Other lessees' rights relating to these mineral interests could prevent, delay or increase the cost of developing the Company's coal reserves and resources. These lessees may also seek damages from the Company based on claims that its coal mining operations impair their interests. Additionally, the U.S. federal government limits the amount of federal land that may be leased by any company to 75,000 acres in any one state and 150,000 acres nationwide. As of December 31, 2021, the Company leased a total of 44,287 acres from the federal government subject to those limitations.

The Company's planned mine development projects and acquisition activities may not result in significant additional reserves and resources, and it may not have success developing additional mines. Most of its mining operations are conducted on properties owned or leased by the Company. Its right to mine some of its reserves and resources may be materially adversely affected if defects in title or boundaries exist. In order to conduct its mining operations on properties where these defects exist, the Company may incur unanticipated costs. In addition, in order to develop its reserves and resources, the Company must also own the rights to the related surface property and receive various governmental permits. The Company cannot predict whether it will continue to receive the permits or appropriate land access necessary for it to operate profitably in the future. The Company may not be able to negotiate or secure new leases from the government or from private parties, obtain mining contracts for properties containing additional reserves and resources or maintain its leasehold interest in properties on which mining operations have not commenced or have not met minimum quantity or product royalty requirements. From time to time, the Company has experienced litigation with lessors of its coal properties and with royalty holders. In addition, from time to time, its permit applications and federal and state coal leases have been challenged, causing production delays.

To the extent that the Company's existing sources of liquidity are not sufficient to fund its planned mine development projects or reserve and resource acquisition activities, it may require access to capital markets, which may not be available to it or, if available, may not be available on satisfactory terms. If the Company is unable to fund these activities, it may not be able to maintain or increase its existing production rates and could be forced to change its business strategy, which could have a material adverse effect on its financial condition, results of operations and cash flows.

The Company faces numerous uncertainties in estimating its coal reserves and resources and inaccuracies in its estimates could result in lower than expected revenues, higher than expected costs and decreased profitability.

Coal is economically recoverable when the price at which the Company's coal can be sold exceeds the costs and expenses of mining and selling the coal. The costs and expenses of mining and selling the coal are determined on a mine-by-mine basis, and as a result, the price at which its coal is economically recoverable varies based on the mine. Forecasts of the Company's future performance are based on, among other things, estimates of its recoverable coal reserves and resources. The Company bases its reserve and resource information on engineering, economic and geological data assembled and analyzed by its staff and third parties, which includes various engineers and geologists. The Company's estimates are also subject to SEC regulations regarding classification of reserves and resources, including the recently adopted subpart 1300 of Regulation S-K. The reserve and resource estimates as to both quantity and quality are updated from time to time to reflect production of coal from the reserves and resources and new drilling or other data received. There are numerous uncertainties inherent in estimating quantities and qualities of coal and costs to mine recoverable reserves and resources, including many factors beyond the Company's control.

Estimates of economically recoverable coal reserves and resources necessarily depend upon a number of variable factors and assumptions, any one of which may, if incorrect, result in an estimate that varies considerably from actual results. These factors and assumptions include:

- geologic and mining conditions, which may not be fully identified by available exploration data and may differ from the Company's experience in areas it currently mines;
- demand for coal;
- current and future market prices for coal, contractual arrangements, operating costs and capital expenditures;
- severance and excise taxes, royalties and development and reclamation costs;
- future mining technology improvements;
- the effects of regulation by governmental agencies;
- the ability to obtain, maintain and renew all required permits;
- employee health and safety; and
- historical production from the area compared with production from other producing areas.

The conversion of reported mineral resources to mineral reserves should not be assumed, and the reclassification of reported mineral resources from lower to higher levels of geological confidence should not be assumed. As such, actual coal tonnage recovered from identified reserve and resource areas or properties and revenues and expenditures with respect to the Company's reserves and resources may vary materially from estimates. Thus, these estimates may not accurately reflect its actual reserves and resources. Any material inaccuracy in the Company's estimates related to its reserves and resources could result in lower than expected revenues, higher than expected costs or decreased profitability which could materially and adversely affect its business, results of operations, financial position and cash flows.

Joint ventures, partnerships or non-managed operations may not be successful and may not comply with the Company's operating standards.

The Company participates in several joint venture and partnership arrangements and may enter into others, all of which necessarily involve risk. Whether or not the Company holds majority interests or maintains operational control in its joint ventures, its partners may, among other things, (1) have economic or business interests or goals that are inconsistent with, or opposed to, the Company's; (2) seek to block actions that the Company believes are in its or the joint venture's best interests; or (3) be unable or unwilling to fulfill their obligations under the joint venture or other agreements, such as contributing capital, each of which may adversely impact the Company's results of operations and its liquidity or impair its ability to recover its investments.

Where the Company's joint ventures are jointly controlled or not managed by it, the Company may provide expertise and advice but have limited control over compliance with its operational standards. The Company also utilizes contractors across its mining platform, and may be similarly limited in its ability to control their operational practices. Failure by non-controlled joint venture partners or contractors to adhere to operational standards that are equivalent to the Company's could unfavorably affect safety results, operating costs and productivity and adversely impact its results of operations and reputation.

The Company's business, results of operations, financial condition and prospects could be materially and adversely affected by pandemic or other widespread illnesses and the related effects on public health.

The Company's operations are susceptible to widespread outbreaks of illness or other public health issues, such as the continuing global COVID-19 pandemic. Pandemic illnesses could have a material adverse effect on the Company's business, results of operations, financial condition and prospects, including its ability to comply with covenants under its debt agreements.

Governmental mandates and the Company's efforts to act in the best interests of its employees, customers, suppliers, vendors and joint venture and other business partners, could affect its business and operations, causing the Company to modify a number of its normal business practices. Governmental mandates could require forced shutdowns of its mines and other facilities for extended or indefinite periods and widespread outbreaks in locations significant to its operations could adversely affect its workforce, resulting in serious health issues and absenteeism. In addition, pandemic illnesses could cause supply chains and distribution channels to be interrupted, slowed or rendered inoperable. If the Company's operations were curtailed, it may need to seek alternate sources of supply for commodities, services and labor, which may be more expensive. Alternate sources may not be available or may result in delays in shipments to its customers. Further, if the Company's customers' businesses were similarly affected, they might delay, reduce or cancel purchases from the Company. Adverse changes in the general domestic and global economic conditions and disrupted domestic and international credit markets, could negatively affect its customers' ability to pay the Company as well as its ability to access capital that could negatively affect its liquidity.

Despite its efforts to manage these potential impacts, their ultimate impact would also depend on factors beyond the Company's knowledge or control, including the duration and severity of the pandemic as well as third-party actions taken to contain its spread and mitigate its public health effects. The Company could also face disruption to supply chain and distribution channels, potentially increasing costs of production, storage and distribution, and potential adverse effects to its workforce, each of which could have a material adverse effect on its business, financial condition, results of operations and prospects.

The Company's expenditures for postretirement benefit obligations could be materially higher than it has predicted if its underlying assumptions prove to be incorrect.

The Company pays postretirement health and life insurance benefits to eligible retirees. Its total accumulated postretirement benefit obligation related to such benefits was a liability of \$232.6 million as of December 31, 2021, of which \$20.5 million was classified as a current liability.

These liabilities are actuarially determined. The Company uses various actuarial assumptions, including the discount rate, future cost trends, mortality tables and rates of return on plan assets to estimate the costs and obligations for these items. Its discount rate is determined by utilizing a hypothetical bond portfolio model which approximates the future cash flows necessary to service its liabilities. A decrease in the discount rate used to determine its postretirement benefit and defined benefit pension obligations could result in an increase in the valuation of these obligations, thereby increasing the cost in subsequent fiscal years. The Company has made assumptions related to future trends for medical care costs in the estimates of retiree health care obligations. Its medical trend assumption is developed by annually examining the historical trend of its cost per claim data. If the Company's assumptions do not materialize as expected, actual cash expenditures and costs that it incurs could differ materially from its current estimates. Moreover, regulatory changes or changes in healthcare benefits provided by the government could increase its obligation to satisfy these or additional obligations. The Company develops its actuarial determinations of liabilities using actuarial mortality tables it believes best fit its population's actual results. In deciding which mortality tables to use, the Company periodically reviews its population's actual mortality experience and evaluates results against its current assumptions as well as consider recent mortality tables published by the Society of Actuaries Retirement Plans Experience Committee in order to select mortality tables for use in its year end valuations. If the Company's mortality tables do not anticipate its population's mortality experience as accurately as expected, actual cash expenditures and costs that the Company incurs could differ materially from its current estimates. Additionally, the Company's reported defined benefit pension funding status may be affected, and it may be required to increase employer contributions, due to increases in its defined benefit pension obligation or poor financial performance in asset markets in future years.

The Company is subject to various general operating risks which may be fully or partially outside of its control.

The Company's results of operations, financial position or cash flows could be adversely impacted by various general operating risks which may be fully or partially outside of its control. Such risks stem from internal and external sources and include:

- global economic recessions and/or credit market disruptions;
- deterioration of the creditworthiness of its customers or counterparties to financial instruments, and their ability to perform under contracts;
- inability of suppliers and other counterparties, including those related to transportation, contract mining, service provision, and coal trading and brokerage, to fulfil the terms of their contracts with the Company;
- decreases in the availability or increases in costs of key supplies, capital equipment or commodities such as diesel fuel, steel, explosives and tires;
- disruption to, or increased costs within, the transportation chain for coal, including rail, barge, trucking, overland conveyor, ports and ocean-going vessels;
- failure to attract and retain skilled and qualified personnel, or increases in the costs required to attract and retain skilled and qualified personnel, particularly as the prevalence of coal-fired electricity generation declines;
- new or increased forms of taxation imposed by federal, state, provincial or local governmental authorities, including production taxes, sales-related taxes, royalties, environmental taxes, mining profits taxes and income taxes;
- uncertainties associated with the Company's global operating platform, including country and political risks, international regulatory requirements, and foreign currency rates; and
- cyber-attacks or other cybersecurity incidents that disrupt the operations of the Company or third-parties with which the Company does business, including cloud-based software service providers, or result in the dissemination of proprietary or confidential information about it, its employees, its customers or other third-parties.

Risks Related to Peabody's Indebtedness and Capital Structure

The Company's financial performance could be adversely affected by its funded indebtedness (Indebtedness).

As of December 31, 2021, the Company had approximately \$1.1 billion of Indebtedness outstanding, excluding finance leases and debt issuance costs.

The degree to which the Company is leveraged could have important consequences, including, but not limited to:

- making it more difficult for the Company to pay interest and satisfy its debt obligations;
- increasing the cost of borrowing;
- increasing the Company's vulnerability to general adverse economic and industry or regulatory conditions;
- requiring the dedication of a substantial portion of the Company's cash flow from operations to the payment of principal and interest on its Indebtedness, thereby reducing the availability of its cash flow to fund working capital, capital expenditures, business development or other general corporate requirements;
- limiting its ability to obtain additional financing to fund future working capital, capital expenditures, business development or other general corporate requirements;
- limiting its ability to make certain investments;
- limiting the Company's ability to refinance or otherwise exchange existing debt at commercially acceptable rates;
- making it more difficult to obtain surety bonds, letters of credit, bank guarantees or other financing, particularly during periods in which credit markets are weak;
- limiting the Company's flexibility in planning for, or reacting to, changes in its business and in the coal industry;
- causing a decline in its credit ratings; and
- placing the Company at a competitive disadvantage compared to less leveraged competitors.

A downgrade in the Company's credit ratings or other unfavorable indicators could result in, among other matters, a requirement to post additional collateral on derivative trading instruments that it may enter into, the loss of trading counterparties for corporate hedging and trading and brokerage activities or an increase in the cost of, or a limit on its access to, various forms of credit used in operating its business.

If the Company's cash flows and capital resources are insufficient to fund its debt service obligations, it may be forced to sell assets, seek additional capital or seek to restructure or refinance its Indebtedness. These alternative measures may not be successful and may not permit the Company to meet its scheduled debt service obligations. Its Indebtedness may restrict the use of the proceeds from any such sales. The Company may not be able to complete those sales and the proceeds may not be adequate to meet any debt service obligations then due.

Despite the Company's Indebtedness, it may still be able to incur more debt, which could further increase the risks associated with its Indebtedness.

The Company may be able to incur additional Indebtedness in the future. Although covenants under the indentures governing its senior secured notes and the agreements governing its other Indebtedness, including its credit facility, letter of credit facility, and finance leases, limit its ability to incur additional Indebtedness, these restrictions are subject to a number of qualifications and exceptions and, under certain circumstances, debt incurred in compliance with these restrictions can be material. In addition, the indenture governing the senior secured notes and the agreements governing the Company's other Indebtedness do not limit it from incurring obligations that do not constitute Indebtedness as defined therein.

The terms of the indentures governing the Company's senior secured notes and the agreements and instruments governing its other Indebtedness and surety bonding obligations impose restrictions that may limit its operating and financial flexibility.

The indentures governing the Company's senior secured notes and the agreements governing its other Indebtedness and surety bonding obligations contain certain restrictions and covenants which restrict its ability to incur liens and/or debt or provide guarantees in respect of obligations of any other person and other restrictions, all of which could adversely affect the Company's ability to operate its business, as well as significantly affect its liquidity, and therefore could adversely affect its results of operations.

These covenants limit, among other things, the Company's ability to:

- incur additional Indebtedness;
- pay dividends on or make distributions in respect of stock or make certain other restricted payments, such as share repurchases;
- make capital or other investments;
- enter into agreements that restrict distributions from certain subsidiaries;
- sell or otherwise dispose of assets;
- use for general purposes the cash received from certain allowable asset sales or disposals;
- enter into transactions with affiliates;
- create or incur liens;
- merge, consolidate or sell all or substantially all of its assets; and
- receive dividends or other payments from subsidiaries in certain cases.

The Company's ability to comply with these covenants may be affected by events beyond its control and the Company may need to refinance existing debt in the future. A breach of any of these covenants together with the expiration of any cure period, if applicable, could result in a default under its senior secured notes. If any such default occurs, subject to applicable grace periods, the holders of its senior secured notes may elect to declare all outstanding senior secured notes, together with accrued interest and other amounts payable thereunder, to be immediately due and payable. If the obligations under its senior secured notes were to be accelerated, the Company's financial resources may be insufficient to repay the notes and any other Indebtedness becoming due in full. The terms of the Company's Indebtedness provide that if it cannot meet its debt service obligations, the lenders could foreclose against the assets securing their borrowings and the Company could be forced into bankruptcy or liquidation.

In addition, if the Company breaches the covenants in the indentures governing the senior secured notes and do not cure such breach within the applicable time periods specified therein, the Company would cause an event of default under the indenture governing the senior secured notes and a cross-default to certain of its other Indebtedness and the lenders or holders thereunder could accelerate their obligations. If the Company's Indebtedness is accelerated, it may not be able to repay its Indebtedness or borrow sufficient funds to refinance it. Even if the Company is able to obtain new financing, it may not be on commercially reasonable terms or on terms that are acceptable to the Company. If the Company's Indebtedness is in default for any reason, its business, financial condition and results of operations could be materially and adversely affected. In addition, complying with these covenants may make it more difficult for the Company to successfully execute its business strategy and compete against companies who are not subject to such restrictions.

The number and quantity of viable financing and insurance alternatives available to the Company may be significantly impacted by unfavorable lending and investment policies by financial institutions and insurance companies associated with concerns about environmental impacts of coal combustion, and negative views around its efforts with respect to environmental and social matters and related governance considerations could harm the perception of the Company by a significant number of investors or result in the exclusion of its securities from consideration by those investors.

Certain banks, other financing sources and insurance companies have taken actions to limit available financing and insurance coverage for the development of new coal-fueled power plants and coal producers and utilities that derive a majority of their revenue from coal, and particularly from thermal coal. This may adversely impact the future global demand for coal. Increasingly, the actions of such financial institutions and insurance companies are informed by non-standardized "sustainability" scores, ratings and benchmarking studies provided by various organizations that assess environmental, social and governance matters. Further, there have been efforts in recent years by members of the general financial and investment communities, including investment advisors, sovereign wealth funds, public pension funds, universities and other institutional investors, to divest themselves and to promote the divestment of securities issued by companies involved in the fossil fuel extraction market, or that have low ratings or scores in studies and assessments of the type noted above, including coal producers. These entities also have been pressuring lenders to limit financing available to such companies.

These efforts may have adverse consequences, including, but not limited to:

- restricting the Company's ability to access capital and financial markets in the future;
- reducing the demand and price for its equity securities;
- increasing the cost of borrowing;
- causing a decline in the Company's credit ratings;
- reducing the availability, and/or increasing the cost of, third-party insurance;
- increasing the Company's retention of risk through self-insurance;
- making it more difficult to obtain surety bonds, letters of credit, bank guarantees or other financing; and
- limiting the Company's flexibility in business development activities such as mergers, acquisitions and divestitures.

Risks Related to Ownership of Peabody's Securities

The price of Peabody's securities may be volatile and could fall below the minimum allowed by New York Stock Exchange (NYSE) listing requirements.

The price of Peabody's common stock (Common Stock) may fluctuate due to a variety of market and industry factors that may materially reduce the market price of its Common Stock regardless of its operating performance, including, among others:

- actual or anticipated fluctuations in Peabody's quarterly and annual results and those of other public companies in its industry;
- industry cycles and trends;
- mergers and strategic alliances in the coal industry;
- changes in government regulation;
- potential or actual military conflicts or acts of terrorism;
- the failure of securities analysts to publish research about Peabody or to accurately predict the results it actually achieves;
- changes in accounting principles;
- announcements concerning Peabody or its competitors;
- the purchase and sale of shares of its Common Stock by significant shareholders;
- lack of or excess of trading liquidity; and
- the general volatility of securities markets.

As a result of all of these factors, investors in Peabody's Common Stock may not be able to resell their stock at or above the price they paid or at all. In the recent past, Peabody's closing stock price has fallen below \$1.00 per share for a limited number of trading days. If Peabody's stock were to trade below \$1.00 per share for 30 consecutive trading days, NYSE could commence suspension and delisting procedures. Further, Peabody could be the subject of securities class action litigation due to any such stock price volatility, which could divert management's attention and have a material adverse effect on its results of operation.

Peabody's Common Stock is subject to dilution and may be subject to further dilution in the future.

Peabody's Common Stock is subject to dilution from its long-term incentive plan. In addition, Peabody may continue issuing equity securities in connection with future investments, acquisitions, debt-for-equity exchanges or capital raising transactions. Such issuances or grants could constitute a significant portion of the then-outstanding Common Stock, which may result in significant dilution in ownership of Common Stock.

There may be circumstances in which the interests of a significant stockholder could be in conflict with other stakeholders' interests.

Circumstances may arise in which the interests of a significant stockholder may be in conflict with the interests of the Company's other stakeholders. A significant stockholder may exert substantial influence over the Company to cause the Company to take action that aligns with their interests, for example, to pursue or prevent acquisitions, divestitures or other transactions, including the issuance or repurchase of additional shares or debt, that, in its judgment, could enhance its investment in Peabody or another company in which it invests. Such transactions may advance the interests of the significant stockholder and not necessarily those of other stakeholders, which might adversely affect Peabody or other holders of its Common Stock or debt instruments.

The future payment of dividends on Peabody's stock or future repurchases of its stock is dependent on a number of factors and cannot be assured.

As more fully described within "Liquidity and Capital Resources" of Part II, Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations," restrictive covenants in the Company's debt and surety agreements limit its ability to pay cash dividends and repurchase shares. Such restrictions may negatively impact the trading price of the Common Stock. The payment of future cash dividends and future repurchases will depend upon these restrictions, as well as Peabody's earnings, economic conditions, liquidity and capital requirements, and other factors, including its leverage and other financial ratios. Accordingly, the Company cannot make any assurance that future dividends will be paid or future repurchases will be made.

General Business Risks

The Company may not be able to fully utilize its deferred tax assets.

The Company is subject to income and other taxes in the U.S. and numerous foreign jurisdictions, most significantly Australia. As of December 31, 2021, the Company had gross deferred income tax assets, including net operating loss (NOL) carryforwards, and liabilities of \$2,176.9 million and \$83.4 million, respectively, as described further in Note 9. "Income Taxes" to the accompanying consolidated financial statements. At that date, the Company also had recorded a valuation allowance of \$2,120.8 million.

The Company's ability to use its U.S. NOL carryforwards may be limited if it experiences an "ownership change" as defined in Section 382 of the Internal Revenue Code of 1986, as amended. An ownership change generally occurs if certain stockholders increase their aggregate percentage ownership of a corporation's stock by more than 50 percentage points over their lowest percentage ownership at any time during the testing period, which is generally the three-year period preceding any potential ownership change.

Although the Company may be able to utilize some or all of those deferred tax assets in the future if it has income of the appropriate character in those jurisdictions (subject to loss carryforward and tax credit expiry, in certain cases), there is no assurance that it will be able to do so. Further, the Company is presently unable to record tax benefits on future losses in the U.S. and Australia until such time as sufficient income is generated by its operations in those jurisdictions to support the realization of the related net deferred tax asset positions. The Company's results of operations, financial condition and cash flows may adversely be affected in future periods by these limitations.

Acquisitions and divestitures are a potentially important part of the Company's long-term strategy, subject to its investment criteria, and involve a number of risks, any of which could cause the Company not to realize the anticipated benefits.

The Company may engage in acquisition or divestiture activity based on its set of investment criteria to produce outcomes that increase shareholder value or provide potential strategic benefits. If the Company fails to accurately estimate the future results and value of an acquired or divested business or assets and the related risk associated with such a transaction, or are unable to successfully integrate the businesses or assets it acquires, its business, financial condition or results of operations could be negatively affected. Moreover, any transactions the Company pursues could materially impact its liquidity and an acquisition could increase capital resource needs and may require it to incur indebtedness, seek equity capital or both. The Company may not be able to satisfy these liquidity and capital resource needs on acceptable terms or at all. In addition, future acquisitions could result in its assuming significant long-term liabilities, including potentially unknown liabilities, relative to the value of the acquisitions.

Peabody's certificate of incorporation and by-laws include provisions that may discourage a takeover attempt.

Provisions contained in Peabody's certificate of incorporation and by-laws and Delaware law could make it more difficult for a third-party to acquire it, even if doing so might be beneficial to its stockholders. Provisions of Peabody's by-laws and certificate of incorporation impose various procedural and other requirements that could make it more difficult for stockholders to effect certain corporate actions. These provisions could limit the price that certain investors might be willing to pay in the future for shares of its Common Stock and may have the effect of delaying or preventing a change in control.

Diversity in interpretation and application of accounting literature in the mining industry may impact the Company's reported financial results.

The mining industry has limited industry-specific accounting literature and, as a result, the Company understands diversity in practice exists in the interpretation and application of accounting literature to mining-specific issues. As diversity in mining industry accounting is addressed, the Company may need to restate its reported results if the resulting interpretations differ from its current accounting practices. Refer to Note 1. "Summary of Significant Accounting Policies" to the accompanying consolidated financial statements for a summary of the Company's significant accounting policies.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.**Coal Reserves and Resources**

Information concerning the Company's mining properties in this Annual Report on Form 10-K has been prepared in accordance with the requirements of subpart 1300 of Regulation S-K, which first became applicable to the Company for the year ended December 31, 2021. These requirements differ significantly from the previously applicable disclosure requirements of SEC Industry Guide 7. Among other differences, subpart 1300 of Regulation S-K requires disclosure of mineral resources, in addition to mineral reserves, as of December 31, 2021, both in the aggregate and for each of our individually material mining properties. The Company's coal reserves and resources are estimated by individuals deemed Qualified Persons (QP) according to the standards set forth in subpart 1300 of Regulation S-K.

Mineral resources and reserves are defined in subpart 1300 of Regulation S-K as follows:

- **Mineral resource.** A concentration or occurrence of material of economic interest in or on the earth's crust in such form, grade or quality, and quantity that there are reasonable prospects for economic extraction. A mineral resource is a reasonable estimate of mineralization, taking into account relevant factors such as cut-off grade, likely mining dimensions, location or continuity, that, with the assumed and justifiable technical and economic conditions, is likely to, in whole or in part, become economically extractable. It is not merely an inventory of all mineralization drilled or sampled.
- **Mineral reserve.** An estimate of tonnage and grade or quality of indicated and measured mineral resources that, in the opinion of a QP, can be the basis of an economically viable project. More specifically, it is the economically mineable part of a measured or indicated mineral resource, which includes diluting materials and allowances for losses that may occur when the material is mined or extracted.

Under subpart 1300 of Regulation S-K, mineral resources may not be classified as mineral reserves unless the determination has been made by a QP that such mineral resources can be the basis of an economically viable project. The conversion of reported mineral resources to mineral reserves should not be assumed.

Coal resources are estimated from geological models constructed from an extensive historical database of drill holes and the Company's ongoing drilling program. Data from individual drill holes is compiled in a computerized drill-hole database, including the depth, thickness and, where core drilling is used, the quality of the coal observed. For coal deposits, the density of a drill pattern is one of the important factors which determine whether the related coal will be classified as measured, indicated, or inferred.

Mineral resource classifications are differentiated under subpart 1300 of Regulation S-K, in part, as follows:

- **Measured resource.** That part of a mineral resource with the highest level of geological confidence; quantity and grade or quality are estimated on the basis of conclusive geological evidence and sampling. The level of geological certainty associated with a measured mineral resource is sufficient to allow a qualified person to apply modifying factors in sufficient detail to support detailed mine planning and final evaluation of the economic viability of the deposit.
- **Indicated resource.** That part of a mineral resource with a level of geological confidence between that of measured and inferred resources; quantity and grade or quality are estimated on the basis of adequate geological evidence and sampling. The level of geological certainty associated with an indicated mineral resource is sufficient to allow a qualified person to apply modifying factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.
- **Inferred resource.** That part of a mineral resource with the lowest level of geological confidence; quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. The level of geological uncertainty associated with an inferred mineral resource is too high to apply relevant technical and economic factors likely to influence the prospects of economic extraction in a manner useful for evaluation of economic viability.

The geological confidence surrounding resource classification is first determined by a drill hole spacing analysis performed by a QP using geostatistical techniques. A QP may also use qualitative analysis to determine the geologic confidence based on historical experience with a specific coal deposit. Resources are further evaluated using a set of structure and quality parameters to determine the reasonable prospects for economic extraction. The structure parameters include coal thickness, depth, dipping angle, and strip ratio, among others. The quality parameters include ash and sulfur content, yield, and heat value, among others. Each coal deposit is different with respect to geology, potential mining methods, logistics, and markets. The cut-off criteria of those structure and quality parameters are different for each deposit, and a QP generally forms those criteria based upon experience with the Company's existing mining operations or adjacent operations with similar geological conditions. Other factors, such as coal control, or surface and underground obstacles are also considered in connection with resource estimates. The reclassification of reported mineral resources from lower to higher levels of geological confidence should not be assumed.

The economically mineable part of a measured coal resource is considered a *proven* coal reserve and has the highest degree of assurance of economic viability. The economically mineable part of indicated, and sometimes measured, coal resources are considered *probable* coal reserves and have a moderate degree of assurance of economic viability.

For each mine or future mine, the Company develops Life-of-Mine (LOM) plans which employ a market-driven, risk-adjusted capital allocation process to guide long-term mine planning of active operations and development projects. QPs rely on LOM planning as an integral process for coal reserve and resource estimates. The LOM plans consider dilution and losses during mining and processing as recoverability factors to estimate saleable coal. The LOM plans are developed in consideration of market demands and operational constraints. The LOM plans project, among other things, annual quantities and qualities for each coal product. The saleable product mix for a mine may include multiple thermal and metallurgical products with different targeted qualities and sales prices. The expected volumes for each mine and product, as well as annual pricing forecasts for each product, developed as described below, and related cost forecasts, developed as described below, are then evaluated to determine the economically viable coal in the LOM plans. Other factors impacting the assessment include geological conditions, production expectations for certain areas, the effects of regulation and taxes by governmental agencies, future price and operating cost assumptions and adverse changes in market conditions and mine closure activities.

The Company periodically reviews and updates coal reserve and resource estimates to reflect the production of coal, new drill hole data, the effects of mining activities, analysis of new engineering and geological data, changes in property control, modification of mining methods and other factors.

Mineral Rights

The Company controls coal rights through direct ownership and numerous lease agreements with government or private parties. The majority of our coal reserves and resources are controlled through lease agreements with the U.S. and Australian governments. In addition, surface rights are required to conduct certain mining-related activities. The Company holds the majority of the required surface rights to meet mid- to long-term production requirements. The additional surface rights to meet long-term production requirements are expected to be acquired as needed.

The Company is party to numerous U.S. federal coal leases that are administered by the U.S. Department of the Interior under the Federal Coal Leasing Amendments Act of 1976. These leases cover Peabody's principal reserves in the Powder River Basin and other reserves and resources in Alabama, Colorado and New Mexico. Each of these leases continues indefinitely, provided there is diligent development of the property and continued operation of the related mine or mines. The U.S. Bureau of Land Management (BLM) has asserted the right to adjust the terms and conditions of these leases, including rent and royalties, after the first 20 years of their term and at 10-year intervals thereafter. Annual rents on surface land under federal coal leases are now set at \$3.00 per acre. Production royalties on federal leases are set by statute at 12.5% of the gross proceeds of coal mined and sold for surface-mined coal and 8% for underground-mined coal. The U.S. federal government limits by statute the amount of federal land that may be leased by any company and its affiliates at any time to 75,000 acres in any one state and 150,000 acres nationwide. As of December 31, 2021, the Company leased 1,610 acres of federal land in Alabama, 3,480 acres in Colorado, 282 acres in New Mexico and 38,915 acres in Wyoming, for a total of 44,287 acres nationwide subject to those limitations. The Company also lease coal-mining properties from various state governments in the U.S.

Private U.S. coal leases normally have terms of between 10 and 20 years and usually give the Company the right to renew the lease for a stated period or to maintain the lease in force until the exhaustion of mineable and merchantable coal contained on the relevant site. These private U.S. leases provide for royalties to be paid to the lessor either as a fixed amount per ton or as a percentage of the sales price. Many private U.S. leases also require payment of a lease bonus or minimum royalty, payable either at the time of execution of the lease or in periodic installments. The terms of private U.S. leases are normally extended by active production at or near the end of the lease term. Private U.S. leases containing undeveloped coal properties may expire or these leases may be renewed periodically.

Mining and exploration in Australia are generally carried out under leases or licenses granted by state governments. Mining leases are typically for an initial term of up to 21 years (but which may be renewed) and contain conditions relating to such matters as minimum annual expenditures, restoration and rehabilitation. Royalties are paid to the state government as a percentage of the sales price. Generally, landowners do not own the mineral rights or have the ability to grant rights to mine those minerals. These rights are retained by state governments. Compensation is payable to landowners for loss of access to the land, and the amount of compensation can be determined by agreement or court process. Surface rights are typically acquired directly from landowners through agreement or court determination, subject to some exceptions.

Pricing

The pricing information used in support of the Company's reserve and resource estimates include internal, proprietary price forecasts and existing contract economics, in each case on a mine-by-mine and product-by-product basis. In general, price forecasts are based on a thorough analytical process utilizing detailed supply and demand models, global economic indicators, projected foreign exchange rates, analyses of price relationships among various commodities, competing fuels analyses, projected supply and demand fundamentals for steel production and electricity generation, analyses of supplier costs and other variables. Price forecasts, supply and demand models and other key assumptions and analyses are stress-tested against independent third-party research (not commissioned by the Company) to confirm the conclusions reached through analytical processes, and that price forecasts fall within the ranges of the projections included in this third-party research. The development of the analyses, price forecasts, supply and demand models and related assumptions are subject to multiple levels of management review.

Below is a description of some of the specific factors that the Company evaluates in developing price forecasts for thermal and metallurgical coal products on a mine-by-mine and product-by-product basis. Differences between the assumptions and analyses included in the price forecasts and realized factors could cause actual pricing to differ from the forecasts.

Thermal. Several factors can influence thermal coal supply and demand and pricing. Demand is sensitive to total electric power generation volumes, which are determined in part by the impact of weather on heating and cooling demand, inter-fuel competition in the electric power generation mix (such as from natural gas and renewable sources), changes in capacity (additions and retirements), competition from other producers, coal stockpiles and policy and regulations. Supply considerations impacting pricing include coal reserve and resource positions, mining methods, strip ratios, production costs and capacity and the cost of new supply (greenfield developments or extensions at existing mines).

In the United States, natural gas is the most significant substitute for thermal coal for electricity generation and can be one of the largest drivers of shifts in supply and demand and pricing. The competitiveness of natural gas as a generation fuel source has been strengthened by accelerated growth in domestic natural gas production, new natural gas combined cycle generation capacity and comparatively low natural gas prices versus historic levels. The build out of renewable generation and subsidized power can also be a key driver of power market pricing and hence coal prices.

Internationally, thermal coal-fueled generation also competes with alternative forms of electricity generation. The competitiveness and availability of generation fueled by natural gas, oil, nuclear, hydro, wind, solar and biomass vary by country and region and can have a meaningful impact on coal pricing. Policy and regulations, which vary from country to country, can also influence prices. In addition, seaborne thermal coal import demand can be significantly impacted by the availability of domestic coal production, particularly in the two leading coal import countries, China and India, and the competitiveness of seaborne supply from leading thermal coal exporting countries, including Indonesia, Australia, Russia, Colombia, the U.S. and South Africa, among others.

Metallurgical. Several factors can influence metallurgical coal supply and demand and pricing. Demand is impacted by economic conditions, government policies and demand for steel, and is also impacted by competing technologies used to make steel, some of which do not use coal as a manufacturing input. Competition from other types of coal is also a key price consideration and can be impacted by the coal quality and characteristics, delivered energy cost (including transportation costs), customer service and support, and reliability of supply.

Seaborne metallurgical coal import demand can be significantly impacted by the availability of domestic coal production, particularly in leading metallurgical coal import countries such as China, among others, as well as country-specific policies restricting or promoting domestic supply. The competitiveness of seaborne metallurgical coal supply from leading metallurgical coal exporting countries of Australia, the U.S., Russia, Canada, Mongolia and Mozambique, among others, is also an important price consideration.

In addition to the factors noted above, the prices which may be obtained at each mine or future mine can be impacted by factors such as (i) the mine's location, which impacts the total delivered energy costs to its customers, (ii) quality characteristics, particularly if they are unique relative to competing mines, (iii) assumed transportation costs and (iv) other mine costs that are contractually passed on to customers in certain commercial relationships.

Costs

The cost estimates used to establish LOM plans are generally made according to internal processes that project future costs based on historical costs and expected trends. The estimated costs normally include mining, processing, transportation, royalty, add-on tax and other mining-related costs. Estimated mining and processing costs reflect projected changes in prices of consumable commodities (mainly diesel fuel, explosives and steel), labor costs, geological and mining conditions, targeted product qualities and other mining-related costs. Estimates for other sales-related costs (mainly transportation, royalty and add-on tax) are based on contractual prices or fixed rates. Specific factors that may impact the Company's operating costs include:

- *Geological settings.* The geological characteristics of each mine are among the most important factors that determine the mining cost. Company geologists conduct the exploration program and provide geological models for the LOM process. Coal seam depth, thickness, dipping angle, partings and quality constrain the available mining methods and size of operations. Shallow coal is typically mined by surface mining methods by which the primary cost is overburden removal. Deep coal is typically mined by underground mining methods where the primary costs include coal extraction, conveyance and roof control.
- *Scale of operations and the equipment sizes.* For surface mines, dragline systems generally have a lower unit cost than truck-and-shovel systems for overburden removal. Longwall operations are generally more cost-effective than room-and-pillar operations for underground mines.
- *Commodity prices.* For surface mines, the costs of diesel fuel and explosives are major components of the total mining cost. For underground mines, the steel used for roof control represents a significant cost. Forecasted commodity prices are used to project those costs in the financial models used to establish reserve and resource estimates.
- *Target product quality.* By targeting a premium quality product, mining and processing processes may experience more coal losses. By lowering product quality the coal losses can be minimized and therefore a lower cost per ton can be achieved. In the Company's LOM plans, product qualities are estimated to correspond to existing contracts and forecasted market demands.
- *Transportation costs.* Transportation costs vary by region. Most of the Company's U.S. thermal operations sell coal at mine loadouts. Therefore, no transportation expenses are included in U.S. thermal cost estimates. The Company's seaborne operations typically sell coal at designated ports. The estimated costs for seaborne operations include rail and barge transportation and related fees at ports.
- *Royalty costs.* Royalty costs are based upon contractual agreements for the coal leased from governments or private owners. The royalty rates for coal leased from governments differ by country and, in some cases, by mining method. Estimated add-on taxes and other sales-related costs are determined according to government regulations or historical costs.
- *Exchange rates.* Costs related to the Company's Australian production are predominantly denominated in Australian dollars, while the Australian coal exported is sold in U.S. dollars. As a result, Australian/U.S. dollar exchange rates impact the U.S. dollar cost of Australian production.

Summary of Coal Reserves and Resources

Peabody controlled an estimated 2.5 billion tons of coal reserves and 2.4 billion tons of coal resources as of December 31, 2021. Approximately 95% of the Company's coal reserves and 98% of the Company's coal resources are held under lease, and the remainder is held through fee ownership.

The following tables summarize the Company's estimated coal reserves and resources as of December 31, 2021. The quantity of the coal resources is estimated on an *in situ* basis as attributable to Peabody. Coal resources are reported exclusive of coal reserves. The quantity of the coal reserves is estimated on a saleable product basis as attributable to Peabody. The coal reserves and resources are reported on selected key quality parameters and on different moisture bases generally referenced by sales contracts for each mining property.

SUMMARY COAL RESERVES AT END OF THE FISCAL YEAR ENDED DECEMBER 31, 2021 ⁽⁴⁾
(Tons in millions)

Segment / Mining Complex	Country	State	Stage	Mining Method	Coal Type	Proven Coal Reserves				Probable Coal Reserves				Total Coal Reserves				Peabody Interest ⁽¹⁰⁾
						Amount		Quality		Amount		Quality		Amount		Quality		
						Tons	%Ash	%Sulfur	Kcal/kg ⁽⁶⁾	Tons	%Ash	%Sulfur	Kcal/kg ⁽⁶⁾	Tons	%Ash	%Sulfur	Kcal/kg ⁽⁶⁾	
Seaborne Thermal Mining:⁽²⁾																		
Wilpinjong	AUS	NSW	P	S	T	71	24.3	0.5	5,940	5	29.7	0.4	5,478	76	24.7	0.5	5,910	100%
Wambo Opencut ⁽⁹⁾	AUS	NSW	P	S	T	28	10.8	0.3	7,098	2	11.3	0.3	7,055	30	10.8	0.3	7,095	50%
Wambo Underground	AUS	NSW	P	U	T	2	12.2	0.3	6,802	-	-	-	-	2	12.2	0.3	6,802	100%
South Wambo	AUS	NSW	E	U	T/C	-	-	-	-	74	9.8	0.3	7,034	74	9.8	0.3	7,034	100%
Total						101				81				182				
Seaborne Metallurgical Mining:⁽³⁾																		
Shoal Creek	USA	AL	P	U	C	16	10.2	0.7	30.4	2	10.2	0.7	30.3	18	10.2	0.7	30.3	100%
Coppabella	AUS	QLD	P	S	P	8	8.9	0.2	10.3	4	9.4	0.2	8.6	12	9.1	0.2	9.7	73.3%
Moorvale	AUS	QLD	P	S	C/P/T	2	11.8	0.3	16.2	-	-	-	-	2	11.8	0.3	16.2	73.3%
Metropolitan	AUS	NSW	P	U	C/T	4	14.0	0.4	18.6	12	14.6	0.4	18.6	16	14.5	0.4	18.6	100%
North Goonyella	AUS	QLD	I	U	C	46	7.4	0.5	21.4	24	7.5	0.5	21.1	70	7.4	0.5	21.3	100%
Moorvale South	AUS	QLD	D	S	C/P	4	11.0	0.4	18.4	2	9.7	0.4	17.4	6	10.6	0.4	18.1	73.3%
Middlemount ⁽⁹⁾	AUS	QLD	P	S	C/P	28	10.3	0.4	18.0	9	10.3	0.4	18.0	37	10.3	0.4	18.0	50.0%
Total						108				53				161				
Powder River Basin Mining:⁽⁵⁾																		
North Antelope Rochelle	USA	WY	P	S	T	1,378	4.4	0.2	8,889	106	4.4	0.2	8,965	1,484	4.4	0.2	8,895	100%
Caballo	USA	WY	P	S	T	266	5.1	0.3	8,504	52	5.4	0.4	8,205	318	5.1	0.3	8,455	100%
Rawhide	USA	WY	P	S	T	124	5.6	0.4	8,274	3	5.5	0.4	8,359	127	5.6	0.4	8,269	100%
Total						1,768				161				1,929				
Other U.S. Thermal Mining:⁽⁵⁾																		
Bear Run	USA	IN	P	S	T	82	10.5	3.1	11,068	55	10.0	2.6	11,052	137	10.3	2.9	11,062	100%
El Segundo/Lee Ranch	USA	NM	P	S	T	16	15.8	0.9	9,249	1	16.3	0.7	9,345	17	15.8	0.9	9,243	100%
Gateway North	USA	IL	P	U	T	36	8.9	2.9	10,892	5	9.0	2.9	10,878	41	8.9	2.9	10,890	100%
Twentymile	USA	CO	P	U	T	7	10.7	0.5	11,282	1	10.1	0.5	11,227	8	10.6	0.5	11,272	100%
Wild Boar	USA	IN	P	S	T	9	8.4	2.6	11,034	10	8.1	2.7	11,203	19	8.2	2.6	11,127	100%
Francisco Underground	USA	IN	P	U	T	1	8.6	3.1	11,515	7	8.8	3.1	11,402	8	8.8	3.1	11,425	100%
Total						151				79				230				
Grand total						2,128				374				2,502				

Stage	Mining Method	Coal Type
P Producing	S Surface Mine	T Thermal
I Idle	U Underground Mine	C Coking
D Development		P Pulverized Coal Injection
E Exploration		

SUMMARY COAL RESOURCES AT END OF THE FISCAL YEAR ENDED DECEMBER 31, 2021⁽⁴⁾
(Tons in millions)

Deposit	Country	State	Stage	Mining Method	Coal Type	Measured and Indicated Coal Resources														Peabody Interest ⁽¹⁰⁾		
						Measured Coal Resources				Indicated Coal Resources				Coal Resources				Inferred Coal Resources				
						Amount	Quality			Amount	Quality			Amount	Quality			Amount	Quality			
Tons	%Ash	%Sulfur	Kcal/kg ⁽⁵⁾	Tons	%Ash	%Sulfur	Kcal/kg ⁽⁵⁾	Tons	%Ash	%Sulfur	Kcal/kg ⁽⁵⁾	Tons	%Ash	%Sulfur	Kcal/kg ⁽⁵⁾	Tons	%Ash	%Sulfur	Kcal/kg ⁽⁵⁾			
Seaborne Thermal Mining:⁽²⁾⁽⁴⁾						103	23.0	0.5	6,042	25	25.4	0.5	5,851	128	23.5	0.5	6,004	6	27.3	0.5	5,707	100%
Wilpinjong	AUS	NSW	P	S	T																	
Wambo Opencut ⁽⁹⁾	AUS	NSW	P	S	T	105	20.5	0.4	6,150	176	23.6	0.4	5,850	281	22.4	0.4	5,962	276	24.8	0.4	5,800	50%
Wambo South	AUS	NSW	E	U	T/C	219	21.5	0.3	6,068	83	27.2	0.3	5,571	302	23.1	0.3	5,931	47	36.3	0.3	4,745	100%
Total						427				284				711				329				
Seaborne Metallurgical Mining:⁽³⁾⁽⁴⁾						40	9.6	0.7	25.1	35	9.9	0.7	24.1	75	9.8	0.7	24.6	7	10.3	0.7	24.0	100%
Shoal Creek	USA	AL	P	U	C																	
Metropolitan	AUS	NSW	P	U	C/T	7	15.4	0.4	18.6	8	15.3	0.3	18.7	15	15.3	0.4	18.6	2	16.0	0.3	19.0	100%
Coppabella	AUS	QLD	P	S	P	13	15.8	0.3	13.1	48	14.3	0.2	12.8	61	14.6	0.2	12.9	73	15.5	0.2	12.3	73.3%
Moorvale	AUS	QLD	P	S	P	18	18.3	0.3	16.7	14	17.2	0.3	16.7	32	17.8	0.3	16.7	5	15.9	0.3	16.7	73.3%
Moorvale South	AUS	QLD	D	S	C/P	3	18.3	0.4	18.4	7	18.2	0.4	18.3	10	18.2	0.4	18.3	6	16.8	0.4	17.7	73.3%
NGC GLB2	AUS	QLD	E	U	C	-	-	-	-	1	15.3	0.6	20.7	1	15.3	0.6	20.7	8	13.6	0.5	20.7	100%
Coppabella North	AUS	QLD	E	U	P	255	15.8	0.3	14.6	102	16.8	0.3	14.6	357	16.1	0.3	14.6	12	16.5	0.3	14.3	75.5%
Yeerun	AUS	QLD	E	S	P	16	16.0	0.4	14.3	57	16.2	0.5	15.0	73	16.2	0.4	14.8	46	17.8	0.5	14.7	83.0%
Moorvale North	AUS	QLD	E	U	P	21	26.0	0.4	12.9	25	24.5	0.5	13.2	46	25.2	0.4	13.1	25	23.2	0.5	13.4	73.3%
Gundyer	AUS	QLD	E	U	P	-	-	-	-	54	16.4	0.2	19.7	54	16.4	0.2	19.7	70	18.3	0.2	18.3	90.0%
Total						373				351				724				254				
Powder River Basin Mining:⁽⁵⁾						42	4.7	0.3	8,428	82	5.2	0.4	8,231	124	5.0	0.4	8,298	2	5.4	0.4	8,245	100%
Caballo	USA	WY	P	S	T																	
Rawhide	USA	WY	P	S	T	1	5.5	0.4	8,286	91	5.2	0.3	8,362	92	5.2	0.3	8,361	7	5.7	0.4	8,243	100%
Total						43				173				216				9				
Other U.S. Thermal Mining:⁽⁵⁾						6	13.7	3.4	10,975	50	16.3	4.0	10,613	56	16.1	4.0	10,652	57	16.5	3.7	10,579	100%
Bear Run	USA	IN	P	S	T																	
Wild Boar	USA	IN	P	S	T	-	-	-	-	3	11.8	5.8	11,300	3	11.8	5.8	11,300	1	12.3	5.4	11,230	100%
Total						6				53				59				58				
Grand total						849				861				1,710				650				

- (1) The sales price assumptions supporting economic recoverability vary depending upon factors such as coal quality and existing customer volume commitments. For the five-year period 2022 through 2026, the estimated sales prices for seaborne metallurgical mines are based upon estimated premium hard coking coal benchmark prices ranging from \$150.00 to \$162.00 per tonne. For seaborne thermal mines, the estimated sales prices for the same period range from approximately \$42.00 to \$104.00 per tonne, and approximately \$9.00 to \$45.00 per ton for U.S. thermal mines. Subsequent to 2026, for all mines, sales price escalation is assumed at 2.0% to 3.0% per annum through the end of each LOM plan.
- (2) The moisture condition for Seaborne Thermal Mining segment coal quality is on an air-dry basis.
- (3) The moisture condition for the Seaborne Metallurgical Mining segment coal quality is on an air-dry basis, except for Shoal Creek Mine which is on a dry basis.
- (4) The quantities for Australian coal reserves are estimated on an as-shipped moisture basis; quantities for Australian coal resources are estimated on an *in situ* moisture basis.
- (5) The quality and quantity estimates for U.S. thermal reserves are calculated on as-shipped moisture basis; the quality and quantity estimates for U.S. thermal resources are calculated on an *in situ* moisture basis.
- (6) Kcal/kg (kilocalories per kilogram) is the net calorific value (net heating value) of coal
- (7) VM (volatile matter) represents the proportion of certain organic and mineral components in coal, for example, water, carbon dioxide, or sulfur dioxide. Volatile matter is inversely related to coal rank.
- (8) Btu (British thermal unit) is the gross heating value of coal per pound, which includes the weight of moisture in coal on an as-sold basis. The range of variability of the moisture content in coal may affect the actual shipped Btu content.
- (9) Reserve and resource data is maintained and provided by joint venture managing partners utilizing the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.
- (10) The quantities of reserves and resources are disclosed at Peabody's proportional ownership share.

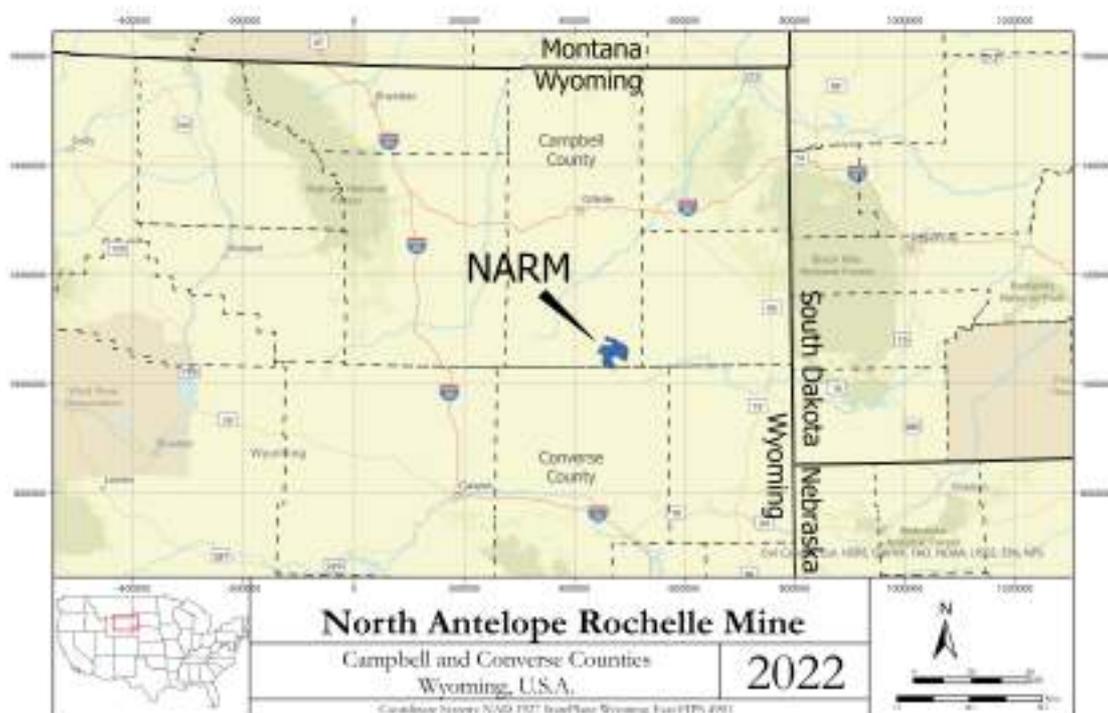
Individual Property Disclosure

To determine the Company's individually material mining operations in accordance with subpart 1300 of Regulation S-K, management considered both quantitative and qualitative factors, assessed in the context of the Company's overall business and financial condition. Such assessment included the Company's aggregate mining operations on all of its mining properties, regardless of the stage of production or the type of coal produced. Quantitative factors included, among others, mining operations' relative contributions to the Company's aggregate historical and estimated revenues, cash flows, and Adjusted EBITDA (as defined in Part II, Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations.") Qualitative factors may include, as applicable, capital expansion plans, long-term pricing outlook, the regulatory environment and various strategic priorities. The Company concluded that, as of December 31, 2021, its individually material mines are North Antelope Rochelle Mine (NARM), Shoal Creek Mine, Wilpinjong Mine, and the Coppabella-Moorvale Joint Venture. The Company will update its assessment of individually material mines on an annual basis. The reserve and resource tables that follow do not include comparative information for resources as of December 31, 2020 as the Company did not present such data previously under the SEC Industry Guide 7 requirements and such data is not required to be presented in connection with the adoption of the disclosure requirements of subpart 1300 of Regulation S-K.

The information that follows relating to such individually material mines is derived, for the most part, from, and in some instances is an extract from, the technical report summaries ("TRS") relating to such properties prepared in compliance with the Item 601(b)(96) and subpart 1300 of Regulation S-K. Portions of the following information are based on assumptions, qualifications and procedures that are not fully described herein. Reference should be made to the full text of the TRS, incorporated herein by reference and made a part of this Annual Report on Form 10-K. The relevant TRS for NARM, Shoal Creek Mine, Wilpinjong Mine, and the Coppabella-Moorvale Joint Venture are included as Exhibits 96.1, 96.2, 96.3 and 96.4, respectively, to this Annual Report on Form 10-K, and specific sections of such TRS are referenced below using the corresponding exhibit number.

North Antelope Rochelle Mine

The North Antelope Rochelle Mine (NARM) is a production-stage surface coal mine located sixty-five miles south of Gillette, Wyoming, USA. NARM is situated in the Gillette Coal Field on the east flank of the Powder River Basin. NARM began operations in 1999 after Peabody combined its interests in the formerly separate North Antelope Mine and Rochelle Mine.



NARM extracts coal from the Wyodak-Anderson coal seam, which ranges from 60- to 80-feet thick and lies from 100 to 400 feet below the surface in the mining area. The Company has secured mineral rights through Federal and State lease agreements which cover 30,159 acres. The typical royalty rate for Federal and State coal leases is 12.5% of realized revenue. Generally, the leases continue indefinitely with periodic renewal, provided there is diligent coal production or other development within the lease area. As of December 31, 2021, all required licenses and permits were in place for the operations of NARM. For additional information regarding mineral rights and permitting, refer to sections 3 and 17 in Exhibit 96.1.

The mining operation consists of multiple open pits in four main mining areas, which allows for quality blending and other optimization strategies. Overburden is removed by dragline, truck and shovel, dozer and cast blasting methods. Coal is hauled by truck to one of five dump locations, where it is then crushed and conveyed to silos adjacent to rail load-outs for customer delivery. Coals of varying characteristics may be blended at a central blending facility along the loadout rail loop. Coal is sold unwashed, as a run-of-mine (ROM) product. NARM coal is well recognized for domestic thermal power generation. For additional information regarding mining and processing methods, refer to sections 13 and 14 in Exhibit 96.1.

The key supporting infrastructure for NARM includes rail services provided by the BNSF Railway Company and Union Pacific Corporation, road access via interstate and state highways and roads, electrical power from a dedicated substation with 230kV and 69kV transmission lines, and water supply from a mine dewatering system and deep wells. The mining industry in the Powder River Basin anchors numerous communities from which the mine attracts qualified personnel. For additional information regarding the mine's infrastructure, refer to sections 13 and 15 in Exhibit 96.1.

The property, plant, equipment and mine development assets of NARM had a net book value of approximately \$406 million at December 31, 2021. The mine's operating equipment and facilities meet contemporary mining standards and are adequately maintained to execute the LOM plan. Routine maintenance, overhauls, and necessary capital replacements are generally included in the LOM plan to support future production. For additional information regarding capital and equipment, refer to sections 13 and 18 in Exhibit 96.1.

The table below presents NARM coal reserve estimates at December 31, 2021, along with comparative quantities at December 31, 2020. NARM did not hold any coal resources as of December 31, 2021. These reserve estimates were supported by the analyses of 4,778 total drill holes within the coal lease area. The quantity of the coal reserves is estimated on a saleable product basis and deemed 100% attributable to Peabody. In addition to quantity, the table presents selected key quality parameters on an as-shipped basis. For additional information regarding coal reserve and resource estimates, refer to sections 11 and 12 in Exhibit 96.1.

NARM - SUMMARY OF RESERVES ⁽¹⁾
(Tons in millions)

Coal Reserves ⁽²⁾⁽³⁾⁽⁴⁾	December 31, 2021					December 31, 2020
	Tons	%Ash	%Sulfur	Btu	% Mine Yield ⁽⁵⁾	Tons
Proven	1,378	4.4	0.2	8,889	100%	1,431
Probable	106	4.4	0.2	8,965	100%	115
Total	1,484					1,546
Year-over-year decrease	-4%					

The year-over-year decrease in the quantity of coal reserves was driven by production depletion.

- ⁽¹⁾ Economic recoverability is based upon an estimated average sales price per ton of \$13.18 for the five-year period ending December 31, 2026 and assumed escalation of 2.5% per annum during the subsequent period through the end of the LOM plan. Refer to section 19 of Exhibit 96.1 for detailed price assumptions.
- ⁽²⁾ The cut-off grade and metallurgical recovery are not limiting factors for reserve estimates due to consistent coal thickness and established trends of coal quality in the leased area. The strip ratio increases gradually, but the existing pit length allows an average mineable strip ratio. Besides the results of drill hole analyses, the main limiting factors include surface infrastructure and lease boundaries.
- ⁽³⁾ The quality of coal reserves is estimated on an as-shipped basis.
- ⁽⁴⁾ The quantity of coal reserves is estimated on a saleable product basis, which takes into consideration 92% mining recovery. The results of the LOM planning process demonstrate the economic recoverability of the coal reserve estimates. Refer to section 19 of Exhibit 96.1 for economic analysis.
- ⁽⁵⁾ Mine yield is the ratio of estimated saleable product coal over ROM coal tons, with processing loss considered.

Shoal Creek Mine

The Shoal Creek Mine is a production-stage underground longwall metallurgical coal mine located thirty-five miles west of Birmingham, Alabama, USA. The mine is within the east-central portion of the Warrior Coal Field, which is part of the Southern Appalachian coal-producing region. The Drummond Corporation began producing coal at the mine in 1994. Peabody Energy acquired the mine from the Drummond Corporation in December 2018. The mine was idled in the fourth quarter of 2020 due to market conditions and resumed production in November 2021.



Shoal Creek Mine extracts coal from the Mary Lee and Blue Creek coal seams at depths of 1,000 to 1,300 feet. The Company has secured mineral rights through a combination of private, federal and state mineral leases and surface rights agreements which encompass a total of 31,747 acres of mineral control and 3,490 acres of surface land control. The majority of the mineral leases are private leases with negotiated royalty rates set at minimum amounts per ton or as percentages of sales realization. Shoal Creek Mine's largest lease agreement, representing 28,517 acres of mineral control, expires in 2031 with an option to negotiate an extension. The expiration dates vary for other leases, but typically include extension provisions. As of December 31, 2021, all required licenses and permits were in place for the operations of the Shoal Creek Mine. For additional information regarding mineral rights and permitting, refer to sections 3 and 17 in Exhibit 96.2.

Coal is produced primarily using longwall systems. The mine also uses continuous miner units for longwall development and limited production. Mined coal is processed through a wash plant, conveyed to barge loadout facilities on the Black Warrior River, and transported by barge 370 miles to McDuffie Coal Terminal in Mobile Bay, Alabama, in the Gulf of Mexico, for export via ocean-going vessels. Shoal Creek Mine metallurgical coal has a well-established customer base in Europe, South America, and East Asia for steel making. For additional information regarding mining and processing methods, refer to sections 13 and 14 in Exhibit 96.2.

The key supporting infrastructure for Shoal Creek Mine includes road access via interstate and state highways and roads, third-party barge services and a barge loadout on the Black Warrior River, the McDuffie Coal Terminal, electrical power provided by 69kV transmission lines, and water supplied from the Black Warrior River and recycled underground water. The mine's workforce is drawn primarily from Jasper and Tuscaloosa, Alabama and other adjacent communities. For additional information regarding the mine's infrastructure, refer to section 15 in Exhibit 96.2.

The property, plant, equipment and mine development assets of Shoal Creek Mine had a net book value of approximately \$296 million at December 31, 2021. The mine's operating equipment and facilities meet contemporary mining standards and are adequately maintained to execute the LOM plan. Routine maintenance, overhauls and necessary capital replacements are generally included in the LOM plan to support future production. While the mine was idled for parts of 2020 and 2021, the Company upgraded the mine's coal handling and preparation plant and made other capital investments to improve its prospective cost structure. For additional information regarding capital and equipment, refer to sections 13 and 18 in Exhibit 96.2.

The tables below present Shoal Creek Mine's estimated coal reserves and resources at December 31, 2021, along with comparative quantities for coal reserves at December 31, 2020. These reserve and resource estimates were supported by the analyses of 1,178 total drill holes within the coal lease area. The quantity of the coal resources is estimated on an *in situ* basis as 100% attributable to Peabody. Coal resources are reported exclusive of coal reserves. The quantity of the coal reserves and resources are estimated on a saleable product basis as 100% attributable to Peabody. Coal reserves and resources are reported on selected key quality parameters on a dry basis. For additional information regarding coal reserve and resource estimates, refer to sections 11 and 12 in Exhibit 96.2.

SHOAL CREEK MINE - SUMMARY OF RESERVES AND RESOURCES ⁽¹⁾
(Tons in millions)

Coal Reserves ⁽²⁾⁽⁴⁾⁽⁵⁾⁽⁶⁾	December 31, 2021						December 31, 2020	
	Tons	%Ash	%Sulfur	%VM	% Mine Yield ⁽⁷⁾	Tons		
Proven	16	10.2	0.7	30.4	46%	51		
Probable	2	10.2	0.7	30.3	46%	1		
Total	18					52		
Year-over-year decrease	-65%							

Coal Resources ⁽²⁾⁽³⁾⁽⁴⁾⁽⁵⁾	December 31, 2021			
	Tons	%Ash	%Sulfur	VM%
Measured	40	9.6	0.7	25.1
Indicated	35	9.9	0.7	24.1
Measured and indicated	75	9.8	0.7	24.6
Inferred	7	10.3	0.7	24.0
Total	82			

The year-over-year decrease in coal reserves reflects 2021 production depletion and the reclassification of certain mine areas to resources until further drilling and studies are completed. Refer to section 19 of Exhibit 96.2 for additional information.

- ⁽¹⁾ Economic recoverability is based upon an estimated average sales price per ton of \$125.37 for the five-year period ending December 31, 2026 and assumed escalation 2.8% per annum during the subsequent period through the end of the LOM plan. Refer to section 19 of Exhibit 96.2 for detailed price assumptions.
- ⁽²⁾ The quality of coal reserves and resources are estimated on a dry basis.
- ⁽³⁾ The quantity of resource estimates are on an *in situ* basis, which doesn't take into consideration coal loss during mining and processing.
- ⁽⁴⁾ The coal resource boundary is established by considering various factors, including results from drill hole analyses, coal control, geological features, faults and other surface features.
- ⁽⁵⁾ The cut-off grade and metallurgical recovery are not limiting factors for the reserve and resource estimates due to relatively consistent coal quality and float recovery from the lab results within the assessed area. The historically mined coal thickness has been used as the main criteria for the resource boundary based on the mine's actual performance in the last two decades.
- ⁽⁶⁾ The quantity of coal reserves is estimated on a saleable product basis, which takes into consideration of unmined coal (pillars, etc.), 20% coal loss during mining and processing, and additional washing recovery. The results from the LOM planning process demonstrate the economic recoverability of the coal reserve estimate. Refer to section 19 of Exhibit 96.2 for economic analysis.
- ⁽⁷⁾ Mine yield is the ratio of estimated saleable product coal over ROM coal tons with mainly processing loss considered.

Wilpinjong Mine

The Wilpinjong Mine is a production-stage surface thermal coal mine situated approximately 25 miles northeast of Mudgee in New South Wales, Australia. Peabody acquired the mine as part of its acquisition of Excel Coal Pty Ltd (Excel) in 2006. Excel began the development of Wilpinjong Mine in 2006 and it commenced production under Peabody ownership in 2007. A third-party contractor managed mining operations until 2013, when the Company converted the mine to owner-operated.



The Wilpinjong Mine extracts coal from the Moolarben and Ulan coal seams which have a combined thickness from 6 to 10 meters and a typical depth less than 60 meters in the Illawarra Coal Measures on the northwest margin of the Sydney Basin. The Company secured two exploration licenses of 1,518 hectares and three mining licenses of 3,723 hectares through the New South Wales Minister of Planning. The typical royalty rate is 8.2% of the value of coal recovered. The mining licenses require renewal upon expiration in 2027 for 2,863 hectares and in 2039-2040 for 860 acres. The renewal application for two exploration licenses is currently pending approval. As of December 31, 2021, all required licenses and permits were in place for the operations of Wilpinjong. For additional information regarding mineral rights and permitting, refer to sections 3 and 17 in Exhibit 96.3.

Conventional open cut mining methods are used at the Wilpinjong Coal Mine, with multiple pits at a low strip ratio allowing for relatively rapid pit advance. Overburden is removed by a combination of cast blasting, doze, and truck and shovel methods. Haul trucks transport coal to various hoppers and pads for blending and temporary storage, as necessary, and then to a coal handling and processing plant to be crushed and washed. Coal is conveyed to a rail loadout and transported by train to either domestic customers or to the Port of Newcastle and seaborne customers for thermal power generation. For additional information regarding mining and processing methods, refer to sections 13 and 14 in Exhibit 96.3.

The key supporting infrastructure for Wilpinjong Mine includes road access via public roads, port service at two terminals at the Port of Newcastle, above and below rail services, electrical power from a 66kV transmission line, and water supply from captured surface runoff and deep wells. The mine's proximity to other large coal producers in the region provides access to a significant pool of experienced mining personnel. For additional information regarding the mine's infrastructure, refer to section 15 in Exhibit 96.3.

The property, plant, equipment and mine development assets of Wilpinjong Mine had a net book value of approximately \$386 million at December 31, 2021. The mine's operating equipment meets contemporary mining standards and is adequately maintained to execute the LOM plan. Routine maintenance, overhauls and necessary capital replacements are generally included in the LOM plan to support future production. During 2018, the Company began an expansion project at Wilpinjong Mine that will extend the mine life from 2026 to 2030 and allow higher annual production rates through access to an additional 55 million tonnes of coal reserves. The Company capitalized approximately \$61 million related to the project through December 31, 2021 and expects the total cost to reach approximately \$74 million. For additional information regarding capital and equipment, refer to sections 13 and 18 in Exhibit 96.3.

The tables below present Wilpinjong Mine's estimated coal reserves and resources at December 31, 2021, along with comparative quantities of coal reserves at December 31, 2020. These reserve and resource estimates were supported by the analyses of 1,271 total drill holes within the coal lease area. The quantity of the coal resources is estimated on an *in situ* basis as 100% attributable to Peabody. Coal resources are reported exclusive of coal reserves. The quantity of the coal reserves is estimated on a saleable product basis as 100% attributable to Peabody. Coal reserves and resources are reported on selected key quality parameters on an air-dried basis. For additional information regarding coal reserve and resource estimates, refer to sections 11 and 12 in Exhibit 96.3.

WILPINJONG MINE - SUMMARY OF RESERVES AND RESOURCES ⁽¹⁾
(Tons in millions)

Coal Reserves ⁽⁵⁾⁽⁶⁾	December 31, 2021					December 31, 2020
	Tons	%Ash	%Sulfur	Kcal/kg	% Mine Yield ⁽⁷⁾	Tons
Proven	71	24.3	0.5	5,940	81%	91
Probable	5	29.7	0.4	5,478	95%	2
Total	76					93
Year-over-year decrease	-18%					

Coal Resources ⁽²⁾⁽³⁾⁽⁴⁾	December 31, 2021			
	Tons	%Ash	%Sulfur	Kcal/kg
Measured	103	23.0	0.5	6,042
Indicated	25	25.4	0.5	5,851
Measured and indicated	128	23.5	0.5	6,004
Inferred	6	27.3	0.5	5,707
Total	134			

The year-over-year decrease in the quantity of coal reserves was driven by production depletion.

- (1) Economic recoverability is based upon product-specific estimated average sales prices per tonne of \$39.18 to \$47.98 for the five-year period ending December 31, 2026 and assumed escalation of 2.5% to 3.0% per annum during the subsequent period through the end of the LOM plan. Refer to section 19 of Exhibit 96.3 for detailed price assumptions.
- (2) The quality of coal resources is on an *in situ*, air-dry basis.
- (3) The quantity of coal resource estimates is on an *in situ* basis, which does not take into consideration coal loss during mining and processing.
- (4) Besides the results from drill hole analyses, the raw ash is a key quality parameter that is relevant to both the cut-off grade and metallurgical recovery. The resource is limited by a maximum of 50% raw ash (air-dry basis). Due to the relatively consistent coal thickness and shallow depth, no other geological limiting factors are applied except for known geological anomalies such as paleochannels and igneous intrusion.
- (5) The quality of coal reserves is based on an air-dry basis. It is the laboratory results from the core samples with adjustments that reflect the reconciliation results from actual production.
- (6) The quantity of coal reserves is estimated on a saleable product basis, which takes into consideration of mining and processing loss. The economic results from the LOM planning process demonstrate the economic viability of the coal reserve estimate. Refer to section 19 of Exhibit 96.3 for economic analysis.
- (7) Mine yield is the ratio of estimated saleable product coal over ROM coal tons with mainly processing loss considered.

Coppabella-Moorvale Joint Venture

The Company's Coppabella Moorvale Joint Venture (CMJV) mines are located approximately 75 miles southwest of Mackay, near the township of Coppabella, in central Queensland, Australia. The CMJV includes two production-stage surface coal mines, the Coppabella Mine and the Moorvale Mine, and one surface coal mine under development, Moorvale South. Peabody owns 73.3% of the joint venture and is responsible for operations management. CMJV originally was developed by Macarthur Coal Limited (Macarthur), with production commencing in 1998 at Coppabella Mine and 2002 at Moorvale Mine. Peabody acquired Macarthur in December 2011 and assumed its majority interest in CMJV.



The CMJV mines primarily extract coal from the Leichardt seam in the Rangal Coal Measures of the Bowen Basin. The seam has a thickness from 5 to 10 meters and a typical depth of less than 250 meters. A portion of the Vermont seam is expected to be economically mineable at Moorvale South, once developed. The CMJV mines operate with a total of fourteen mining leases and one mineral development license issued by the Queensland state government, covering 13,459 hectares in total. Coal production is subject to royalties payable to the Queensland state government ranging from 7% to 15% of realized revenue, depending upon the lease. In addition, there are special private royalty agreements established in relation to exploration efforts. The primary mining leases for the Coppabella Mine expire in 2040 and other peripheral leases expire between 2023 and 2035. The Moorvale Mine has two mining leases which expire in 2023, and a third in 2028. The proposed Moorvale South mine has two mining leases which expire in 2030, and its relevant mineral development license expires in 2024. As of December 31, 2021, all required licenses and permits were in place for the operations of CMJV. For additional information regarding mineral rights and permitting, refer to sections 3 and 17 in Exhibit 96.4.

Conventional open cut mining methods are used at the CMJV mines. Coppabella Mine utilizes a dragline and two electric rope shovels to perform the majority of overburden removal, supplemented by diesel hydraulic excavators, which are also used to extract coal. Moorvale Mine utilizes only diesel hydraulic excavators for overburden removal. Both mines utilize cast and dozer push operations where applicable. Coal is trucked via internal haul roads for direct dumping to the hopper, or rehandled from pads to the dump hopper. Coal is crushed and washed at two processing plants, then transported by rail to the Dalrymple Bay Coal Terminal for seaborne customers. The CMJV produces a range of products including pulverized coal injection coal, coking coal and thermal coal. For additional information regarding mining and processing methods, refer to sections 13 and 14 in Exhibit 96.4.

The key supporting infrastructure for CMJV includes the port service at Dalrymple Bay Coal Terminal, above and below rail services, road access via public roads, electrical power from 66kV transmission lines, and water supply from captured surface runoff and commercial pipelines. Temporary housing near the mine sites provides employees with overnight accommodations, as necessary. The mines draw personnel primarily from nearby Moranbah, Nebo and Mackay, Queensland. For additional information regarding the mine's infrastructure, refer to section 15 in Exhibit 96.4.

The property, plant, equipment and mine development assets of CMJV had a net book value of approximately \$170 million at December 31, 2021. The CMJV's operating equipment meets contemporary mining standards and is adequately maintained to execute the mine plan. Routine maintenance, overhauls and necessary capital replacements are generally included in the LOM plan to support future production. For additional information regarding capital and equipment, refer to sections 13 and 18 in Exhibit 96.4.

The tables below present estimates of the CMJV coal reserves and resources as of December 31, 2021, along with comparative quantities of coal reserves at December 31, 2020. These reserve and resource estimates were supported by the analyses of 4,763 total drill holes within the coal lease areas. The quantity of the coal resources is estimated on an *in situ* basis as 73.3% attributable to Peabody. Coal resources are reported exclusive of coal reserves. The quantity of the coal reserves is estimated on a saleable product basis as 73.3% attributable to Peabody. Coal reserves and resources are reported on selected key quality parameters on an air-dry basis. For additional information regarding coal reserve and resource estimates, refer to sections 11 and 12 in Exhibit 96.4.

CMJV - SUMMARY OF RESERVES AND RESOURCES ⁽¹⁾
(Tons in millions)

Coal Reserves ⁽⁵⁾⁽⁶⁾	December 31, 2021					December 31, 2020
	Tons	%Ash	%Sulfur	%VM	% Mine Yield ⁽⁷⁾	Tons
Proven	14	9.8	0.3	13.1	76%	
Probable	6	9.5	0.3	11.8	70%	
Total	20					
Year-over-year decrease	-41%					

Coal Resources ⁽²⁾⁽³⁾⁽⁴⁾	December 31, 2021			
	Tons	%Ash	%Sulfur	VM%
Measured	34	17.4	0.3	15.5
Indicated	69	15.3	0.3	14.1
Measured and indicated	103	16.0	0.3	14.6
Inferred	84	15.6	0.3	12.9
Total	187			

The decrease in reserves reflects 2021 production depletion and reclassification of certain mine areas to resources until further drilling and studies are completed.

- (1) Economic recoverability is based upon product-specific estimated average sales prices per tonne of \$107.61 to \$116.49 for the five-year period ending Dec 31, 2026 and assumed escalation of 2.5% per annum during the subsequent period through the end of the LOM plan. Refer to section 19 of Exhibit 96.4 for detailed assumptions.
- (2) The quality of coal resources is estimated on an *in situ*, air-dry basis.
- (3) The quantity of coal resource is estimated on an *in situ* basis, which doesn't take into consideration coal loss during mining and processing.
- (4) Besides the results from drill hole analyses, the resource estimates are based on the following criteria:
- Open cut resources are limited to an area defined by pit shell with RF150 (revenue factor 150%), with exception of Moorvale South MDL 3034 o resources are limited to 150m depth of cover
 - Minimum mining thickness of 0.3m for open cut
 - Minimum mining thickness of 2m for underground resources
 - Underground resources excluded in areas of seam dip exceeding 15 degrees
 - Underground resources depth cutoff at 500m depth of cover, with exception of Moorvale Mine depth cutoff at 300m depth of cover
 - A seam quality cut-off greater than 50% raw ash (a.d.) is excluded from resources
 - No weathered coal included
 - Intrusive sills and dykes within seams are excluded from the resources
 - Heat-affected coal is included in the resources
 - Other limiting factors include surface infrastructure and lease boundary
- (5) The quality of coal reserves is estimated on an air-dry basis.
- (6) The quantity of coal reserves is estimated on a saleable product basis which takes into consideration of mining and processing loss. The economic results of the LOM planning process demonstrate the economic viability of the coal reserve estimate. Refer to section 19 of Exhibit 96.4 for economic analysis.
- (7) Mine yield is the ratio of estimated saleable product coal over ROM coal tons with mainly processing loss considered.

Internal Controls

The preparation of coal reserve and resource estimates is completed in accordance with the Company's prescribed internal control procedures, which are designed specifically to ensure the reliability of such estimates presented herein. Annually, QPs and other employees review the estimates of mineral reserves and mineral resources, the supporting documentation, and compliance with applicable internal controls. Such controls employ management systems, standardized procedures, workflow processes, multi-functional supervision and management approval, internal and external reviews, reconciliations, and data security covering record keeping, chain of custody and data storage.

The internal controls for reserve and resource estimates also cover exploration activities, sample preparation and analysis, data verification, processing, metallurgical testing, recovery estimation, mine design and sequencing, and reserve and resource evaluations, with environmental, social and regulatory considerations. The quality assurance and control protocols over the assaying of drill hole samples are performed by reputable commercial laboratories following certification and accreditation programs established by the American Society for Testing and Materials (ASTM) or Australian National Association of Testing Authorities (NATA).

The reserve and resource estimates have inherent risks due to data accuracy, uncertainty from geological interpretation, mine plan assumptions, uncontrolled rights for mineral and surface properties, environmental challenges, uncertainty for future market supply and demand, and changes in laws and regulations. Management and QPs are aware of those risks that might directly impact the assessment of coal reserves and resources. The current coal reserves and resources are estimated based on the best information available and are subject to re-assessment when conditions change. Refer to Item 1A. "Risk Factors" for discussion of risks associated with the estimates of the Company's reserves and resources.

Item 3. *Legal Proceedings.*

See Note 23. "Commitments and Contingencies" to the accompanying consolidated financial statements for a description of Peabody's pending legal proceedings, which information is incorporated herein by reference.

Item 4. Mine Safety Disclosures.

Peabody's "Safety and Sustainability Management System" has been designed to set clear and consistent expectations for safety, health and environmental stewardship across the Company's business. It aligns to the National Mining Association's CORESafety® framework and encompasses three fundamental areas: leadership and organization, risk management and assurance. Peabody also partners with other companies and certain governmental agencies to pursue new technologies that have the potential to improve its safety performance and provide better safety protection for employees.

Peabody continually monitors its safety performance and regulatory compliance. The information concerning mine safety violations or other regulatory matters required by SEC regulations is included in Exhibit 95 to this Annual Report on Form 10-K.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Peabody's Common Stock is listed on the New York Stock Exchange, under the symbol "BTU." As of February 11, 2022 there were 152 holders of the Company's Common Stock, as determined by counting its record holders and the number of participants reflected in a security position listing provided to the Company by the Depository Trust Company (DTC). Because such DTC participants are brokers and other institutions holding shares of Peabody's Common Stock on behalf of their customers, the Company does not know the actual number of unique shareholders represented by these record holders.

Dividends

The Company declared and paid quarterly dividends every quarter in 2019, and a supplemental dividend was declared and paid during the first quarter of 2019. The Company suspended dividends in 2020. As more fully described within "Liquidity and Capital Resources" of Part II, Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations," during the fourth quarter of 2020, the Company entered into a transaction support agreement with its surety bond providers which prohibits the payment of dividends through the earlier of December 31, 2025, or the maturity of the Credit Agreement (currently March 31, 2025) unless otherwise agreed to by the parties to the agreements. Additionally, restrictive covenants in its credit facility and in the indentures governing its senior secured notes also limit the Company's ability to pay cash dividends.

Share Relinquishments

The Company routinely allows employees to relinquish Common Stock to pay estimated taxes upon the vesting of restricted stock units and the payout of performance units that are settled in Common Stock under its equity incentive plans. The value of Common Stock tendered by employees is determined based on the closing price of the Company's Common Stock on the dates of the respective relinquishments.

Share Repurchase Program

On August 1, 2017, the Company announced that its Board of Directors authorized a share repurchase program to allow repurchases of up to \$500 million of the then outstanding shares of its common stock and/or preferred stock (Repurchase Program), which was eventually expanded to \$1.5 billion during 2018. The Repurchase Program does not have an expiration date and may be discontinued at any time. Through December 31, 2021, the Company has repurchased 41.5 million shares of its Common Stock for \$1,340.3 million, which included commissions paid of \$0.8 million, leaving \$160.5 million available for share repurchase under the Repurchase Program.

The Company suspended share repurchases in 2019, and similar to the payment of dividends as described above, the same agreements with its surety bond providers prohibit share repurchases through the earlier of December 31, 2025, or the maturity of the Credit Agreement (currently March 31, 2025) unless otherwise agreed to by the parties to the agreements. Additionally, restrictive covenants in its credit facility and in the indentures governing its senior secured notes also limit the Company's ability to repurchase shares. Prior to the suspension, repurchases were made at the Company's discretion. The specific timing, price and size of purchases depended upon the share price, general market and economic conditions and other considerations, including compliance with various debt agreements in effect at the time the repurchases were made.

Issuances of Equity Securities

In June 2021, the Company announced an at-the-market equity offering program pursuant to which the Company could offer and sell up to 12.5 million shares of its Common Stock. The at-the-market equity offering program was further expanded to 32.5 million shares during 2021. The shares are offered and sold pursuant to the Company's Registration Statement on Form S-3, which was declared effective by the Securities and Exchange Commission on April 23, 2021, as supplemented by prospectus supplements dated June 4, 2021, September 17, 2021, and December 17, 2021 relating to the offer and sale of the shares. During the year ended December 31, 2021, the Company sold approximately 24.8 million shares for net cash proceeds of \$269.8 million.

Also during the year ended December 31, 2021, the Company completed multiple bilateral transactions with holders of the 2022 Notes, the 2025 Notes and the 2024 Peabody Notes in which the Company issued an aggregate 10.0 million shares of its Common Stock in exchange for \$37.3 million aggregate principal amount of the 2022 Notes, \$47.2 million aggregate principal amount of the 2025 Notes and \$21.6 million aggregate principal amount of the 2024 Peabody Notes. The issuance of shares of common stock in exchange for the 2022 Notes, the 2025 Notes and the 2024 Peabody Notes was made in reliance on the exemption from registration provided in Section 3(a)(9) under the Securities Act of 1933, based in part on representations of holders of the 2022 Notes, the 2025 Notes and the 2024 Peabody Notes, and on the basis that the exchange was completed with existing holders of the Company's securities and no commission or other remuneration was paid or given for soliciting the exchange.

Purchases of Equity Securities

The following table summarizes all share purchases for the three months ended December 31, 2021:

Period	Total Number of Shares Purchased ⁽¹⁾	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Program	Maximum Dollar Value of Shares that May Yet Be Used to Repurchase Shares Under the Publicly Announced Program (in millions)
October 1 through October 31, 2021	546	\$ 15.65	—	\$ 160.5
November 1 through November 30, 2021	—	—	—	160.5
December 1 through December 31, 2021	—	—	—	160.5
Total	546	15.65	—	—

⁽¹⁾ Includes shares withheld to cover the withholding taxes upon the vesting of equity awards, which are not a part of the Repurchase Program.

Stock Performance Graph

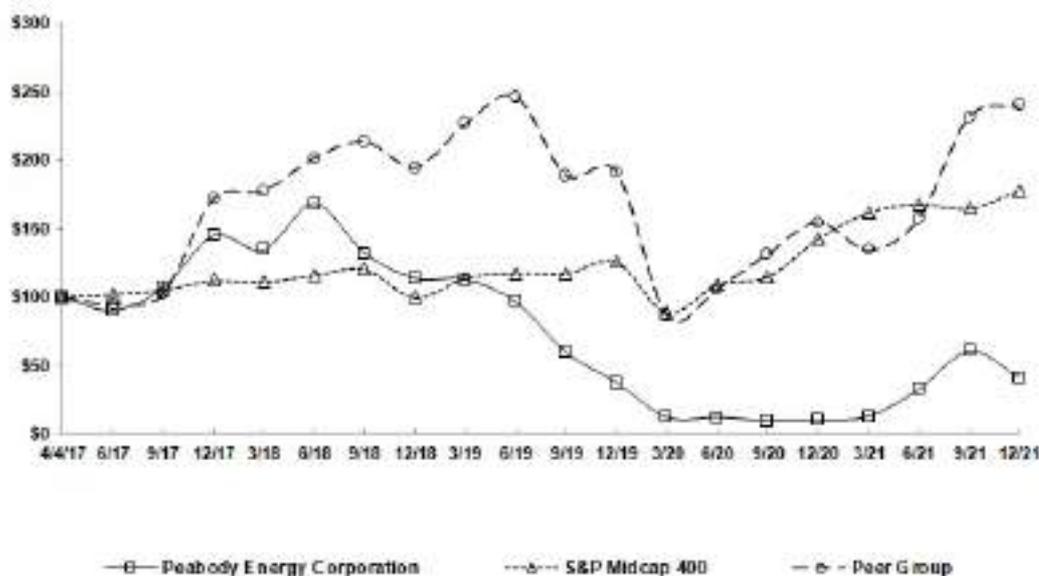
The following performance graph compares the cumulative total return on Peabody's common stock from April 4, 2017, the date its common stock began trading following the effective date of its plan of reorganization, through December 31, 2021, with the cumulative total return of the following indices: (i) the S&P MidCap 400 Stock Index and (ii) Custom Composite Index (a peer group comprised of Arch Resources, Inc., Hallador Energy Co., and Warrior Met Coal, Inc.). The Custom Composite Index reflects publicly listed U.S. companies within the coal industry of similar size or product type.

The graph assumes that the value of the investment was \$100 at April 4, 2017 for BTU and the Custom Composite Index (Warrior Met Coal, Inc. began trading on the New York Stock Exchange on April 13, 2017) and at March 31, 2017, for the S&P Midcap 400 Index. The graph also assumes that all dividends were reinvested and that the investments were held through December 31, 2021.

These indices are included for comparative purposes only and do not necessarily reflect management's opinion that such indices are an appropriate measure of the relative performance of the stock involved and are not intended to forecast or be indicative of possible future performance of the common stock.

COMPARISON OF 57 MONTH CUMULATIVE TOTAL RETURN*

Among Peabody Energy Corporation, the S&P Midcap 400 Index, and a Peer Group



*\$100 invested on 4/4/17 in stock or 3/31/17 in index, including reinvestment of dividends. Fiscal year ending December 31.

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Item 6. Reserved.

Not applicable.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The Company's discussion and analysis of the year ended December 31, 2021 compared to the year ended December 31, 2020 is included herein. For discussion and analysis of the year ended December 31, 2020 compared to the year ended December 31, 2019, please refer to Item 7 of Part II, "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Peabody's Annual Report on Form 10-K for the year ended December 31, 2020, which was filed with the SEC on February 23, 2021 and is incorporated by reference herein.

Non-GAAP Financial Measures

The following discussion of Peabody's results of operations includes references to and analysis of Adjusted EBITDA, which is a financial measure not recognized in accordance with U.S. generally accepted accounting principles (U.S. GAAP). Adjusted EBITDA is used by management as the primary metric to measure each of its segments' operating performance.

Also included in the following discussion of Peabody's results of operations are references to Revenues per Ton, Costs per Ton and Adjusted EBITDA Margin per Ton for each mining segment. These metrics are used by management to measure each of its mining segments' operating performance. Management believes Costs per Ton and Adjusted EBITDA Margin per Ton best reflect controllable costs and operating results at the mining segment level. The Company considers all measures reported on a per ton basis to be operating/statistical measures; however, the Company includes reconciliations of the related non-GAAP financial measures (Adjusted EBITDA and Total Reporting Segment Costs) in the "Reconciliation of Non-GAAP Financial Measures" section contained within this Item 7.

In its discussion of liquidity and capital resources, Peabody includes references to Free Cash Flow which is also a non-GAAP measure. Free Cash Flow is used by management as a measure of its financial performance and its ability to generate excess cash flow from its business operations.

Peabody believes non-GAAP performance measures are used by investors to measure its operating performance and lenders to measure its ability to incur and service debt. These measures are not intended to serve as alternatives to U.S. GAAP measures of performance and may not be comparable to similarly-titled measures presented by other companies. Refer to the "Reconciliation of Non-GAAP Financial Measures" section contained within this Item 7 for definitions and reconciliations to the most comparable measures under U.S. GAAP.

Overview

In 2021, Peabody produced and sold 126.9 million and 130.1 million tons of coal, respectively, from continuing operations.

As of December 31, 2021, the Company reports its results of operations primarily through the following reportable segments: Seaborne Thermal Mining, Seaborne Metallurgical Mining, Powder River Basin Mining, Other U.S. Thermal Mining and Corporate and Other.

The business of the Company's seaborne operating platform is primarily export focused with customers spread across several countries, with a portion of its thermal and metallurgical coal sold within Australia. Generally, revenues from individual countries vary year by year based on electricity and steel demand, the strength of the global economy, governmental policies and several other factors, including those specific to each country. The Company classifies its seaborne mines within the Seaborne Thermal Mining or Seaborne Metallurgical Mining segments based on the primary customer base and coal reserve type of each mining operation. A small portion of the coal mined by the Seaborne Thermal Mining segment is of a metallurgical grade. Similarly, a small portion of the coal mined by the Seaborne Metallurgical Mining segment is of a thermal grade. Additionally, the Company may market some of its metallurgical coal products as a thermal coal product from time to time depending on market conditions.

The Company's Seaborne Thermal Mining operations consist of mines in New South Wales, Australia. The mines in that segment utilize both surface and underground extraction processes to mine low-sulfur, high Btu thermal coal.

The Company's Seaborne Metallurgical Mining operations consist of mines in Queensland, Australia, one in New South Wales, Australia and one in Alabama, USA. The mines in that segment utilize both surface and underground extraction processes to mine various qualities of metallurgical coal. The metallurgical coal qualities include hard coking coal, semi-hard coking coal, semi-soft coking coal and pulverized coal injection coal.

The principal business of the Company's thermal mining segments in the U.S. is the mining, preparation and sale of thermal coal, sold primarily to electric utilities in the U.S. under long-term contracts, with a relatively small portion sold as international exports as conditions warrant. The Company's Powder River Basin Mining operations consist of its mines in Wyoming. The mines in that segment are characterized by surface mining extraction processes, coal with a lower sulfur content and Btu and higher customer transportation costs (due to longer shipping distances). The Company's Other U.S. Thermal Mining operations historically reflect the aggregation of its Illinois, Indiana, New Mexico and Colorado mining operations. The mines in that segment are characterized by a mix of surface and underground mining extraction processes, coal with a higher sulfur content and Btu and lower customer transportation costs (due to shorter shipping distances). Geologically, the Company's Powder River Basin Mining operations mine sub-bituminous coal deposits and its Other U.S. Thermal Mining operations mine both bituminous and sub-bituminous coal deposits.

The Company's Corporate and Other segment includes selling and administrative expenses, results from equity affiliates, corporate hedging activities, trading and brokerage activities, minimum charges on certain transportation-related contracts, the closure of inactive mining sites and certain commercial matters.

Resource Management. As of December 31, 2021, Peabody controlled approximately 2.5 billion tons of proven and probable coal reserves, 2.4 billion tons of resources and approximately 400,000 acres of surface property through ownership and lease agreements. The Company has an ongoing asset optimization program whereby its property management group regularly reviews these reserves, resources and surface properties for opportunities to generate earnings and cash flow through the sale or exchange of non-strategic coal reserves, resources and surface lands. These surface lands include acres where Peabody has completed post-mining reclamation. In addition, the Company generates revenue through royalties from coal reserves and oil and gas rights leased to third parties and farm income from surface lands under third-party contracts.

Middlemount Mine. Peabody owns a 50% equity interest in Middlemount, which owns the Middlemount Mine in Queensland, Australia. The mine predominantly produces semi-hard coking coal and low-volatile pulverized coal injection (LV PCI) coal for sale into seaborne coal markets through Abbot Point Coal Terminal, with some capacity also secured at Dalrymple Bay Coal Terminal. Mining operations first commenced at the Middlemount Mine in late 2011. During the years ended December 31, 2021 and 2020, the mine sold 2.0 million and 1.6 million tons of coal, respectively (on a 50% basis).

Summary

Spot pricing for premium low-vol hard coking coal (Premium HCC), premium low-vol pulverized coal injection (Premium PCI) coal, Newcastle index thermal coal and API 5 thermal coal, and prompt month pricing for PRB 8,800 Btu/Lb coal and Illinois Basin 11,500 Btu/Lb coal during the year ended December 31, 2021 is set forth in the table below.

The seaborne pricing included in the table below is not necessarily indicative of the pricing the Company realized during the year ended December 31, 2021 due to quality differentials and the majority of its seaborne sales being executed through annual and multi-year international coal supply agreements that contain provisions requiring both parties to renegotiate pricing periodically. The Company's typical practice is to negotiate pricing for seaborne metallurgical coal contracts on a bi-annual, quarterly, spot or index basis and seaborne thermal coal contracts on an annual, spot or index basis.

In the U.S., the pricing included in the table below is also not necessarily indicative of the pricing the Company realized during the year ended December 31, 2021 since the Company generally sells coal under long-term contracts where pricing is determined based on various factors. Such long-term contracts in the U.S. may vary significantly in many respects, including price adjustment features, price reopener terms, coal quality requirements, quantity parameters, permitted sources of supply, treatment of environmental constraints, extension options, force majeure and termination and assignment provisions. Competition from alternative fuels such as natural gas and other fuel sources may also impact the Company's realized pricing.

	High	Low	Average	December 31, 2021
Premium HCC ⁽¹⁾	\$ 408.50	\$ 99.50	\$ 226.24	\$ 357.2
Premium PCI coal ⁽¹⁾	\$ 290.00	\$ 91.50	\$ 164.34	\$ 244.0
Newcastle index thermal coal ⁽¹⁾	\$ 253.55	\$ 80.78	\$ 137.95	\$ 165.8
API 5 thermal coal ⁽¹⁾	\$ 170.90	\$ 50.75	\$ 82.59	\$ 101.6
PRB 8,800 Btu/Lb coal ⁽²⁾	\$ 37.00	\$ 11.85	\$ 17.70	\$ 29.0
Illinois Basin 11,500 Btu/Lb coal ⁽²⁾	\$ 92.00	\$ 29.75	\$ 51.95	\$ 88.0

⁽¹⁾ Prices expressed per metric tonne.

⁽²⁾ Prices expressed per short ton.

Within the global coal industry, supply and demand disruptions were widespread as the coronavirus (COVID-19) pandemic forced country-wide lockdowns and regional restrictions. Future COVID-19-related developments are unknown, including the duration, severity, scope and the necessary government actions to limit the spread of COVID-19. The global coal industry data for the year ended December 31, 2021 presented herein may not be indicative of the ultimate impacts of the COVID-19 pandemic given the various levels of response and unknown duration.

Within the seaborne metallurgical coal market, a combination of robust steel production, decade-high steel margins and tight coal availability have driven Australian spot prices to record levels. The year ended December 31, 2021 saw China's unofficial ban on Australian coal remain in place and several countries such as India, Brazil and Vietnam achieve record annual import volumes of seaborne metallurgical coal. China's unofficial ban on Australian coal has caused a redistribution of trade flows with Australian suppliers increasing market share in Europe, South America, India and North Asia while other suppliers targeted China, incentivized by a significant price advantage. However, recent measures introduced by China to reduce steel production and increase domestic coal output have temporarily dampened seaborne demand and driven delivered China prices in line with or below the rest of the market. Despite this, supply availability remains exceedingly tight with the spread of COVID-19 and weather impacts in Australia, Canada, Mongolia and Russia. The Company believes energy shortages in some markets present a risk to industrial activity but the underlying market fundamentals remain constructive.

Within the seaborne thermal coal market, Newcastle thermal coal prices remained elevated for the year ended December 31, 2021, compared to the prior year, driven by a combination of tight supplies and elevated demand. China's domestic thermal coal supply was hampered by heightened safety inspections and mine suspensions through much of the year. Thermal electricity generation in China was strong for the year ended December 31, 2021, and the relaxation of China's import controls combined with tight domestic supply pushed import demand higher for the year. In Europe, gas supply constraints have pushed standby coal plants to resume operation to help supply strong electricity demand. Despite the strong demand, the supply response has been muted from key exporters such as Australia, Colombia and South Africa, keeping thermal coal prices elevated.

In the United States, overall electricity demand increased 3% year-over-year, positively impacted by weather and the prior year economic impacts of the COVID-19 pandemic. Electricity generation from thermal coal has notably improved year-over-year as a result of higher natural gas prices and stronger overall electricity demand. This has positively impacted coal's share of electricity generation for the year ended December 31, 2021, with a rise to approximately 22% compared to approximately 19% in the prior year, while causing natural gas's share to decline to approximately 38% compared to approximately 40% in the prior year. Stronger coal use and a limited supply response in coal production has contributed to decreasing coal stockpile levels. Since December 2020, coal inventories have fallen by approximately 38 million tons, a 29% decline. Through the year ended December 31, 2021, utility consumption of PRB coal rose approximately 22% compared to the prior year period.

Other

Peabody's North Goonyella Mine in Queensland, Australia experienced a fire in 2018 which resulted in the suspension of mining operations. In 2020, the Company commenced a review of strategic alternatives for North Goonyella which is currently ongoing. During the years ended December 31, 2019 and 2018, Peabody recorded provisions for equipment losses of \$83.2 million and \$66.4 million, respectively, related to the fire. The Company has also incurred containment and idling costs subsequent to the mine's suspension which amounted to \$13.0 million, \$32.3 million and \$111.5 million during the years ended December 31, 2021, 2020 and 2019, respectively.

In March 2019, Peabody entered into an insurance claim settlement agreement with its insurers and various re-insurers under a combined property damage and business interruption policy and recorded a \$125 million insurance recovery, the maximum amount available under the policy above a \$50 million deductible. The Company collected the settlement in 2019.

Results of Operations

Year Ended December 31, 2021 Compared to Year Ended December 31, 2020

Peabody's revenues for the year ended December 31, 2021 increased compared to the same period in 2020 (\$437.2 million) primarily due to the impacts of higher seaborne thermal and metallurgical pricing, partially offset by lower seaborne volumes and net unrealized mark-to-market losses on derivative contracts related to forecasted sales and other financial trading.

Results from continuing operations, net of income taxes for the year ended December 31, 2021 increased compared to the same period in the prior year (\$2,207.2 million) primarily due to the asset impairment charges recorded in the prior year (\$1,487.4 million), the favorable revenue variance described above and improved results from equity affiliates (\$142.2 million).

Adjusted EBITDA for the year ended December 31, 2021 reflected a year-over-year increase of \$657.9 million.

As of December 31, 2021, Peabody's available liquidity was approximately \$996 million. Refer to the "Liquidity and Capital Resources" section contained within this Item 7 for a further discussion of factors affecting the Company's available liquidity.

Tons Sold

The following table presents tons sold by operating segment:

	Year Ended December 31,		(Decrease) Increase to Volumes	
	2021	2020	Tons	%
	(Tons in millions)			
Seaborne Thermal Mining	17.3	19.0	(1.7)	(8.9)%
Seaborne Metallurgical Mining	5.5	5.6	(0.1)	(1.8)%
Powder River Basin Mining	88.4	87.2	1.2	1.4 %
Other U.S. Thermal Mining	16.9	18.3	(1.4)	(7.7)%
Total tons sold from mining segments	128.1	130.1	(2.0)	(1.5)%
Corporate and Other	2.0	2.5	(0.5)	(20.0)%
Total tons sold	130.1	132.6	(2.5)	(1.9)%

Supplemental Financial Data

The following table presents supplemental financial data by operating segment:

	Year Ended December 31,		Increase (Decrease)	
	2021	2020	\$	%
Revenues per Ton - Mining Operations ⁽¹⁾				
Seaborne Thermal	\$ 54.09	\$ 37.46	\$ 16.63	44.4 %
Seaborne Metallurgical	131.83	86.33	45.50	52.7 %
Powder River Basin	10.99	11.37	(0.38)	(3.3)%
Other U.S. Thermal	40.75	38.73	2.02	5.2 %
Costs per Ton - Mining Operations ^{(1) (2)}				
Seaborne Thermal	\$ 33.64	\$ 28.87	\$ 4.77	16.5 %
Seaborne Metallurgical	99.55	109.44	(9.89)	(9.0)%
Powder River Basin	9.46	9.14	0.32	3.5 %
Other U.S. Thermal	31.04	29.51	1.53	5.2 %
Adjusted EBITDA Margin per Ton - Mining Operations ^{(1) (2)}				
Seaborne Thermal	\$ 20.45	\$ 8.59	\$ 11.86	138.1 %
Seaborne Metallurgical	32.28	(23.11)	55.39	239.7 %
Powder River Basin	1.53	2.23	(0.70)	(31.4)%
Other U.S. Thermal	9.71	9.22	0.49	5.3 %

⁽¹⁾ This is an operating/statistical measure not recognized in accordance with U.S. GAAP. Refer to the "Reconciliation of Non-GAAP Financial Measures" section below for definitions and reconciliations to the most comparable measures under U.S. GAAP.

⁽²⁾ Includes revenue-based production taxes and royalties; excludes depreciation, depletion and amortization; asset retirement obligation expenses; selling and administrative expenses; restructuring charges; asset impairment; amortization of take-or-pay contract-based intangibles; and certain other costs related to post-mining activities.

Revenues

The following table presents revenues by reporting segment:

	Year Ended December 31,		Increase (Decrease) to Revenues	
	2021	2020	\$	%
	(Dollars in millions)			
Seaborne Thermal Mining	\$ 934.0	\$ 711.8	\$ 222.2	31.2 %
Seaborne Metallurgical Mining	727.7	486.5	241.2	49.6 %
Powder River Basin Mining	971.2	991.1	(19.9)	(2.0)%
Other U.S. Thermal Mining	689.1	707.3	(18.2)	(2.6)%
Corporate and Other	(3.7)	(15.6)	11.9	76.3 %
Revenues	\$ 3,318.3	\$ 2,881.1	\$ 437.2	15.2 %

Seaborne Thermal Mining. The increase in segment revenues during the year ended December 31, 2021 compared to the prior year was due to favorable realized coal pricing (\$280.8 million), partially offset by unfavorable volume and mix variances (\$58.6 million).

Seaborne Metallurgical Mining. Segment revenues increased during the year ended December 31, 2021 compared to the prior year due to favorable realized coal pricing (\$257.7 million), partially offset by unfavorable volume and mix variances (\$16.5 million).

Powder River Basin Mining. Segment revenues decreased during the year ended December 31, 2021 compared to the prior year primarily due to unfavorable realized coal pricing (\$27.6 million), offset by increased demand (\$7.7 million).

Other U.S. Thermal Mining. The decrease in segment revenues during the year ended December 31, 2021 compared to the prior year was primarily due to lower volumes (\$64.3 million), offset by favorable realized pricing (\$46.1 million).

Corporate and Other. Segment revenues increased during the year ended December 31, 2021 compared to the prior year due to primarily due to higher results from trading activities (\$88.9 million), partially offset by net unrealized mark-to-market losses on derivative contracts related to forecasted coal sales and other financial trading (\$79.2 million).

Adjusted EBITDA

The following table presents Adjusted EBITDA for each of the Company's reporting segments:

	Year Ended December 31,		Increase (Decrease) to Adjusted EBITDA	
	2021	2020	\$	%
	(Dollars in millions)			
Seaborne Thermal Mining	\$ 353.1	\$ 163.2	\$ 189.9	116.4 %
Seaborne Metallurgical Mining	178.2	(130.2)	308.4	236.9 %
Powder River Basin Mining	134.9	194.8	(59.9)	(30.7)%
Other U.S. Thermal Mining	164.2	168.4	(4.2)	(2.5)%
Corporate and Other	86.3	(137.4)	223.7	162.8 %
Adjusted EBITDA ⁽¹⁾	\$ 916.7	\$ 258.8	\$ 657.9	254.2 %

⁽¹⁾ This is a financial measure not recognized in accordance with U.S. GAAP. Refer to the "Reconciliation of Non-GAAP Financial Measures" section below for definitions and reconciliations to the most comparable measures under U.S. GAAP.

Seaborne Thermal Mining. Segment Adjusted EBITDA increased during the year ended December 31, 2021 compared to the same period in the prior year as a result of higher realized net coal pricing (\$258.7 million) and product mix (\$27.7 million). The increases were partially offset by unfavorable volume variances (\$51.8 million), unfavorable foreign currency impacts (\$31.5 million) and higher commodity pricing (\$10.5 million).

Seaborne Metallurgical Mining. Segment Adjusted EBITDA increased during the year ended December 31, 2021 compared to the same period in the prior year due to higher realized net coal pricing (\$238.7 million), cost improvements across the operations (\$80.7 million) and favorable volume variances (\$26.8 million), offset by unfavorable foreign currency impacts (\$41.8 million).

Powder River Basin Mining. Segment Adjusted EBITDA decreased during the year ended December 31, 2021 compared to the same period in the prior year due to the unfavorable impacts of higher commodity pricing (\$28.4 million), lower realized net coal pricing (\$23.0 million), higher costs for materials, services and repairs (\$14.1 million) and unfavorable volume and mix variances (\$12.6 million). The decreases were partially offset by favorable mine sequencing impacts (\$11.9 million) and lower leasing costs (\$6.3 million).

Other U.S. Thermal Mining. Segment Adjusted EBITDA decreased during the year ended December 31, 2021 compared to the same period in the prior year due to higher costs for materials, services and repairs (\$28.9 million) and higher commodity pricing (\$23.7 million), offset by higher realized net coal pricing (\$43.9 million) and favorable mine sequencing impacts (\$7.5 million).

Corporate and Other Adjusted EBITDA. The following table presents a summary of the components of Corporate and Other Adjusted EBITDA:

	Year Ended December 31,		Increase (Decrease)	
	2021	2020	to Income	
			\$	%
	(Dollars in millions)			
Middlemount ⁽¹⁾	\$ 48.2	\$ (29.2)	\$ 77.4	265.1 %
Resource management activities ⁽²⁾	6.9	15.3	(8.4)	(54.9)%
Selling and administrative expenses	(84.9)	(99.5)	14.6	14.7 %
Other items, net ⁽³⁾	116.1	(24.0)	140.1	583.8 %
Corporate and Other Adjusted EBITDA	\$ 86.3	\$ (137.4)	\$ 223.7	162.8 %

⁽¹⁾ Middlemount's results are before the impact of related changes in deferred tax asset valuation allowance and reserves and amortization of basis difference. Middlemount's standalone results included (on a 50% attributable basis) aggregate amounts of depreciation, depletion and amortization, asset retirement obligation expenses, net interest expense and income taxes of \$73.8 million and \$29.9 million during the years ended December 31, 2021 and 2020, respectively.

⁽²⁾ Includes gains (losses) on certain surplus coal reserve, resource and surface land sales and property management costs and revenues.

⁽³⁾ Includes trading and brokerage activities, costs associated with post-mining activities, gains (losses) on certain asset disposals, minimum charges on certain transportation-related contracts, costs associated with suspended operations including the North Goonyella Mine and expenses related to other commercial activities.

The increase in Corporate and Other Adjusted EBITDA during the year ended December 31, 2021 compared to the same period in the prior year was due to favorable trading results (\$63.7 million); the gain recognized in the current year on the sale of the Company's Millennium Mine (\$26.1 million) as discussed in Note 19. "Other Events"; a favorable variance in Middlemount's results due to the combined impacts of higher sales pricing, improved production, cost improvements and the insurance settlement attributable to a business interruption and property damage claim from 2019; lower postretirement health care costs (\$38.5 million) primarily due to changes made to the Company's postretirement health care benefit plans announced in 2021 and 2020; and lower containment and holding costs for the Company's North Goonyella Mine (\$19.3 million).

Income (Loss) From Continuing Operations, Net of Income Taxes

The following table presents income (loss) from continuing operations, net of income taxes:

	Year Ended December 31,		Increase (Decrease) to Income	
	2021	2020	\$	%
	(Dollars in millions)			
Adjusted EBITDA ⁽¹⁾	\$ 916.7	\$ 258.8	\$ 657.9	254.2 %
Depreciation, depletion and amortization	(308.7)	(346.0)	37.3	10.8 %
Asset retirement obligation expenses	(44.7)	(45.7)	1.0	2.2 %
Restructuring charges	(8.3)	(37.9)	29.6	78.1 %
Transaction costs related to joint ventures	—	(23.1)	23.1	100.0 %
Asset impairment	—	(1,487.4)	1,487.4	100.0 %
Changes in deferred tax asset valuation allowance and reserves and amortization of basis difference related to equity affiliates	33.8	(30.9)	64.7	209.4 %
Interest expense	(183.4)	(139.8)	(43.6)	(31.2)%
Net gain on early debt extinguishment	33.2	—	33.2	n.m.
Interest income	6.5	9.4	(2.9)	(30.9)%
Net mark-to-market adjustment on actuarially determined liabilities	43.4	5.1	38.3	751.0 %
Unrealized losses on derivative contracts related to forecasted sales	(115.1)	(29.6)	(85.5)	(288.9)%
Unrealized (losses) gains on foreign currency option contracts	(7.5)	7.1	(14.6)	(205.6)%
Take-or-pay contract-based intangible recognition	4.3	8.2	(3.9)	(47.6)%
Income tax provision	(22.8)	(8.0)	(14.8)	(185.0)%
Income (loss) from continuing operations, net of income taxes	<u>\$ 347.4</u>	<u>\$ (1,859.8)</u>	<u>\$ 2,207.2</u>	118.7 %

⁽¹⁾ This is a financial measure not recognized in accordance with U.S. GAAP. Refer to the "Reconciliation of Non-GAAP Financial Measures" section below for definitions and reconciliations to the most comparable measures under U.S. GAAP.

Depreciation, Depletion and Amortization. The following table presents a summary of depreciation, depletion and amortization expense by segment:

	Year Ended December 31,		(Decrease) Increase to Income	
	2021	2020	\$	%
	(Dollars in millions)			
Seaborne Thermal Mining	\$ (107.7)	\$ (88.0)	\$ (19.7)	(22.4)%
Seaborne Metallurgical Mining	(73.3)	(85.4)	12.1	14.2 %
Powder River Basin Mining	(41.5)	(85.3)	43.8	51.3 %
Other U.S. Thermal Mining	(67.4)	(72.1)	4.7	6.5 %
Corporate and Other	(18.8)	(15.2)	(3.6)	(23.7)%
Total	<u>\$ (308.7)</u>	<u>\$ (346.0)</u>	<u>\$ 37.3</u>	10.8 %

Additionally, the following table presents a summary of the Company's weighted-average depletion rate per ton for active mines in each of its mining segments:

	Year Ended December 31,	
	2021	2020
Seaborne Thermal Mining	\$ 2.19	\$ 1.90
Seaborne Metallurgical Mining	1.18	2.30
Powder River Basin Mining	0.25	0.50
Other U.S. Thermal Mining	1.15	1.04

Depreciation, depletion and amortization expense decreased during the year ended December 31, 2021 compared to the same period in the prior year primarily due to the impact of the asset impairment recorded at the North Antelope Rochelle Mine during the second quarter of 2020 (\$46.2 million). The increase in the weighted-average depletion rate per ton for the Seaborne Thermal Mining segment during the year ended December 31, 2021 compared to the same period in the prior year reflects the impact of the transition to the United Wambo Joint Venture. The decrease in the weighted-average depletion rate per ton for the Seaborne Metallurgical Mining segment during the year ended December 31, 2021 compared to the same period in the prior year reflects the volume and mix variances which impacted the Company's revenues as described above. The decrease in the weighted-average depletion rate per ton for the Powder River Basin Mining segment during the year ended December 31, 2021 compared to the same period in the prior year reflects the asset impairment recorded during the second quarter of 2020.

Restructuring Charges. Restructuring charges decreased during the year ended December 31, 2021 compared to the same period in the prior year as the result of workforce reductions made across the organization during the prior year.

Transaction Costs Related to Joint Ventures. The charges recorded during the prior year period related to the proposed PRB Colorado joint venture with Arch Resources, Inc. which was terminated during the third quarter of 2020.

Asset Impairment. The Company recognized \$1,487.4 million in aggregate asset impairment charges during the year ended December 31, 2020, primarily related to the fair value of its North Antelope Rochelle Mine in its Powder River Basin Mining segment. Refer to Note 3. "Asset Impairment" to the accompanying consolidated financial statements for further information regarding the nature and composition of those charges, which information is incorporated herein by reference.

Changes in Deferred Tax Asset Valuation Allowance and Reserves and Amortization of Basis Difference Related to Equity Affiliates. During the year ended December 31, 2021, the Company reversed a valuation allowance of approximately \$33 million that had been established in the prior year on Middlemount's net deferred tax position. The Company reversed the valuation allowance due to the realization of deferred tax assets as a result of pricing improvements. Refer to Note 6. "Equity Method Investments" to the accompanying consolidated financial statements for further information regarding these changes, which information is incorporated herein by reference.

Interest Expense. The increase in interest expense during the year ended December 31, 2021 compared to the prior year was the result of a series of refinancing transactions completed by the Company during the first quarter of 2021, partially offset by the impacts of debt reductions made throughout 2021 as described in Note 11. "Long-term Debt" to the accompanying consolidated financial statements.

Net Gain on Early Debt Extinguishment. The gain recognized during the year ended December 31, 2021 was primarily related to debt retirements made through various open market purchases throughout the year as further discussed in Note 11. "Long-term Debt" to the accompanying consolidated financial statements.

Net Mark-to-Market Adjustment on Actuarially Determined Liabilities. The gain recorded during the year ended December 31, 2021 was driven by increases to the discount rates for actuarially determined liabilities (\$37.6 million); the favorable impacts of changes for the postretirement benefit plans related to updated claims experience (\$22.0 million) and a mortality update (\$16.6 million); and the favorable impact of an update to the Company's census data for actuarially determined liabilities (\$10.3 million). These increases were offset by mark-to-market losses on pension and postretirement benefit plan assets (\$43.1 million).

The gain recorded during the year ended December 31, 2020 was driven by gains on pension and postretirement benefit plan assets (\$73.7 million), the favorable impacts of a mortality update for actuarially determined liabilities (\$39.5 million) and changes related to claims for the postretirement benefit plans (\$21.2 million). These increases were offset by decreases to the discount rates for actuarially determined liabilities (\$116.5 million).

Unrealized Losses on Derivative Contracts Related to Forecasted Sales. Unrealized losses primarily relate to mark-to-market activity on derivatives related to forecasted sales. For additional information, refer to Note 7. "Derivatives and Fair Value Measurements" to the accompanying consolidated financial statements.

Unrealized (Losses) Gains on Foreign Currency Option Contracts. Unrealized (losses) gains primarily relate to mark-to-market activity on foreign currency option contracts. For additional information, refer to Note 7. "Derivatives and Fair Value Measurements" to the accompanying consolidated financial statements.

Income Tax Provision. The increase in the income tax provision during the year ended December 31, 2021 compared to the prior year period was primarily due to year-over-year increases in taxable income, partially offset by a decrease in the provision related to the remeasurement of foreign income tax accounts. Refer to Note 9. "Income Taxes" to the accompanying consolidated financial statements for additional information.

Net Income (Loss) Attributable to Common Stockholders

The following table presents net income (loss) attributable to common stockholders:

	Year Ended December 31,		Increase to	
	2021	2020	\$	%
	(Dollars in millions)			
Income (loss) from continuing operations, net of income taxes	\$ 347.4	\$ (1,859.8)	\$ 2,207.2	118.7 %
Income (loss) from discontinued operations, net of income taxes	24.0	(14.0)	38.0	271.4 %
Net income (loss)	371.4	(1,873.8)	2,245.2	119.8 %
Less: Net income (loss) attributable to noncontrolling interests	11.3	(3.5)	14.8	422.9 %
Net income (loss) attributable to common stockholders	<u>\$ 360.1</u>	<u>\$ (1,870.3)</u>	<u>\$ 2,230.4</u>	<u>119.3 %</u>

Income (Loss) from Discontinued Operations, Net of Income Taxes. The increase in results from discontinued operations, net of income taxes during the year ended December 31, 2021 compared to the prior year period was primarily due to the gain of \$24.6 million recognized on the sale of the Wilkie Creek Mine as discussed in Note 19. "Other Events" and increases to the discount rates for black lung liabilities.

Net Income (Loss) Attributable to Noncontrolling Interests. The increase in net results attributable to noncontrolling interests during the year ended December 31, 2021 compared to the prior year period was primarily due to higher results of Peabody's majority-owned mines in which there is an outside non-controlling interest.

Diluted EPS

The following table presents diluted EPS:

	Year Ended December 31,		Increase to	
	2021	2020	\$	%
Diluted EPS attributable to common stockholders:				
Income (loss) from continuing operations	\$ 3.00	\$ (18.99)	\$ 21.99	115.8 %
Income (loss) from discontinued operations	0.22	(0.15)	0.37	246.7 %
Net income (loss) attributable to common stockholders	<u>\$ 3.22</u>	<u>\$ (19.14)</u>	<u>\$ 22.36</u>	<u>116.8 %</u>

Diluted EPS is commensurate with the changes in results from continuing operations and discontinued operations during that period. Diluted EPS reflects weighted average diluted common shares outstanding of 112.0 million and 97.7 million for the years ended December 31, 2021 and 2020, respectively.

Reconciliation of Non-GAAP Financial Measures

Adjusted EBITDA is defined as income (loss) from continuing operations before deducting net interest expense, income taxes, asset retirement obligation expenses and depreciation, depletion and amortization. Adjusted EBITDA is also adjusted for the discrete items that management excluded in analyzing each of its segment's operating performance, as displayed in the reconciliations below.

	Year Ended December 31,	
	2021	2020
	(Dollars in millions)	
Income (loss) from continuing operations, net of income taxes	\$ 347.4	\$ (1,859.8)
Depreciation, depletion and amortization	308.7	346.0
Asset retirement obligation expenses	44.7	45.7
Restructuring charges	8.3	37.9
Transaction costs related to joint ventures	—	23.1
Asset impairment	—	1,487.4
Changes in deferred tax asset valuation allowance and reserves and amortization of basis difference related to equity affiliates	(33.8)	30.9
Interest expense	183.4	139.8
Net gain on early debt extinguishment	(33.2)	—
Interest income	(6.5)	(9.4)
Net mark-to-market adjustment on actuarially determined liabilities	(43.4)	(5.1)
Unrealized losses on derivative contracts related to forecasted sales	115.1	29.6
Unrealized losses (gains) on foreign currency option contracts	7.5	(7.1)
Take-or-pay contract-based intangible recognition	(4.3)	(8.2)
Income tax provision	22.8	8.0
Adjusted EBITDA	<u>\$ 916.7</u>	<u>\$ 258.8</u>

Revenues per Ton and Adjusted EBITDA Margin per Ton are equal to revenues by segment and Adjusted EBITDA by segment, respectively, divided by segment tons sold. Costs per Ton is equal to Revenues per Ton less Adjusted EBITDA Margin per Ton, and are reconciled to operating costs and expenses as follows:

	Year Ended December 31,	
	2021	2020
	(Dollars in millions)	
Operating costs and expenses	\$ 2,553.1	\$ 2,524.9
Unrealized (losses) gains on foreign currency option contracts	(7.5)	7.1
Take-or-pay contract-based intangible recognition	4.3	8.2
Net periodic benefit credit, excluding service cost	(38.3)	(1.8)
Total Reporting Segment Costs	<u>\$ 2,511.6</u>	<u>\$ 2,538.4</u>

The following table presents Reporting Segment Costs by reporting segment:

	Year Ended December 31,	
	2021	2020
	(Dollars in millions)	
Seaborne Thermal Mining	\$ 580.9	\$ 548.6
Seaborne Metallurgical Mining	549.5	616.7
Powder River Basin Mining	836.3	796.3
Other U.S. Thermal Mining	524.9	538.9
Corporate and Other	20.0	37.9
Total Reporting Segment Costs	<u>\$ 2,511.6</u>	<u>\$ 2,538.4</u>

The following tables present tons sold, revenues, Reporting Segment Costs and Adjusted EBITDA by mining segment:

	Year Ended December 31, 2021			
	Seaborne Thermal Mining	Seaborne Metallurgical Mining	Powder River Basin Mining	Other U.S. Thermal Mining
	(Amounts in millions, except per ton data)			
Tons sold	17.3	5.5	88.4	16.9
Revenues	\$ 934.0	\$ 727.7	\$ 971.2	\$ 689.1
Reporting Segment Costs	580.9	549.5	836.3	524.9
Adjusted EBITDA	\$ 353.1	\$ 178.2	\$ 134.9	\$ 164.2
Revenues per Ton	\$ 54.09	\$ 131.83	\$ 10.99	\$ 40.75
Costs per Ton	33.64	99.55	9.46	31.04
Adjusted EBITDA Margin per Ton	\$ 20.45	\$ 32.28	\$ 1.53	\$ 9.71

	Year Ended December 31, 2020			
	Seaborne Thermal Mining	Seaborne Metallurgical Mining	Powder River Basin Mining	Other U.S. Thermal Mining
	(Amounts in millions, except per ton data)			
Tons sold	19.0	5.6	87.2	18.3
Revenues	\$ 711.8	\$ 486.5	\$ 991.1	\$ 707.3
Reporting Segment Costs	548.6	616.7	796.3	538.9
Adjusted EBITDA	\$ 163.2	\$ (130.2)	\$ 194.8	\$ 168.4
Revenues per Ton	\$ 37.46	\$ 86.33	\$ 11.37	\$ 38.73
Costs per Ton	28.87	109.44	9.14	29.51
Adjusted EBITDA Margin per Ton	\$ 8.59	\$ (23.11)	\$ 2.23	\$ 9.22

Free Cash Flow is defined as net cash provided by (used in) operating activities less net cash used in investing activities and excludes cash outflows related to business combinations. See the table below for a reconciliation of Free Cash Flow to its most comparable measure under U.S. GAAP.

	Year Ended December 31,	
	2021	2020
	(Dollars in millions)	
Net cash provided by (used in) operating activities	\$ 420.0	\$ (9.7)
Net cash used in investing activities	(131.5)	(206.7)
Free Cash Flow	\$ 288.5	\$ (216.4)

Liquidity and Capital Resources

Overview

The Company's primary source of cash is proceeds from the sale of its coal production to customers. The Company has also generated cash from the sale of non-strategic assets, including coal reserves, resources and surface lands, and, from time to time, borrowings under its credit facilities and the issuance of securities. The Company's primary uses of cash include the cash costs of coal production, capital expenditures, coal reserve lease and royalty payments, debt service costs, capital and operating lease payments, postretirement plans, take-or-pay obligations, post-mining reclamation obligations, collateral and margining requirements, and selling and administrative expenses. Recently, the Company has also used cash for early debt retirements, and historically it has also used cash for dividends and share repurchases.

Any future determinations to return capital to stockholders, such as dividends or share repurchases will depend on a variety of factors, including the restrictions set forth under the Company's debt and surety agreements, its net income or other sources of cash, liquidity position and potential alternative uses of cash, such as internal development projects or acquisitions, as well as economic conditions and expected future financial results. The Company's ability to early retire debt, declare dividends or repurchase shares in the future will depend on its future financial performance, which in turn depends on the successful implementation of its strategy and on financial, competitive, regulatory, technical and other factors, general economic conditions, demand for and selling prices of coal and other factors specific to its industry, many of which are beyond the Company's control. The Company has presently suspended the payment of dividends and share repurchases, as discussed in Part II, Item 5. "Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities."

Liquidity

As of December 31, 2021, the Company's cash balances totaled \$954.3 million, including approximately \$542 million held by Australian subsidiaries, approximately \$368 million held by U.S. subsidiaries, and the remainder held by other foreign subsidiaries in accounts predominantly domiciled in the U.S. The subsidiaries that conduct the operations of the Wilpinjong Mine held cash of approximately \$207 million at December 31, 2021. A significant majority of the cash held by the Company's foreign subsidiaries is denominated in U.S. dollars. This cash is generally used to support non-U.S. liquidity needs, including capital and operating expenditures in Australia.

The Company's available liquidity increased from \$728.7 million as of December 31, 2020 to \$995.9 million as of December 31, 2021. Available liquidity was comprised of the following:

	December 31,	
	2021	2020
	(Dollars in millions)	
Cash and cash equivalents	\$ 954.3	\$ 709.2
Credit facility availability	15.3	0.2
Accounts receivable securitization program availability	26.3	19.3
Total liquidity	<u>\$ 995.9</u>	<u>\$ 728.7</u>

Indebtedness

The Company's total funded indebtedness (Indebtedness) as of December 31, 2021 and 2020 is presented in the table below.

Debt Instrument (defined below, as applicable)	December 31,	
	2021	2020
	(Dollars in millions)	
6.000% Senior Secured Notes due March 2022 (2022 Notes)	\$ 23.1	\$ 459.0
8.500% Senior Secured Notes due December 2024 (2024 Peabody Notes)	62.6	—
10.000% Senior Secured Notes due December 2024 (2024 Co-Issuer Notes)	193.9	—
Senior Secured Term Loan due 2024 (Co-Issuer Term Loans)	206.0	—
6.375% Senior Secured Notes due March 2025 (2025 Notes)	334.9	500.0
Senior Secured Term Loan due 2025, net of original issue discount (Senior Secured Term Loan)	322.8	388.2
Revolving credit facility	—	216.0
Finance lease obligations	29.3	27.3
Less: Debt issuance costs	(34.8)	(42.7)
	<u>1,137.8</u>	<u>1,547.8</u>
Less: Current portion of long-term debt	59.6	44.9
Long-term debt	<u>\$ 1,078.2</u>	<u>\$ 1,502.9</u>

The Company's Indebtedness will require estimated principal and interest payments, assuming interest rates in effect at December 31, 2021, of approximately \$110 million in 2022, \$85 million in 2023, \$545 million in 2024, \$660 million in 2025, and \$10 million thereafter.

Refinancing and Related Transactions

During the fourth quarter of 2020 and the first quarter of 2021, the Company entered into a series of interrelated agreements with its surety bond providers, the revolving lenders under its credit agreement and certain holders of its senior secured notes to extend a significant portion of its near-term debt maturities to December 2024 and to stabilize collateral requirements for its existing surety bond portfolio. Such agreements and related activities are described below.

Organizational Realignment

In July and August 2020, the Company effected certain changes to its corporate structure in contemplation of a debt-for-debt exchange, which included, among other steps, the formation of certain wholly-owned subsidiaries (the Co-Issuers). In connection with the change in structure, the Company's subsidiary which owns and operates its Wilpinjong Mine in Australia became a subsidiary of the Co-Issuers. The Co-Issuers and the Wilpinjong subsidiary were designated as unrestricted subsidiaries under the Company's credit agreement (Credit Agreement) and its senior notes' indenture (the Existing Indenture).

Surety Agreement

In November 2020, the Company entered into a surety transaction support agreement (Surety Agreement) with the providers of its surety bond portfolio (Participating Sureties) to resolve previous collateral demands made by the Participating Sureties. In accordance with the Surety Agreement, the Company initially provided \$75.0 million of collateral, in the form of letters of credit.

Upon completion of the Refinancing Transactions, as defined below, other provisions of the Surety Agreement became effective. In particular, the Company granted second liens on \$200.0 million of certain mining equipment and will post an additional \$25.0 million of collateral per year from 2021 through 2024 for the benefit of the Participating Sureties, plus other amounts in accordance with the Surety Agreement. Further, the Participating Sureties have agreed to a standstill through the earlier of December 31, 2025, or the maturity of the Credit Agreement (currently March 31, 2025), during which time, the Participating Sureties will not demand any additional collateral, draw on letters of credit posted for the benefit of themselves or cancel any existing surety bond. The Company will not pay dividends or make share repurchases during the standstill period, unless otherwise agreed between parties.

Under the Surety Agreement, additional collateral postings are required if the Company generates more than \$100.0 million of free cash flow in any twelve-month period. As calculated in accordance with the agreement, the Company posted an additional \$13 million of collateral in January 2022 in the form of letters of credit.

Refinancing Transactions

On January 29, 2021 (the Settlement Date), the Company completed a series of transactions (collectively, the Refinancing Transactions) to, among other things, provide it with maturity extensions and covenant relief, while allowing it to maintain near-term operating liquidity and financial flexibility. The Refinancing Transactions included a senior notes exchange and related consent solicitation, a revolving credit facility exchange and various amendments to its existing debt agreements, as summarized below.

Exchange Offer

On the Settlement Date, the Company settled an exchange offer (Exchange Offer) pursuant to which \$398.7 million aggregate principal amount of its 6.000% Senior Secured Notes due March 2022 (2022 Notes) were validly tendered, accepted by the Company and exchanged for aggregate consideration consisting of (a) \$193.9 million aggregate principal amount of new 10.000% Senior Secured Notes due 2024 issued by the Co-Issuers (2024 Co-Issuer Notes), (b) \$195.1 million aggregate principal amount of new 8.500% Senior Secured Notes due 2024 issued by Peabody (Peabody Notes), and (c) a cash payment of approximately \$9.4 million. Concurrently with the exchange, the requisite number of holders of the 2022 Notes consented to amend the notes' underlying indenture to render them unsecured and not subject to substantially all of the restrictive covenants. The holders of \$60.3 million of the 2022 Notes did not participate in the exchange offer. In connection with the exchange requirements, the Company purchased \$22.4 million of the 2024 Peabody Notes at 80% of their accreted value, plus accrued and unpaid interest, during the first quarter of 2021.

The 2024 Co-Issuer Notes and Co-Issuer Term Loans are subject to mandatory prepayment offers at the end of each six-month period whereby the Excess Cash Flow (as defined in the 2024 Co-Issuer Notes Indenture) generated by the Wilpinjong Mine during each such period may be applied to the principal of the 2024 Co-Issuer Notes and the Co-Issuer Term Loans on a pro rata basis, provided that the liquidity attributable to the Co-Issuers would not fall below \$60.0 million. Such prepayments may be accepted or declined at the option of the debt holders. Based upon the Wilpinjong Mine's results for the six-month period ended December 31, 2021, a total offer to prepay \$105.6 million of principal was made on a pro rata basis in February 2022, including \$51.2 million of the Co-Issuer Notes and \$54.4 million of the Co-Issuer Term Loan. The offer for the Co-Issuer Notes expires March 14, 2022. The Company expects to prepay \$17.2 million of principal under the now-expired Co-Issuer Term Loan offer, which is reflected within the current portion of long-term debt in the accompanying consolidated balance sheet as of December 31, 2021. There was no prepayment offer made with respect to the six-month period ended June 30, 2021.

Revolver Transactions

In connection with the Refinancing Transactions, the Company restructured the revolving loans under the Credit Agreement by (i) making a pay down of revolving loans thereunder in the aggregate amount of \$10.0 million, (ii) the Co-Issuers incurring \$206.0 million of term loans under a credit agreement, dated as of the Settlement Date (Co-Issuer Term Loans, Co-Issuer Term Loan Agreement), (iii) Peabody entering into a letter of credit facility (the Company LC Agreement), and (iv) amending the Credit Agreement (collectively, the Revolver Transactions).

On the Settlement Date, the Company entered into the Company LC Agreement with the revolving lenders party to the Credit Agreement, pursuant to which the Company obtained a \$324.0 million letter of credit facility under which its existing letters of credit under the Credit Agreement were deemed to be issued. The commitments under the Company LC Agreement mature on December 31, 2024. Undrawn letters of credit under the Company LC Agreement bear interest at 6.00% per annum and unused commitments are subject to a 0.50% per annum commitment fee.

In connection with the Revolver Transactions, the Company amended the Credit Agreement to make certain changes in consideration of the Company LC Agreement. After giving effect to the Revolver Transactions, there remain no revolving commitments or revolving loans under the Credit Agreement and the first lien net leverage ratio covenant was eliminated. The Company LC Agreement requires that the Company's restricted subsidiaries maintain minimum aggregate liquidity of \$125.0 million at the end of each quarter through December 31, 2024. As such, liquidity attributable to the Co-Issuers, its subsidiaries and other unrestricted subsidiaries is excluded from the calculation. Liquidity calculated in this manner amounted to \$771.9 million at December 31, 2021.

The indenture which governs the Peabody Notes and the Company LC Agreement allow the Company to make open market debt repurchases, subject to certain limitations, including, but not limited to: (i) the Company's unrestricted subsidiaries' liquidity must be greater than or equal to \$200.0 million after giving effect to such repurchases and (ii) for every \$4 of principal repurchased in any fiscal quarter, the Company must make an offer on a pro rata basis to purchase \$1 of principal amount of debt from holders of the Peabody Notes and the priority lien obligations under the Company LC Agreement within 30 days of the end of such fiscal quarter at a price equal to the weighted average repurchase price paid over that quarter (Mandatory Repurchase Offer).

Other Debt Financing

The Refinancing Transactions did not significantly impact the Company's existing senior secured term loan under the Credit Facility (Senior Secured Term Loan), or its \$500.0 million of 6.375% senior secured notes due March 2025 (2025 Notes), but these debt instruments were impacted by subsequent financing transactions described below. The term loan requires quarterly principal payments of \$1.0 million and periodic interest payments, currently at LIBOR plus 2.75%, through December 2024 with the remaining balance due in March 2025. The senior secured notes require semi-annual interest payments each March 31 and September 30 until maturity.

The Company's debt agreements impose various restrictions and limits on certain categories of payments that the Company may make, such as those for dividends, investments, and stock repurchases. The Company is also subject to customary affirmative and negative covenants. The Company was compliant with all covenants under its debt agreements including the minimum liquidity covenant under the Company LC Agreement at December 31, 2021.

Subsequent Financing Transactions

Subsequent to the Refinancing Transactions, the Company completed a series of financing transactions intended to improve its capital structure.

During 2021, the Company announced an at-the-market equity offering program pursuant to which, as amended, the Company could offer and sell up to 32.5 million shares of its common stock. Through December 31, 2021, the Company sold approximately 24.8 million shares for net cash proceeds of \$269.8 million.

Through December 31, 2021, the Company retired \$91.4 million of 2024 Peabody Notes, \$117.8 million of 2025 Notes and \$61.7 million of its Senior Secured Term Loan primarily through various open market purchases at an aggregate cost of \$232.4 million. During the year ended December 31, 2021, the Company recorded net gains on early debt extinguishment of \$28.8 million related to these retirements.

Through December 31, 2021, the Company also completed multiple bilateral transactions with holders of the 2022 Notes, the 2025 Notes and the 2024 Peabody Notes in which the Company issued an aggregate 10.0 million shares of its common stock in exchange for \$37.3 million aggregate principal amount of the 2022 Notes, \$47.2 million aggregate principal amount of the 2025 Notes and \$21.6 million aggregate principal amount of the 2024 Peabody Notes.

As a result of the Company's open market purchases of its debt during the three months ended December 31, 2021, on January 14, 2022, the Company announced a Mandatory Repurchase Offer of up to \$38.6 million of 2024 Peabody Notes, at 94.940% of their aggregate accreted value, plus accrued and unpaid interest, and a concurrent repurchase offer of priority lien obligations under the Company LC Agreement. The offers expire on March 4, 2022, unless extended by the Company.

Considering the Refinancing Transactions and the subsequent financing transactions described above, the Company expects to incur approximately \$157 million of interest expense, including approximately \$17 million of non-cash interest expense, during the year ended December 31, 2022. Approximately \$80 million of the total cash interest expense expected to be incurred in 2022 is related to the Company's Indebtedness, and the remainder relates primarily to its surety bonding and securitization programs.

Refer to Note 11. "Long-term Debt" of the accompanying consolidated financial statements for additional information related to the subsequent financing transactions described above.

Accounts Receivable Securitization Program

As described in Note 22. "Financial Instruments, Guarantees With Off-Balance-Sheet Risk and Other Guarantees" of the accompanying consolidated financial statements, the Company entered into an accounts receivable securitization program during 2017. The securitization program was amended in January 2022 to extend its maturity to January 2025 and reduce the available funding capacity from \$250.0 million to \$175.0 million, which better aligns with the current average borrowing base. Funding capacity is limited to the availability of eligible receivables and is accounted for as a secured borrowing. Funding capacity under the program may also be utilized for letters of credit in support of other obligations. At December 31, 2021, the Company had no outstanding borrowings and \$143.9 million of letters of credit issued under the program, which were primarily in support of portions of the Company's reclamation obligations. The Company was not required to post cash collateral under the Securitization Program at December 31, 2021.

Collateralized Letter of Credit Agreement

In February 2022, the Company entered into a new agreement, which provides up to \$250.0 million of capacity for irrevocable standby letters of credit in support of reclamation bonding. The agreement requires the Company to provide cash collateral at a level of 103% of the aggregate amount of letters of credit outstanding under the arrangement (limited to \$5.0 million total excess collateralization.) Outstanding letters of credit bear a fixed fee in the amount of 0.75% per annum. The Company receives a deposit rate of 0.25% per annum on the amount of cash collateral posted in support of letters of credit, with the rate subject to increases over time. The agreement has an initial expiration date of December 31, 2025.

Capital Expenditures

For 2022, the Company is targeting total capital expenditures of approximately \$190 million, which includes approximately \$80 million of major project and growth capital expenditures.

Other Requirements

The Company will incur significant future cash outflows for certain liabilities related to its prior mining activities and former employees. Such cash flows pertain to postretirement benefit plans, work-related injuries and illnesses, defined benefit pension plans, mine reclamation and end-of-mine closure costs and exploration obligations and are estimated to amount to approximately \$205 million in 2022, \$155 million in 2023, \$150 million in 2024, \$145 million in 2025, \$135 million in 2026, and \$1,640 million thereafter.

The Company has various short- and long-term take-or-pay arrangements in Australia and the U.S. associated with rail and port commitments for the delivery of coal, including amounts relating to export facilities. The estimated future cash flows associated with such arrangements are approximately \$85 million in 2022, \$90 million in 2023, \$95 million in 2024, \$90 million in 2025, \$85 million in 2026, and \$710 million thereafter.

The Company's operating lease commitments, excluding potential contingent rental amounts, will require cash payments of approximately \$19 million in 2022, \$17 million in 2023, and \$13 million thereafter.

Cash Flows and Free Cash Flow

The following table summarizes the Company's cash flows for the years ended December 31, 2021 and 2020, as reported in the accompanying consolidated financial statements. Free Cash Flow is a financial measure not recognized in accordance with U.S. GAAP. Refer to the "Reconciliation of Non-GAAP Financial Measures" section above for definitions and reconciliations to the most comparable measures under U.S. GAAP.

	Year Ended December 31,	
	2021	2020
	(Dollars in millions)	
Net cash provided by (used in) operating activities	\$ 420.0	\$ (9.7)
Net cash used in investing activities	(131.5)	(206.7)
Net cash (used in) provided by financing activities	(43.4)	193.4
Net change in cash, cash equivalents and restricted cash	245.1	(23.0)
Cash, cash equivalents and restricted cash at beginning of period	709.2	732.2
Cash, cash equivalents and restricted cash at end of period	\$ 954.3	\$ 709.2
Net cash provided by (used in) operating activities	\$ 420.0	\$ (9.7)
Net cash used in investing activities	(131.5)	(206.7)
Free Cash Flow	\$ 288.5	\$ (216.4)

Operating Activities. The net increase in net cash provided by (used in) operating activities for the year ended December 31, 2021 compared to the prior year was driven by a year-over-year increase in cash from the Company's mining operations (\$526.6 million) partially offset by increased cash utilized to satisfy the margin requirements associated with derivative financial instruments (\$96.9 million).

Investing Activities. The decrease in net cash used in investing activities for the year ended December 31, 2021 compared to the prior year was compared to the same period in the prior year was driven by cash receipts from the Company's equity method investee, Middlemount (\$44.7 million), and lower advances to related parties (\$22.7 million).

Financing Activities. The decrease in net cash provided by financing activities for the year ended December 31, 2021 compared to the prior year was driven by \$375.0 million of revolving loan and securitization borrowings in the prior year, higher repayments of debt principal (\$115.9 million) and payments for deferred financing costs (\$15.5 million) in the current year, partially offset by \$269.8 million proceeds from the issuance of common stock in the current year.

Financial Assurances

In the normal course of business, the Company is a party to various guarantees and financial instruments that carry off-balance-sheet risk and are not reflected in the accompanying consolidated balance sheets. At December 31, 2021, such instruments included \$1,463.7 million of surety bonds and \$452.6 million of letters of credit. Such financial instruments provide support for its reclamation bonding requirements, lease obligations, insurance policies and various other performance guarantees. The Company periodically evaluates the instruments for on-balance-sheet treatment based on the amount of exposure under the instrument and the likelihood of required performance. The Company does not expect any material losses to result from these guarantees or off-balance-sheet instruments in excess of liabilities provided for in its consolidated balance sheets.

As of December 31, 2021, the Company was party to financial instruments with off-balance sheet risk in support of the following obligations:

	Reclamation	Health and welfare ⁽¹⁾	Contract performance ⁽²⁾	Leased property and equipment	Other ⁽³⁾	Total
	(Dollars in millions)					
Surety bonds and bank guarantees	\$ 1,294.7	\$ 42.1	\$ 79.9	\$ 30.9	\$ 16.1	\$ 1,463.7
Letters of credit outstanding under letter of credit facility	205.8	90.9	7.1	5.0	—	308.8
Letters of credit outstanding under accounts receivable securitization program	117.2	18.9	7.7	—	—	143.8
	1,617.7	151.9	94.7	35.9	16.1	1,916.3
Less: Letters of credit in support of surety bonds ⁽⁴⁾	(315.9)	(29.9)	—	(1.2)	—	(347.0)
Less: Cash collateral in support of surety bonds ⁽⁴⁾	(15.0)	—	—	—	—	(15.0)
Obligations supported, net	\$ 1,286.8	\$ 122.0	\$ 94.7	\$ 34.7	\$ 16.1	\$ 1,554.3

⁽¹⁾ Obligations include pension and health care plans, workers' compensation, and property and casualty insurance.

⁽²⁾ Obligations pertain to customer and vendor contracts.

⁽³⁾ Obligations primarily pertain to the disturbance or alteration of public roadways in connection with the Company's mining activities that is subject to future restoration.

⁽⁴⁾ Serve as collateral for certain surety bonds at the request of surety bond providers. The Company has also posted \$8.8 million in incremental collateral directly with the beneficiary that is not supported by a surety bond.

Financial assurances associated with new reclamation bonding requirements, surety bonds or other obligations may require additional collateral in the form of cash or letters of credit causing a decline in the Company's liquidity.

As described in Note 22. "Financial Instruments, Guarantees With Off-Balance-Sheet Risk and Other Guarantees" to the accompanying consolidated financial statements, the Company is required to provide various forms of financial assurance in support of its mining reclamation obligations in the jurisdictions in which it operates. Such requirements are typically established by statute or under mining permits. Historically, such assurances have taken the form of third-party instruments such as surety bonds, bank guarantees and letters of credit, as well as self-bonding arrangements in the U.S. Self-bonding in the U.S. has become increasingly restricted in recent years, leading to the Company's increased usage of surety bonds and similar third-party instruments. This change in practice has had an unfavorable impact on its liquidity due to increased collateral requirements and surety and related fees.

At December 31, 2021, the Company had total asset retirement obligations of \$719.8 million which were backed by a combination of surety bonds, bank guarantees and letters of credit.

Bonding requirement amounts may differ significantly from the related asset retirement obligation because such requirements are calculated under the assumption that reclamation begins currently, whereas the Company's accounting liabilities are discounted from the end of a mine's economic life (when final reclamation work would begin) to the balance sheet date.

Guarantees and Other Financial Instruments with Off-Balance Sheet Risk. See Note 22. "Financial Instruments, Guarantees With Off-Balance-Sheet Risk and Other Guarantees" to the accompanying consolidated financial statements for a discussion of the Company's accounts receivable securitization program and guarantees and other financial instruments with off-balance sheet risk.

Critical Accounting Policies and Estimates

The Company's discussion and analysis of its financial condition, results of operations, liquidity and capital resources is based upon its financial statements, which have been prepared in accordance with U.S. GAAP. The Company is also required under U.S. GAAP to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, the Company evaluates its estimates. The Company bases its estimates on historical experience and on various other assumptions that it believes are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

Impairment of Long-Lived Assets. The Company evaluates its long-lived assets held and used in operations for impairment as events and changes in circumstances indicate that the carrying amount of such assets might not be recoverable. Factors that would indicate potential impairment to be present include, but are not limited to, a sustained history of operating or cash flow losses, an unfavorable change in earnings and cash flow outlook, prolonged adverse industry or economic trends and a significant adverse change in the extent or manner in which a long-lived asset is being used or in its physical condition. The Company generally does not view short-term declines in thermal and metallurgical coal prices as a triggering event for conducting impairment tests because of historic price volatility. However, the Company generally views a sustained trend of depressed coal pricing (for example, over periods exceeding one year) as an indicator of potential impairment. Because of the volatile and cyclical nature of coal prices and demand, it is reasonably possible that coal prices may decrease and/or fail to improve in the near term, which, absent sufficient mitigation such as an offsetting reduction in the Company's operating costs, may result in the need for future adjustments to the carrying value of its long-lived mining assets and mining-related investments.

Assets are grouped at the lowest level for which there are identifiable cash flows that are largely independent of the cash flows of other groups of assets. For its active mining operations, the Company generally groups such assets at the mine level, or the mining complex level for mines that share infrastructure, with the exception of impairment evaluations triggered by mine closures. In those cases involving mine closures, the related assets are evaluated at the individual asset level for remaining economic life based on transferability to ongoing operating sites or for expected salvage. For its development and exploration properties and portfolio of surface land and coal reserve and resource holdings, the Company considers several factors to determine whether to evaluate those assets individually or on a grouped basis for purposes of impairment testing. Such factors include geographic proximity to one another, the expectation of shared infrastructure upon development based on future mining plans and whether it would be most advantageous to bundle such assets in the event of a sale to a third party.

When indicators of impairment are present, the Company evaluates its long-lived assets for recoverability by comparing the estimated undiscounted cash flows in the LOM plan expected to be generated by those assets under various assumptions to their carrying amounts. If such undiscounted cash flows indicate that the carrying value of the asset group is not recoverable, impairment losses are measured by comparing the estimated fair value of the asset group to its carrying amount. As quoted market prices are unavailable for the Company's individual mining operations, fair value is determined through the use of an expected present value technique based on the income approach, except for non-strategic coal reserves and resources, surface lands and undeveloped coal properties excluded from its long-range mine planning. In those cases, a market approach is utilized based on the most comparable market multiples available. The estimated future cash flows and underlying assumptions used to assess recoverability and, if necessary, measure the fair value of the Company's long-lived mining assets are derived from those developed in connection with its planning and budgeting process. The Company believes its assumptions to be consistent with those a market participant would use for valuation purposes. The most critical assumptions underlying its projections and fair value estimates include those surrounding future tons sold, coal prices for unpriced coal, production costs (including costs for labor, commodity supplies and contractors), transportation costs, foreign currency exchange rates and a risk-adjusted, cost of capital (all of which generally constitute unobservable Level 3 inputs under the fair value hierarchy), in addition to market multiples for non-strategic coal reserves and resources, surface lands and undeveloped coal properties excluded from the Company's long-range mine planning (which generally constitute Level 2 inputs under the fair value hierarchy).

There were no impairment charges of long-lived assets recorded for the year ended December 31, 2021. Impairment charges of \$1,487.4 million of long-lived assets were recorded for the year ended December 31, 2020. The assumptions used are based on the Company's best knowledge at the time it prepare its analysis but can vary significantly due to the volatile and cyclical nature of coal prices and demand, regulatory issues, unforeseen mining conditions, commodity prices and cost of labor. Additionally, the decline of coal-fired electricity generation in the U.S., driven by the reduced utilization of plants and plant retirements, sustained low natural gas pricing and the increased use of renewable energy sources, was a significant consideration in the Company's analysis. These factors may cause the Company to be unable to recover all or a portion of the carrying value of its long-lived assets.

The Company has identified certain assets with an aggregate carrying value of approximately \$0.5 billion at December 31, 2021 in its Other U.S. Thermal Mining and Corporate and Other segments whose recoverability is most sensitive to coal pricing, cost pressures, customer demand, customer concentration risk and future economic viability. The Company conducted a review of those assets as of December 31, 2021 and determined that no further impairment charges were necessary as of that date.

See Note 3. "Asset Impairment" to the accompanying consolidated financial statements for additional information regarding impairment charges.

Income Taxes. Peabody accounts for income taxes in accordance with accounting guidance which requires deferred tax assets and liabilities to be recognized using enacted tax rates for the effect of temporary differences between the book and tax bases of recorded assets and liabilities. The guidance also requires that deferred tax assets be reduced by a valuation allowance if it is “more likely than not” that some portion or all of the deferred tax asset will not be realized. In its evaluation of the need for a valuation allowance, Peabody takes into account various factors, including the expected level of future taxable income, available tax planning strategies, reversals of existing taxable temporary differences and taxable income in carryback years. As of December 31, 2021, the Company had valuation allowances for income taxes totaling \$2,120.8 million. If actual results differ from the assumptions made in the annual evaluation of its valuation allowance, Peabody may record a change in valuation allowance through income tax expense in the period such determination is made.

Peabody’s liability for unrecognized tax benefits contains uncertainties because management is required to make assumptions and to apply judgment to estimate the exposures associated with its various filing positions. Peabody recognizes the tax benefit from an uncertain tax position only if it is “more likely than not” that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position must be measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. As of December 31, 2021, the Company had net unrecognized tax benefits of \$11.0 million included in recorded liabilities in the consolidated balance sheet. Peabody believes that its judgments and estimates are reasonable; however, to the extent it prevails in matters for which liabilities have been established, or are required to pay amounts in excess of its recorded liabilities, the Company’s effective tax rate in a given period could be materially affected.

See Note 9. “Income Taxes” to the accompanying consolidated financial statements for additional information regarding valuation allowances and unrecognized tax benefits.

Postretirement Benefit and Pension Liabilities. Peabody has long-term liabilities for its employees’ postretirement benefit costs and defined benefit pension plans. Its pension obligations are funded in accordance with the provisions of applicable laws and the Company’s policies. Liabilities for postretirement benefit costs are funded at its discretion. For the year ended December 31, 2021 Peabody recorded a total benefit related to postretirement benefit costs and pension of \$38.2 million, while employer contributions were \$26.8 million. An actuarial gain of \$41.8 million was recorded for the year ended December 31, 2021.

Each of these liabilities is actuarially determined and Peabody uses various actuarial assumptions, including the discount rate, future cost trends, mortality tables, demographic assumptions and expected asset returns to estimate the costs and obligations for these items. Peabody’s discount rate is determined by utilizing a hypothetical bond portfolio model which approximates the future cash flows necessary to service its liabilities. The Company makes assumptions related to future trends for medical care costs in the estimates of postretirement benefit costs. Its medical trend assumption is developed by annually examining the historical trend of cost per claim data. In deciding which mortality tables to use, the Company periodically reviews its population’s actual mortality experience and evaluates results against its current assumptions as well as consider recent mortality tables published by the Society of Actuaries Retirement Plans Experience Committee in order to select mortality tables for use in its year end valuations. In addition, the Company makes assumptions related to rates of return on plan assets. If its assumptions do not materialize as expected, actual cash expenditures and costs that Peabody incurs could differ materially from its current estimates. Moreover, regulatory changes could affect Peabody’s obligation to satisfy these or additional obligations.

For the Company's postretirement benefit obligation, assumed discount rates and health care cost trend rates have a significant effect on the expense and liability amounts reported for its health care plans. Below the Company has provided two separate sensitivity analyses to demonstrate the significance of these assumptions in relation to reported amounts.

	For Year Ended December 31, 2021	
	One-Percentage-Point Increase	One-Percentage-Point Decrease
(Dollars in millions)		
Health care cost trend rate:		
Effect on total net periodic postretirement benefit cost	\$ 1.0	\$ (0.9)
Effect on total postretirement benefit obligation	\$ 16.6	\$ (14.3)

	For Year Ended December 31, 2021	
	One-Half Percentage-Point Increase	One-Half Percentage-Point Decrease
(Dollars in millions)		
Discount rate:		
Effect on total net periodic postretirement benefit cost	\$ 1.4	\$ (1.5)
Effect on total postretirement benefit obligation	\$ (9.6)	\$ 10.8

Expected return on assets:		
Effect on total net periodic postretirement benefit cost	\$ (0.1)	\$ 0.1

For the Company's pension obligation, assumed discount rates and expected returns on assets have a significant effect on the expense and funded status amounts reported for its defined benefit pension plans. Below the Company has provided two separate sensitivity analyses to demonstrate the significance of these assumptions in relation to reported amounts.

	For Year Ended December 31, 2021	
	One-Half Percentage-Point Increase	One-Half Percentage-Point Decrease
(Dollars in millions)		
Discount rate:		
Effect on total net periodic pension cost	\$ 2.7	\$ (3.0)
Effect on defined benefit pension plans' projected benefit obligation	\$ (34.4)	\$ 37.4

Expected return on assets:		
Effect on total net periodic pension cost	\$ (4.1)	\$ 4.1

As a result of discretionary contributions made in recent years, its defined benefit pension plans have become nearly fully funded. As a result of the funding level, the asset allocation mix reflected Peabody's target asset mix of 100% fixed income investments and the pensions plans' assets provide a significant hedge to the funded status against interest rate movements. If the discount rate moves, Peabody's actual results would be different than those shown above as substantially all of the change in the discount rate should be offset by changes to the expected return on plan assets.

See Note 14. "Postretirement Health Care and Life Insurance Benefits" and Note 15. "Pension and Savings Plans" to the accompanying consolidated financial statements for additional information regarding postretirement benefit and pension plans.

Asset Retirement Obligations. The Company's asset retirement obligations primarily consist of spending estimates for surface land reclamation and support facilities at both surface and underground mines in accordance with applicable reclamation laws and regulations in the U.S. and Australia as defined by each mining permit. Asset retirement obligations are determined for each mine using various estimates and assumptions including, among other items, estimates of disturbed acreage as determined from engineering data, estimates of future costs to reclaim the disturbed acreage and the timing of these cash flows, discounted using a credit-adjusted, risk-free rate. As changes in estimates occur (such as mine plan revisions, changes in estimated costs or changes in timing of the performance of reclamation activities), the revisions to the obligation and asset are recognized at the appropriate credit-adjusted, risk-free rate. If the Company's assumptions do not materialize as expected, actual cash expenditures and costs that it incurs could be materially different than currently estimated. Moreover, regulatory changes could increase its obligation to perform reclamation and mine closing activities. Amortization associated with the Company's asset retirement obligation assets of \$27.1 million for the year ended December 31, 2021 was included in "Depreciation, depletion and amortization" in the Company's consolidated statements of operations. Asset retirement obligation expense, consisting of both accretion expense and expense related to reclamation activities at the Company's active locations, for the year ended December 31, 2021 was \$44.7 million and payments totaled \$39.3 million. See Note 13. "Asset Retirement Obligations" to the accompanying consolidated financial statements for additional information regarding the Company's asset retirement obligations.

Contingent liabilities. From time to time, Peabody is subject to legal and environmental matters related to its continuing and discontinued operations and certain historical, non-coal producing operations. In connection with such matters, the Company is required to assess the likelihood of any adverse judgments or outcomes, as well as potential ranges of probable losses.

A determination of the amount of reserves required for these matters is made after considerable analysis of each individual issue. Peabody accrues for legal and environmental matters within "Operating costs and expenses" when it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. Peabody provides disclosure surrounding loss contingencies when it believes that it is at least reasonably possible that a material loss may be incurred or an exposure to loss in excess of amounts already accrued may exist. Adjustments to contingent liabilities are made when additional information becomes available that affects the amount of estimated loss, which information may include changes in facts and circumstances, changes in interpretations of law in the relevant courts, the results of new or updated environmental remediation cost studies and the ongoing consideration of trends in environmental remediation costs.

Accrued contingent liabilities exclude claims against third parties and are not discounted. The current portion of these accruals is included in "Accounts payables and accrued expenses" and the long-term portion is included in "Other noncurrent liabilities" in the Company's consolidated balance sheets. In general, legal fees related to environmental remediation and litigation are charged to expense. The Company includes the interest component of any litigation-related penalties within "Interest expense" in its consolidated statements of operations. See Note 23. "Commitments and Contingencies" to the accompanying consolidated financial statements for further discussion of the Company's contingent liabilities.

Newly Adopted Accounting Standards and Accounting Standards Not Yet Implemented

See Note 1. "Summary of Significant Accounting Policies" to the accompanying consolidated financial statements for a discussion of newly adopted accounting standards and accounting standards not yet implemented.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

The potential for changes in the market value of the Company's coal and freight-related trading, crude oil, diesel fuel and foreign currency contract portfolios, as applicable, is referred to as "market risk." Market risk related to its coal trading and freight-related contract portfolio, which includes bilaterally-settled and over-the-counter (OTC) exchange-settled trading, in addition to, from time to time, the brokered trading of coal, is evaluated using a value at risk (VaR) analysis. VaR analysis is not used to evaluate the Company's non-trading diesel fuel or foreign currency hedging portfolios, as applicable, or coal trading activities it employs in support of coal production (as discussed below). The Company attempts to manage market price risks through diversification, controlling position sizes and executing hedging strategies. Due to a lack of quoted market prices and the long-term, illiquid nature of the positions, the Company has not quantified market price risk related to its non-trading, long-term coal supply agreement portfolio.

Coal Trading Activities and Related Commodity Price Risk

Coal Price Risk Monitored Using VaR. Peabody engages in direct and brokered trading of physical coal and freight-related commodities in OTC markets. These activities give rise to commodity price risk, which represents the potential loss that can be caused by an adverse change in the market value of a particular commitment. Peabody actively measures, monitors, manages and hedges market price risk due to current and anticipated trading activities to remain within risk limits prescribed by management. For example, it has policies in place that limit the amount of market price risk, as measured by VaR, that the Company may assume at any point in time from its trading and brokerage activities.

Peabody generally accounts for its coal trading activities using the fair value method, which requires it to reflect contracts with third parties that meet the definition of a derivative at market value in its consolidated financial statements, with the exception of contracts for which it has elected to apply the normal purchases and normal sales exception. Peabody's trading portfolio included futures, forwards and options as of December 31, 2021. The use of VaR allows the Company to quantify in dollars, on a daily basis, a measure of price risk inherent in its trading portfolio. VaR represents the expected loss in portfolio value due to adverse market price movements over a defined time horizon (liquidation period) within a specified confidence level. Peabody's VaR model is based on a variance/co-variance approach, which captures its potential loss exposure related to future, forward, swap and option positions. Peabody's VaR model assumes a 15-day holding period at the time of VaR measurement and produces an output corresponding with a 95% one-tailed confidence interval, which means that there is a one in 20 statistical chance that its portfolio could lose more than the VaR estimates during the assumed liquidation period. Peabody's volatility calculation incorporates an exponentially weighted moving average algorithm based on price movements during the previous 60 market days, which makes its volatility more representative of recent market conditions while still reflecting an awareness of historical price movements. VaR does not estimate the maximum potential loss expected in the 5% of the time that changes in the portfolio value during the assumed liquidation period is expected to exceed measured VaR. The Company uses stress testing and scenario analysis to help provide visibility in such cases, as discussed further below.

VaR analysis allows the Company to aggregate market price risk across products in the portfolio, compare market price risk on a consistent basis and identify the drivers of risk and changes thereto over time. Peabody uses historical data to estimate price volatility as an input to VaR. Given its reliance on historical data, the Company believes VaR is reasonably effective in characterizing market price risk exposures in markets in which there are not sudden fundamental changes or shifts in market conditions. Nonetheless, an inherent limitation of VaR is that past changes in market price risk factors may not produce accurate predictions of future market price risk. Due to that limitation, combined with the subjectivity in the choice of the liquidation period and reliance on historical data to calibrate its models, the Company performs stress and scenario analyses as needed to estimate the impacts of market price changes on the value of the portfolio. Additionally, back-testing is regularly performed to monitor the effectiveness of its VaR measure. The results of these analyses are used to supplement the VaR methodology and identify additional market price-related risks.

During the year ended December 31, 2021, the actual low, high and average VaR associated with the Company's trading and brokerage function was \$0.8 million, \$18.4 million and \$6.8 million, respectively.

Other Risk Exposures. Peabody also uses its coal trading and brokerage platform to support various coal production-related activities. These transactions may involve coal to be produced from its mines, coal sourcing arrangements with third-party mining companies, joint venture positions with producers or offtake agreements with producers. While the support activities (such as the forward sale of coal to be produced and/or purchased) may ultimately involve instruments sensitive to market price risk, the sourcing of coal in these arrangements does not involve market risk sensitive instruments and does not encompass the commodity price risks that the Company monitors through VaR analysis, as discussed above.

Future Realization. As of December 31, 2021, the total estimated future realization of the value of the Company's trading portfolio is expected to occur over 2022 and 2023.

Peabody also monitors other types of risk associated with its coal trading activities, including credit, market liquidity and counterparty nonperformance.

Credit and Nonperformance Risk

The fair values of Peabody's derivative instruments utilized for corporate hedging and coal trading activities reflect adjustments for credit risk, as necessary. The Company's exposure is substantially with electric utilities, energy marketers, steel producers and nonfinancial trading houses. Its policy is to independently evaluate each counterparty's creditworthiness prior to entering into transactions and to regularly monitor exposures. Peabody manages its counterparty risk from its hedging activities related to foreign currency and fuel exposures, as applicable, through established credit standards, diversification of counterparties, utilization of investment grade commercial banks, adherence to established tenor limits based on counterparty creditworthiness and continual monitoring of that creditworthiness. If the Company engages in a transaction with a counterparty that does not meet its credit standards, the Company seeks to protect its position by requiring the counterparty to provide an appropriate credit enhancement. Also, when appropriate (as determined by its credit management function), Peabody has taken steps to reduce its exposure to customers or counterparties whose credit has deteriorated and who may pose a higher risk of failure to perform under their contractual obligations. These steps include obtaining letters of credit or cash collateral (margin), requiring prepayments for shipments or the creation of customer trust accounts held for Peabody's benefit to serve as collateral in the event of a failure to pay or perform. To reduce its credit exposure related to trading and brokerage activities, Peabody seeks to enter into netting agreements with counterparties that permit it to offset asset and liability positions with such counterparties and, to the extent required, Peabody will post or receive margin amounts associated with exchange-cleared and certain OTC positions. Peabody also continually monitors counterparty and contract nonperformance risk, if present, on a case-by-case basis.

Foreign Currency Risk

The Company has historically utilized currency forwards and options to hedge currency risk associated with anticipated Australian dollar expenditures. The accounting for these derivatives is discussed in Note 7. "Derivatives and Fair Value Measurements" to the accompanying consolidated financial statements. As of December 31, 2021, the Company had currency options outstanding with an aggregate notional amount of \$535.0 million Australian dollars to hedge currency risk associated with anticipated Australian dollar expenditures during the first nine months of 2022. Assuming the Company had no foreign currency hedging instruments in place, its exposure in operating costs and expenses due to a \$0.10 change in the Australian dollar/U.S. dollar exchange rate is approximately \$140 to \$150 million for the next twelve months. Based upon the Australian dollar/U.S. dollar exchange rate at December 31, 2021, the currency option contracts outstanding at that date would limit the Company's net exposure to a \$0.10 unfavorable change in the exchange rate to approximately \$90 million for the next twelve months.

Coal Price Risk

The Company predominantly manages its commodity price risk for its non-trading, long-term coal contract portfolio through the use of long-term coal supply agreements (those with terms longer than one year) to the extent possible, rather than through the use of derivative instruments. Sales under such agreements comprised approximately 84%, 89% and 88% of its worldwide sales (by volume) for the years ended December 31, 2021, 2020 and 2019, respectively. As of December 31, 2021, the Company had approximately 104 million tons of U.S. thermal coal priced and committed for 2022. This includes approximately 86 million tons of PRB coal and 18 million tons of other U.S. thermal coal. The Company has the flexibility to increase volumes should demand warrant. Peabody is estimating 2022 thermal coal sales volumes from its Seaborne Thermal Mining segment of 17.0 million to 18.5 million tons comprised of thermal export volume of 9.5 million to 10.5 million tons and domestic volume of 7.5 million to 8.0 million tons. Peabody is estimating full year 2022 metallurgical coal sales from its Seaborne Metallurgical Mining segment of 6.5 million to 7.5 million tons. Sales commitments in the metallurgical coal market are typically not long-term in nature, and the Company is therefore subject to fluctuations in market pricing.

Diesel Fuel Price Risk

Previously, the Company managed price risk of the diesel fuel used in its mining activities through the use of derivatives, primarily swaps. As of December 31, 2021, the Company did not have any diesel fuel derivative instruments in place. The Company also manages the price risk of diesel fuel through the use of cost pass-through contracts with certain customers.

The Company expects to consume 95 to 105 million gallons of diesel fuel during the next twelve months. A \$10 per barrel change in the price of crude oil (the primary component of a refined diesel fuel product) would increase or decrease its annual diesel fuel costs by approximately \$23 million based on its expected usage.

Interest Rate Risk

Peabody's objectives in managing exposure to interest rate changes are to limit the impact of interest rate changes on earnings and cash flows and to lower overall borrowing costs. From time to time, Peabody manages its debt to achieve a certain ratio of fixed-rate debt and variable-rate debt as a percent of net debt through the use of various hedging instruments. As of December 31, 2021, Peabody had approximately \$849.9 million of fixed-rate borrowings and \$323.3 million of variable-rate borrowings outstanding and had no interest rate swaps in place. A one percentage point increase in interest rates would result in an annualized increase to interest expense of approximately \$3 million on its variable-rate borrowings. With respect to its fixed-rate borrowings, a one percentage point increase in interest rates would result in a decrease of approximately \$20 million in the estimated fair value of these borrowings.

Item 8. Financial Statements and Supplementary Data.

See Part IV, Item 15. "Exhibits and Financial Statement Schedules" of this report for the information required by this Item 8, which information is incorporated by reference herein.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Peabody's disclosure controls and procedures are designed to, among other things, provide reasonable assurance that material information, both financial and non-financial, and other information required under the securities laws to be disclosed is accumulated and communicated to senior management, including the principal executive officer and principal accounting officer, on a timely basis. As of December 31, 2021, the end of the period covered by this Annual Report on Form 10-K, the Company carried out an evaluation of the effectiveness of the design and operation of its disclosure controls and procedures. Based upon that evaluation, Peabody's Chief Executive Officer and Chief Financial Officer have concluded that such disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act as of December 31, 2021 were effective to provide reasonable assurance that the desired control objectives were achieved.

Changes in Internal Control Over Financial Reporting

Peabody periodically reviews its internal control over financial reporting as part of its efforts to ensure compliance with the requirements of Section 404 of the Sarbanes-Oxley Act of 2002. In addition, Peabody routinely reviews its system of internal control over financial reporting to identify potential changes to its processes and systems that may improve controls and increase efficiency, while ensuring that the Company maintains an effective internal control environment. Changes may include such activities as implementing new systems; consolidating the activities of acquired business units; migrating certain processes to its shared services organizations and/or managed third parties; formalizing and refining policies, procedures and control documentation requirements; improving segregation of duties and adding monitoring controls. In addition, when Peabody acquires new businesses, it incorporate its controls and procedures into the acquired business as part of its integration activities.

There have been no changes in Peabody's internal control over financial reporting that occurred during the three months ended December 31, 2021 that have materially affected, or are reasonably likely to materially affect, its internal control over financial reporting.

Management's Report on Internal Control Over Financial Reporting

Management is responsible for maintaining and establishing adequate internal control over financial reporting. An evaluation of the effectiveness of the design and operation of the Company's internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act, as of the end of the period covered by this report was performed under the supervision and with the participation of management, including its Chief Executive Officer and Chief Financial Officer. This evaluation is performed to determine if the Company's internal controls over financial reporting provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Because of inherent limitations, any system of internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management conducted an assessment of the effectiveness of the Company's internal control over financial reporting using the criteria set by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control - Integrated Framework (2013)*. Based on this assessment, management concluded that the Company's internal control over financial reporting was effective to provide reasonable assurance that the desired control objectives were achieved as of December 31, 2021.

Peabody's Independent Registered Public Accounting Firm, Ernst & Young LLP, has audited Peabody's internal control over financial reporting, as stated in their unqualified opinion report included herein.

/s/ James C. Grech

James C. Grech
President and Chief Executive Officer

/s/ Mark A. Spurbeck

Mark A. Spurbeck
Executive Vice President and Chief Financial Officer

February 18, 2022

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Peabody Energy Corporation

Opinion on Internal Control over Financial Reporting

We have audited Peabody Energy Corporation's internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Peabody Energy Corporation (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of Peabody Energy Corporation as of December 31, 2021 and 2020, the related consolidated statements of operations, comprehensive income (loss), changes in stockholders' equity and cash flows for each of the three years in the period ended December 31, 2021, and the related notes and financial statement schedule listed in the Index at Item 15(a) (collectively referred to as the "consolidated financial statements") of the Company, and our report dated February 18, 2022 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young, LLP

St. Louis, Missouri

February 18, 2022

Item 9B. Other Information.

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.

Not applicable.

PART III**Item 10. Directors, Executive Officers and Corporate Governance.**

The information required by Item 401 of Regulation S-K is included under the caption Proposal 1 - "Election of Directors" in Peabody's 2022 Proxy Statement and in Part I, Item 1. "Business" of this report under the caption "Information About Our Executive Officers." The information required by Items 405, 406 and 407(c)(3), (d) (4) and (d)(5) of Regulation S-K is included under the captions "Stock Ownership," "Additional Information Concerning the Board of Directors - Corporate Governance - Code of Business Conduct and Ethics" and "Additional Information Concerning the Board of Directors - Committee Overview - Audit Committee" in Peabody's 2022 Proxy Statement. Such information is incorporated herein by reference.

Item 11. Executive Compensation.

The information required by Items 402 and 407(e)(4) and (e)(5) of Regulation S-K is included under the captions "Additional Information Concerning the Board of Directors - Director Compensation," "Compensation Discussion and Analysis," "Compensation Committee Interlocks and Insider Participation," "Compensation Committee Report," "Risk Assessment in Compensation Programs," "Executive Compensation Tables" and "Pay Ratio Disclosure" in Peabody's 2022 Proxy Statement and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required by Item 403 of Regulation S-K is included under the caption "Stock Ownership - Security Ownership of Directors and Management and Certain Beneficial Owners" in Peabody's 2022 Proxy Statement and is incorporated herein by reference.

Equity Compensation Plan Information

As required by Item 201(d) of Regulation S-K, the following table provides information regarding Peabody's equity compensation plans as of December 31, 2021:

Plan Category	(a) Number of Securities to be Issued upon Exercise of Outstanding Options, Warrants and Rights	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a))
Equity compensation plans approved by security holders	872,839 ⁽¹⁾	\$ — ⁽²⁾	7,045,005
Equity compensation plans not approved by security holders	—	—	—
Total	872,839	\$ —	7,045,005

⁽¹⁾ Shares issuable pursuant to outstanding performance units and vested but not issued deferred stock units. Performance units are shown at target and could change based on actual metrics achieved.

⁽²⁾ The weighted-average exercise price shown in the table does not take into account outstanding deferred stock units or performance awards.

Refer to Note 17. "Share-Based Compensation" to the accompanying consolidated financial statements for additional information regarding the material features of Peabody's current equity compensation plans.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by Items 404 and 407(a) of Regulation S-K is included under the captions "Review of Related Person Transactions" and "Additional Information Concerning the Board of Directors - Board Independence" in Peabody's 2022 Proxy Statement and is incorporated herein by reference.

Item 14. Principal Accountant Fees and Services.

The information required by Item 9(e) of Schedule 14A is included under the caption "Audit Fees" in Peabody's 2022 Proxy Statement and is incorporated herein by reference.

PART IV**Item 15. Exhibits and Financial Statement Schedules.**

(a) Documents Filed as Part of the Report

(1) Financial Statements.

The following consolidated financial statements of Peabody Energy Corporation and the report thereon of the independent registered public accounting firm are included herein on the pages indicated:

	Page
Report of Independent Registered Public Accounting Firm (PCAOB ID: 42)	F-1
Consolidated Statements of Operations — For the Years Ended December 31, 2021, 2020 and 2019	F-3
Consolidated Statements of Comprehensive Income (Loss) — For the Years Ended December 31, 2021, 2020 and 2019	F-4
Consolidated Balance Sheets — December 31, 2021 and 2020	F-5
Consolidated Statements of Cash Flows — For the Years Ended December 31, 2021, 2020 and 2019	F-6
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(2) Financial Statement Schedules.

The following financial statement schedule of Peabody Energy Corporation is at the page indicated:

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All other schedules for which provision is made in the applicable accounting regulation of the Securities and Exchange Commission are not required under the related instructions or are not applicable and, therefore, have been omitted.

(3) Exhibits.

The exhibits below are numbered in accordance with the Exhibit Table of Item 601 of Regulation S-K.

Exhibit No.	Description of Exhibit
2.1	Debtors' Second Amended Joint Plan of Reorganization under Chapter 11 of the Bankruptcy Code as revised March 15, 2017 (Incorporated by reference to Exhibit 2.2 of the Registrant's Current Report on Form 8-K, filed March 20, 2017).
2.2	Order Confirming Debtors' Second Amended Joint Plan of Reorganization under Chapter 11 of the Bankruptcy Code on March 17, 2017 (Incorporated by reference to Exhibit 2.1 of the Registrant's Current Report on Form 8-K, filed March 20, 2017).

- 2.3 [Asset Purchase Agreement, dated as of September 20, 2018, by and between Drummond Company, Inc. and Peabody Southeast Mining, LLC, and, for certain limited purposes, Peabody Energy Corporation \(Incorporated by reference to Exhibit 2.1 of the Registrant's Current Report on Form 8-K, filed September 24, 2018\).](#)
- 2.4 [Implementation Agreement, dated as of June 18, 2019, between Peabody Energy Corporation and Arch Coal, Inc. \(Incorporated by reference to Exhibit 2.1 of the Registrant's Current Report on Form 8-K/A filed on June 19, 2019\).](#)
- 3.1 [Fourth Amended and Restated Certificate of Incorporation of the Registrant \(Incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed April 3, 2017\).](#)
- 3.2 [Amended and Restated By-Laws of the Registrant \(Incorporated by reference to Exhibit 3.3 of the Registrant's Current Report on Form 8-K filed April 3, 2017\).](#)
- 4.1 [Specimen of stock certificate representing the Registrant's common stock, \\$.01 par value \(Incorporated by reference to Exhibit 4.13 to Amendment No. 4 to the Registrant's Form S-1 Registration Statement No. 333-55412, filed May 1, 2001\).](#)
- 4.2 [Indenture, dated as of February 15, 2017, between Peabody Securities Finance Corporation and Wilmington Trust, National Association, as Trustee, governing 6.000% Senior Secured Notes due 2022 and 6.375% Senior Secured Notes due 2025 \(Incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K, filed February 15, 2017\).](#)
- 4.3 [First Supplemental Indenture, dated as of April 3, 2017, among the Registrant, Peabody Securities Finance Corporation, the subsidiary guarantors party thereto and Wilmington Trust, National Association, as trustee \(Incorporated by reference to Exhibit 4.3 of the Registrant's Current Report on Form 8-K, filed April 3, 2017\).](#)
- 4.4 [Second Supplemental Indenture, dated as of May 7, 2018, among the Registrant, NGS Acquisition Corp., LLC, and Wilmington Trust, National Association, as trustee \(Incorporated by reference to Exhibit 4.4 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018\).](#)
- 4.5 [Third Supplemental Indenture, dated as of August 9, 2018, between the Registrant and Wilmington Trust, National Association, as trustee \(Incorporated by reference to Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2018\).](#)
- 4.6 [Fourth Supplemental Indenture, dated as of December 7, 2018, among the Registrant, Peabody Southeast Mining, LLC, and Wilmington Trust, National Association, as trustee \(Incorporated by reference to Exhibit 4.6 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018\).](#)
- 4.7 [Description of Securities \(Incorporated by reference to Exhibit 4.7 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2019\).](#)
- 4.8 [Indenture dated as of January 29, 2021, by and among the Co-Issuers, Wilmington Trust, National Association, as trustee, and the Company \(on a limited basis, to the extent of its obligations specifically set forth therein\) \(Incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K/A filed on February 1, 2021\).](#)
- 4.9 [Indenture dated as of January 29, 2021, by and among Peabody, the guarantors party thereto, and Wilmington Trust, National Association, as trustee \(Incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K/A filed on February 1, 2021\).](#)
- 4.10 [Seventh Supplemental Indenture, dated as of January 8, 2021, by and among the Company and Wilmington Trust, National Association, as trustee \(Incorporated by reference to Exhibit 4.3 to the Registrant's Current Report on Form 8-K/A filed on February 1, 2021\).](#)
- 4.11 [Eighth Supplemental Indenture, dated as of January 29, 2021, by and among the Company and Wilmington Trust, National Association, as trustee \(Incorporated by reference to Exhibit 4.4 to the Registrant's Current Report on Form 8-K/A filed on February 1, 2021\).](#)
- 4.12 [First Supplemental Indenture, dated as of February 3, 2021, by and among the Co-Issuers, Wilmington Trust, National Association, as trustee, and Peabody \(on a limited basis, to the extent of its obligations specifically set forth therein\) \(Incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on February 5, 2021\).](#)
- 4.13 [First Supplemental Indenture, dated as of February 3, 2021, by and among Peabody, the guarantors party thereto, and Wilmington Trust, National Association, as trustee \(Incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed on February 5, 2021\).](#)
- 10.1 Federal Coal Lease WYW0321779: North Antelope/Rochelle Mine (Incorporated by reference to Exhibit 10.3 of the Registrant's Form S-4 Registration Statement No. 333-59073, filed July 14, 1998).
- 10.2 Federal Coal Lease WYW119554: North Antelope/Rochelle Mine (Incorporated by reference to Exhibit 10.4 of the Registrant's Form S-4 Registration Statement No. 333-59073, filed July 14, 1998).
- 10.3 Federal Coal Lease WYW5036: Rawhide Mine (Incorporated by reference to Exhibit 10.5 of the Registrant's Form S-4 Registration Statement No. 333-59073, filed July 14, 1998).
- 10.4 Federal Coal Lease WYW3397: Caballo Mine (Incorporated by reference to Exhibit 10.6 of the Registrant's Form S-4 Registration Statement No. 333-59073, filed July 14, 1998).
- 10.5 Federal Coal Lease WYW83394: Caballo Mine (Incorporated by reference to Exhibit 10.7 of the Registrant's Form S-4 Registration Statement No. 333-59073, filed July 14, 1998).

- 10.6 [Federal Coal Lease WYW136142 \(Incorporated by reference to Exhibit 10.8 of Amendment No. 1 to the Registrant's Form S-4 Registration Statement No. 333-59073, filed September 8, 1998\).](#)
- 10.7 [Royalty Prepayment Agreement by and among Peabody Natural Resources Company, Gallo Finance Company and Chaco Energy Company, dated September 30, 1998 \(incorporated by reference to Exhibit 10.9 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 1998\).](#)
- 10.8 [Federal Coal Lease WYW154001: North Antelope Rochelle South \(Incorporated by reference to Exhibit 10.68 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2004\).](#)
- 10.9 [Federal Coal Lease WYW150210: North Antelope Rochelle Mine \(Incorporated by reference to Exhibit 10.8 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2005\).](#)
- 10.10 [Federal Coal Lease WYW151134 effective May 1, 2005: West Roundup \(Incorporated by reference to Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2005\).](#)
- 10.11 [Federal Coal Lease Readjustment WYW78633: Caballo \(Incorporated by reference to Exhibit 10.24 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2012\).](#)
- 10.12 [Transfer by Assignment and Assumption of Federal Coal Lease WYW172657: Caballo West \(Incorporated by reference to Exhibit 10.25 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2012\).](#)
- 10.13 [Federal Coal Lease WYW176095: Porcupine South \(Incorporated by reference to Exhibit 10.26 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2012\).](#)
- 10.14 [Federal Coal Lease WYW173408: North Porcupine \(Incorporated by reference to Exhibit 10.27 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2012\).](#)
- 10.15 [Federal Coal Lease WYW172413: School Creek \(Incorporated by reference to Exhibit 10.28 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2012\).](#)
- 10.16 [Separation Agreement, Plan of Reorganization and Distribution, dated October 22, 2007, between the Registrant and Patriot Coal Corporation \(Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K, filed October 25, 2007\).](#)
- 10.17 [Tax Separation Agreement, dated October 22, 2007, between the Registrant and Patriot Coal Corporation \(Incorporated by reference to Exhibit 10.2 of the Registrant's Current Report on Form 8-K, filed October 25, 2007\).](#)
- 10.18 [Coal Act Liabilities Assumption Agreement, dated October 22, 2007, among Patriot Coal Corporation, Peabody Holding Company, LLC and the Registrant \(Incorporated by reference to Exhibit 10.3 of the Registrant's Current Report on Form 8-K, filed October 25, 2007\).](#)
- 10.19 [Salaried Employee Liabilities Assumption Agreement, dated October 22, 2007, among Patriot Coal Corporation, Peabody Holding Company, LLC, Peabody Coal Company, LLC and the Registrant \(Incorporated by reference to Exhibit 10.5 of the Registrant's Current Report on Form 8-K, filed October 25, 2007\).](#)
- 10.20 [Coal Supply Agreement, dated October 22, 2007, between Patriot Coal Sales LLC and COALSALES II, LLC \(Incorporated by reference to Exhibit 10.6 of the Registrant's Current Report on Form 8-K, filed October 25, 2007\).](#)
- 10.21 [Settlement Agreement entered into as of October 24, 2013, by and among Patriot Coal Corporation, on behalf of itself and its affiliates, the Registrant, on behalf of itself and its affiliates, and the United Mine Workers of America, on behalf of itself and the UMWA Employees and UMWA Retirees \(Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K, filed October 30, 2013\).](#)
- 10.22 [Purchase and Sale Agreement, dated as of November 20, 2015, by and between Four Star Holdings, LLC and Western Megawatt Resources, LLC \(Incorporated by reference to Exhibit 10.28 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2015\).](#)
- 10.23* [Employment Agreement entered into as of August 21, 2013, by and between Peabody Energy Corporation and Glenn L. Kellow \(Incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on August 27, 2013\).](#)
- 10.24* [Restrictive Covenant Agreement entered into as of August 21, 2013, by and between Peabody Energy Corporation and Glenn L. Kellow \(Incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on August 27, 2013\).](#)
- 10.25* [Letter dated January 27, 2015 to Glenn L. Kellow from the Chairman of the Compensation Committee of the Peabody Energy Corporation Board of Directors \(Incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on January 28, 2015\).](#)
- 10.26* [Letter Agreement entered into as of January 27, 2015, by and between Peabody Energy Corporation and Glenn L. Kellow \(Incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on January 28, 2015\).](#)
- 10.27* [Letter Agreement entered into as of April 20, 2015, by and between Peabody Energy Corporation and Glenn L. Kellow \(Incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on April 21, 2015\).](#)

- 10.28* [Form of Addendum to Participation Agreement executed by Glenn L. Kellow and Charles F. Meintjes \(2020\). \(Incorporated by reference to Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020\).](#)
- 10.29* [Employment Transition Agreement, dated March 18, 2021, between Peabody Energy Corporation and Glenn L. Kellow \(Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed on March 18, 2021\).](#)
- 10.30* [Contract of Employment, dated October 22, 2020, between Peabody Energy Australia Coal Pty Ltd and Darren R. Yeates \(Incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed October 26, 2020\).](#)
- 10.31* [Variation of Employment Contract, dated August 11, 2021, between Peabody Energy Australia Coal Pty Ltd and Darren R. Yeates \(Incorporated by reference to Exhibit 99.1 of the Registrant's Current Report on Form 8-K, filed August 13, 2021\).](#)
- 10.32* [Restated Employment Agreement entered into as of December 20, 2012 by and between the Registrant and Kemal Williamson \(Incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on December 26, 2012\).](#)
- 10.33* [Peabody Energy Corporation 2019 Executive Severance Plan. \(Incorporated by reference to Exhibit 10.32 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018\).](#)
- 10.34 [Termination Agreement, dated as of October 5, 2020, between Peabody Energy Corporation and Arch Resources, Inc. \(Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K, filed on October 6, 2020\).](#)
- 10.35 [Limited Waiver to Purchase and Sale Agreement by and between Four Star Holdings, LLC and Western Megawatt Resources, LLC dated March 30, 2016 \(Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed March 31, 2016\).](#)
- 10.36 [Fifth Amended and Restated Receivables Purchase Agreement, dated as of March 25, 2016, by and among P&L Receivables Company, LLC, Peabody Energy Corporation, the various Sub-Servicers listed on the signature pages thereto, all Conduit Purchasers listed on the signature pages thereto, all Committed Purchasers listed on the signature pages thereto, all Purchaser Agents listed on the signature pages thereto, all LC Participants listed on the signature pages thereto, and PNC Bank, National Association, as Administrator and as LC Bank \(Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed March 31, 2016\).](#)
- 10.37 [First Amendment to the Fifth Amended and Restated Receivables Purchase Agreement, dated as of April 12, 2016, by and among P&L Receivables Company, LLC, Peabody Energy Corporation, the various Sub-Servicers listed on the signature pages thereto, and PNC Bank, National Association, as Administrator and as the Sole Purchaser, Committed Purchaser, LC Bank and LC Participant \(Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K, filed April 13, 2016\).](#)
- 10.38 [Second Amendment to the Fifth Amended and Restated Receivables Purchase Agreement, dated as of April 18, 2016, by and among Peabody Energy Corporation, P&L Receivables Company, LLC, the various Sub-Servicers listed on the signature pages thereto, and PNC Bank, National Association, as Administrator and as the Sole Purchaser, Committed Purchaser, LC Bank and LC Participant \(Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K, filed April 22, 2016\).](#)
- 10.39 [Sixth Amendment to the Sixth Amended and Restated Receivables Purchase Agreement, dated as of June 30, 2020, by and among P&L Receivables Company, LLC, Peabody Energy Corporation, all Committed Purchasers listed on the signature pages thereto, all Purchaser Agents listed on the signature pages thereto, all LC Participants listed on the signature pages thereto, and PNC Bank, National Association, as Administrator and as LC Bank \(Incorporated by reference to Exhibit 10.2 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020\).](#)
- 10.40 [Receivables Purchase Facility Commitment Letter entered into as of January 27, 2017, by and among the Registrant, P&L Receivables Company, LLC and PNC Bank, National Association \(Incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on January 27, 2017\).](#)
- 10.41 [Notice Letter and Term Sheet dated as of February 15, 2017, for Amendments to the Receivables Purchase Facility Commitment Letter entered into as of January 27, 2017, by and among the Registrant, P&L Receivables Company, LLC and PNC Bank, National Association \(Incorporated by reference to Exhibit 10.128 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2016\).](#)
- 10.42 [Settlement Agreement dated as of March 13, 2017 by and among the Registrant, certain subsidiaries of the Registrant, and the United Mine Workers of America 1974 Pension Plan and Trust \(Incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on March 17, 2017\).](#)
- 10.43 [Sixth Amended and Restated Receivables Purchase Agreement, dated as of April 3, 2017, by and among P&L Receivables Company, LLC, Peabody Energy Corporation, the various Sub-Servicers listed on the signature pages thereto, all Conduit Purchasers listed on the signature pages thereto, all Committed Purchasers listed on the signature pages thereto, all Purchaser Agents listed on the signature pages thereto, all LC Participants listed on the signature pages thereto, and PNC Bank, National Association, as Administrator and as LC Bank \(Incorporated by reference to Exhibit 10.4 of the Registrant's Current Report on Form 8-K filed April 3, 2017\).](#)

- 10.44 [First Amendment to the Sixth Amended and Restated Receivables Purchase Agreement, dated as of June 30, 2017, by and among P&L Receivables Company, LLC, Peabody Energy Corporation, the various parties identified on the signature pages thereto as Sub-Servicers, Metropolitan Collieries Pty Ltd, and PNC Bank, National Association, as Administrator and as the sole Purchaser Agent, Committed Purchaser, LC Bank and LC Participant on the date thereof \(Incorporated by reference to Exhibit 10.9 of the Registrant's Quarterly Report on Form 10-Q, filed August 14, 2017\).](#)
- 10.45 [Second Amendment to the Sixth Amended and Restated Receivables Purchase Agreement, dated as of December 13, 2017, by and among P&L Receivables Company, LLC, Peabody Energy Corporation, Regions Bank, and PNC Bank, National Association, as Administrator and as the sole Purchaser Agent, Committed Purchaser, LC Bank and LC Participant on the date thereof \(Incorporated by reference to Exhibit 10.57 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2017\).](#)
- 10.46 [Fifth Amendment to the Sixth Amended and Restated Receivables Purchase Agreement, dated as of April 3, 2019, by and among P&L Receivables Company, LLC, Peabody Energy Corporation, all Committed Purchasers listed on the signature pages thereto, all Purchaser Agents listed on the signature pages thereto, all LC Participants listed on the signature pages thereto, and PNC Bank, National Association, as Administrator and as LC Bank \(Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K, filed April 4, 2019\).](#)
- 10.47 [Credit Agreement dated as of April 3, 2017, among the Registrant, as Borrower, Goldman Sachs Bank USA, as Administrative Agent, and the other lenders party thereto \(Incorporated by reference to Exhibit 10.3 of the Registrant's Current Report on Form 8-K, filed April 3, 2017\).](#)
- 10.48 [Amendment No. 1 to Credit Agreement, by and among Peabody Energy Corporation, the subsidiaries of the Peabody Energy Corporation party thereto as reaffirming parties, the lenders party thereto and Goldman Sachs Bank USA, as administrative agent, dated as of September 18, 2017 \(Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed September 18, 2017\).](#)
- 10.49 [Amendment No. 2 to Credit Agreement, by and among Peabody Energy Corporation, the subsidiaries of Peabody Energy Corporation party thereto as reaffirming parties, the lenders party thereto and Goldman Sachs Bank USA, as administrative agent, dated as of November 17, 2017 \(Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K, filed November 20, 2017\).](#)
- 10.50 [Amendment No. 3 to Credit Agreement, by and among Peabody Energy Corporation, the subsidiaries of Peabody Energy Corporation party thereto as reaffirming parties, the lenders party thereto and Goldman Sachs Bank USA, as administrative agent, dated as of December 18, 2017 \(Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K, filed December 19, 2017\).](#)
- 10.51 [Amendment No. 4 to Credit Agreement, by and among Peabody Energy Corporation, the subsidiaries of Peabody Energy Corporation party thereto as reaffirming parties, the lenders party thereto and Goldman Sachs Bank USA, as administrative agent, dated as of April 11, 2018 \(Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K, filed April 11, 2018\).](#)
- 10.52 [Amendment No. 5 to Credit Agreement, by and among Peabody Energy Corporation, the subsidiaries of Peabody Energy Corporation party thereto as reaffirming parties, the lenders party thereto and Goldman Sachs Bank USA, as administrative agent, dated as of June 27, 2018 \(Incorporated by reference to Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2018\).](#)
- 10.53 [Amendment No. 6 to Credit Agreement, by and among Peabody Energy Corporation, the subsidiaries of Peabody Energy Corporation party thereto as reaffirming parties, the incremental revolving lenders party thereto, Goldman Sachs Bank USA, as existing administrative agent, and JPMorgan Chase Bank, N.A., as successor administrative agent, dated as of September 17, 2019 \(Incorporated by reference to Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2019\).](#)
- 10.54 [Amendment No. 7 to Credit Agreement by and among Peabody Energy Corporation, the subsidiaries of the Peabody Energy Corporation party thereto as reaffirming parties, the lenders party thereto, and JPMorgan Chase Bank, N.A., as successor administrative agent, dated as of September 17, 2019 \(Incorporated by reference to Exhibit 10.2 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2019\).](#)
- 10.55 [Amendment No. 8 to Credit Agreement by and among Peabody Energy Corporation, the subsidiaries of Peabody Energy Corporation party thereto as reaffirming parties, the lenders party thereto, and JPMorgan Chase Bank, N.A., as administrative agent, dated as of January 29, 2021 \(as successor to Goldman Sachs Bank USA in its capacity as administrative agent\) \(Incorporated by reference to Exhibit 10.3 of the Registrant's Current Report on Form 8-K/A filed on February 1, 2021\).](#)
- 10.56 [Credit Agreement, dated as of January 29, 2021, among the Co-Issuers, as borrowers, Peabody Energy Corporation, as parent, JPMorgan Chase Bank, N.A., as administrative agent, and the lenders party thereto \(Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K/A filed on February 1, 2021\).](#)
- 10.57 [Credit Agreement, dated as of January 29, 2021, among the Registrant, as borrower, JPMorgan Chase Bank, N.A., as administrative agent, and the lenders party thereto \(Incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K/A filed on February 1, 2021\).](#)
- 10.58* [Peabody Energy Corporation 2017 Incentive Plan \(Incorporated by reference to Exhibit 4.6 of the Registrant's Registration Statement on Form S-8, filed April 3, 2017\).](#)

10.59	Registration Rights Agreement, dated as of April 3, 2017, among the Registrant and the stockholders party thereto (Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed, April 3, 2017).
10.60	Form of Indemnification Agreement (Incorporated by reference to Exhibit 10.9 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017).
10.61*	Form of Restricted Stock Unit Agreement under the Peabody Energy Corporation 2017 Incentive Plan (Incorporated by reference to Exhibit 10.7 of the Registrant's Current Report on Form 8-K, filed April 3, 2017).
10.62*	Form of Restrictive Covenant Agreement under the Peabody Energy Corporation 2017 Incentive Plan (Incorporated by reference to Exhibit 10.8 of the Registrant's Current Report on Form 8-K, filed April 3, 2017).
10.63*	Form of Deferred Stock Unit Agreement under the Peabody Energy Corporation 2017 Incentive Plan (Incorporated by reference to Exhibit 10.12 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017).
10.64*	Form of Performance Share Unit Agreement under the Peabody Energy Corporation 2017 Incentive Plan (Incorporated by reference to Exhibit 10.68 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2017).
10.65	Form of Indemnification Agreement (Incorporated by reference to Exhibit 10.73 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018).
10.66*	Form of Deferred Stock Unit Agreement under the Peabody Energy Corporation 2017 Incentive Plan (Incorporated by reference to Exhibit 10.74 of the Registrant's Annual Report on Form 10-K for the year ended December 31, 2018).
10.67*	Form of Restricted Stock Unit Agreement (ELT Level 2019 Special Award) under the Peabody Energy Corporation 2017 Incentive Plan (Incorporated by reference to Exhibit 10.75 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2019).
10.68*	Form of Restricted Stock Unit Agreement (Director Level and Above 2019 Special Award) under the Peabody Energy Corporation 2017 Incentive Plan (Incorporated by reference to Exhibit 10.76 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2019).
10.69*	Form of Deferred Stock Unit Agreement under the Peabody Energy Corporation 2017 Incentive Plan (Incorporated by reference to Exhibit 10.2 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2020).
10.70*	Form of Restricted Stock Unit Agreement (Director Level and Above 2020 Off-Cycle Award) under the Peabody Energy Corporation 2017 Incentive Plan (Incorporated by reference to Exhibit 10.3 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2020).
10.71*	Form of Performance Share Units Agreement under the Peabody Energy Corporation 2017 Incentive Plan (Incorporated by reference to Exhibit 10.4 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2020).
10.72*	Form of Restricted Stock Unit Agreement under the Peabody Energy Corporation 2017 Incentive Plan (Incorporated by reference to Exhibit 10.5 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2020).
10.73*	Form of 2021 Service-Based Cash Award Agreement under the Peabody Energy Corporation 2017 Incentive Plan (Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed on March 5, 2021).
10.74*	Form of Amendment No. 1 to 2021 Service-Based Cash Award Agreement under the Peabody Energy Corporation 2017 Incentive Plan (Incorporated by reference to Exhibit 10.2 of the Registrant's Current Report on Form 8-K filed on March 5, 2021).
10.75* †	Form of 2022 Service-Based Cash Award Agreement under the Peabody Energy Corporation 2017 Incentive Plan (US Employees).
10.76* †	Form of 2022 Performance-Based Cash Award Agreement under the Peabody Energy Corporation 2017 Incentive Plan (US Employees).
10.77* †	Form of 2022 Restricted Stock Unit Agreement under the Peabody Energy Corporation 2017 Incentive Plan (US Employees).
10.78* †	Form of 2022 Global Restricted Stock Unit Agreement under the Peabody Energy Corporation 2017 Incentive Plan (AUS Employees).
10.79* †	Offer of Restricted Stock Units to Australian Resident Grantees under the Peabody Energy Corporation 2017 Incentive Plan (AUS Employees).
10.80* †	Form of 2022 Service-Based Cash Award Agreement under the Peabody Energy Corporation 2017 Incentive Plan (AUS Employees).

10.81* †	Form of 2022 Performance-Based Cash Award Agreement under the Peabody Energy Corporation 2017 Incentive Plan (AUS Employees).
10.82	Agreement, dated as of February 4, 2020, by and among Peabody Energy Corporation, Elliott Investment Management L.P., Elliott Associates, L.P. and Elliott International, L.P. (Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K, filed February 5, 2020).
10.83	Management Services Agreement, dated as of August 4, 2020, by and between Peabody Investments Corp. and each of the Client Companies listed on the signature page thereto (Incorporated by reference to Exhibit 10.3 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020).
10.84	Management Services Agreement, dated as August 4, 2020, by and between Peabody Energy Australia Pty Ltd and each of the Client Companies listed on the signature page thereto (Incorporated by reference to Exhibit 10.4 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2020).
10.85	Transaction Support Agreement, dated as of November 6, 2020, between Peabody Energy Corporation, certain subsidiaries of Peabody Energy Corporation and the Participating Sureties (Incorporated by reference to Exhibit 10.5 of the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020).
10.86	Transaction Support Agreement, dated as of December 24, 2020, between Peabody, certain subsidiaries of Peabody, the Revolving Lenders, the Administrative Agent, and the Consenting Noteholders (Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K, filed December 28, 2020).
10.87	Amended and Restated Transaction Support Agreement, dated as of December 31, 2020, between Peabody, certain subsidiaries of Peabody, the Revolving Lenders, the Administrative Agent, and the Consenting Noteholders (Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K, filed January 4, 2021).
10.88	First Amendment to Amended and Restated Transaction Support Agreement, dated as of January 29, 2021, between Peabody, certain subsidiaries of Peabody, the Revolving Lenders, the Administrative Agent, and the Consenting Noteholders (Incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K/A filed on February 1, 2021).
10.89†	Agreement for Irrevocable Standby Letters of Credit, dated as of February 17, 2022, between Peabody and Goldman Sachs Bank USA.
21†	List of Subsidiaries.
23.1†	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.
23.2†	Consents of Qualified Persons for Technical Report Summary for the North Antelope Rochelle Mine.
23.3†	Consents of Qualified Persons for Technical Report Summary for the Shoal Creek Mine.
23.4†	Consents of Qualified Persons for Technical Report Summary for the Wilpinjong Mine.
23.5†	Consents of Qualified Persons for Technical Report Summary for the Coppabella Moorvale Joint Venture.
31.1†	Certification of periodic financial report by the Registrant's Chief Executive Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as amended pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2†	Certification of periodic financial report by the Registrant's Chief Financial Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as amended pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1†	Certification of periodic financial report pursuant to 18 U.S.C. Section 1350, adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, by the Registrant's Chief Executive Officer.
32.2†	Certification of periodic financial report pursuant to 18 U.S.C. Section 1350, adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, by the Registrant's Chief Financial Officer.
95†	Mine Safety Disclosure required by Item 104 of Regulation S-K.
96.1†	Technical Report Summary for the North Antelope Rochelle Mine, effective as of December 31, 2021.
96.2†	Technical Report Summary for the Shoal Creek Mine, effective as of December 31, 2021.
96.3†	Technical Report Summary for the Wilpinjong Mine, effective as of December 31, 2021.
96.4†	Technical Report Summary for the Coppabella Moorvale Joint Venture, effective as of December 31, 2021.
101.INS	Inline XBRL Instance Document - the instance document does not appear in the interactive data file because XBRL tags are embedded within the Inline XBRL document
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document

104 Cover Page Interactive Data File (embedded within the Inline XBRL document).

* These exhibits constitute all management contracts, compensatory plans and arrangements required to be filed as an exhibit to this form pursuant to Item 15(a)(3) and 15(b) of this report.

† Filed herewith.

Pursuant to the Instructions to Exhibits, certain instruments defining the rights of holders of long-term debt securities of the Company and its consolidated subsidiaries are not filed because the total amount of securities authorized under any such instrument does not exceed 10% of the total assets of the Company and its subsidiaries on a consolidated basis. A copy of such instrument will be furnished to the Securities and Exchange Commission upon request.

Item 16. Form 10-K Summary.

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

PEABODY ENERGY CORPORATION

/s/ JAMES C. GRECH
James C. Grech
President and Chief Executive Officer

Date: February 18, 2022

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons, on behalf of the registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ JAMES C. GRECH</u> James C. Grech	President and Chief Executive Officer, Director (principal executive officer)	February 18, 2022
<u>/s/ MARK A. SPURBECK</u> Mark A. Spurbeck	Executive Vice President and Chief Financial Officer (principal financial and accounting officer)	February 18, 2022
<u>/s/ SAMANTHA ALGAZE</u> Samantha Algaze	Director	February 17, 2022
<u>/s/ ANDREA BERTONE</u> Andrea Bertone	Director	February 17, 2022
<u>/s/ BILL CHAMPION</u> Bill Champion	Director	February 17, 2022
<u>/s/ NICHOLAS CHIREKOS</u> Nicholas Chirekos	Director	February 17, 2022
<u>/s/ STEPHEN GORMAN</u> Stephen Gorman	Director	February 17, 2022
<u>/s/ JOE LAYMON</u> Joe Laymon	Director	February 17, 2022
<u>/s/ ROBERT MALONE</u> Robert Malone	Chairman	February 17, 2022
<u>/s/ DAVID MILLER</u> David Miller	Director	February 17, 2022
<u>/s/ MICHAEL SUTHERLIN</u> Michael Sutherlin	Director	February 17, 2022

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Peabody Energy Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Peabody Energy Corporation (the Company) as of December 31, 2021 and 2020, the related consolidated statements of operations, comprehensive income (loss), changes in stockholders' equity and cash flows for each of the three years in the period ended December 31, 2021, and the related notes and financial statement schedule listed in the Index at Item 15(a) (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 18, 2022 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved especially challenging, subjective, or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Asset Retirement Obligation Liability

Description of the Matter

At December 31, 2021, the Company's asset retirement obligation (ARO) liabilities totaled \$719.8 million. As discussed in Note 1 and Note 13 of the consolidated financial statements, the Company estimates its ARO liabilities in the U.S. and Australia for final reclamation and mine closure based upon detailed engineering calculations of the amount and timing of the future cash spending for a third party to perform the required work. The Company records an ARO asset associated with the discounted liability for final reclamation and mine closure and are recognized in the period in which the liability is incurred. As changes in estimates occur, the revisions to the obligation and asset are recognized at the appropriate credit-adjusted, risk-free rate.

Management's estimate involves a high degree of subjectivity and auditing the significant assumptions utilized by management in estimating the amount of the liability requires judgment. In particular, the obligation is determined using a discounted cash flow technique and is based upon mining permit requirements and various assumptions including credit-adjusted risk-free rates, inflation rates, estimates of disturbed acreage, timing of reclamation activities, and reclamation costs.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design, and tested the operating effectiveness of the controls over the Company's accounting for ARO liabilities, including controls over management's review of the ARO calculation and the significant assumptions and data inputs described above.

To audit the ARO liabilities, our procedures included evaluating the methodology used, and testing the significant assumptions discussed above and the underlying data used by the Company in its estimate. We compared assumptions including the credit-adjusted risk-free rate, and inflation rate to current market data. In addition, to assess the estimates of disturbed acreage, timing of reclamation activities, and reclamation costs, we evaluated significant changes from the prior estimate, verified consistency between timing of reclamation activities and projected mine life, considered the appropriateness of the estimated costs based on mine type, compared anticipated costs to recent operating data, and recalculated management's estimate. Additionally, we involved our specialists to assist in our assessment of the Company's ARO liability. As part of this effort, our specialists interviewed members of the Company's engineering staff, assessed the completeness of the mine reclamation estimate with respect to meeting mine closure and post closure plan regulatory requirements, and evaluated the reasonableness of the engineering estimates and assumptions.

/s/ Ernst & Young, LLP

We have served as the Company's auditor since 1991.

St. Louis, Missouri

February 18, 2022

PEABODY ENERGY CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,		
	2021	2020	2019
	(Dollars in millions, except per share data)		
Revenues	\$ 3,318.3	\$ 2,881.1	\$ 4,623.4
Costs and expenses			
Operating costs and expenses (exclusive of items shown separately below)	2,553.1	2,524.9	3,536.6
Depreciation, depletion and amortization	308.7	346.0	601.0
Asset retirement obligation expenses	44.7	45.7	58.4
Selling and administrative expenses	84.9	99.5	145.0
Restructuring charges	8.3	37.9	24.3
Transaction costs related to joint ventures	—	23.1	21.6
Other operating (income) loss:			
Net gain on disposals	(31.5)	(15.2)	(2.1)
Gain on formation of United Wambo Joint Venture	—	—	(48.1)
Asset impairment	—	1,487.4	270.2
Provision for North Goonyella equipment loss	—	—	83.2
North Goonyella insurance recovery	—	—	(125.0)
(Income) loss from equity affiliates	(82.1)	60.1	(3.4)
Operating profit (loss)	432.2	(1,728.3)	61.7
Interest expense	183.4	139.8	144.0
Net (gain) loss on early debt extinguishment	(33.2)	—	0.2
Interest income	(6.5)	(9.4)	(27.0)
Net periodic benefit (credit) costs, excluding service cost	(38.3)	(1.8)	19.4
Net mark-to-market adjustment on actuarially determined liabilities	(43.4)	(5.1)	67.4
Income (loss) from continuing operations before income taxes	370.2	(1,851.8)	(142.3)
Income tax provision	22.8	8.0	46.0
Income (loss) from continuing operations, net of income taxes	347.4	(1,859.8)	(188.3)
Income (loss) from discontinued operations, net of income taxes	24.0	(14.0)	3.2
Net income (loss)	371.4	(1,873.8)	(185.1)
Less: Net income (loss) attributable to noncontrolling interests	11.3	(3.5)	26.2
Net income (loss) attributable to common stockholders	\$ 360.1	\$ (1,870.3)	\$ (211.3)
Income (loss) from continuing operations:			
Basic income (loss) per share	\$ 3.03	\$ (18.99)	\$ (2.07)
Diluted income (loss) per share	\$ 3.00	\$ (18.99)	\$ (2.07)
Net income (loss) attributable to common stockholders:			
Basic income (loss) per share	\$ 3.24	\$ (19.14)	\$ (2.04)
Diluted income (loss) per share	\$ 3.22	\$ (19.14)	\$ (2.04)

See accompanying notes to consolidated financial statements

PEABODY ENERGY CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

	Year Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Net income (loss)	\$ 371.4	\$ (1,873.8)	\$ (185.1)
Postretirement plans (net of \$0.0 tax provisions in each period)	93.1	168.1	(8.7)
Foreign currency translation adjustment	(1.0)	6.1	0.2
Other comprehensive income (loss), net of income taxes	92.1	174.2	(8.5)
Comprehensive income (loss)	463.5	(1,699.6)	(193.6)
Less: Net income (loss) attributable to noncontrolling interests	11.3	(3.5)	26.2
Comprehensive income (loss) attributable to common stockholders	<u>\$ 452.2</u>	<u>\$ (1,696.1)</u>	<u>\$ (219.8)</u>

See accompanying notes to consolidated financial statements

PEABODY ENERGY CORPORATION
CONSOLIDATED BALANCE SHEETS

	December 31,	
	2021	2020
(Amounts in millions, except per share data)		
ASSETS		
Current assets		
Cash and cash equivalents	\$ 954.3	\$ 709.2
Accounts receivable, net of allowance for credit losses of \$0.0 at December 31, 2021 and 2020	350.5	244.8
Inventories	226.7	261.6
Other current assets	270.2	204.7
Total current assets	1,801.7	1,420.3
Property, plant, equipment and mine development, net	2,950.6	3,051.1
Operating lease right-of-use assets	35.5	49.9
Investments and other assets	162.0	140.9
Deferred income taxes	—	4.9
Total assets	\$ 4,949.8	\$ 4,667.1
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Current portion of long-term debt	\$ 59.6	\$ 44.9
Accounts payable and accrued expenses	872.1	745.7
Total current liabilities	931.7	790.6
Long-term debt, less current portion	1,078.2	1,502.9
Deferred income taxes	27.3	35.0
Asset retirement obligations	654.8	650.5
Accrued postretirement benefit costs	212.1	413.2
Operating lease liabilities, less current portion	27.2	42.1
Other noncurrent liabilities	197.7	251.5
Total liabilities	3,129.0	3,685.8
Stockholders' equity		
Preferred Stock — \$0.01 per share par value; 100.0 shares authorized, no shares issued or outstanding as of December 31, 2021 or December 31, 2020	—	—
Series Common Stock — \$0.01 per share par value; 50.0 shares authorized, no shares issued or outstanding as of December 31, 2021 or December 31, 2020	—	—
Common Stock — \$0.01 per share par value; 450.0 shares authorized, 176.3 shares issued and 133.3 shares outstanding as of December 31, 2021 and 140.5 shares issued and 97.8 shares outstanding as of December 31, 2020	1.8	1.4
Additional paid-in capital	3,745.6	3,364.6
Treasury stock, at cost — 43.0 and 42.7 common shares as of December 31, 2021 and December 31, 2020	(1,370.3)	(1,368.9)
Accumulated deficit	(913.2)	(1,273.3)
Accumulated other comprehensive income	297.9	205.8
Peabody Energy Corporation stockholders' equity	1,761.8	929.6
Noncontrolling interests	59.0	51.7
Total stockholders' equity	1,820.8	981.3
Total liabilities and stockholders' equity	\$ 4,949.8	\$ 4,667.1

See accompanying notes to consolidated financial statements

PEABODY ENERGY CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Cash Flows From Operating Activities			
Net income (loss)	\$ 371.4	\$ (1,873.8)	\$ (185.1)
(Income) loss from discontinued operations, net of income taxes	(24.0)	14.0	(3.2)
Income (loss) from continuing operations, net of income taxes	347.4	(1,859.8)	(188.3)
Adjustments to reconcile income (loss) from continuing operations, net of income taxes to net cash provided by (used in) operating activities:			
Depreciation, depletion and amortization	308.7	346.0	601.0
Noncash interest expense, net	21.3	16.2	16.0
Deferred income taxes	(7.5)	27.8	39.4
Noncash share-based compensation	10.0	13.5	38.3
Asset impairment	—	1,487.4	270.2
Net gain on disposals	(31.5)	(15.2)	(2.1)
Net (gain) loss on early debt extinguishment	(33.2)	—	0.2
(Income) loss from equity affiliates	(82.1)	60.1	(3.4)
Provision for North Goonyella equipment loss	—	—	83.2
Gain on formation of United Wambo Joint Venture	—	—	(48.1)
Foreign currency option contracts	5.8	(13.0)	5.2
Changes in current assets and liabilities:			
Accounts receivable	(105.6)	84.6	82.9
Inventories	35.0	69.9	(53.3)
Other current assets	(57.6)	21.0	(35.6)
Accounts payable and accrued expenses	128.1	(192.4)	(118.2)
Collateral arrangements	(6.3)	(15.0)	—
Asset retirement obligations	6.8	22.5	6.6
Workers' compensation obligations	(2.0)	1.8	5.0
Postretirement benefit obligations	(108.2)	(12.1)	36.8
Pension obligations	11.6	(28.4)	(32.5)
Other, net	—	0.1	2.1
Net cash provided by continuing operations	440.7	15.0	705.4
Net cash used in discontinued operations	(20.7)	(24.7)	(28.0)
Net cash provided by (used in) operating activities	420.0	(9.7)	677.4

See accompanying notes to consolidated financial statements

PEABODY ENERGY CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS - (Continued)

	Year Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Cash Flows From Investing Activities			
Additions to property, plant, equipment and mine development	(183.1)	(191.4)	(285.4)
Changes in accrued expenses related to capital expenditures	7.4	(6.1)	0.1
Insurance proceeds attributable to North Goonyella equipment losses	—	—	23.2
Proceeds from disposal of assets, net of receivables	17.8	27.1	30.0
Amount attributable to acquisition of Shoal Creek Mine	—	—	(2.4)
Contributions to joint ventures	(485.6)	(343.0)	(419.1)
Distributions from joint ventures	470.8	330.3	408.8
Advances to related parties	(0.5)	(23.2)	(27.3)
Cash receipts from Middlemount Coal Pty Ltd and other related parties	44.7	—	14.7
Investment in equity securities	—	—	(3.0)
Other, net	(3.0)	(0.4)	(0.9)
Net cash used in investing activities	<u>(131.5)</u>	<u>(206.7)</u>	<u>(261.3)</u>
Cash Flows From Financing Activities			
Proceeds from long-term debt	—	375.0	—
Repayments of long-term debt	(285.3)	(169.5)	(71.1)
Payment of debt issuance and other deferred financing costs	(22.5)	(7.0)	(6.4)
Proceeds from common stock issuances, net of costs	269.8	—	—
Common stock repurchases	—	—	(329.9)
Repurchase of employee common stock relinquished for tax withholding	(1.4)	(1.6)	(12.3)
Dividends paid	—	—	(258.1)
Distributions to noncontrolling interests	(4.0)	(3.5)	(23.5)
Net cash (used in) provided by financing activities	<u>(43.4)</u>	<u>193.4</u>	<u>(701.3)</u>
Net change in cash, cash equivalents and restricted cash	245.1	(23.0)	(285.2)
Cash, cash equivalents and restricted cash at beginning of period	709.2	732.2	1,017.4
Cash, cash equivalents and restricted cash at end of period	<u>\$ 954.3</u>	<u>\$ 709.2</u>	<u>\$ 732.2</u>

See accompanying notes to consolidated financial statements

PEABODY ENERGY CORPORATION
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY

Peabody Energy Corporation Stockholders' Equity

	Common Stock	Additional Paid-in Capital	Treasury Stock	Retained Earnings (Accumulated Deficit)	Accumulated Other Comprehensive Income	Noncontrolling Interests	Total Stockholders' Equity
(Dollars in millions)							
December 31, 2018	\$ 1.4	\$ 3,304.7	\$ (1,025.1)	\$ 1,074.5	\$ 40.1	\$ 56.0	\$ 3,451.6
Net (loss) income	—	—	—	(211.3)	—	26.2	(185.1)
Dividends declared (\$2.410 per share)	—	8.1	—	(266.2)	—	—	(258.1)
Postretirement plans (net of \$0.0 tax provision)	—	—	—	—	(8.7)	—	(8.7)
Foreign currency translation adjustment	—	—	—	—	0.2	—	0.2
Share-based compensation for equity-classified awards	—	38.3	—	—	—	—	38.3
Common stock repurchases	—	—	(329.9)	—	—	—	(329.9)
Repurchase of employee common stock relinquished for tax withholding	—	—	(12.3)	—	—	—	(12.3)
Distributions to noncontrolling interests	—	—	—	—	—	(23.5)	(23.5)
December 31, 2019	\$ 1.4	\$ 3,351.1	\$ (1,367.3)	\$ 597.0	\$ 31.6	\$ 58.7	\$ 2,672.5
Net loss	—	—	—	(1,870.3)	—	(3.5)	(1,873.8)
Postretirement plans (net of \$0.0 tax provision)	—	—	—	—	168.1	—	168.1
Foreign currency translation adjustment	—	—	—	—	6.1	—	6.1
Share-based compensation for equity-classified awards	—	13.5	—	—	—	—	13.5
Repurchase of employee common stock relinquished for tax withholding	—	—	(1.6)	—	—	—	(1.6)
Distributions to noncontrolling interests	—	—	—	—	—	(3.5)	(3.5)
December 31, 2020	\$ 1.4	\$ 3,364.6	\$ (1,368.9)	\$ (1,273.3)	\$ 205.8	\$ 51.7	\$ 981.3
Net income	—	—	—	360.1	—	11.3	371.4
Postretirement plans (net of \$0.0 tax provision)	—	—	—	—	93.1	—	93.1
Foreign currency translation adjustment	—	—	—	—	(1.0)	—	(1.0)
Share-based compensation for equity-classified awards	—	10.0	—	—	—	—	10.0
Common stock issued in exchange for debt retirement	0.1	101.8	—	—	—	—	101.9
Common stock issuances, net of cost	0.3	269.2	—	—	—	—	269.5
Repurchase of employee common stock relinquished for tax withholding	—	—	(1.4)	—	—	—	(1.4)
Distributions to noncontrolling interests	—	—	—	—	—	(4.0)	(4.0)
December 31, 2021	\$ 1.8	\$ 3,745.6	\$ (1,370.3)	\$ (913.2)	\$ 297.9	\$ 59.0	\$ 1,820.8

See accompanying notes to consolidated financial statements

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(1) Summary of Significant Accounting Policies

Basis of Presentation

The consolidated financial statements include the accounts of Peabody Energy Corporation (PEC) and its affiliates. The Company, or Peabody, are used interchangeably to refer to Peabody Energy Corporation, to Peabody Energy Corporation and its subsidiaries, or to such subsidiaries, as appropriate to the context. Interests in subsidiaries controlled by the Company are consolidated with any outside stockholder interests reflected as noncontrolling interests, except when the Company has an undivided interest in an unincorporated joint venture. In those cases, the Company includes its proportionate share in the assets, liabilities, revenues and expenses of the jointly controlled entities within each applicable line item of the consolidated financial statements. All intercompany transactions, profits and balances have been eliminated in consolidation.

Description of Business

The Company is engaged in the mining of thermal coal for sale primarily to electric utilities and metallurgical coal for sale to industrial customers. The Company's mining operations are located in the United States (U.S.) and Australia, including an equity-affiliate mining operation in Australia. The Company also markets and brokers coal from other coal producers and trades coal and freight-related contracts. The Company's other commercial activities include managing its coal reserves and resources and real estate holdings and supporting the development of clean coal technologies.

Newly Adopted Accounting Standards

Equity Method Investments. In January 2020, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2020-01, which clarifies the interactions between Accounting Standards Codification (ASC) 321, ASC 323 and ASC 815. The new guidance addresses accounting for the transition into and out of the equity method and measuring certain purchased options and forward contracts to acquire investments. ASU 2020-01 is effective on January 1, 2021 for calendar year-end public companies. The Company adopted the requirements effective January 1, 2021. The adoption of this ASU did not have a material impact on the Company's consolidated financial statements or disclosures.

Accounting Standards Not Yet Implemented

Reference Rate Reform. In March 2020, ASU 2020-04 was issued, which provides optional guidance for a limited period of time to ease the potential burden on accounting for contract modifications caused by reference rate reform (including reform of the London Interbank Offered Rate (LIBOR) or other reference rate reform). This guidance is effective for all entities as of March 12, 2020 through December 31, 2022. The guidance may be adopted over time as reference rate reform activities occur and should be applied on a prospective basis. The Company is still completing its evaluation of the impact of the guidance and plans to elect optional expedients as reference rate reform activities occur. The Company does not expect the guidance to have a material impact on its consolidated financial statements or disclosures.

Leases. In November 2021, ASU 2021-09 was issued, which allows lessees to make an accounting policy election by class of underlying asset, rather than on an entity-wide basis, to use a risk-free rate as the discount rate when measuring and classifying leases. The Company is required to apply the amendments for fiscal years beginning after December 15, 2021 and for interim periods with fiscal years beginning after December 15, 2022. The Company does not expect the guidance to have a material impact on its consolidated financial statements or disclosures.

Government Assistance. In November 2021, ASU 2021-10 was issued, which aims to provide increased transparency by requiring business entities to disclose information about certain types of government assistance they receive in the notes to the financial statements. The guidance is effective for annual periods beginning after December 15, 2021, with early application permitted. The Company does not plan to early adopt the guidance in ASU 2021-10 and the Company does not expect the guidance to have a material impact on its disclosures.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Revenues

The majority of the Company's revenue is derived from the sale of coal under long-term coal supply agreements (those with initial terms of one year or longer and which often include price reopener and/or extension provisions) and contracts with terms of less than one year, including sales made on a spot basis. The Company's revenue from coal sales is realized and earned when control passes to the customer. Under the typical terms of the Company's coal supply agreements, title and risk of loss transfer to the customer at the mine or port, where coal is loaded to the transportation sources that serve the Company's mines. The Company incurs certain "add-on" taxes and fees on coal sales. Reported coal sales include taxes and fees charged by various federal and state governmental bodies and the freight charged on destination customer contracts.

The Company's seaborne operating platform is primarily export focused with customers spread across several countries, with a portion of the thermal and metallurgical coal sold within Australia. Generally, revenues from individual countries vary year by year based on electricity and steel demand, the strength of the global economy, governmental policies and several other factors, including those specific to each country. A majority of these sales are executed through annual and multi-year international coal supply agreements that contain provisions requiring both parties to renegotiate pricing periodically. Industry commercial practice, and the Company's typical practice, is to negotiate pricing for seaborne thermal coal contracts on an annual, spot or index basis and seaborne metallurgical coal contracts on a bi-annual, quarterly, spot or index basis. The portion of sales volume under contracts with a duration of less than one year has increased in recent years. In the case of periodically negotiated pricing, the Company may deliver coal under provisional pricing until a final agreed-upon price is determined. Variable consideration resulting from provisional pricing arrangements is recognized based on the Company's best estimate of the amount expected to be received at the time control is transferred to the customer.

The Company's U.S. thermal operating platform primarily sells thermal coal to electric utilities in the U.S. under long-term contracts, with a portion sold into the seaborne markets as conditions warrant. A significant portion of the coal production from the U.S. thermal mining segments is sold under existing long-term supply agreements. Certain customers of those segments utilize long-term sales agreements in recognition of the importance of reliability, service and predictable coal prices to their operations. The terms of coal supply agreements result from competitive bidding and extensive negotiations with customers. Consequently, the terms of those agreements may vary in many respects, including price adjustment features, price reopener terms, coal quality requirements, quantity parameters, permitted sources of supply, treatment of environmental constraints, extension options, force majeure and termination and assignment provisions.

Contract pricing is set forth on a per ton basis, and revenue is generally recorded as the product of price and volume delivered. Many of the Company's coal supply agreements contain provisions that permit the parties to adjust the contract price upward or downward at specified times. These contract prices may be adjusted based on inflation or deflation and/or changes in the factors affecting the cost of producing coal, such as taxes, fees, royalties and changes in the laws regulating the mining, production, sale or use of coal. In a limited number of contracts, failure of the parties to agree on a price under those provisions may allow either party to terminate the contract. The Company sometimes experiences a reduction in coal prices in new long-term coal supply agreements replacing some of its expiring contracts. Coal supply agreements also typically contain force majeure provisions allowing temporary suspension of performance by the Company or the customer during the duration of specified events beyond the control of the affected party. Most of the coal supply agreements contain provisions requiring the Company to deliver coal meeting quality thresholds for certain characteristics such as Btu, sulfur content, ash content, grindability and ash fusion temperature. Failure to meet these specifications could result in economic penalties, including price adjustments, the rejection of deliveries or termination of the contracts. Moreover, some of these agreements allow the Company's customers to terminate their contracts in the event of changes in regulations affecting the industry that restrict the use or type of coal permissible at the customer's plant or increase the price of coal beyond specified limits.

Additional revenues may include gains and losses related to mark-to-market adjustments from economic hedge activities intended to hedge future coal sales, revenues from customer contract-related payments and other insignificant items including royalties related to coal lease agreements, sales agency commissions, farm income and property and facility rentals. Royalty income generally results from the lease or sublease of mineral rights to third parties, with payments based upon a percentage of the selling price or an amount per ton of coal produced.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Discontinued Operations

The Company classifies items within discontinued operations in the consolidated financial statements when the operations and cash flows of a particular component of the Company have been (or will be) eliminated from the ongoing operations of the Company as a result of a disposal (by sale or otherwise) and represents a strategic shift that has (or will have) a major effect on the entity's operations and financial results. Refer to Note 4. "Discontinued Operations" for additional details related to discontinued operations.

Assets and Liabilities Held for Sale

The Company classifies assets and liabilities (disposal groups) to be sold as held for sale in the period in which all of the following criteria are met: management, having the authority to approve the action, commits to a plan to sell the disposal group; the disposal group is available for immediate sale in its present condition subject only to terms that are usual and customary for sales of such disposal groups; an active program to locate a buyer and other actions required to complete the plan to sell the disposal group have been initiated; the sale of the disposal group is probable, and transfer of the disposal group is expected to qualify for recognition as a completed sale within one year, except if events or circumstances beyond the Company's control extend the period of time required to sell the disposal group beyond one year; the disposal group is being actively marketed for sale at a price that is reasonable in relation to its current fair value; and actions required to complete the plan indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

The Company initially measures a disposal group that is classified as held for sale at the lower of its carrying value or fair value less any costs to sell. Any loss resulting from this measurement is recognized in the period in which the held for sale criteria are met. Conversely, gains are not recognized on the sale of a disposal group until the date of sale. The Company assesses the fair value of a disposal group, less any costs to sell, each reporting period it remains classified as held for sale and reports any subsequent changes as an adjustment to the carrying value of the disposal group, as long as the new carrying value does not exceed the carrying value of the disposal group at the time it was initially classified as held for sale.

Upon determining that a disposal group meets the criteria to be classified as held for sale, the Company reports the assets and liabilities of the disposal group, if material, in the line items assets held for sale and liabilities held for sale in the consolidated balance sheets.

Cash and Cash Equivalents

Cash and cash equivalents are stated at cost, which approximates fair value. Cash equivalents consist of highly liquid investments with original maturities of three months or less.

Accounts Receivable

The timing of revenue recognition, billings and cash collections results in accounts receivable from customers. Customers are invoiced as coal is shipped or at periodic intervals in accordance with contractual terms. Invoices typically include customary adjustments for the resolution of price variability related to prior shipments, such as coal quality thresholds. Payments are generally received within thirty days of invoicing.

Inventories

Coal is reported as inventory at the point in time the coal is extracted from the mine. Raw coal represents coal stockpiles that may be sold in current condition or may be further processed prior to shipment to a customer. Saleable coal represents coal stockpiles which require no further processing prior to shipment to a customer.

Coal inventory is valued at the lower of average cost or net realizable value. Coal inventory costs include labor, supplies, equipment (including depreciation thereto) and operating overhead and other related costs incurred at or on behalf of the mining location. Net realizable value considers the projected future sales price of the particular coal product, less applicable selling costs and, in the case of raw coal, estimated remaining processing costs. The valuation of coal inventory is subject to several additional estimates, including those related to ground and aerial surveys used to measure quantities and processing recovery rates.

Materials and supplies inventory is valued at the lower of average cost or net realizable value, less a reserve for obsolete or surplus items. This reserve incorporates several factors, such as anticipated usage, inventory turnover and inventory levels.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Property, Plant, Equipment and Mine Development

Property, plant, equipment and mine development are recorded at cost. Interest costs applicable to major asset additions are capitalized during the construction period. There was no capitalized interest in any of the periods presented. Expenditures which extend the useful lives of existing plant and equipment assets are capitalized. Maintenance and repairs are charged to operating costs as incurred. Costs incurred to develop coal mines or to expand the capacity of operating mines are capitalized. Maintenance and repair costs incurred to maintain current production capacity at a mine are charged to operating costs as incurred. Costs to acquire computer hardware and the development and/or purchase of software for internal use are capitalized and depreciated over the estimated useful lives.

Coal reserves and resources are recorded at cost, or at fair value in the case of nonmonetary exchanges of reserves and resources or business acquisitions.

Depletion of coal reserves and resources and amortization of advance royalties are computed using the units-of-production method utilizing expected recoverable tons (as adjusted for recoverability factors) in the depletion base. Mine development costs are principally amortized over the estimated lives of the mines using the straight-line method. Depreciation of plant and equipment is computed using the straight-line method over the shorter of the asset's estimated useful life or the life of the mine. The estimated useful lives by category of assets are as follows:

	Years
Building and improvements	up to 29
Machinery and equipment	1 - 15
Leasehold improvements	Shorter of Useful Life or Remaining Life of Lease

The Company leases coal reserves under agreements that require royalties to be paid as the coal is mined. Certain agreements also require minimum annual royalties to be paid regardless of the amount of coal mined during the year. Total royalty expense was \$263.0 million, \$214.7 million and \$388.6 million for the years ended December 31, 2021, 2020 and 2019, respectively.

A substantial amount of the coal mined by the Company is produced from mineral reserves leased from the owner. One of the major lessors is the U.S. government, from which the Company leases substantially all of the coal it mines in Wyoming under terms set by Congress and administered by the U.S. Bureau of Land Management. These leases are generally for an initial term of ten years but may be extended by diligent development and mining of the reserves until all economically recoverable reserves are depleted. The Company has met the diligent development requirements for substantially all of these federal leases either directly through production, by including the lease as a part of a logical mining unit with other leases upon which development has occurred or by paying an advance royalty in lieu of continued operations. Annual production on these federal leases must total at least 1.0% of the leased reserve or the original amount of coal in the entire logical mining unit in which the leased reserve resides. In addition, royalties are payable monthly at a rate of 12.5% of the gross realization from the sale of the coal mined using surface mining methods and at a rate of 8.0% of the gross realization for coal produced using underground mining methods.

The remainder of the leased coal is generally leased from state governments, land holding companies and various individuals. The duration of these leases varies greatly. Typically, the lease terms are automatically extended as long as active mining continues. Royalty payments are generally based upon a specified rate per ton or a percentage of the gross realization from the sale of the coal.

Mining and exploration in Australia is generally conducted under leases, licenses or permits granted by the relevant state government. Mining and exploration licenses and their associated environmental protection approvals (granted by the state government, and in some cases also the federal government) contain conditions relating to such matters as minimum annual expenditures, environmental compliance, protection of flora and fauna, restoration and rehabilitation. Royalties are paid to the state government as a percentage of the sales price (less certain allowable deductions in some cases). Generally, landowners do not own the mineral rights or have the ability to grant rights to mine those minerals. These rights are retained by the state government. Compensation is often payable to landowners, occupiers and Aboriginal traditional owners with residual native title rights and interests for the loss of access to the land from the proposed mining activities. The amount and type of compensation and the ability to proceed to grant of a mining tenement may be determined by agreement or court determination, as provided by law.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Leases

The Company determines if an arrangement is a lease at inception. Right-of-use (ROU) assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent its obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. For the purpose of calculating such present values, lease payments include components that vary based upon an index or rate, using the prevailing index or rate at the commencement date, and exclude components that vary based upon other factors. As most of its leases do not contain a readily determinable implicit rate, the Company uses its incremental borrowing rate at commencement to determine the present value of lease payments. The Company does not separate lease components (i.e., fixed payments including rent, real estate taxes and insurance costs) from non-lease components (i.e., common-area maintenance) and recognizes them as a single lease component for the majority of asset classes. Variable lease payments not included within lease contracts are expensed as incurred. The Company's leases may include options to extend or terminate the lease, and such options are reflected in the term when their exercise is reasonably certain. Lease expense is recognized on a straight-line basis over the lease term. For certain equipment leases, the Company applies a portfolio approach to effectively account for the operating lease ROU assets and liabilities.

Equity Investments

The Company applies the equity method to investments in joint ventures when it has the ability to exercise significant influence over the operating and financial policies of the joint venture. Investments accounted for under the equity method are initially recorded at cost and any difference between the cost of the Company's investment and the underlying equity in the net assets of the joint venture at the investment date is amortized over the lives of the related assets that gave rise to the difference. The Company's pro-rata share of the operating results of joint ventures and basis difference amortization is reported in the consolidated statements of operations in "(Income) loss from equity affiliates." Similarly, the Company's pro-rata share of the cumulative foreign currency translation adjustment of its equity method investments whose functional currency is not the U.S. dollar is reported in the consolidated balance sheets as a component of "Accumulated other comprehensive income," with periodic changes thereto reflected in the consolidated statements of comprehensive income.

The Company monitors its equity method investments for indicators that a decrease in investment value has occurred that is other than temporary. Examples of such indicators include a sustained history of operating losses and adverse changes in earnings and cash flow outlook. In the absence of quoted market prices for an investment, discounted cash flow projections are used to assess fair value, the underlying assumptions to which are generally considered unobservable Level 3 inputs under the fair value hierarchy. If the fair value of an investment is determined to be below its carrying value and that loss in fair value is deemed other than temporary, an impairment loss is recognized. No such impairment losses were recorded in any period presented.

For the remaining investments, the Company will adjust the carrying value of its investments to fair value based on observable market transactions. The Company also monitors such investments for indicators of impairment should no observable market transactions exist. Refer to Note 3, "Asset Impairment" for details regarding an impairment loss of \$9.0 million recorded during the year ended December 31, 2019 related to an investment in an equity security. No such impairment losses were recorded during the years ended December 31, 2021 or 2020.

Asset Retirement Obligations

The Company's asset retirement obligation (ARO) liabilities primarily consist of spending estimates for surface land reclamation and support facilities at both surface and underground mines in accordance with applicable reclamation laws and regulations in the U.S. and Australia as defined by each mining permit.

The Company estimates its ARO liabilities for final reclamation and mine closure based upon detailed engineering calculations of the amount and timing of the future cash spending for a third party to perform the required work. Spending estimates are escalated for inflation and then discounted at the credit-adjusted, risk-free rate. The Company records an ARO asset associated with the discounted liability for final reclamation and mine closure. The obligation and corresponding asset are recognized in the period in which the liability is incurred. The ARO asset is amortized on the units-of-production method over its expected life and the ARO liability is accreted to the projected spending date. As changes in estimates occur (such as mine plan revisions, changes in estimated costs or changes in timing of the performance of reclamation activities), the revisions to the obligation and asset are recognized at the appropriate credit-adjusted, risk-free rate. The Company also recognizes an obligation for contemporaneous reclamation liabilities incurred as a result of surface mining. Contemporaneous reclamation consists primarily of grading, topsoil replacement and re-vegetation of backfilled pit areas.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Contingent Liabilities

From time to time, the Company is subject to legal and environmental matters related to its continuing and discontinued operations and certain historical, non-coal producing operations. In connection with such matters, the Company is required to assess the likelihood of any adverse judgments or outcomes, as well as potential ranges of probable losses.

A determination of the amount of reserves required for these matters is made after considerable analysis of each individual issue. The Company accrues for legal and environmental matters within "Operating costs and expenses" when it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated. The Company provides disclosure surrounding loss contingencies when it believes that it is at least reasonably possible that a material loss may be incurred or an exposure to loss in excess of amounts already accrued may exist. Adjustments to contingent liabilities are made when additional information becomes available that affects the amount of estimated loss, which information may include changes in facts and circumstances, changes in interpretations of law in the relevant courts, the results of new or updated environmental remediation cost studies and the ongoing consideration of trends in environmental remediation costs.

Accrued contingent liabilities exclude claims against third parties and are not discounted. The current portion of these accruals is included in "Accounts payable and accrued expenses" and the long-term portion is included in "Other noncurrent liabilities" in the consolidated balance sheets. In general, legal fees related to environmental remediation and litigation are charged to expense. The Company includes the interest component of any litigation-related penalties within "Interest expense" in the consolidated statements of operations.

Income Taxes

Income taxes are accounted for using a balance sheet approach. The Company accounts for deferred income taxes by applying statutory tax rates in effect at the reporting date of the balance sheet to differences between the book and tax basis of assets and liabilities. A valuation allowance is established if it is "more likely than not" that the related tax benefits will not be realized. Significant weight is given to evidence that can be objectively verified including history of tax attribute expiration and cumulative income or loss. In determining the appropriate valuation allowance, the Company considers the projected realization of tax benefits based on expected levels of future taxable income, available tax planning strategies, reversals of existing taxable temporary differences and taxable income in carryback years.

The Company recognizes the tax benefit from uncertain tax positions only if it is "more likely than not" the tax position will be sustained on examination by the taxing authorities based on the technical merits of the position. The tax benefits recognized from such a position are measured based on the largest benefit that has a greater than fifty percent likelihood of being realized upon ultimate settlement. To the extent the Company's assessment of such tax positions changes, the change in estimate will be recorded in the period in which the determination is made. Tax-related interest and penalties are classified as a component of income tax expense.

Postretirement Health Care and Life Insurance Benefits

The Company accounts for postretirement benefits other than pensions by accruing the costs of benefits to be provided over the employees' period of active service. These costs are determined on an actuarial basis. The Company's consolidated balance sheets reflect the accumulated postretirement benefit obligations of its postretirement benefit plans. The Company accounts for changes in its postretirement benefit obligations as a settlement when an irrevocable action has been effected that relieves the Company of its actuarially-determined liability to individual plan participants and removes substantial risk surrounding the nature, amount and timing of the obligation's funding and the assets used to effect the settlement. The Company records amounts attributable to actuarial valuation changes currently in earnings rather than recording such amounts within accumulated other comprehensive income and amortizing to expense over applicable time periods. See Note 14. "Postretirement Health Care and Life Insurance Benefits" for information related to postretirement benefits.

Pension Plans

The Company sponsors non-contributory defined benefit pension plans accounted for by accruing the cost to provide the benefits over the employees' period of active service. These costs are determined on an actuarial basis. The Company's consolidated balance sheets reflect the funded status of the defined benefit pension plans. The Company records amounts attributable to actuarial valuation changes currently in earnings rather than recording such amounts within accumulated other comprehensive income and amortizing to expense over applicable time periods. See Note 15. "Pension and Savings Plans" for information related to pension plans.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Restructuring Activities

From time to time, the Company initiates restructuring activities in connection with its repositioning efforts to appropriately align its cost structure or optimize its coal production relative to prevailing market conditions. Costs associated with restructuring actions can include early mine closures, voluntary and involuntary workforce reductions, office closures and other related activities. Costs associated with restructuring activities are recognized in the period incurred.

Included as a component of "Restructuring charges" in the Company's consolidated statements of operations for the years ended December 31, 2021, 2020 and 2019 were aggregate restructuring charges of \$8.3 million, \$37.9 million and \$24.3 million, respectively, primarily associated with voluntary and involuntary workforce reductions. As of December 31, 2021, a \$0.9 million accrual for restructuring charges remained in "Accounts payable and accrued expenses," which is expected to be paid in the first quarter of 2022.

Derivatives

The Company recognizes at fair value all contracts meeting the definition of a derivative as assets or liabilities in the consolidated balance sheets, with the exception of certain sales contracts for which the Company has elected to apply a normal purchases and normal sales exception.

With respect to derivatives used in hedging activities, the Company assesses at hedge inception whether such derivatives are highly effective at offsetting the changes in the anticipated exposure of the hedged item. The change in the fair value of derivatives designated as a cash flow hedge is recorded in "Accumulated other comprehensive income" in the consolidated balance sheets until the hedged transaction impacts reported earnings, at which time any gain or loss is reclassified to earnings. If the hedge ceases to qualify for hedge accounting, the Company prospectively recognizes changes in the fair value of the instrument in earnings in the period of the change. Gains or losses from derivative financial instruments designated as fair value hedges are recognized immediately in earnings, along with the offsetting gain or loss related to the underlying hedged item.

The Company's asset and liability derivative positions are offset on a counterparty-by-counterparty basis if the contractual agreement provides for the net settlement of contracts with the counterparty in the event of default or termination of any one contract.

Non-derivative contracts and derivative contracts for which the Company has elected to apply the normal purchases and normal sales exception are accounted for on an accrual basis.

Business Combinations

The Company accounts for business combinations using the purchase method of accounting. The purchase method requires the Company to determine the fair value of all acquired assets, including identifiable intangible assets and all assumed liabilities. The total cost of acquisitions is allocated to the underlying identifiable net assets, based on their respective estimated fair values. Determining the fair value of assets acquired and liabilities assumed requires management's judgment and the utilization of independent valuation experts, and often involves the use of significant estimates and assumptions, including assumptions with respect to future cash inflows and outflows, discount rates and asset lives, among other items.

Impairment of Long-Lived Assets

The Company evaluates its long-lived assets held and used in operations for impairment as events and changes in circumstances indicate that the carrying amount of such assets might not be recoverable. Factors that would indicate potential impairment to be present include, but are not limited to, a sustained history of operating or cash flow losses, an unfavorable change in earnings and cash flow outlook, prolonged adverse industry or economic trends and a significant adverse change in the extent or manner in which a long-lived asset is being used or in its physical condition. The Company generally does not view short-term declines in thermal and metallurgical coal prices as a triggering event for conducting impairment tests because of historic price volatility. However, the Company generally does view a sustained trend of depressed coal pricing (for example, over periods exceeding one year) as an indicator of potential impairment. Because of the volatile and cyclical nature of coal prices and demand, it is reasonably possible that coal prices may decrease and/or fail to improve in the near term, which, absent sufficient mitigation such as an offsetting reduction in the Company's operating costs, may result in the need for future adjustments to the carrying value of the Company's long-lived mining assets and mining-related investments.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Assets are grouped at the lowest level for which there are identifiable cash flows that are largely independent of the cash flows of other groups of assets. For its active mining operations, the Company generally groups such assets at the mine level, or the mining complex level for mines that share infrastructure, with the exception of impairment evaluations triggered by mine closures. In those cases involving mine closures, the related assets are evaluated at the individual asset level for remaining economic life based on transferability to ongoing operating sites or for expected salvage. For its development and exploration properties and portfolio of surface land and coal reserve and resource holdings, the Company considers several factors to determine whether to evaluate those assets individually or on a grouped basis for purposes of impairment testing. Such factors include geographic proximity to one another, the expectation of shared infrastructure upon development based on future mining plans and whether it would be most advantageous to bundle such assets in the event of sale to a third party.

When indicators of impairment are present, the Company evaluates its long-lived assets for recoverability by comparing the estimated undiscounted cash flows expected to be generated by those assets under various assumptions to their carrying amounts. If such undiscounted cash flows indicate that the carrying value of the asset group is not recoverable, impairment losses are measured by comparing the estimated fair value of the asset group to its carrying amount. As quoted market prices are unavailable for the Company's individual mining operations, fair value is determined through the use of an expected present value technique based on the income approach, except for non-strategic coal reserves, resources, surface lands and undeveloped coal properties excluded from the Company's long-range mine planning. In those cases, a market approach is utilized based on the most comparable market multiples available. The estimated future cash flows and underlying assumptions used to assess recoverability and, if necessary, measure the fair value of the Company's long-lived mining assets are derived from those developed in connection with the Company's planning and budgeting process. The Company believes its assumptions to be consistent with those a market participant would use for valuation purposes. The most critical assumptions underlying the Company's projections and fair value estimates include those surrounding future tons sold, coal prices for unpriced coal, production costs (including costs for labor, commodity supplies and contractors), transportation costs, foreign currency exchange rates and a risk-adjusted, cost of capital (all of which generally constitute unobservable Level 3 inputs under the fair value hierarchy), in addition to market multiples for non-strategic coal reserves, resources, surface lands and undeveloped coal properties excluded from the Company's long-range mine planning (which generally constitute Level 2 inputs under the fair value hierarchy).

Refer to Note 3. "Asset Impairment" for details regarding impairment charges related to long-lived assets of \$1,487.4 million and \$261.2 million recognized during the years ended December 31, 2020 and 2019, respectively. There were no impairment charges related to long-lived assets during the year ended December 31, 2021.

Fair Value

For assets and liabilities that are recognized or disclosed at fair value in the consolidated financial statements, the Company defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Foreign Currency

Functional currency is determined by the primary economic environment in which an entity operates, which for the Company's foreign operations is generally the U.S. dollar because sales prices in international coal markets and the Company's sources of financing those operations are denominated in that currency. Accordingly, substantially all of the Company's consolidated foreign subsidiaries utilize the U.S. dollar as their functional currency. Monetary assets and liabilities are remeasured at year-end exchange rates while non-monetary items are remeasured at historical rates. Income and expense accounts are remeasured at the average rates in effect during the year, except for those expenses related to balance sheet amounts that are remeasured at historical exchange rates. Gains and losses from foreign currency remeasurement related to tax balances are included as a component of "Income tax provision," while all other remeasurement gains and losses are included in "Operating costs and expenses" in the consolidated statements of operations. The total impact of foreign currency remeasurement on the consolidated statements of operations was a net loss of \$3.1 million, \$4.0 million, and \$2.7 million for the years ended December 31, 2021, 2020 and 2019, respectively,

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The Company owns a 50% equity interest in Middlemount Coal Pty Ltd. (Middlemount), which owns the Middlemount Mine in Queensland, Australia. Middlemount utilizes the Australian dollar as its functional currency. Accordingly, the assets and liabilities of that equity investee are translated to U.S. dollars at the year-end exchange rate and income and expense accounts are translated at the average rate in effect during the year. The Company's pro-rata share of the translation gains and losses of the equity investee are recorded as a component of "Accumulated other comprehensive income" in the consolidated balance sheets. Australian dollar denominated stockholder loans to the Middlemount Mine, which are long term in nature, are considered part of the Company's net investment in that operation. Accordingly, foreign currency gains or losses on those loans are recorded as a component of foreign currency translation adjustment. The Company recorded foreign currency translation gains of \$6.1 million and \$0.2 million for the years ended December 31, 2020 and 2019, respectively, and a loss of \$1.0 million for the year ended December 31, 2021.

Share-Based Compensation

The Company accounts for share-based compensation at the grant date fair value of awards and recognizes the related expense over the service period of the awards. See Note 17. "Share-Based Compensation" for information related to share-based compensation.

Exploration and Drilling Costs

Exploration expenditures are charged to operating costs as incurred, including costs related to drilling and study costs incurred to convert or upgrade mineral resources to reserves.

Advance Stripping Costs

Pre-production. At existing surface operations, additional pits may be added to increase production capacity in order to meet customer requirements. These expansions may require significant capital to purchase additional equipment, expand the workforce, build or improve existing haul roads and create the initial pre-production box cut to remove overburden (that is, advance stripping costs) for new pits at existing operations. If these pits operate in a separate and distinct area of the mine, the costs associated with initially uncovering coal (that is, advance stripping costs incurred for the initial box cuts) for production are capitalized and amortized over the life of the developed pit consistent with coal industry practices.

Post-production. Advance stripping costs related to post-production are expensed as incurred. Where new pits are routinely developed as part of a contiguous mining sequence, the Company expenses such costs as incurred. The development of a contiguous pit typically reflects the planned progression of an existing pit, thus maintaining production levels from the same mining area utilizing the same employee group and equipment.

Use of Estimates in the Preparation of the Consolidated Financial Statements

These consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the U.S. (U.S. GAAP). In doing so, estimates and assumptions are made that affect the amounts reported in the consolidated financial statements and accompanying notes. These estimates are based on historical experience and on various other assumptions deemed reasonable under the circumstances, the results of which form the basis for making judgments about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The Company's actual results may differ materially from these estimates. Significant estimates inherent in the preparation of these consolidated financial statements include, but are not limited to, accounting for sales and cost recognition, postretirement benefit plans, environmental receivables and liabilities, asset retirement obligations, evaluation of long-lived assets for impairment, income taxes including deferred tax assets, fair value measurements and contingencies.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(2) Revenue Recognition
Disaggregation of Revenues

Revenue by product type and market is set forth in the following tables. With respect to its seaborne mining segments, the Company classifies as “Export” certain revenue from domestically-delivered coal under contracts in which the price is derived on a basis similar to export contracts.

	Year Ended December 31, 2021					Consolidated
	Seaborne Thermal Mining	Seaborne Metallurgical Mining	Powder River Basin Mining	Other U.S. Thermal Mining	Corporate and Other	
	(Dollars in millions)					
Thermal coal						
Domestic	\$ 173.5	\$ —	\$ 970.7	\$ 669.9	\$ —	\$ 1,814.1
Export	759.0	—	—	10.0	—	769.0
Total thermal	932.5	—	970.7	679.9	—	2,583.1
Metallurgical coal						
Export	—	719.8	—	—	—	719.8
Total metallurgical	—	719.8	—	—	—	719.8
Other ⁽²⁾	1.5	7.9	0.5	9.2	(3.7)	15.4
Revenues	\$ 934.0	\$ 727.7	\$ 971.2	\$ 689.1	\$ (3.7)	\$ 3,318.3
	Year Ended December 31, 2020					
	Seaborne Thermal Mining	Seaborne Metallurgical Mining	Powder River Basin Mining	Other U.S. Thermal Mining	Corporate and Other	Consolidated
	(Dollars in millions)					
Thermal coal						
Domestic	\$ 145.5	\$ —	\$ 993.9	\$ 675.2	\$ —	\$ 1,814.6
Export	564.8	—	—	—	—	564.8
Total thermal	710.3	—	993.9	675.2	—	2,379.4
Metallurgical coal						
Export	—	484.3	—	—	—	484.3
Total metallurgical	—	484.3	—	—	—	484.3
Other ⁽²⁾	1.5	2.2	(2.8)	32.1	(15.6)	17.4
Revenues	\$ 711.8	\$ 486.5	\$ 991.1	\$ 707.3	\$ (15.6)	\$ 2,881.1

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	Year Ended December 31, 2019					Consolidated
	Seaborne Thermal Mining	Seaborne Metallurgical Mining	Powder River Basin Mining	Other U.S. Thermal Mining	Corporate and Other	
	(Dollars in millions)					
Thermal coal						
Domestic	\$ 147.9	\$ —	\$ 1,208.9	\$ 1,274.2	\$ —	\$ 2,631.0
Export	822.4	—	—	11.3	—	833.7
Total thermal	970.3	—	1,208.9	1,285.5	—	3,464.7
Metallurgical coal						
Export	—	1,030.0	—	—	—	1,030.0
Total metallurgical	—	1,030.0	—	—	—	1,030.0
Other ⁽²⁾	1.4	3.1	19.8	23.9	80.5	128.7
Revenues	\$ 971.7	\$ 1,033.1	\$ 1,228.7	\$ 1,309.4	\$ 80.5	\$ 4,623.4

⁽¹⁾ Corporate and Other revenue includes net losses of \$113.7 million and \$34.5 million and a net gain of \$50.6 million related to unrealized mark-to-market adjustments on derivatives related to forecasted sales and other financial trading activity during the years ended December 31, 2021, 2020 and 2019, respectively. Refer to Note 7. "Derivatives and Fair Value Measurements" for additional information. Also included in Corporate and Other revenue are revenues with customers of \$139.5 million, \$(28.9) million and \$(17.6) million during the years ended December 31, 2021, 2020 and 2019, respectively.

⁽²⁾ Other includes revenues from arrangements such as customer contract-related payments associated with volume shortfalls, royalties related to coal lease agreements, sales agency commissions, farm income and property and facility rentals.

The Company recorded revenue related to delivered coal to customers of approximately \$3,442 million, \$2,835 million and \$4,477 million during the years ended December 31, 2021, 2020 and 2019, respectively. Such amounts exclude unrealized and realized gains and losses on derivative contracts related to forecasted sales and certain other revenues unrelated to delivered coal.

Committed Revenue from Contracts with Customers

The Company expects to recognize revenue subsequent to December 31, 2021 of approximately \$5.3 billion related to contracts with customers in which volumes and prices per ton were fixed or reasonably estimable at December 31, 2021. Approximately 46% of such amount is expected to be recognized over the next twelve months and the remainder thereafter. Actual revenue related to such contracts may differ materially for various reasons, including price adjustment features for coal quality and cost escalations, volume optionality provisions and potential force majeure events. This estimate of future revenue does not include any revenue related to contracts with variable prices per ton that cannot be reasonably estimated, such as the majority of seaborne metallurgical and seaborne thermal coal contracts where pricing is negotiated or settled quarterly or annually.

Accounts Receivable

"Accounts receivable, net" at December 31, 2021 and 2020 consisted of the following:

	December 31,	
	2021	2020
	(Dollars in millions)	
Trade receivables, net	\$ 307.0	\$ 180.9
Miscellaneous receivables, net	43.5	63.9
Accounts receivable, net	\$ 350.5	\$ 244.8

None of the above receivables included allowances for credit losses at December 31, 2021 or 2020. No charges for credit losses were recognized during the years ended December 31, 2021 and 2020. Included in "Operating costs and expenses" in the consolidated statements of operations were reductions of previously recorded credit losses of \$4.4 million for the year ended December 31, 2019.

(3) Asset Impairment

The Company recognized no asset impairment charges during the year ended December 31, 2021.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

During the year ended December 31, 2020, the Company recognized impairment charges of \$1,418.1 million related to its North Antelope Rochelle Mine of the Powder River Basin Mining segment. Of this amount, \$1,393.7 million related to the property, plant, equipment and mine development assets; \$19.9 million related to operating lease right-of-use assets; and \$4.5 million related to contract-based intangible assets. The outlook for the North Antelope Rochelle Mine was negatively impacted by the accelerated decline of coal-fired electricity generation in the U.S., driven by the reduced utilization of plants and plant retirements, sustained low natural gas pricing and the increased use of renewable energy sources. These factors led to the expectation of reduced future sales volumes. The impairment charge was based upon the remaining estimated discounted cash flows of the mine. Such cash flows were based upon estimates which generally constitute unobservable Level 3 inputs under the fair value hierarchy, including, but not limited to, future tons sold, coal prices for unpriced coal, production costs (including costs for labor, commodity supplies and contractors), transportation costs and a risk-adjusted cost of capital. During the year ended December 31, 2020, the Company also recognized impairment charges of \$69.3 million related to certain unassigned coal reserves and resources in the Midwest due to their low probability of development.

During the year ended December 31, 2019, the Company recognized impairment charges of \$192.0 million related to the El Segundo/Lee Ranch and Wildcat Hills Underground Mines of the Other U.S. Thermal Mining segment based upon the expectation of reduced sales volumes and uncertainty over remaining economic mine lives. The related impairment charges were based upon the remaining probability-weighted discounted cash flows of those mines. The Company also recognized impairment charges of \$69.2 million related to certain unassigned coal reserves and resources in the Midwest and Colorado due to their low probability of development and \$9.0 million related to the fair value of an investment in equity securities during the year ended December 31, 2019.

In addition to the impairment charges described above, the Company also recorded provisions related to its North Goonyella Mine during the year ended December 31, 2019, as further described in Note 19. "Other Events."

The Company has identified certain assets with an aggregate carrying value of approximately \$0.5 billion at December 31, 2021 in its Other U.S. Thermal Mining and Corporate and Other segments whose recoverability is most sensitive to coal pricing, cost pressures, customer demand, customer concentration risk and future economic viability. The Company conducted a review of those assets as of December 31, 2021 and determined that no further impairment charges were necessary as of that date.

(4) Discontinued Operations

Discontinued operations include certain former Seaborne Thermal Mining and Other U.S. Thermal Mining segment assets that have ceased production and other previously divested legacy operations, including Patriot Coal Corporation and certain of its wholly-owned subsidiaries (Patriot). In the third quarter of 2021, the Company executed the sale of the closed Wilkie Creek Mine, which reduced its closed mine reclamation liabilities and associated costs. Refer to Note 19. "Other Events" for additional information associated with the Company's sale of the Wilkie Creek Mine.

Summarized Results of Discontinued Operations

Results from discontinued operations were as follows during the years ended December 31, 2021, 2020 and 2019:

	Year Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Income (loss) from discontinued operations, net of income taxes	\$ 24.0	\$ (14.0)	\$ 3.2

There were no significant revenues from discontinued operations during the years ended December 31, 2021, 2020 and 2019.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Liabilities of Discontinued Operations

Liabilities classified as discontinued operations included in the Company's consolidated balance sheets were as follows:

	December 31,	
	2021	2020
(Dollars in millions)		
Liabilities:		
Accounts payable and accrued expenses	\$ 45.0	\$ 62.3
Other noncurrent liabilities	59.0	91.4
Total liabilities classified as discontinued operations	<u>\$ 104.0</u>	<u>\$ 153.7</u>

Patriot-Related Matters

A significant portion of the liabilities in the table above relate to Patriot. In 2012, Patriot filed voluntary petitions for relief under Chapter 11 of Title 11 of the U.S. Code (the Bankruptcy Code). In 2013, the Company entered into a definitive settlement agreement (2013 Agreement) with Patriot and the United Mine Workers of America (UMWA), on behalf of itself, its represented Patriot employees and its represented Patriot retirees, to resolve all then-disputed issues related to Patriot's bankruptcy. In May 2015, Patriot again filed voluntary petitions for relief under the Bankruptcy Code in the U.S. District Court for the Eastern District of Virginia and subsequently initiated a process to sell substantially all of its assets to qualified bidders. On October 9, 2015, Patriot's bankruptcy court entered an order confirming Patriot's plan of reorganization, which provided, among other things, for the sale of substantially all of Patriot's assets to two different buyers.

Black Lung Occupational Disease Liabilities. Patriot had federal and state black lung occupational disease liabilities related to workers employed in periods prior to Patriot's spin-off from the Company in 2007. Upon spin-off, Patriot indemnified the Company against any claim relating to these liabilities, which amounted to approximately \$150 million at that time. The indemnification included any claim made by the U.S. Department of Labor (DOL) against the Company with respect to these obligations as a potentially liable operator under the Federal Coal Mine Health and Safety Act of 1969. The 2013 Agreement included Patriot's affirmation of indemnities provided in the spin-off agreements, including the indemnity relating to such black lung liabilities; however, Patriot rejected this indemnity in its May 2015 bankruptcy.

By statute, the Company had secondary liability for the black lung liabilities related to Patriot's workers employed by former subsidiaries of the Company. The Company's accounting for the black lung liabilities related to Patriot is based on an interpretation of applicable statutes. Management believes that inconsistencies exist among the applicable statutes, regulations promulgated under those statutes and the DOL's interpretative guidance. The Company has sought clarification from the DOL regarding these inconsistencies. The amount of these liabilities could be reduced in the future. Whether the Company will ultimately be required to fund certain of those obligations in the future as a result of Patriot's May 2015 bankruptcy remains uncertain. The amount of the liability, which was determined on an actuarial basis based on the best information available to the Company was \$87.2 million and \$90.1 million at December 31, 2021 and 2020, respectively. In connection with the actuarial valuation, the Company recorded mark-to-market adjustments of \$2.1 million to decrease the liability during the year ended December 31, 2021, \$4.2 million to increase the liability during the year ended December 31, 2020 and \$18.3 million to decrease the liability during the year ended December 31, 2019. While the Company has recorded a liability, it intends to review each claim on a case-by-case basis and contest liability estimates as appropriate. The amount of the Company's recorded liability reflects only Patriot workers employed by former subsidiaries of the Company that are presently retired, disabled or otherwise not actively employed. The Company cannot reliably estimate the potential liabilities for Patriot's workers employed by former subsidiaries of the Company that are presently active in the workforce because of the potential for such workers to continue to work for another coal operator that is a going concern.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(5) Inventories

Inventories as of December 31, 2021 and December 31, 2020 consisted of the following:

	December 31,	
	2021	2020
	(Dollars in millions)	
Materials and supplies	\$ 102.1	\$ 102.6
Raw coal	54.6	70.5
Saleable coal	70.0	88.5
Inventories	<u>\$ 226.7</u>	<u>\$ 261.6</u>

Materials and supplies inventories presented above have been shown net of reserves of \$9.0 million and \$10.4 million as of December 31, 2021 and 2020, respectively.

(6) Equity Method Investments

Equity Method Investments

The Company's equity method investments include its joint venture interest in Middlemount and certain other equity method investments.

The table below summarizes the book value of those investments and related financing receivables, which are reported in "Investments and other assets" in the consolidated balance sheets, and the related "(Income) loss from equity affiliates":

	Book Value at		(Income) Loss from Equity Affiliates		
	December 31,		Year Ended December 31,		
	2021	2020	2021	2020	2019
	(Dollars in millions)				
Equity method investment and financing receivables related to Middlemount	\$ 62.2	\$ 24.6	\$ (82.1)	\$ 60.1	\$ (9.0)
Other equity method investments	—	—	—	—	5.6
Total equity method investments and financing receivables related to Middlemount	<u>\$ 62.2</u>	<u>\$ 24.6</u>	<u>\$ (82.1)</u>	<u>\$ 60.1</u>	<u>\$ (3.4)</u>

The Company received cash payments from Middlemount of \$43.5 million and \$14.7 million during the years ended December 31, 2021 and 2019, respectively. No payments were received from Middlemount during the year ended December 31, 2020.

One of the Company's Australian subsidiaries and the other shareholder of Middlemount are parties to an agreement, as amended from time to time, to provide a revolving loan (Revolving Loans) to Middlemount. The Company's participation in the Revolving Loans will not, at any time, exceed its 50% equity interest of the revolving loan limit. The Revolving Loans bear interest at 10% per annum and expire on December 31, 2023. At December 31, 2021, the revolving loan limit was \$50 million Australian dollars, and Middlemount had not drawn upon the Revolving Loans. The value of the portion of the Revolving Loans due to the Company's Australian subsidiary, which is included in the total investment balance, was \$46.2 million as of December 31, 2020, with the decrease during the year ended December 31, 2021 primarily attributable to payments made by Middlemount.

As of both December 31, 2021 and 2020, the financing receivables and Revolving Loans are accounted for as in-substance common stock due to the limited fair value attributed to Middlemount's equity.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

During the year ended December 31, 2019, Middlemount received notification that the Australian Taxation Office would no longer pursue an uncertain tax position related to an earlier income tax audit. The related tax reserve was released, resulting in approximately \$17 million of income. During the year ended December 31, 2020, the Company established a valuation allowance on Middlemount's net deferred tax position of approximately \$33 million primarily based upon recent cumulative losses. During the year ended December 31, 2021, the Company determined that the valuation allowance was no longer necessary based on recent cumulative earnings and expectation of future earnings. The determination resulted in approximately \$33 million of income related to the release of the previously established valuation allowance.

During the year ended December 31, 2021, Middlemount entered into an insurance claim settlement agreement attributable to a business interruption and property damage claim from 2019, which resulted in \$12.5 million of income for the Company (on a 50% basis).

During the years ended December 31, 2021, 2020 and 2019, respectively, Middlemount generated revenues of approximately \$265 million, \$123 million and \$160 million (on a 50% basis).

Middlemount had current assets, noncurrent assets, current liabilities and noncurrent liabilities of \$83.1 million, \$269.9 million, \$254.9 million and \$79.5 million, respectively, as of December 31, 2021 and \$31.0 million, \$301.8 million, \$273.8 million and \$83.5 million, respectively, as of December 31, 2020 (on a 50% basis).

(7) Derivatives and Fair Value Measurements

Derivatives

From time to time, the Company may utilize various types of derivative instruments to manage its exposure to risks in the normal course of business, including (1) foreign currency exchange rate risk and the variability of cash flows associated with forecasted Australian dollar expenditures made in its Australian mining platform, (2) price risk of fluctuating coal prices related to forecasted sales or purchases of coal, or changes in the fair value of a fixed price physical sales contract, (3) price risk and the variability of cash flows related to forecasted diesel fuel purchased for use in its operations and (4) interest rate risk on long-term debt. These risk management activities are actively monitored for compliance with the Company's risk management policies.

On a limited basis, the Company engages in the direct and brokered trading of coal and freight-related contracts. Except those contracts for which the Company has elected to apply a normal purchases and normal sales exception, all derivative coal trading contracts are accounted for at fair value. The Company had no diesel fuel or interest rate derivatives in place as of December 31, 2021.

Foreign Currency Option Contracts

As of December 31, 2021, the Company had currency options outstanding with an aggregate notional amount of \$535.0 million Australian dollars to hedge currency risk associated with anticipated Australian dollar expenditures over the nine-month period ending September 30, 2022. The instruments are quarterly average rate options which entitle the Company to receive payment on the notional amount should the quarterly average Australian dollar-to-U.S. dollar exchange rate exceed amounts ranging from \$0.76 to \$0.80 over the nine-month period ending September 30, 2022.

Derivative Contracts Related to Forecasted Sales

As of December 31, 2021, the Company held coal derivative contracts related to a portion of its forecasted sales with an aggregate notional volume of 2.5 million tonnes. Such financial contracts may include futures, forwards and options. Included in this total are 2.1 million tonnes related to financial derivatives entered to support the profitability of the Wambo Underground Mine as part of a strategy to extend the mine life through mid-2023. Of this total, 1.4 million tonnes will settle in 2022 and 0.7 million tonnes will settle in 2023 at expected average pricing of approximately \$84 per tonne (Newcastle index). The remaining 0.4 million tonnes aggregate notional volume related to other coal financial contracts will settle in 2022. Additionally, the Company classifies certain physical forward sales contracts as derivatives for which the normal purchase, normal sales exception does not apply.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

During the year ended December 31, 2021, the Company recorded an unrealized mark-to-market loss of \$115.1 million on these coal derivative contracts, which includes approximately \$86 million of unrealized mark-to-market losses on financial derivatives and approximately \$29 million on physical forward sales contracts. During the year ended December 31, 2020, the Company recorded an unrealized mark-to-market loss of \$29.6 million, which included approximately \$28 million of unrealized mark-to-market losses on financial derivatives and approximately \$1 million on physical forward sales contracts. During the year ended December 31, 2019, the Company recorded an unrealized mark-to-market gain of \$42.2 million, which included approximately \$42 million of unrealized mark-to-market gains on financial derivatives.

Financial Trading Contracts

On a limited basis, the Company may enter coal or freight derivative contracts for trading purposes. Such financial contracts may include futures, forwards and options. The Company held nominal financial trading contracts as of December 31, 2021.

Tabular Derivatives Disclosures

The Company has master netting agreements with certain of its counterparties which allow for the settlement of contracts in an asset position with contracts in a liability position in the event of default or termination. Such netting arrangements reduce the Company's credit exposure related to these counterparties. For classification purposes, the Company records the net fair value of all the positions with a given counterparty as a net asset or liability in the consolidated balance sheets. The fair value of derivatives reflected in the accompanying consolidated balance sheets are set forth in the table below.

	December 31, 2021		December 31, 2020 ⁽¹⁾	
	Asset Derivative	Liability Derivative	Asset Derivative	Liability Derivative
	(Dollars in millions)			
Foreign currency option contracts	\$ 1.4	\$ —	\$ 10.3	\$ —
Derivative contracts related to forecasted sales	59.5	(184.2)	16.7	(24.7)
Financial trading contracts	3.4	—	0.4	—
Total derivatives	64.3	(184.2)	27.4	(24.7)
Effect of counterparty netting	(59.5)	59.5	(16.2)	16.2
Variation margin (received) posted	(3.4)	95.2	(0.3)	6.8
Net derivatives and variation margin as classified in the balance sheets	\$ 1.4	\$ (29.5)	\$ 10.9	\$ (1.7)

⁽¹⁾ Certain comparative amounts have been reclassified to conform with the 2021 presentation. The reclassifications do not impact the prior year presentation of the accompanying consolidated balance sheets.

The Company generally posts or receives variation margin cash with its clearing broker on the majority of its financial derivatives as market values of the financial derivatives fluctuate. As of December 31, 2021, the Company had posted \$130.1 million aggregate margin cash, consisting of \$91.8 million variation margin cash and \$38.3 million initial margin. As of December 31, 2020, the Company had posted \$9.5 million aggregate margin cash, consisting of \$6.5 million variation margin cash and \$3.0 million initial margin.

The net amount of asset derivatives, net of variation margin, is included in "Other current assets" and the net amount of liability derivatives, net of variation margin, is included in "Accounts payable and accrued expenses" in the accompanying consolidated balance sheets. The amounts of initial margin are not included with the derivatives presented in the tabular disclosures above and are included in "Other current assets" in the accompanying consolidated balance sheets.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Currently, the Company does not seek cash flow hedge accounting treatment for its derivative financial instruments and thus changes in fair value are reflected in current earnings. The tables below show the amounts of pre-tax gains and losses related to the Company's derivatives and their classification within the accompanying consolidated statements of operations.

Year Ended December 31, 2021				
Derivative Instrument	Classification	Total (loss) gain recognized in income	Gain (loss) realized in income on derivatives	Unrealized (loss) gain recognized in income on derivatives
(Dollars in millions)				
Foreign currency option contracts	Operating costs and expenses	\$ (5.7)	\$ 1.8	\$ (7.5)
Derivative contracts related to forecasted sales	Revenues	(160.7)	(45.6)	(115.1)
Financial trading contracts	Revenues	6.1	4.6	1.5
Total		<u>\$ (160.3)</u>	<u>\$ (39.2)</u>	<u>\$ (121.1)</u>
Year Ended December 31, 2020 ⁽¹⁾				
Derivative Instrument	Classification	Total gain (loss) recognized in income	Gain realized in income on derivatives	Unrealized gain (loss) recognized in income on derivatives
(Dollars in millions)				
Foreign currency option contracts	Operating costs and expenses	\$ 12.9	\$ 5.8	\$ 7.1
Derivative contracts related to forecasted sales	Revenues	4.7	34.3	(29.6)
Financial trading contracts	Revenues	(0.7)	4.2	(4.9)
Total		<u>\$ 16.9</u>	<u>\$ 44.3</u>	<u>\$ (27.4)</u>
Year Ended December 31, 2019 ⁽¹⁾				
Derivative Instrument	Classification	Total (loss) gain recognized in income	(Loss) gain realized in income on derivatives	Unrealized gain recognized in income on derivatives
(Dollars in millions)				
Foreign currency option contracts	Operating costs and expenses	\$ (3.7)	\$ (4.9)	\$ 1.2
Derivative contracts related to forecasted sales	Revenues	86.6	44.4	42.2
Financial trading contracts	Revenues	(0.3)	(8.7)	8.4
Total		<u>\$ 82.6</u>	<u>\$ 30.8</u>	<u>\$ 51.8</u>

⁽¹⁾ 'Results realized in income on derivatives' have been revised to exclude revenues arising from coal deliveries earned by the Company's trading and brokerage function of (\$28.5) million and (\$18.8) million for the years ended December 31, 2020 and 2019, respectively, to be comparable to the presentation of the 2021 amounts.

The Company classifies the cash effects of its derivatives within the "Cash Flows From Operating Activities" section of the consolidated statements of cash flows.

Fair Value Measurements

The Company uses a three-level fair value hierarchy that categorizes assets and liabilities measured at fair value based on the observability of the inputs utilized in the valuation. These levels include: Level 1 - inputs are quoted prices in active markets for the identical assets or liabilities; Level 2 - inputs are other than quoted prices included in Level 1 that are directly or indirectly observable through market-corroborated inputs; and Level 3 - inputs are unobservable, or observable but cannot be market-corroborated, requiring the Company to make assumptions about pricing by market participants.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following tables set forth the hierarchy of the Company's net (liability) asset positions for which fair value is measured on a recurring basis. As noted below, variation margin cash associated with the derivative balances is excluded from this table.

	December 31, 2021			
	Level 1	Level 2	Level 3	Total
	(Dollars in millions)			
Foreign currency option contracts	\$ —	\$ 1.4	\$ —	\$ 1.4
Derivative contracts related to forecasted sales	—	(124.7)	—	(124.7)
Financial trading contracts	—	3.4	—	3.4
Equity securities	—	—	4.0	4.0
Total net (liabilities) assets	\$ —	\$ (119.9)	\$ 4.0	\$ (115.9)

	December 31, 2020 ⁽¹⁾			
	Level 1	Level 2	Level 3	Total
	(Dollars in millions)			
Foreign currency option contracts	\$ —	\$ 10.3	\$ —	\$ 10.3
Derivative contracts related to forecasted sales	—	(7.9)	—	(7.9)
Financial trading contracts	—	0.4	—	0.4
Equity securities	—	—	4.0	4.0
Total net assets	\$ —	\$ 2.8	\$ 4.0	\$ 6.8

⁽¹⁾ December 31, 2020 'total net assets' has been revised to exclude \$6.5 million variation margin cash for comparability to 2021 presentation. Variation margin cash was \$91.8 million as of December 31, 2021.

For Level 1 and 2 financial assets and liabilities, the Company utilizes both direct and indirect observable price quotes, including interest rate yield curves, exchange indices, broker/dealer quotes, published indices, issuer spreads, benchmark securities and other market quotes. In the case of certain debt securities, fair value is provided by a third-party pricing service. Below is a summary of the Company's valuation techniques for Level 1 and 2 financial assets and liabilities:

- Foreign currency option contracts are valued utilizing inputs obtained in quoted public markets (Level 2) except when credit and non-performance risk is considered to be a significant input, then the Company classifies such contracts as Level 3.
- Derivative contracts related to forecasted sales and financial trading contracts are generally valued based on unadjusted quoted prices in active markets (Level 1) or a valuation that is corroborated by the use of market-based pricing (Level 2) except when credit and non-performance risk is considered to be a significant input (greater than 10% of fair value), then the Company classifies as Level 3.
- Investments in equity securities are based on observed prices in an inactive market (Level 3).

Other Financial Instruments. The following methods and assumptions were used by the Company in estimating fair values for other financial instruments as of December 31, 2021 and 2020:

- Cash and cash equivalents, accounts receivable, including those within the Company's accounts receivable securitization program, margining cash, notes receivable and accounts payable have carrying values which approximate fair value due to the short maturity or the liquid nature of these instruments.
- Long-term debt fair value estimates are based on observed prices for securities when available (Level 2), and otherwise on estimated borrowing rates to discount the cash flows to their present value (Level 3).

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Market risk associated with the Company's fixed- and variable-rate long-term debt relates to the potential reduction in the fair value and negative impact to future earnings, respectively, from an increase in interest rates. The fair value of debt, shown below, is principally based on reported market values and estimates based on interest rates, maturities, credit risk, underlying collateral and completed market transactions.

	December 31,	
	2021	2020
	(Dollars in millions)	
Total debt at par value	\$ 1,173.2	\$ 1,591.3
Less: Unamortized debt issuance costs and original issue discount	(35.4)	(43.5)
Net carrying amount	<u>\$ 1,137.8</u>	<u>\$ 1,547.8</u>
Estimated fair value	<u>\$ 1,136.5</u>	<u>\$ 987.6</u>

The Company's risk management function, which is independent of the Company's coal trading function, is responsible for valuation policies and procedures, with oversight from executive management. The fair value of the Company's coal derivative assets and liabilities reflects adjustments for credit risk. The Company's exposure is substantially with electric utilities, energy marketers, steel producers and nonfinancial trading houses.

The Company's risk management function, which is independent of the Company's coal trading function, is responsible for valuation policies and procedures, with oversight from executive management. Generally, the Company's Level 3 instruments or contracts are valued using bid/ask price quotations and other market assessments obtained from multiple, independent third-party brokers or other transactional data incorporated into internally-generated discounted cash flow models. Decreases in the number of third-party brokers or market liquidity could erode the quality of market information and therefore the valuation of the Company's market positions. The Company's valuation techniques include basis adjustments to the foregoing price inputs for quality, such as sulfur and ash content, location differentials, expressed as port and freight costs, and credit risk. The Company's risk management function independently validates the Company's valuation inputs, including unobservable inputs, with third-party information and settlement prices from other sources where available. A daily process is performed to analyze market price changes and changes to the portfolio. Further periodic validation occurs at the time contracts are settled with the counterparty. These valuation techniques have been consistently applied in all periods presented, and the Company believes it has obtained the most accurate information available for the types of derivative contracts held.

Significant increases or decreases in the inputs in isolation could result in a significantly higher or lower fair value measurement. The unobservable inputs do not have a direct interrelationship; therefore, a change in one unobservable input would not necessarily correspond with a change in another unobservable input.

The following table summarizes the changes in the Company's recurring Level 3 net financial assets:

	Year Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Beginning of period	\$ 4.0	\$ 4.0	\$ 10.0
Included in earnings	—	—	(9.0)
Purchases	—	—	3.0
End of period	<u>\$ 4.0</u>	<u>\$ 4.0</u>	<u>\$ 4.0</u>

The Company had no transfers between Levels 1, 2 and 3 during any of the periods presented in the table above. The Company's policy is to value all transfers between levels using the beginning of period valuation.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(8) Property, Plant, Equipment and Mine Development

Property, plant, equipment and mine development, net, as of December 31, 2021 and December 31, 2020 consisted of the following:

	December 31,	
	2021	2020
	(Dollars in millions)	
Land and coal interests	\$ 2,494.1	\$ 2,482.9
Buildings and improvements	550.8	481.0
Machinery and equipment	1,386.5	1,408.5
Less: Accumulated depreciation, depletion and amortization	(1,480.5)	(1,321.3)
Property, plant, equipment and mine development, net	<u>\$ 2,950.6</u>	<u>\$ 3,051.1</u>

Land and coal interests included coal reserves and resources with a net book value of \$1.4 billion as of December 31, 2021 and \$1.5 billion as of December 31, 2020. Such coal reserves and resources were comprised of mineral rights for leased coal interests and advance royalties that had a net book value of \$0.8 billion as of both December 31, 2021 and 2020, and coal reserves and resources held by fee ownership of \$0.6 billion and \$0.7 billion at December 31, 2021 and 2020, respectively. The amount of coal reserves and resources unassigned to active mining operations, and thus not subject to current depletion, including certain exploratory properties, was \$0.1 billion as of both December 31, 2021 and 2020.

(9) Income Taxes

Income (loss) from continuing operations before income taxes for the periods presented below consisted of the following:

	Year Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
U.S.	\$ (55.0)	\$ (1,771.5)	\$ (374.2)
Non-U.S.	425.2	(80.3)	231.9
Total	<u>\$ 370.2</u>	<u>\$ (1,851.8)</u>	<u>\$ (142.3)</u>

Total income tax provision for the periods presented below consisted of the following:

	Year Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Current:			
U.S. federal	\$ (0.5)	\$ (23.9)	\$ (21.5)
Non-U.S.	30.8	2.4	28.4
State	—	1.7	(0.3)
Total current	<u>30.3</u>	<u>(19.8)</u>	<u>6.6</u>
Deferred:			
U.S. federal	—	23.4	20.3
Non-U.S.	(7.5)	4.4	19.3
State	—	—	(0.2)
Total deferred	<u>(7.5)</u>	<u>27.8</u>	<u>39.4</u>
Total income tax provision	<u>\$ 22.8</u>	<u>\$ 8.0</u>	<u>\$ 46.0</u>

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following is a reconciliation of the expected statutory federal income tax expense (benefit) to the Company's income tax provision for the periods presented below:

	Year Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Expected income tax expense (benefit) at U.S. federal statutory rate	\$ 77.7	\$ (388.9)	\$ (29.9)
Changes in valuation allowance, income tax	(101.3)	410.1	(32.0)
Changes in tax reserves	1.9	(7.7)	3.0
Excess depletion	(13.7)	(14.5)	(19.3)
Foreign earnings repatriation	—	—	76.1
Foreign earnings provision differential	17.3	16.4	45.6
Global intangible low-taxed income	67.0	—	6.1
Tax credits	(26.5)	—	—
Remeasurement of foreign income tax accounts	(1.8)	2.9	(0.1)
State income taxes, net of federal tax benefit	(1.1)	(6.8)	(13.2)
Other, net	3.3	(3.5)	9.7
Total income tax provision	<u>\$ 22.8</u>	<u>\$ 8.0</u>	<u>\$ 46.0</u>

Certain reconciliation items included in the above table exclude the remeasurement of foreign income tax accounts as these foreign currency effects are separately presented. The Company recognizes the tax on global intangible low-taxed income (GILTI) as a period expense and recorded a provision of \$67.0 million and \$6.1 million for the years ended December 31, 2021 and 2019, respectively, which was fully offset by the release of valuation allowance associated with the net operating losses (NOLs) that absorbed the GILTI inclusion. The Company did not record a provision for the year ended December 31, 2020 due to tested foreign losses.

On March 27, 2020, the Coronavirus Aid, Relief and Economic Security Act was signed into law and contained numerous tax provisions including the acceleration of refunds of previously generated alternative minimum tax (AMT) credits. During the years ended December 31, 2021 and 2020, the Company received AMT credit refunds of \$1.2 million and \$46.9 million, respectively. The Company does not expect any further AMT refunds. The Taxpayer Certainty and Disaster Relief Act of 2020 and the American Rescue Plan Act were enacted on December 27, 2020 and March 1, 2021, respectively. These acts did not have a material impact on the Company's tax provision for 2021 or 2020.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The tax effects of temporary differences that gave rise to significant portions of the deferred tax assets and liabilities as of December 31, 2021 and 2020 consisted of the following:

	December 31,	
	2021	2020
(Dollars in millions)		
Deferred tax assets:		
Tax loss carryforwards and credits	\$ 1,267.6	\$ 1,377.4
Property, plant, equipment and mine development, principally due to differences in depreciation, depletion and asset impairments	571.9	573.7
Accrued postretirement benefit obligations	48.9	93.8
Asset retirement obligations	91.4	95.5
Employee benefits	19.9	22.8
Take-or-pay obligations	9.5	11.0
Hedge activities	36.8	2.4
Interest limitation	7.9	—
Investments and other assets	81.8	88.0
Workers' compensation obligations	7.2	7.8
Operating lease liabilities	11.3	17.5
Other	22.7	21.7
Total gross deferred tax assets	2,176.9	2,311.6
Valuation allowance, income tax	(2,120.8)	(2,287.3)
Total deferred tax assets	56.1	24.3
Deferred tax liabilities:		
Property, plant, equipment and mine development, principally due to differences in depreciation, depletion and asset impairments	66.4	36.2
Operating lease right-of-use assets	9.4	13.5
Investments and other assets	7.6	4.7
Total deferred tax liabilities	83.4	54.4
Net deferred tax liability	\$ (27.3)	\$ (30.1)
Deferred taxes are classified as follows:		
Noncurrent deferred income tax asset	\$ —	\$ 4.9
Noncurrent deferred income tax liability	(27.3)	(35.0)
Net deferred tax liability	\$ (27.3)	\$ (30.1)

As of December 31, 2021, the Company had gross Australia NOLs of \$1.6 billion in Australian dollars and gross U.S. federal NOLs of \$2.6 billion. The Company's tax loss carryforwards and credits of \$1.3 billion as of December 31, 2021 were comprised primarily of net Australia NOLs and capital tax loss carryforwards of \$491.6 million, net federal NOLs of \$534.2 million, state NOLs of \$85.2 million, tax general business credits (GBCs) of \$139.1 million and other foreign NOLs of \$15.8 million. The foreign tax loss carryforwards have no expiration date. The federal NOLs begin to expire in 2036. The state NOLs begin to expire in 2022 and the GBCs begin to expire in 2027.

In assessing the near-term use of NOLs and tax credits and corresponding valuation allowance adjustments, the Company evaluated the expected level of future taxable income, available tax planning strategies, reversals of existing taxable temporary differences and taxable income in carryback years. For the year ended December 31, 2021, the Company continued to record valuation allowances of \$2.1 billion against net deferred tax asset positions, comprised primarily of \$1.2 billion in the U.S. and \$0.9 billion in Australia. Recognition of those valuation allowances was driven by recent cumulative book losses, as determined by considering all sources of available income (including items classified as discontinued operations or recorded directly to "Accumulated other comprehensive income"), which limited the Company's ability to look to future taxable income in assessing the realizability of the related assets.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Unrecognized Tax Benefits

Net unrecognized tax benefits (excluding interest and penalties) were recorded as follows in the consolidated balance sheets as of December 31, 2021 and 2020:

	December 31,	
	2021	2020
	(Dollars in millions)	
Deferred income taxes	\$ 9.7	\$ 7.8
Other noncurrent liabilities	1.3	1.3
Net unrecognized tax benefits	<u>\$ 11.0</u>	<u>\$ 9.1</u>
Gross unrecognized tax benefits	<u>\$ 11.0</u>	<u>\$ 9.1</u>

The amount of the Company's gross unrecognized tax benefits increased by \$1.9 million since December 31, 2020 due primarily to additions for current positions partially offset by adjustments for effectively settled positions. The amount of the net unrecognized tax benefits that, if recognized, would directly affect the effective tax rate was \$11.0 million and \$9.1 million at December 31, 2021 and 2020, respectively. A reconciliation of the beginning and ending amount of gross unrecognized tax benefits for the periods presented below is as follows:

	Year Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Balance at beginning of period	\$ 9.1	\$ 16.5	\$ 14.0
Additions for current year tax positions	3.0	1.9	2.2
(Reductions) additions for prior year tax positions	(1.1)	(9.3)	0.3
Balance at end of period	<u>\$ 11.0</u>	<u>\$ 9.1</u>	<u>\$ 16.5</u>

The Company recognizes interest and penalties related to unrecognized tax benefits in its income tax provision. The Company recorded \$0.2 million and \$0.4 million of gross interest and penalties for the years ended December 31, 2021 and 2019, respectively, and reversed gross interest and penalties of \$0.4 million for the year ended December 31, 2020. The Company had \$5.7 million, \$5.4 million and \$5.8 million of accrued gross interest and penalties related to unrecognized tax benefits at December 31, 2021, 2020 and 2019, respectively.

The Company does not expect a significant change in its net unrecognized tax benefits during the next twelve months.

Tax Returns Subject to Examination

The Company's federal income tax returns for the 2019 and 2020 tax years are subject to potential examinations by the Internal Revenue Service. The Company's state income tax returns for the tax years 2014 and thereafter remain potentially subject to examination by various state taxing authorities due to NOL carryforwards. Australian income tax returns for tax years 2013 through 2020 continue to be subject to potential examinations by the Australian Taxation Office.

Foreign Earnings

As of December 31, 2021, the Company has unremitted earnings relating to certain wholly owned subsidiaries that are not permanently reinvested due to terms of certain debt agreements. There is no residual cash taxes on the unremitted earnings due to the existence of NOLs. The Company has an earnings deficit for remaining investments outside the U.S. and continues to be permanently reinvested with respect to its historical earnings. However, when appropriate, the Company has the ability to access foreign cash without incurring residual cash taxes due to the existence of NOLs.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Tax Payments and Refunds

The following table summarizes the Company's income tax payments (refunds), net for the periods presented below:

	Year Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
U.S. — federal	\$ (1.3)	\$ (44.6)	\$ (45.7)
U.S. — state and local	—	1.6	0.3
Non-U.S.	12.9	3.1	36.3
Total income tax payments (refunds), net	<u>\$ 11.6</u>	<u>\$ (39.9)</u>	<u>\$ (9.1)</u>

(10) Accounts Payable and Accrued Expenses

Accounts payable and accrued expenses consisted of the following:

	December 31,	
	2021	2020
	(Dollars in millions)	
Trade accounts payable	\$ 201.7	\$ 146.3
Accrued payroll and related benefits	170.5	163.9
Other accrued expenses	161.3	120.6
Accrued taxes other than income	78.8	80.4
Asset retirement obligations	65.0	77.7
Accrued royalties	51.4	25.8
Liabilities associated with discontinued operations	45.0	62.3
Liabilities from coal trading activities	29.5	1.7
Income taxes payable	20.2	2.3
Accrued insurance	17.8	15.7
Operating lease liabilities	16.4	24.5
Workers' compensation obligations	8.5	9.0
Accrued interest	6.0	15.5
Accounts payable and accrued expenses	<u>\$ 872.1</u>	<u>\$ 745.7</u>

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(11) Long-term Debt

The Company's total funded indebtedness (Indebtedness) as of December 31, 2021 and 2020 consisted of the following:

Debt Instrument (defined below, as applicable)	December 31,	
	2021	2020
	(Dollars in millions)	
6.000% Senior Secured Notes due March 2022 (2022 Notes)	\$ 23.1	\$ 459.0
8.500% Senior Secured Notes due December 2024 (2024 Peabody Notes)	62.6	—
10.000% Senior Secured Notes due December 2024 (2024 Co-Issuer Notes)	193.9	—
Senior Secured Term Loan due 2024 (Co-Issuer Term Loans)	206.0	—
6.375% Senior Secured Notes due March 2025 (2025 Notes)	334.9	500.0
Senior Secured Term Loan due 2025, net of original issue discount (Senior Secured Term Loan)	322.8	388.2
Revolving credit facility	—	216.0
Finance lease obligations	29.3	27.3
Less: Debt issuance costs	(34.8)	(42.7)
	1,137.8	1,547.8
Less: Current portion of long-term debt	59.6	44.9
Long-term debt	\$ 1,078.2	\$ 1,502.9

Refinancing Transactions

On January 29, 2021 (the Settlement Date), the Company completed a series of transactions (collectively, the Refinancing Transactions) to, among other things, provide the Company with maturity extensions and covenant relief, while allowing it to maintain near-term operating liquidity and financial flexibility. The Refinancing Transactions included a senior notes exchange and related consent solicitation, a revolving credit facility exchange and various amendments to the Company's existing debt agreements, as summarized below. As further discussed in Note 22, "Financial Instruments, Guarantees With Off-Balance-Sheet Risk and Other Guarantees," upon completion of the Refinancing Transactions, the surety transaction support agreement (Surety Agreement) entered into with the Company's surety bond providers in November 2020 became effective.

On the Settlement Date, the Company settled an exchange offer (Exchange Offer) pursuant to which \$398.7 million aggregate principal amount of the Company's 6.000% Senior Secured Notes due March 2022 (the 2022 Notes) were validly tendered, accepted by the Company and exchanged for aggregate consideration consisting of (a) \$193.9 million aggregate principal amount of new 10.000% Senior Secured Notes due December 2024 (2024 Co-Issuer Notes) issued by certain wholly-owned subsidiaries of the Company (the Co-Issuers), (b) \$195.1 million aggregate principal amount of new 8.500% Senior Secured Notes due December 2024 issued by the Company (2024 Peabody Notes) and (c) a cash payment of approximately \$9.4 million. In connection with the settlement of the Exchange Offer, the Company also paid early tender premiums totaling \$4.0 million in cash. The Company's Wilpinjong Mine in Australia is owned and operated by a subsidiary of the Co-Issuers.

The Exchange Offer was accounted for as a debt modification based upon the relative similarity of the present value of the future cash flows of the instruments. As such, no gain or loss was recorded in connection with the Exchange Offer. Fees paid to third parties of \$10.6 million were included in "Interest expense" in the accompanying consolidated statements of operations during the year ended December 31, 2021.

Concurrently with the Exchange Offer, the Company solicited consents from holders of the 2022 Notes to certain proposed amendments to its existing senior notes' indenture (the Existing Indenture) to (i) eliminate substantially all of the restrictive covenants, certain events of default applicable to the 2022 Notes and certain other provisions contained in the Existing Indenture and (ii) release the collateral securing the 2022 Notes and eliminate certain other related provisions contained in the Existing Indenture. The Company received the requisite consents from holders of the 2022 Notes and entered into a supplemental indenture to the Existing Indenture, which became operative on January 29, 2021.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

In connection with the Refinancing Transactions, the Company restructured the revolving loans under its existing credit agreement (the Credit Agreement) by (i) making a pay down of revolving loans thereunder in the aggregate amount of \$10.0 million, (ii) the Co-Issuers incurring \$206.0 million of term loans under a credit agreement, dated as of the Settlement Date (Co-Issuer Term Loans, Co-Issuer Term Loan Agreement), (iii) the Company entering into a letter of credit facility (the Company LC Agreement) and (iv) amending the Credit Agreement (collectively, the Revolver Transactions).

2024 Co-Issuer Notes

The terms of the 2024 Co-Issuer Notes are governed by an indenture, as amended and restated as of February 3, 2021, by and among the Co-Issuers, Wilmington Trust, National Association, as trustee, and, on a limited basis, the Company (2024 Co-Issuer Notes Indenture).

The 2024 Co-Issuer Notes mature on December 31, 2024 and bear interest at an annual rate of 10.000%. The Company paid aggregate debt issuance costs of \$5.6 million, which are being amortized over the terms of the notes. Beginning March 31, 2021, interest is payable on March 31, June 30, September 30 and December 31 of each year. During the year ended December 31, 2021, the Company recorded interest expense of \$19.6 million related to the 2024 Co-Issuer Notes.

The 2024 Co-Issuer Notes and the Co-Issuer Term Loans are subject to mandatory prepayment offers at the end of each six-month period, beginning with June 30, 2021, whereby the Excess Cash Flow (as defined in the 2024 Co-Issuer Notes Indenture) generated by the Wilpinjong Mine during each such period will be applied to the principal of the 2024 Co-Issuer Notes and the Co-Issuer Term Loans on a pro rata basis, provided that the liquidity attributable to the Co-Issuers would not fall below \$60.0 million. Such prepayments may be accepted or declined at the option of the debt holders. Based upon the Wilpinjong Mine's results for the six-month period ended December 31, 2021, a total offer to prepay \$105.6 million of principal was made on a pro rata basis in February 2022, including \$51.2 million of the Co-Issuer Notes and \$54.4 million of the Co-Issuer Term Loan. The offer for the Co-Issuer Notes expires March 14, 2022. The Company expects to prepay \$17.2 million of principal under the now-expired Co-Issuer Term Loan offer, which is reflected within the current portion of long-term debt in the accompanying consolidated balance sheet as of December 31, 2021. There was no prepayment offer made with respect to the six-month period ended June 30, 2021.

The 2024 Co-Issuer Notes Indenture contains customary covenants that, among other things, limit the Co-Issuers' and their subsidiaries' ability to incur additional indebtedness, pay dividends on or make distributions in respect of capital stock or make certain other restricted payments or investments, enter into agreements that restrict distributions from subsidiaries, sell or otherwise dispose of assets, enter into transactions with affiliates, create or incur liens, and merge, consolidate or sell all or substantially all of their assets, and place restrictions on the ability of subsidiaries to pay dividends or make other payments to the Co-Issuers.

The 2024 Co-Issuer Notes are not guaranteed by any of the Co-Issuers' subsidiaries and thus are structurally subordinated to any existing or future indebtedness or other liabilities, including trade payables, of any such subsidiaries. The 2024 Co-Issuer Notes initially are secured by liens on substantially all of the assets of the Co-Issuers, including by (i) 100% of the capital stock of PIC Acquisition Corp. owned by PIC AU Holdings LLC and (ii) all other property subject or purported to be subject, from time to time, to a lien under the Co-Issuers' collateral trust agreement (collectively, the Wilpinjong Collateral).

The Co-Issuers may redeem some or all of the 2024 Co-Issuer Notes at the redemption prices and on the terms specified in the 2024 Co-Issuer Notes Indenture.

The 2024 Co-Issuer Notes Indenture contains certain events of default, including, in certain circumstances, (i) specified events occurring at the Wilpinjong Mine, (ii) the termination or certain modifications of the Surety Agreement, (iii) the Company's failure to comply with any obligation under the transaction support agreement entered into prior to, and in contemplation of, the Refinancing Transactions and (iv) the termination of the management services agreements between the Company and the Co-Issuers. If the 2024 Co-Issuer Notes are accelerated or otherwise become due and payable as a result of an event of default, certain additional premium amounts may become due and payable in addition to unpaid principal and interest at the time of acceleration. In addition, the holders of the 2024 Co-Issuer Notes have the right, under certain circumstances specified in the 2024 Co-Issuer Notes Indenture, to exchange their 2024 Co-Issuer Notes for 2024 Peabody Notes.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Co-Issuer Term Loans due 2024

The Co-Issuer Term Loans mature on December 31, 2024 and bear interest at a rate of 10.000% per annum. The Company paid aggregate debt issuance costs of \$7.1 million, that are being amortized over its term. During the year ended December 31, 2021, the Company recorded interest expense of \$20.5 million related to the Co-Issuer Term Loans.

The Co-Issuer Term Loan Agreement contains customary covenants that, among other things, limit the Co-Issuers' and their subsidiaries' ability to incur additional indebtedness, pay dividends on or make distributions in respect of capital stock or make certain other restricted payments or investments, enter into agreements that restrict distributions from subsidiaries, sell or otherwise dispose of assets, enter into transactions with affiliates, create or incur liens, and merge, consolidate or sell all or substantially all of their assets, and place restrictions on the ability of subsidiaries to pay dividends or make other payments to the Co-Issuers. The Co-Issuer Term Loan Agreement is guaranteed and secured to the same extent as the 2024 Co-Issuer Notes as described above. In addition, the Co-Issuer Term Loan Agreement contains events of default substantially similar to those described above for the 2024 Co-Issuer Notes Indenture.

The Co-Issuer Term Loans are subject to the Excess Cash Flow offer described above.

2024 Peabody Notes

The terms of the 2024 Peabody Notes are governed by an indenture, as amended and restated as of February 3, 2021, by and among Peabody, the guarantors party thereto, and Wilmington Trust, National Association, as trustee (the 2024 Peabody Notes Indenture).

The 2024 Peabody Notes mature on December 31, 2024. The Company paid aggregate debt issuance costs of \$5.7 million, which are being amortized over the terms of the notes. The 2024 Peabody Notes bear interest at an annual rate of 8.500%, consisting of 6.000% per annum in cash and an additional 2.500% per annum to be paid-in-kind through an increase of the principal amount of the outstanding 2024 Peabody Notes, which is payable on June 30 and December 31 of each year, commencing on June 30, 2021. During the year ended December 31, 2021, the Company recorded interest expense of \$12.9 million related to the 2024 Peabody Notes, which included in-kind interest of approximately \$2.9 million.

As a requirement of the Exchange Offer, during the three months ended March 31, 2021, the Company purchased \$22.4 million of the 2024 Peabody Notes at 80% of their accreted value, plus accrued and unpaid interest. In connection with the purchases, the Company recognized a net gain of \$3.5 million to "Net (gain) loss on early debt extinguishment" during the year ended December 31, 2021. The notes were subsequently canceled.

The 2024 Peabody Notes Indenture contains customary covenants that, among other things, limit the Company's and its restricted subsidiaries' ability to incur additional indebtedness, pay dividends on or make distributions in respect of capital stock or make certain other restricted payments or investments, enter into agreements that restrict distributions from restricted subsidiaries, sell or otherwise dispose of assets, enter into transactions with affiliates, create or incur liens, and merge, consolidate or sell all or substantially all of its assets, and place restrictions on the ability of subsidiaries to pay dividends or make other payments to the Company.

The 2024 Peabody Notes are unconditionally guaranteed, jointly and severally, on a senior secured basis by the Peabody Guarantors (as defined below) on the Peabody Collateral (as defined below). The obligations are secured on a *pari passu* basis by the same collateral that secures the 6.375% Senior Secured Notes due March 2025 (the 2025 Notes), the Credit Agreement and the Company LC Agreement described below.

Company LC Agreement

On the Settlement Date, the Company entered into the Company LC Agreement with the revolving lenders party to the Credit Agreement, pursuant to which the Company obtained a \$324.0 million letter of credit facility under which its existing letters under the Credit Agreement were deemed to be issued. The Company paid aggregate debt issuance costs of \$4.1 million. The commitments under the Company LC Agreement mature on December 31, 2024. Undrawn letters of credit under the Company LC Agreement bear interest at 6.00% per annum and unused commitments are subject to a 0.50% per annum commitment fee. During the year ended December 31, 2021, the Company recorded interest expense and fees of \$21.9 million related to the Company LC Agreement.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

In connection with the Revolver Transactions, the Company amended its Credit Agreement to make certain changes in consideration of the Company LC Agreement. After giving effect to the Revolver Transactions, there remain no revolving commitments or revolving loans under the Credit Agreement and the first lien net leverage ratio covenant was eliminated. The Company LC Agreement requires that the Company's restricted subsidiaries maintain minimum aggregate liquidity of \$125.0 million at the end of each quarter through December 31, 2024. As such, liquidity attributable to the Co-Issuers, its subsidiaries and other unrestricted subsidiaries is excluded from the calculation.

The Company LC Agreement is guaranteed and secured to the same extent of the 2024 Peabody Notes as described above. In addition, the Company LC Agreement contains events of default substantially similar to those described above for the 2024 Peabody Notes.

The 2024 Peabody Notes Indenture and the Company LC Agreement allow the Company to make open market debt repurchases, subject to certain limitations, including, but not limited to: (i) the Company's unrestricted subsidiaries' liquidity must be greater than or equal to \$200.0 million after giving effect to such repurchases and (ii) for every \$4 of principal repurchased in any fiscal quarter, the Company must make an offer on a pro rata basis to purchase \$1 of principal amount of debt from holders of the 2024 Peabody Notes and the priority lien obligations under the Company LC Agreement within 30 days of the end of such fiscal quarter at a price equal to the weighted average repurchase price paid over that quarter (Mandatory Repurchase Offer).

6.375% Senior Secured Notes due 2025

On February 15, 2017, the Company entered into the Existing Indenture with Wilmington Trust, National Association, as trustee, relating to its issuance of \$500.0 million aggregate principal amount of the 2025 Notes. The 2025 Notes were issued on February 15, 2017 in a private transaction exempt from the registration requirements of the Securities Act of 1933, as amended (the Securities Act).

The 2025 Notes were issued at par value. The Company paid aggregate debt issuance costs of \$25.1 million related to the offering, which are being amortized over the term of the 2025 Notes. Interest payments on the 2025 Notes are scheduled to occur each year on March 31 and September 30 until maturity. The Company recorded interest expense of \$35.7 million, \$36.7 million and \$36.3 million during the years ended December 31, 2021, 2020 and 2019, respectively, related to the 2025 Notes.

With respect to the 2025 Notes, the Existing Indenture contains customary conditions of default and imposes certain restrictions on the Company's activities, including its ability to incur debt, incur liens, make investments, engage in fundamental changes such as mergers and dissolutions, dispose of assets, enter into transactions with affiliates and make certain restricted payments, such as cash dividends and share repurchases.

The 2025 Notes rank senior in right of payment to any subordinated Indebtedness and equally in right of payment with any senior Indebtedness to the extent of the collateral securing that Indebtedness. The 2025 Notes are jointly and severally and fully and unconditionally guaranteed on a senior secured basis by substantially all of the Company's domestic restricted subsidiaries (the Peabody Guarantors) and secured by (a) first priority liens over (1) substantially all of the assets of the Company and the Peabody Guarantors, except for certain excluded assets, (2) 100% of the capital stock of each domestic restricted subsidiary of the Company, (3) 100% of the capital stock of each first tier foreign subsidiary of the Company or a foreign subsidiary holding company and (4) all intercompany debt owed to the Company or any Peabody Guarantor, in each case, subject to certain exceptions (the Peabody Collateral), and (b) second priority liens over the Wilpinjong Collateral. The 2025 Notes are secured on a *pari passu* basis by the same collateral securing the Credit Agreement, and the other priority lien debt of the Company, including the 2024 Peabody Notes and the Company LC Agreement described above.

Credit Agreement/Senior Secured Term Loan due 2025

The Company originally entered into the Credit Agreement during 2017, which provided for a \$950.0 million senior secured term loan (the Senior Secured Term Loan) due in 2022. Proceeds from the Senior Secured Term Loan were received net of an original issue discount and deferred financing costs of \$37.3 million that are being amortized over its term. The Credit Agreement has been amended periodically over its term to add a revolving loan facility, to increase the capacity and extend the maturity date of the revolving loan facility, to extend the maturity date of the Senior Secured Term Loan to 2025 and to make various changes to terms such as those related to interest, fees and payment restrictions. In connection with certain of the amendments, the Company voluntarily prepaid \$46.0 million of Senior Secured Term Loan principal and incurred \$10.4 million of deferred financing costs related to the revolving loan facility. The Company also voluntarily repaid an additional \$500.0 million of Senior Secured Term Loan principal in various installments.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

At December 31, 2021 the Senior Secured Term Loan had a balance of \$322.8 million. The Senior Secured Term Loan requires quarterly principal payments of \$1.0 million and periodic interest payments through December 2024 with the remaining balance due in March 2025. The Company recorded interest expense of \$12.8 million, \$15.6 million and \$22.2 million during the years ended December 31, 2021, 2020 and 2019, respectively, related to the Senior Secured Term Loan, which bore interest at LIBOR plus 2.75% per annum as of December 31, 2021.

The Senior Secured Term Loan may require mandatory principal prepayments of Excess Cash Flow (as defined in the Credit Agreement) for any fiscal year based upon the Company's Total Leverage Ratio (as defined in the Credit Agreement and calculated at December 31, net of any unrestricted cash).

In connection with the Revolver Transactions, the Company amended the Credit Agreement to make certain changes in consideration of the Company LC Agreement. After giving effect to the Revolver Transactions, there remain no revolving commitments or revolving loans under the Credit Agreement. Further, all financial covenants specific to the former revolving credit facility under the Credit Agreement were eliminated in connection with the Refinancing Transactions and were not applicable at December 31, 2021. The Company recorded interest expense and fees of \$1.4 million, \$15.9 million and \$6.2 million, during the years ended December 31, 2021, 2020 and 2019, respectively, related to the revolving loan facility.

The Credit Agreement contains customary conditions of default and imposes certain restrictions on the Company's activities, including its ability to incur liens, incur debt, make investments, engage in fundamental changes such as mergers and dissolutions, dispose of assets, enter into transactions with affiliates and make certain restricted payments, such as cash dividends and share repurchases. Obligations under the Credit Agreement are guaranteed by the Peabody Guarantors and are secured by first priority liens on the Peabody Collateral and second priority liens on the Wilpinjong Collateral. The obligations are secured on a *pari passu* basis by the same collateral securing the 2025 Notes and the other priority lien debt of the Company, including the 2024 Peabody Notes and the Company LC Agreement described above.

The Company was compliant with all covenants under its debt agreements, including the minimum liquidity covenant under the Company LC Agreement, at December 31, 2021.

Subsequent Financing Transactions

Subsequent to the Refinancing Transactions, the Company completed a series of financing transactions intended to improve its capital structure.

In June 2021, the Company announced an at-the-market equity offering program pursuant to which the Company could offer and sell up to 12.5 million shares of its common stock. The at-the-market equity offering program was further expanded to 32.5 million shares during 2021. The shares are offered and sold pursuant to the Company's Registration Statement on Form S-3, which was declared effective by the Securities and Exchange Commission on April 23, 2021, as supplemented by prospectus supplements dated June 4, 2021, September 17, 2021, and December 17, 2021, relating to the offer and sale of the shares. During the year ended December 31, 2021, the Company sold approximately 24.8 million shares for net cash proceeds of \$269.8 million.

During the year ended December 31, 2021, the Company retired \$91.4 million of 2024 Peabody Notes, \$117.8 million of 2025 Notes and \$61.7 million of its Senior Secured Term Loan primarily through various open market purchases at an aggregate cost of \$232.4 million. The Company recorded a gain on early debt extinguishment of \$28.8 million, net of debt issuance costs and original issue discount related to the retired debt of \$9.7 million.

Also during the year ended December 31, 2021, the Company completed multiple bilateral transactions with holders of the 2022 Notes, the 2025 Notes and the 2024 Peabody Notes in which the Company issued an aggregate 10.0 million shares of its common stock in exchange for \$37.3 million aggregate principal amount of the 2022 Notes, \$47.2 million aggregate principal amount of the 2025 Notes and \$21.6 million aggregate principal amount of the 2024 Peabody Notes. Based upon the fair value of the Company's common stock at the respective settlement dates, the Company recorded a net gain on early debt extinguishment of \$0.9 million in connection with the transactions. The issuance of shares of common stock in exchange for the 2022 Notes, the 2025 Notes and the 2024 Peabody Notes was made in reliance on the exemption from registration provided in Section 3(a)(9) under the Securities Act of 1933, based in part on representations of holders of the 2022 Notes, the 2025 Notes and the 2024 Peabody Notes, and on the basis that the exchange was completed with existing holders of the Company's securities and no commission or other remuneration was paid or given for soliciting the exchange.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

As a result of the Company's open market purchases of its debt during the three months ended December 31, 2021, on January 14, 2022, the Company announced a Mandatory Repurchase Offer of up to \$38.6 million of 2024 Peabody Notes, at 94.940% of their aggregate accreted value, plus accrued and unpaid interest, and a concurrent repurchase offer of priority lien obligations under the Company LC Agreement. The offers expire on March 4, 2022, unless extended by the Company.

Finance Lease Obligations

Refer to Note 12. "Leases" for additional information associated with the Company's finance leases, which pertain to the financing of mining equipment used in operations.

(12) Leases

The Company has operating and finance leases for mining and non-mining equipment, office space and certain other facilities under various non-cancellable agreements. Historically, the majority of the Company's leases have been accounted for as operating leases. Refer to Note 1. "Summary of Significant Accounting Policies" for the Company's policies regarding "Leases."

The Company and certain of its subsidiaries have guaranteed other subsidiaries' performance under various lease obligations. Certain lease agreements are subject to the restrictive covenants of the Company's credit facilities and include cross-acceleration provisions, under which the lessor could require remedies including, but not limited to, immediate recovery of the present value of any remaining lease payments. The Company typically agrees to indemnify lessors for the value of the property or equipment leased, should the property be damaged or lost during the course of the Company's operations. The Company expects that losses with respect to leased property, if any, may be covered by insurance (subject to deductibles). Aside from indemnification of the lessor for the value of the property leased, the Company's maximum potential obligations under its leases are equal to the respective future minimum lease payments, and the Company assumes that no amounts could be recovered from third parties.

The components of lease expense for the periods presented below were as follows:

	Year Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Operating lease cost:			
Operating leases	\$ 19.8	\$ 28.8	\$ 43.3
Short-term leases	15.5	39.1	49.7
Variable leases	2.7	4.6	19.1
Sublease income	(1.9)	(2.3)	(2.6)
Total operating lease cost	<u>\$ 36.1</u>	<u>\$ 70.2</u>	<u>\$ 109.5</u>
Finance lease cost:			
Amortization of right-of-use assets	\$ 5.9	\$ 3.5	\$ 15.3
Interest on lease liabilities	2.7	0.8	1.5
Total finance lease cost	<u>\$ 8.6</u>	<u>\$ 4.3</u>	<u>\$ 16.8</u>

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Supplemental balance sheet information related to leases at December 31, 2021 and 2020 was as follows:

	December 31,	
	2021	2020
(Dollars in millions)		
Operating leases:		
Operating lease right-of-use assets	\$ 35.5	\$ 49.9
Accounts payable and accrued expenses	\$ 16.4	\$ 24.5
Operating lease liabilities, less current portion	27.2	42.1
Total operating lease liabilities	\$ 43.6	\$ 66.6
Finance leases:		
Property, plant, equipment and mine development	\$ 32.2	\$ 20.4
Accumulated depreciation	(7.4)	(2.5)
Property, plant, equipment and mine development, net	\$ 24.8	\$ 17.9
Current portion of long-term debt	\$ 15.3	\$ 21.5
Long-term debt, less current portion	14.0	5.8
Total finance lease liabilities	\$ 29.3	\$ 27.3
Weighted average remaining lease term (years)		
Operating leases	3.0	
Finance leases	6.7	
Weighted average discount rate		
Operating leases	6.9 %	
Finance leases	8.5 %	

Supplemental cash flow information related to leases for the periods presented below was as follows:

	Year Ended December 31,		
	2021	2020	2019
(Dollars in millions)			
Cash paid for amounts included in the measurement of lease liabilities:			
Operating cash flows for operating leases	\$ 24.3	\$ 35.1	\$ 51.0
Operating cash flows for finance leases	3.8	0.8	1.5
Financing cash flows for finance leases	8.2	8.9	29.6
Right-of-use assets obtained in exchange for lease obligations:			
Operating leases	7.1	16.5	16.6
Finance leases	24.4	1.6	1.6

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The Company's leases have remaining lease terms ranging from 1 year to 20.0 years, and may include options to extend the terms, as applicable. The contractual maturities of lease liabilities were as follows:

Period Ending December 31,	Operating Leases	Finance Leases
	(Dollars in millions)	
2022	\$ 18.9	\$ 11.4
2023	16.9	5.9
2024	6.0	4.9
2025	3.4	4.8
2026	3.5	2.4
2027 and thereafter	0.3	7.2
Total lease payments	49.0	36.6
Less imputed interest	(5.4)	(7.3)
Total lease liabilities	\$ 43.6	\$ 29.3

(13) Asset Retirement Obligations

Reconciliations of the Company's asset retirement obligations are as follows:

	December 31,	
	2021	2020
	(Dollars in millions)	
Balance at beginning of period	\$ 728.2	\$ 752.3
Liabilities settled or disposed	(72.4)	(38.4)
Accretion expense	54.9	56.0
Revisions to estimates	9.1	(41.7)
Balance at end of period	\$ 719.8	\$ 728.2
Less: Current portion (included in "Accounts payable and accrued expenses")	65.0	77.7
Noncurrent obligation (included in "Asset retirement obligations")	\$ 654.8	\$ 650.5
Balance at end of period — active locations	\$ 511.8	\$ 471.8
Balance at end of period — closed or inactive locations	\$ 208.0	\$ 256.4

The credit-adjusted, risk-free interest rates utilized to estimate the Company's asset retirement obligations ranged from 7.89% for life of mines 3 years or less to 10.12% for life of mines greater than 20 years for both U.S. and Australia reclamation obligations at December 31, 2021 and ranged from 9.16% for life of mines 3 years or less to 12.74% for life of mines greater than 20 years for both U.S. and Australia reclamation obligations at December 31, 2020.

As of December 31, 2021 and 2020, the Company had \$1,294.7 million and \$1,451.9 million, respectively, in surety bonds outstanding to secure reclamation obligations. Additionally, the Company had \$323.0 million and \$315.0 million, respectively, of letters of credit in support of reclamation obligations as of December 31, 2021 and 2020.

(14) Postretirement Health Care and Life Insurance Benefits

The Company currently provides health care and life insurance benefits to qualifying salaried and hourly retirees of its current and certain former subsidiaries and their dependents from benefit plans established by the Company. Plan coverage for health benefits is provided to future hourly and salaried retirees in accordance with the applicable plan document. Life insurance benefits are provided to future hourly retirees in accordance with the applicable labor agreement.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Net periodic postretirement benefit (benefit) cost included the following components:

	Year Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Service cost for benefits earned	\$ 1.0	\$ 3.8	\$ 4.8
Interest cost on accumulated postretirement benefit obligation	10.5	20.2	25.1
Expected return on plan assets	(1.0)	(1.5)	(0.5)
Amortization of prior service credit	(46.4)	(17.3)	(8.7)
Net actuarial (gain) loss	(54.5)	16.5	78.3
Net periodic postretirement benefit (benefit) cost	<u>\$ (90.4)</u>	<u>\$ 21.7</u>	<u>\$ 99.0</u>

The actuarial gain for all benefit plans in 2021 was primarily due to the increase in the discount rate used to measure the benefit obligation, favorable impact of claims experience for the year, and updating the mortality base table and improvement scale to those published by the Society of Actuaries considering the plan's experience for participants receiving medical benefits under the UMWA Coal Act design. The actuarial loss for all benefit plans in 2020 was primarily due to the decrease in the discount rate used to measure the benefit obligation offset by the favorable impact of claims experience for the year and updating the mortality base tables and improvement scales to those published by the Society of Actuaries for all participants except those receiving medical benefits under the UMWA Coal Act design. The actuarial loss for all benefit plans in 2019 was primarily due to the decrease in the discount rate used to measure the benefit obligation and unfavorable medical claims experience for the year.

The following includes pre-tax amounts recorded in "Accumulated other comprehensive income":

	Year Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Prior service credit arising during year	\$ (139.5)	\$ (185.4)	\$ —
Amortization:			
Prior service credit	46.4	17.3	8.7
Total recorded in "Accumulated other comprehensive income"	<u>\$ (93.1)</u>	<u>\$ (168.1)</u>	<u>\$ 8.7</u>

The Company amortizes prior service credit over an amortization period of the average remaining service period to full eligibility for participating employees at the time of the plan change or the expected lifetime of participants in the plan. Prior service credits established during 2021 and 2020 are described below. The estimated prior service credit that will be amortized from accumulated other comprehensive income into net periodic postretirement benefit cost during the year ending December 31, 2022 is \$53.8 million.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table sets forth the plans' funded status reconciled with the amounts shown in the consolidated balance sheets:

	December 31,	
	2021	2020
	(Dollars in millions)	
Change in benefit obligation:		
Accumulated postretirement benefit obligation at beginning of period	\$ 476.6	\$ 659.9
Service cost	1.0	3.8
Interest cost	10.5	20.2
Participant contributions	0.1	2.4
Plan amendments	(139.5)	(185.4)
Benefits paid and administrative fees (net of Medicare Part D reimbursements)	(34.5)	(42.9)
Actuarial (gain) loss	(55.5)	18.6
Accumulated postretirement benefit obligation at end of period	<u>258.7</u>	<u>476.6</u>
Change in plan assets:		
Fair value of plan assets at beginning of period	33.7	34.2
Actual return on plan assets	—	3.6
Employer contributions	26.8	36.4
Participant contributions	0.1	2.4
Benefits paid and administrative fees (net of Medicare Part D reimbursements)	(34.5)	(42.9)
Fair value of plan assets at end of period	<u>26.1</u>	<u>33.7</u>
Funded status at end of period	<u>(232.6)</u>	<u>(442.9)</u>
Less: Current portion (included in "Accounts payable and accrued expenses")	20.5	29.7
Noncurrent obligation (included in "Accrued postretirement benefit costs")	<u>\$ (212.1)</u>	<u>\$ (413.2)</u>

In October 2021, the Company announced changes to its postretirement health care benefit plan for certain represented retirees. Effective January 1, 2022, the Company will no longer provide medical coverage to certain existing retirees but will continue to offer a life insurance benefit to eligible retirees. The impact of the changes on future benefits reduced the Company's accumulated postretirement benefit obligation by \$139.5 million. The reduction was attributable to the elimination of health care benefits for certain represented retirees. The reduction in liability was recorded with an offsetting balance in "Accumulated other comprehensive income" and is being amortized to earnings based upon the estimated remaining life expectancies of certain plan participants (14.2 years was the amortization period when it was established on October 1, 2021).

In September 2020, the Company announced changes to its postretirement health care benefit plans for non-represented employees and retirees. Effective January 1, 2021, the Company no longer subsidizes medical costs for Medicare eligible individuals or provides life insurance to salaried and hourly non-union retirees. The Company provides non-Medicare eligible salaried and hourly non-union retirees and eligible dependents a health reimbursement arrangement. There were no changes to benefits for represented participants. The impact of the changes on future benefits reduced the Company's accumulated postretirement benefit obligation by \$185.4 million. The reduction was attributable to the elimination of health care benefits upon covered individuals' attainment of Medicare eligibility and the elimination of life insurance benefits for certain non-represented participants. The reduction in liability was recorded with an offsetting balance in "Accumulated other comprehensive income." The \$174.5 million reduction for elimination of health care benefits upon attainment of Medicare eligibility for salaried and non-union hourly retirees and eligible dependents is being amortized to earnings over an average remaining service period to full eligibility for participating employees (3.9 years and 4.9 years were the remaining amortization periods at January 1, 2022 and 2021, respectively). The remaining \$10.9 million for the elimination of life insurance benefits and elimination of health care benefits upon attainment of Medicare eligibility for select non-union retirees is being amortized to earnings over the average remaining life expectancy of the affected plan (9.5 years and 10.5 years were the remaining amortization periods at January 1, 2022 and 2021, respectively).

A prior service credit established in December 2018 is being amortized to earnings over an average remaining service period to full eligibility for participating employees (2.9 years and 3.9 years were the remaining amortization periods at January 1, 2022 and 2021, respectively).

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The weighted-average assumptions used to determine the benefit obligations for the plans as of the end of each year were as follows:

	December 31,	
	2021	2020
Discount rate	2.84 %	2.55 %
Measurement date	December 31, 2021	December 31, 2020

The weighted-average assumptions used to determine net periodic benefit (benefit) cost for the plans during each period were as follows:

	Year Ended December 31,		
	2021	2020	2019
Discount rate	2.55 %	3.40 %	4.35 %
Expected long-term return on plan assets (pre-tax)	5.75 %	7.00 %	5.00 %
Measurement date	December 31, 2020	December 31, 2019	December 31, 2018

The expected rate of return on plan assets is determined by taking into consideration expected long-term returns associated with each major asset class based on long-term historical ranges, inflation assumptions and the expected net value from active management of the assets based on actual results. The asset allocation of plan assets and long-term capital market expectations remain unchanged from December 31, 2020 therefore the Company's expected pre-tax rate of return on plan assets will remain at 5.75% for 2022.

The accumulated postretirement benefit obligation exceeded plan assets for all plans as of December 31, 2021 and 2020. The accumulated postretirement benefit obligation for all plans was \$258.7 million and \$476.6 million as of December 31, 2021 and 2020, respectively.

The following presents information about the assumed health care cost trend rate:

	Year Ended December 31,	
	2021	2020
Pre-Medicare:		
Health care cost trend rate assumed for next year	6.00 %	6.00 %
Rate to which the cost trend is assumed to decline (the ultimate trend rate)	4.75 %	4.75 %
Year that the rate reaches the ultimate trend rate	2027	2026
Post-Medicare:		
Health care cost trend rate assumed for next year	5.75 %	5.75 %
Rate to which the cost trend is assumed to decline (the ultimate trend rate)	4.75 %	4.75 %
Year that the rate reaches the ultimate trend rate	2027	2026

Plan Assets

The Company has established two Voluntary Employees Beneficiary Association (VEBA) trusts to pre-fund a portion of benefits for non-represented and represented retirees. Assets of the Peabody Investments Corp. Non-Represented Retiree VEBA Trust (the Non-Represented Trust) are invested in accordance with the investment policy established by the Peabody VEBA Retirement Committee after consultation with outside investment advisors and actuaries. As of December 31, 2021 and 2020, the asset allocation strategy for the Non-Represented Trust is 30% in equity and 70% in fixed income assets. The asset strategy may vary over time based on changes in the status of the Non-Represented Plan, the Company's risk posture and other factors. In 2021 the Peabody Holding Company LLC Represented Retiree VEBA Trust (the Represented Trust) was terminated. At December 31, 2020 assets of the Represented Trust were invested in cash funds.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

A financial instrument's level within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. Following is a description of the valuation techniques and inputs used for investments measured at fair value, including the general classification of such investments pursuant to the valuation hierarchy.

U.S. equity securities. The Non-Represented Trust invests in U.S. equity securities for growth and diversification. Investment vehicles include various domestic large-cap publicly traded common stocks and mutual funds. All common stocks are traded on a national securities exchange and are valued at quoted market prices in active markets and accordingly classified within Level 1 of the valuation hierarchy. The mutual funds are traded on a national securities exchange in an active market, are valued using daily publicly quoted net asset value (NAV) prices and accordingly classified within Level 1 of the valuation hierarchy.

International equity securities. The Non-Represented Trust invests in international equity securities for growth and diversification. Investment vehicles include various international publicly traded common stocks, exchange traded funds and mutual funds. All common stocks are traded on a national securities exchange and are valued at quoted market prices in active markets and accordingly classified within Level 1 of the valuation hierarchy. The exchange traded funds and mutual funds are traded on a national securities exchange in an active market, are valued using daily publicly quoted NAV prices and accordingly classified within Level 1 of the valuation hierarchy.

Corporate bonds. The Non-Represented Trust invests in corporate bonds for diversification, volatility reduction of equity securities and to provide a hedge to interest rate movements affecting liabilities. Investment types are predominantly investment-grade corporate bonds. Fair value for these securities is provided by a third-party pricing service that utilizes various inputs such as benchmark yields, reported trades, broker/dealer quotes, issuer spreads and benchmark securities as well as other relevant economic measures. Corporate bonds are classified within the Level 2 valuation hierarchy since fair value inputs are derived prices in active markets and the bonds are not traded on a national securities exchange.

U.S. government securities. The Non-Represented Trust invests in U.S. government securities for diversification, volatility reduction of equity securities and to provide a hedge to interest rate movements affecting liabilities. Investment types are predominantly U.S. government bonds, notes, agency securities and municipal bonds. Fair value for these securities is provided by a third-party pricing service that utilizes various inputs such as benchmark yields, reported trades, broker/dealer quotes, issuer spreads and benchmark securities as well as other relevant economic measures. If fair value is based on quoted prices in active markets and traded on a national securities exchange, U.S. government securities are classified within the Level 1 valuation hierarchy; otherwise, U.S. government securities are classified within the Level 2 valuation hierarchy.

Cash funds. The Non-Represented and Represented Trusts invest in cash funds to manage liquidity resulting from payment of participant benefits and certain administrative fees. The investments consist of non-interest bearing cash funds and U.S. Government money market fund which are classified within the Level 1 valuation hierarchy.

The methods described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Company believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date. The inputs or methodologies used for valuing investments are not necessarily an indication of the risk associated with investing in those investments.

The following tables present the fair value of assets in the Non-Represented and Represented Trusts by asset category and by fair value hierarchy:

	December 31, 2021			
	Level 1	Level 2	Level 3	Total
	(Dollars in millions)			
U.S. equity securities	\$ 5.7	\$ —	\$ —	\$ 5.7
International equity securities	2.0	—	—	2.0
Corporate bonds	—	10.1	—	10.1
U.S. government securities	3.1	3.8	—	6.9
Cash funds	1.4	—	—	1.4
Total assets at fair value	<u>\$ 12.2</u>	<u>\$ 13.9</u>	<u>\$ —</u>	<u>\$ 26.1</u>

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	December 31, 2020			
	Level 1	Level 2	Level 3	Total
	(Dollars in millions)			
U.S. equity securities	\$ 10.5	\$ —	\$ —	\$ 10.5
International equity securities	2.0	—	—	2.0
Corporate bonds	—	9.6	—	9.6
U.S. government securities	1.0	4.2	—	5.2
Cash funds	6.4	—	—	6.4
Total assets at fair value	<u>\$ 19.9</u>	<u>\$ 13.8</u>	<u>\$ —</u>	<u>\$ 33.7</u>

Contributions

Annual contributions to the Non-Represented and Represented Trusts are discretionary. During the year ended December 31, 2021, the Company made no contributions to either trust.

Estimated Future Benefit Payments

The following benefit payments (net of retiree contributions and Medicare Part D reimbursements), which reflect expected future service, as appropriate, are expected to be paid by the Company or satisfied from Non-Represented Trust assets:

	Postretirement Benefits
	(Dollars in millions)
2022	\$ 28.9
2023	25.8
2024	24.3
2025	22.7
2026	20.8
Years 2027-2031	81.5

(15) Pension and Savings Plans

One of the Company's subsidiaries, Peabody Investments Corp. (PIC), sponsors a defined benefit pension plan covering certain U.S. salaried employees and eligible hourly employees at certain PIC subsidiaries (the Peabody Plan). A subsidiary of PIC also has a defined benefit pension plan covering eligible employees who are represented by the UMWA under the Western Surface Agreement (the Western Plan and together with the Peabody Plan, the Pension Plans).

Effective May 31, 2008, the Peabody Plan was frozen in its entirety for both participation and benefit accrual purposes. In 2020, the Company announced a program to offer a voluntary lump-sum pension payout to eligible active salaried employees and former salaried employees in the Peabody Plan which would settle the Company's obligation to them. The program provided participants with a limited time opportunity to elect to receive a lump-sum settlement of their pension benefit or begin to receive their benefit in the form of a monthly annuity in December 2020. As part of this voluntary lump-sum program, the Company settled \$51.6 million of its pension obligations for active salaried employees and former salaried employees in the Peabody Plan with an equal amount paid from plan assets. As a result, the Company recorded a settlement gain of \$2.7 million during the year ended December 31, 2020, which was reflected in "Net periodic benefit (credit) costs, excluding service cost" on the consolidated statement of operations.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Net periodic pension cost (benefit) included the following components:

	Year Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Service cost for benefits earned	\$ 0.2	\$ 0.3	\$ 2.0
Interest cost on projected benefit obligation	20.4	28.0	33.5
Expected return on plan assets	(22.9)	(29.7)	(31.4)
Settlement	—	(2.7)	—
Net actuarial loss (gain)	12.7	(25.6)	(16.6)
Net periodic pension cost (benefit)	<u>\$ 10.4</u>	<u>\$ (29.7)</u>	<u>\$ (12.5)</u>

The actuarial loss for all pension plans in 2021 was primarily due to actual returns on plan assets lower than expected returns for the year offset by the increase in the discount rate used to measure the benefit obligation. The actuarial gain for all pension plans in 2020 was primarily due to actual returns on plan assets exceeding the expected returns for the year and the favorable impact of updating the mortality base tables and improvement scales to those published by the Society of Actuaries, offset by the decline in the discount rate used to measure the benefit obligation. The actuarial gain for all pension plans in 2019 was primarily due to actual returns on plan assets exceeding the expected returns for the year, offset by the decline in the discount rate used to measure the benefit obligation.

The following summarizes the change in benefit obligation, change in plan assets and funded status of the Pension Plans:

	December 31,	
	2021	2020
	(Dollars in millions)	
Change in benefit obligation:		
Projected benefit obligation at beginning of period	\$ 816.4	\$ 853.8
Service cost	0.2	0.3
Interest cost	20.4	28.0
Benefits paid	(55.9)	(57.5)
Actuarial (gain) loss	(29.4)	43.4
Settlement	—	(51.6)
Projected benefit obligation at end of period	<u>751.7</u>	<u>816.4</u>
Change in plan assets:		
Fair value of plan assets at beginning of period	847.5	855.2
Actual return on plan assets	(19.2)	101.4
Benefits paid	(55.9)	(57.5)
Settlement	—	(51.6)
Fair value of plan assets at end of period	<u>772.4</u>	<u>847.5</u>
Funded status at end of period	<u>\$ 20.7</u>	<u>\$ 31.1</u>
Amounts recognized in the consolidated balance sheets:		
Noncurrent asset (included in "Investments and other assets")	\$ 28.5	\$ 39.6
Noncurrent obligation (included in "Other noncurrent liabilities")	(7.8)	(8.5)
Net amount recognized	<u>\$ 20.7</u>	<u>\$ 31.1</u>

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The weighted-average assumptions used to determine the benefit obligations as of the end of each year were as follows:

	December 31,	
	2021	2020
Discount rate	2.95 %	2.60 %
Measurement date	December 31, 2021	December 31, 2020

The weighted-average assumptions used to determine net periodic pension cost benefit during each period were as follows:

	Year Ended December 31,		
	2021	2020	2019
Discount rate	2.60 %	3.40 %	4.35 %
Expected long-term return on plan assets	2.80 %	3.60 %	4.20 %
Measurement date	December 31, 2020	December 31, 2019	December 31, 2018

The expected rate of return on plan assets is determined by taking into consideration expected long-term returns associated with each major asset class based on long-term historical ranges, inflation assumptions and the expected net value from active management of the assets based on actual results. Effective January 1, 2022, the Company raised its expected rate of return on plan assets from 2.80% to 3.20% reflecting the impact of the Company's asset allocation and capital market expectations.

As of December 31, 2021 and 2020, the accumulated benefit obligation for all plans was \$751.7 million and \$816.4 million, respectively, which was equal to the projected benefit obligation for those periods. As of December 31, 2021 and 2020, the plan assets for the Peabody Plan of \$611.6 million and \$672.5 million, respectively, exceeded the projected benefit obligation and accumulated benefit obligation for those periods of \$583.1 million and \$632.9 million, respectively. The projected benefit obligation and accumulated benefit obligation for the Western Plan as of December 31, 2021 and 2020, was \$168.6 million and \$183.5 million, respectively, which exceeded the plan assets of \$160.8 million and \$175.0 million, respectively, for those periods.

Assets of the Pension Plans

Assets of the PIC Master Trust (the Master Trust) are invested in accordance with investment guidelines established by the Peabody Plan Retirement Committee and the Peabody Western Plan Retirement Committee (collectively, the Retirement Committees) after consultation with outside investment advisors and actuaries.

The asset allocation targets have been set with the expectation that the assets of the Master Trust will be managed with an appropriate level of risk to fund each Pension Plan's expected liabilities. To determine the appropriate target asset allocations, the Retirement Committees consider the demographics of each Pension Plan's participants, the funded status of each Pension Plan, the business and financial profile of the Company and other associated risk preferences. These allocation targets are reviewed by the Retirement Committees on a regular basis and revised as necessary. As a result of discretionary contributions made in recent years, the Pension Plans have become nearly fully funded and therefore, as of December 31, 2021 and 2020, the Master Trust investment portfolio reflected the Company's target asset mix of 100% fixed income investments. Master Trust assets also include investments in various real estate holdings through limited partnerships representing approximately less than 1% of total Master Trust assets as of both December 31, 2021 and 2020. The Retirement Committees' intention is to liquidate these real estate holdings when allowable per the terms of the limited partnership agreements. Generally, dissolution and liquidation of the limited partnerships is required before the Master Trust's real estate holdings can be liquidated.

Assets of the Master Trust are under management by third-party investment managers, which are selected and monitored by the Retirement Committees. Specific investment guidelines have been established by the Retirement Committees for each major asset class including performance benchmarks, allowable and prohibited investment types and concentration limits. In general, investment guidelines do not permit leveraging the assets held in the Master Trust. However, investment managers may employ various strategies and derivative instruments in establishing overall portfolio characteristics consistent with the guidelines and investment objectives established by the Retirement Committees for their portfolios. Fixed income investment guidelines only allow for exchange-traded derivatives if the investment manager deems the derivative vehicle to be more attractive than a similar direct investment in an underlying cash market or to manage the duration of the fixed income portfolio.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

A financial instrument's level within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. Following is a description of the valuation techniques and inputs used for investments measured at fair value, including the general classification of such investments pursuant to the valuation hierarchy.

Corporate bonds. The Master Trust invests in corporate bonds for diversification and to provide a hedge to interest rate movements affecting liabilities. Investment types are predominantly investment-grade corporate bonds. Fair value for these securities is provided by a third-party pricing service that utilizes various inputs such as benchmark yields, reported trades, broker/dealer quotes, issuer spreads and benchmark securities as well as other relevant economic measures. Corporate bonds are classified within the Level 2 valuation hierarchy since fair value inputs are derived prices in active markets and the bonds are not traded on a national securities exchange.

U.S. government securities. The Master Trust invests in U.S. government securities for diversification and to provide a hedge to interest rate movements affecting liabilities. Investment types are predominantly U.S. government bonds, agency securities and municipal bonds. Fair value for these securities is provided by a third-party pricing service that utilizes various inputs such as benchmark yields, reported trades, broker/dealer quotes, issuer spreads and benchmark securities as well as other relevant economic measures. If fair value is based on quoted prices in active markets and traded on a national securities exchange, U.S. government securities are classified within the Level 1 valuation hierarchy; otherwise, U.S. government securities are classified within the Level 2 valuation hierarchy.

International government securities. The Master Trust invests in international government securities for diversification and to provide a hedge to interest rate movements affecting liabilities. Investment types are predominantly non-U.S. government bonds. Fair value for these securities is provided by a third-party pricing service that utilizes various inputs such as benchmark yields, reported trades, broker/dealer quotes, issuer spreads and benchmark securities as well as other relevant economic measures. International government securities are classified within the Level 2 valuation hierarchy since fair value inputs are derived prices in active markets and the bonds are not traded on a national securities exchange.

Asset-backed securities. The Master Trust invests in asset-backed securities for diversification and to provide a hedge to interest rate movements affecting liabilities. Investment types are predominately mortgage-backed securities. Asset-backed securities are classified within the Level 2 valuation hierarchy since fair value inputs are derived prices in active markets and the investments are not traded on a national securities exchange.

Cash funds. The Master Trust invests in cash funds to manage liquidity resulting from payment of participant benefits and certain administrative fees. Investment vehicles primarily include a non-interest bearing cash fund with an earnings credit allowance feature, various exchange-traded derivative instruments consisting of futures and interest rate swap agreements used to manage the duration of certain liability-hedging investments. The non-interest bearing cash fund is classified within the Level 1 valuation hierarchy. Exchange traded derivatives, such as options and futures, for which market quotations are readily available, are valued at the last reported sale price or official closing price on the primary market or exchange on which they are traded and are classified within the Level 1 valuation hierarchy.

Real estate interests. The Master Trust invests in real estate interests for diversification. Investments in real estate represent interests in several limited partnerships, which invest in various real estate properties. Interests in real estate are valued using various methodologies, including independent third party appraisals; fair value measurements are not developed by the Company. For some investments, little market activity may exist and determination of fair value is then based on the best information available in the circumstances. This involves a significant degree of judgment by taking into consideration a combination of internal and external factors. Accordingly, interests in real estate are classified within the Level 3 valuation hierarchy. Some limited partnerships issue dividends to their investors in the form of cash distributions that the Pension Plans invest elsewhere within the Master Trust.

Private mutual funds. The Master Trust invests in mutual funds for growth and diversification. Investment vehicles include an institutional fund that holds a diversified portfolio of long-duration corporate fixed income investments (Corporate Bond Fund). The Corporate Bond Fund is not traded on a national securities exchange and is valued at NAV, the practical expedient to estimate fair value.

The methods described above may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Company believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date. The inputs or methodologies used for valuing investments are not necessarily an indication of the risk associated with investing in those investments.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following tables present the fair value of assets in the Master Trust by asset category and by fair value hierarchy:

	December 31, 2021			
	Level 1	Level 2	Level 3	Total
	(Dollars in millions)			
Corporate bonds	\$ —	\$ 537.5	\$ —	\$ 537.5
U.S. government securities	125.2	22.5	—	147.7
International government securities	—	15.5	—	15.5
Asset-backed securities	—	3.3	—	3.3
Cash funds	30.7	—	—	30.7
Real estate interests	—	—	0.3	0.3
Total assets at fair value	\$ 155.9	\$ 578.8	\$ 0.3	\$ 735.0
Assets measured at net asset value practical expedient ⁽¹⁾				
Private mutual funds				37.4
Total plan assets				\$ 772.4

	December 31, 2020			
	Level 1	Level 2	Level 3	Total
	(Dollars in millions)			
Corporate bonds	\$ —	\$ 623.3	\$ —	\$ 623.3
U.S. government securities	121.4	21.2	—	142.6
International government securities	—	18.7	—	18.7
Asset-backed securities	—	4.7	—	4.7
Cash funds	14.9	—	—	14.9
Real estate interests	—	—	1.2	1.2
Total assets at fair value	\$ 136.3	\$ 667.9	\$ 1.2	\$ 805.4
Assets measured at net asset value practical expedient ⁽¹⁾				
Private mutual funds				42.1
Total plan assets				\$ 847.5

⁽¹⁾ In accordance with Accounting Standards Update 2015-07, investments that are measured at fair value using the net asset value per share practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the total value of assets of the plans.

The table below sets forth a summary of changes in the fair value of the Master Trust's Level 3 investments:

	Year Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Balance, beginning of period	\$ 1.2	\$ 4.1	\$ 6.2
Realized gains (losses)	0.9	1.6	(1.0)
Unrealized (losses) gains relating to investments still held at the reporting date	(0.6)	(2.1)	1.4
Purchases, sales and settlements, net	(1.2)	(2.4)	(2.5)
Balance, end of period	\$ 0.3	\$ 1.2	\$ 4.1

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Contributions

Annual contributions to the qualified plans are made in accordance with minimum funding standards and the Company's agreement with the Pension Benefit Guaranty Corporation. Funding decisions also consider certain funded status thresholds defined by the Pension Protection Act of 2006 (generally 80%). As of December 31, 2021, the Company's qualified plans are expected to be at or above the Pension Protection Act thresholds. The Company was not required to make any payments to its qualified pension plans in 2021 based on minimum funding requirements and did not make any discretionary contributions in 2021.

Estimated Future Benefit Payments

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid in connection with the Company's benefit obligation:

	Pension Benefits
	(Dollars in millions)
2022	\$ 56.3
2023	55.3
2024	54.3
2025	53.1
2026	51.8
Years 2027-2031	236.8

Defined Contribution Plans

The Company sponsors employee retirement accounts under three 401(k) plans for eligible U.S. employees. The Company matches voluntary contributions to each plan up to specified levels. In May 2020 the Company amended one of its plans to eliminate the formula for calculating matching contributions and provide the Company sole discretion in making any matching contributions. During the period May 2020 to December 2020 the Company suspended matching contributions due to challenging business conditions of COVID-19. In January 2021 the Company reinstated matching contributions. The expense for these plans was \$9.7 million, \$9.6 million and \$27.8 million for the years ended December 31, 2021, 2020 and 2019, respectively. Discretionary contribution features in the plans allow for additional contributions from the Company. There were no discretionary contributions granted for the years ended December 31, 2021, 2020 and 2019. There were no discretionary contributions paid during the years ended December 31, 2021 and 2020. A discretionary contribution of \$8.9 million was paid during the year ended December 31, 2019.

Superannuation

The Company makes superannuation contributions for eligible Australia employees in accordance with the employer contribution rate set by the Government of Australia. The expense related to these contributions was \$17.4 million, \$20.5 million and \$26.5 million for the years ended December 31, 2021, 2020 and 2019, respectively. A performance contribution feature allows for additional discretionary contributions from the Company. There was no performance contribution granted for the years ended December 31, 2021, 2020 and 2019. There were no discretionary performance contributions paid during the years ended December 31, 2021 and 2020. A prior performance contribution of approximately \$3 million was paid during the year ended December 31, 2019.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(16) Stockholders' Equity**Common Stock**

In accordance with the Company's Fourth Amended and Restated Certificate of Incorporation, the Company has 450.0 million authorized shares of Common Stock, par value \$0.01 per share. Holders of Common Stock are entitled to one vote per share on all matters to be voted upon by the stockholders. The holders of Common Stock do not have cumulative voting rights in the election of directors. Holders of Common Stock are entitled to receive ratably dividends if, as and when dividends are declared from time to time by the Board of Directors (the Board) out of funds legally available for that purpose, after payment of dividends required to be paid on any outstanding preferred stock or series common stock. Upon dissolution, liquidation or winding up of the Company, the holders of Common Stock are entitled to receive ratably the assets available for distribution to the stockholders after payment of liabilities and subject to the right of holders of any outstanding preferred stock or series common stock. The Common Stock has no preemptive or conversion rights and is not subject to further calls or assessment by the Company. There are no redemption or sinking fund provisions applicable to the Common Stock.

The following table summarizes Common Stock activity during the periods presented below:

	Year Ended December 31,		
	2021	2020	2019
	(In millions)		
Shares outstanding at the beginning of the period	97.8	96.9	110.4
Shares issued for vested restricted stock units	1.0	1.3	1.5
Shares issued in exchange for debt retirement	10.0	—	—
Shares issued under at-the-market equity offering program	24.8	—	—
Shares repurchased	(0.3)	(0.4)	(15.0)
Shares outstanding at the end of the period	<u>133.3</u>	<u>97.8</u>	<u>96.9</u>

Preferred Stock

The Board is authorized to issue up to 100.0 million shares of preferred stock, par value \$0.01 per share. The Board can determine the terms and rights of each series, including whether dividends (if any) will be cumulative or non-cumulative and the dividend rate of the series, redemption or sinking fund provisions, conversion terms, prices and rates and amounts payable on shares of the series in the event of any voluntary or involuntary liquidation, dissolution or winding up of the affairs of the Company and whether the shares of the series will be convertible into shares of any other class or series, or any other security, of the Company or any other corporation. The Board may also determine restrictions on the issuance of shares of the same series or of any other class or series, and the voting rights (if any) of the holders of the series. There were no outstanding shares of preferred stock as of December 31, 2021.

Series Common Stock

The Board is authorized to issue up to 50.0 million shares of series common stock, par value \$0.01 per share. The Board can determine the terms and rights of each series, whether dividends (if any) will be cumulative or non-cumulative and the dividend rate of the series, redemption or sinking fund provisions, conversion terms, prices and rates and amounts payable on shares of the series in the event of any voluntary or involuntary liquidation, dissolution or winding up of the affairs of the Company and whether the shares of the series will be convertible into shares of any other class or series, or any other security, of the Company or any other corporation. The Board may also determine restrictions on the issuance of shares of the same series or of any other class or series, and the voting rights (if any) of the holders of the series. There were no outstanding shares of series common stock as of December 31, 2021.

Treasury Stock

Share repurchases. On August 1, 2017, the Board authorized a \$500.0 million share repurchase program of the outstanding shares of the Company's common stock and/or preferred stock (Repurchase Program), which was eventually expanded to \$1.5 billion during 2018. The Repurchase Program does not have an expiration date and may be discontinued at any time. Through December 31, 2021, the Company repurchased 41.5 million shares of its Common Stock for \$1,340.3 million (14.6 million shares for \$329.9 million during the year ended December 31, 2019; 21.1 million shares for \$834.7 million during the year ended December 31, 2018; and 5.8 million shares for \$175.7 million during the period April 2 through December 31, 2017), which included commissions paid of \$0.8 million. As of December 31, 2021, there was \$160.5 million available for repurchase under the Repurchase Program.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Share repurchases were suspended by the Company during 2019, and as further described in Note 22. "Financial Instruments, Guarantees With Off-Balance-Sheet Risk and Other Guarantees," during the fourth quarter of 2020, the Company entered into a transaction support agreement with its surety bond providers which prohibits the repurchase of shares through the earlier of December 31, 2025, or the maturity of the Credit Agreement (currently March 31, 2025), unless otherwise agreed to by the parties to the agreements. Additionally, restrictive covenants in the Company's credit facility and in the indentures governing its senior secured notes also limit the Company's ability to repurchase shares. Prior to the suspension, repurchases were made at the Company's discretion. The specific timing, price and size of purchases depended upon the share price, general market and economic conditions and other considerations, including compliance with various debt agreements in effect at the time repurchases were made.

Shares relinquished. The Company routinely allows employees to relinquish Common Stock to pay estimated taxes upon the vesting of restricted stock units and the payout of performance units that are settled in Common Stock under its equity incentive plans. The number of shares of Common Stock relinquished was 0.3 million for the year ended December 31, 2021 and 0.4 million for both the years ended December 31, 2020 and 2019. The value of the Common Stock tendered by employees was based upon the closing price on the dates of the respective transactions.

(17) Share-Based Compensation

The Company has established the Peabody Energy Corporation 2017 Incentive Plan (the 2017 Incentive Plan) for employees, non-employee directors and consultants that allows for the issuance of share-based compensation in various forms including options (including non-qualified stock options and incentive stock options), stock appreciation rights, restricted stock, restricted stock units, deferred stock, performance units, dividend equivalents and cash incentive awards. Under the 2017 Incentive Plan, approximately 14 million shares of the Company's Common Stock were reserved for issuance. As of December 31, 2021, there are approximately 7.0 million shares of the Company's Common Stock available for grant.

Share-Based Compensation Expense and Cash Flows

The Company's share-based compensation expense is recorded in "Operating costs and expenses" and "Selling and administrative expenses" in the consolidated statements of operations. Cash received by the Company upon the exercise of stock options is reflected as a financing activity in the consolidated statements of cash flows. Share-based compensation expense and cash flow amounts were as follows:

	Year Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Share-based compensation expense	\$ 10.0	\$ 13.5	\$ 38.3
Tax benefit	—	—	—
Share-based compensation expense, net of tax benefit	<u>\$ 10.0</u>	<u>\$ 13.5</u>	<u>\$ 38.3</u>
Cash received upon the exercise of stock options	—	—	—
Write-off tax benefits related to share-based compensation	—	—	—

As of December 31, 2021, the total unrecognized compensation cost related to nonvested awards was \$4.9 million, net of taxes, which is expected to be recognized over 2.5 years with a weighted-average period of 0.6 years.

Deferred Stock Units

During the years ended December 31, 2021, 2020 and 2019, the Company granted deferred stock units to each of the non-employee members of the Board. The fair value of these units is equal to the market price of the Company's Common Stock at the date of grant. These deferred stock units generally vest on a monthly basis over 12 months and are settled in Common Stock three years after the date of grant.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Restricted Stock Units

The Company grants restricted stock units to certain senior management and non-senior management employees. For units granted to both senior and non-senior management employees containing only service conditions, the fair value of the award is equal to the market price of the Company's Common Stock at the date of grant. Units granted to senior and non-senior management employees vest at various times (none of which exceed three years) in accordance with the underlying award agreement. Compensation cost for both senior and non-senior management employees is recognized on a straight-line basis over the requisite service period. The payouts for active grants awarded during the years ended December 31, 2021, 2020 and 2019 will be settled in the Company's Common Stock.

A summary of restricted stock unit activity is as follows:

	Year Ended December 31, 2021	Weighted Average Grant-Date Fair Value
Nonvested at December 31, 2020	1,629,956	\$ 14.49
Granted	752,039	4.14
Vested	(826,473)	13.81
Forfeited	(451,694)	9.90
Nonvested at December 31, 2021	<u>1,103,828</u>	<u>\$ 8.99</u>

The total fair value at grant date of restricted stock units granted during the years ended December 31, 2021, 2020 and 2019 was \$3.1 million, \$16.6 million and \$19.8 million, respectively.

The restricted stock units receive dividend equivalent units (DEUs) upon payment of cash dividends to holders of Common Stock. DEUs vest subject to the same vesting requirements as the underlying restricted stock unit award. As of December 31, 2021, there were approximately 7,000 nonvested DEUs. The total fair value of restricted stock units and DEUs vested was \$3.3 million, \$5.6 million and \$40.3 million during the years ended December 31, 2021, 2020 and 2019, respectively.

In March 2021 the Company entered into a transition agreement with its former chief executive officer which resulted in a modification to restricted stock units granted. Under terms of the agreement, any restricted stock units held by the former chief executive officer that would have vested under their original terms during the twelve months following the specified termination vested upon such date. As a result of this modification, the Company avoided additional compensation expense of approximately \$1.3 million for the year ended December 31, 2021.

Performance Units

Performance units are typically granted annually in January and vest over a three-year measurement period and are primarily limited to senior management personnel. The performance units are usually subject to the achievement of goals based on the following conditions: three-year return on invested capital and environmental reclamation (performance condition). In addition, the payout of the performance units can be increased or decreased by up to 25% of the award based on three-year stock price performance compared to a custom peer group (market condition). There were no performance units granted during the year ended December 31, 2021. Awards granted during the years ended December 31, 2020 and 2019 will be settled in the Company's Common Stock.

A summary of performance unit activity is as follows:

	Year Ended December 31, 2021	Weighted Average Remaining Contractual Life
Nonvested at December 31, 2020	858,588	1.5
Granted	—	
Vested	(118,031)	
Forfeited	(89,651)	
Nonvested at December 31, 2021	<u>650,906</u>	<u>0.7</u>

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

As of December 31, 2021, there were 131,203 performance units and DEU's vested that had an aggregate intrinsic value of \$0.5 million and a conversion price per share of \$3.89.

The performance units receive DEUs upon payment of cash dividends to holders of Common Stock. DEUs vest subject to the same vesting requirements as the underlying performance unit award. As of December 31, 2021, there were approximately 17,000 nonvested DEUs.

In March 2021 the Company entered into a transition agreement with its former chief executive officer which resulted in a modification to performance units granted. Under terms of the agreement, a portion of the performance units held by the former chief executive officer as of the specified termination date remain eligible to vest based on actual performance through the original performance period. As a result of this modification, the Company avoided additional compensation expense of approximately \$2.5 million for the year ended December 31, 2021.

The performance condition awards were valued utilizing the grant date fair values of the Company's Common Stock adjusted for dividends foregone during the vesting period. The market condition awards were valued utilizing a Monte Carlo simulation model which incorporates the total stockholder return hurdles set for each grant. The assumptions used in the valuations for grants were as follows:

	Year Ended December 31,	
	2021	2020
Risk-free interest rate	— %	1.45 %
Expected volatility	— %	49.34 %
Dividend yield	— %	— %

(18) Accumulated Other Comprehensive Income

The following table sets forth the after-tax components of accumulated other comprehensive income and changes thereto:

	Foreign Currency Translation Adjustment	Prior Service Credit Associated with Postretirement Plans	Total Accumulated Other Comprehensive Income
	(Dollars in millions)		
December 31, 2018	\$ (4.5)	\$ 44.6	\$ 40.1
Reclassification from other comprehensive income to earnings	—	(8.7)	(8.7)
Current period change	0.2	—	0.2
December 31, 2019	(4.3)	35.9	31.6
Reclassification from other comprehensive income to earnings	—	(17.3)	(17.3)
Current period change	6.1	185.4	191.5
December 31, 2020	1.8	204.0	205.8
Reclassification from other comprehensive income to earnings	—	(46.4)	(46.4)
Current period change	(1.0)	139.5	138.5
December 31, 2021	\$ 0.8	\$ 297.1	\$ 297.9

Postretirement health care and life insurance benefits reclassified from "Accumulated other comprehensive income" to earnings of \$46.4 million, \$17.3 million and \$8.7 million during the years ended December 31, 2021, 2020 and 2019, respectively, are included in "Net periodic benefit (credit) costs, excluding service cost" in the accompanying consolidated statements of operations.

Comprehensive income (loss) differed from net income (loss) by the amount of the change in prior service credit associated with postretirement plans (see Note 14. "Postretirement Health Care and Life Insurance Benefits" for information related to the Company's postretirement plans) and foreign currency translation adjustment related to the Company's investments in Middlemount, whose functional currency is the Australian dollar.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(19) Other Events***Restructuring Charges***

From time to time, the Company initiates restructuring activities to appropriately align its cost structure or optimize coal production relative to prevailing market conditions. Costs associated with restructuring actions can include the impact of early mine closures, voluntary and involuntary workforce reductions, office closures and other related activities. Costs associated with restructuring activities amounted to \$8.3 million, \$37.9 million, and \$24.3 million during the years ended December 31, 2021, 2020 and 2019, respectively, and are included as "Restructuring charges" in the Company's consolidated statements of operations. Such costs were primarily associated with voluntary and involuntary workforce reductions.

Divestitures and Other Transactions

During July 2021, the Company executed transactions to sell its closed Millennium and Wilkie Creek Mines, which reduced its closed mine reclamation liabilities and associated costs. The Millennium Mine was sold for minimal cash consideration and the assumption of the majority of the mine's reclamation liabilities. The Company will remain responsible for \$9.4 million of reclamation liabilities and retains certain royalty rights on future sales. The Company recorded a gain of \$26.1 million in connection with the sale, and will recognize royalty revenue when it is deemed collectible. The gain is included within "Net gain on disposals" in the accompanying consolidated statements of operations.

The Wilkie Creek Mine was sold for minimal cash consideration and full assumption of the mine's reclamation liabilities. The Company retains certain royalty rights on future sales. The Company recorded a gain of \$24.6 million in connection with the sale, and will recognize royalty revenue when it is deemed collectible. The gain is included within "Income (loss) from discontinued operations, net of income taxes" in the accompanying consolidated statements of operations.

United Wambo Joint Venture with Glencore

In December 2019 the Company formed an unincorporated joint venture with Glencore plc (Glencore), in which the Company holds a 50% interest, to combine the existing operations of the Company's Wambo Open-Cut Mine in Australia with the adjacent coal reserves of Glencore's United Mine. The Company proportionally consolidates the entity based upon its economic interest.

Both parties contributed mining tenements upon formation of the joint venture (United Wambo Joint Venture), and combined operations commenced in December 2020. At that date, the parties contributed mining equipment and other assets, and certain additional construction and development activities are ongoing. During the years ended December 31, 2021 and 2020, the Company contributed approximately \$59 million and \$72 million, respectively, towards construction and development, which is reflected as "Additions to property, plant, equipment and mine development" in the accompanying consolidated statements of cash flows. Glencore is responsible for managing the mining operations of the joint venture.

The Company accounted for its interest in the United Wambo Joint Venture at fair value and recognized a gain of \$48.1 million, which was classified in "Gain on formation of United Wambo Joint Venture" in the accompanying consolidated statements of operations during the year ended December 31, 2019.

North Goonyella

The Company's North Goonyella Mine in Queensland, Australia experienced a fire in 2018 which resulted in the suspension of mining operations. During the years ended December 31, 2019 and 2018, the Company recorded provisions for equipment losses of \$83.2 million and \$66.4 million, respectively, related to the fire. During 2019, the Company collected a \$125 million insurance recovery under a property damage and business interruption policy. The Company has incurred containment and idling costs subsequent to the mine's suspension which amounted to \$13.0 million, \$32.3 million and \$111.5 million during the years ended December 31, 2021, 2020 and 2019, respectively.

The Company is currently evaluating various alternatives regarding the future utility of the mine. In the event that no future mining occurs at the North Goonyella Mine or the Company is unable to find a commercial alternative, the Company may record additional charges for the remaining carrying value of the North Goonyella Mine of up to approximately \$0.3 billion, which is included in the at-risk value described in Note 3. "Asset Impairment." Incremental exposures above the aforementioned include take-or-pay obligations and other costs associated with idling or closing the mine.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(20) Earnings per Share (EPS)

Basic EPS is computed based on the weighted average number of shares of common stock outstanding during the period. Diluted EPS is computed based on the weighted average number of shares of common stock plus the effect of dilutive potential common shares outstanding. As such, the Company includes the share-based compensation awards in its potentially dilutive securities. Dilutive securities are not included in the computation of loss per share when a company reports a net loss from continuing operations as the impact would be anti-dilutive.

For all but performance units, the potentially dilutive impact of the Company's share-based compensation awards is determined using the treasury stock method. Under the treasury stock method, awards are treated as if they had been exercised with any proceeds used to repurchase common stock at the average market price during the period. Any incremental difference between the assumed number of shares issued and purchased is included in the diluted share computation. For performance units, their contingent features result in an assessment for any potentially dilutive common stock by using the end of the reporting period as if it were the end of the contingency period for all units granted. For further discussion of the Company's share-based compensation awards, see Note 17. "Share-Based Compensation."

The computation of diluted EPS excluded aggregate share-based compensation awards of less than 0.1 million for the year ended December 31, 2021, and approximately 2.2 million and 1.9 million for the years ended December 31, 2020 and 2019, respectively, because to do so would have been anti-dilutive for those periods. Because the potential dilutive impact of such share-based compensation awards is calculated under the treasury stock method, anti-dilution generally occurs when the exercise prices or unrecognized compensation cost per share of such awards are higher than the Company's average stock price during the applicable period. Anti-dilution also occurs when a company reports a net loss from continuing operations, and the dilutive impact of all share-based compensation awards are excluded accordingly.

The following illustrates the earnings allocation method utilized in the calculation of basic and diluted EPS:

	Year Ended December 31,		
	2021	2020	2019
	(In millions, except per share data)		
EPS numerator:			
Income (loss) from continuing operations, net of income taxes	\$ 347.4	\$ (1,859.8)	\$ (188.3)
Less: Net income (loss) attributable to noncontrolling interests	11.3	(3.5)	26.2
Income (loss) from continuing operations attributable to common stockholders	336.1	(1,856.3)	(214.5)
Income (loss) from discontinued operations, net of income taxes	24.0	(14.0)	3.2
Net income (loss) attributable to common stockholders	<u>\$ 360.1</u>	<u>\$ (1,870.3)</u>	<u>\$ (211.3)</u>
EPS denominator:			
Weighted average shares outstanding — basic	111.1	97.7	103.7
Impact of dilutive securities	0.9	—	—
Weighted average shares outstanding — diluted	<u>112.0</u>	<u>97.7</u>	<u>103.7</u>
Basic EPS attributable to common stockholders:			
Income (loss) from continuing operations	\$ 3.03	\$ (18.99)	\$ (2.07)
Income (loss) from discontinued operations	0.21	(0.15)	0.03
Net income (loss) attributable to common stockholders	<u>\$ 3.24</u>	<u>\$ (19.14)</u>	<u>\$ (2.04)</u>
Diluted EPS attributable to common stockholders:			
Income (loss) from continuing operations	\$ 3.00	\$ (18.99)	\$ (2.07)
Income (loss) from discontinued operations	0.22	(0.15)	0.03
Net income (loss) attributable to common stockholders	<u>\$ 3.22</u>	<u>\$ (19.14)</u>	<u>\$ (2.04)</u>

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(21) Management — Labor Relations

On December 31, 2021, the Company had approximately 4,900 employees worldwide, including approximately 3,900 hourly employees; the employee amounts exclude employees that were employed at operations classified as discontinued operations. Approximately 34% of those hourly employees were represented by organized labor unions and were employed by mines that generated 16% of the Company's 2021 coal production from continuing operations. In the U.S., one mine is represented by an organized labor union. In Australia, the coal mining industry is unionized and the majority of hourly workers employed at the Company's Australian mining operations are members of trade unions. The Construction, Forestry, Maritime, Mining and Energy Union (CFMMEU) generally represents the Company's Australian subsidiaries' hourly production and engineering employees, including those employed through contract mining relationships.

The following table presents the Company's active and inactive mining operations as of December 31, 2021 in which the employees are represented by organized labor unions:

Mine	Approximate Number of Active Employees Represented	Union	Current Agreement Expiration Date or Date Amendable
U.S.			
Kayenta	15	UMWA	November 2024
Shoal Creek	280	UMWA	December 2024
Australia			
Wilpinjong	480	CFMMEU	June 2024
Coppabella ⁽¹⁾	280	CFMMEU	June 2021
Moorvale ⁽²⁾	150	N/A	June 2023
Metropolitan			
Underground employees	145	CFMMEU	May 2025
Handling and preparation plant employees ⁽¹⁾	20	CFMMEU	May 2021
Wambo Underground			
Underground employees	75	CFMMEU	November 2025
Handling and preparation plant employees ⁽¹⁾	20	CFMMEU	December 2021

⁽¹⁾ The Company and the CFMMEU are currently negotiating a new labor agreement.

⁽²⁾ Employees of the Moorvale Mine operate on individual contracts under a direct engagement model. Such contracts are modeled after the Company's former labor agreement with CFMMEU which ended in 2017. According to a memorandum of understanding between the Company and employees, individual contracts may be renegotiated in June 2023.

Note: Employees of the North Goonyella Mine operated under a labor agreement which expired in December 2018. Due to the idling of the mine, as further described in Note 19. "Other Events," hourly employees were terminated and there are no employees employed under the agreement. Peabody applied to the Fair Work Commission in December 2021 to terminate the labor agreement.

(22) Financial Instruments, Guarantees With Off-Balance-Sheet Risk and Other Guarantees

In the normal course of business, the Company is a party to various guarantees and financial instruments that carry off-balance-sheet risk and are not reflected in the accompanying consolidated balance sheets. At December 31, 2021, such instruments included \$1,463.7 million of surety bonds and \$452.6 million of letters of credit. Such financial instruments provide support for the Company's reclamation bonding requirements, lease obligations, insurance policies and various other performance guarantees. The Company periodically evaluates the instruments for on-balance-sheet treatment based on the amount of exposure under the instrument and the likelihood of required performance. The Company does not expect any material losses to result from these guarantees or off-balance-sheet instruments in excess of liabilities provided for in the accompanying consolidated balance sheets.

In November 2020, the Company entered into a Surety Agreement with the providers of its surety bond portfolio (Participating Sureties) to resolve previous collateral demands made by the Participating Sureties. In accordance with the Surety Agreement, the Company initially provided \$75.0 million of collateral, in the form of letters of credit.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Upon completion of the Refinancing Transactions described in Note 11. "Long-term Debt", other provisions of the Surety Agreement became effective. In particular, the Company granted second liens on \$200.0 million of certain mining equipment and will post an additional \$25.0 million of collateral per year from 2021 through 2024 for the benefit of the Participating Sureties. The collateral postings further increase to the extent the Company generates more than \$100.0 million of free cash flow (as defined in the Surety Agreement) in any twelve-month period or has cumulative asset sales in excess of \$10.0 million, as of the last quarter end during the term of the agreement. Based upon the Company's free cash flow for the year ended December 31, 2021, additional collateral of \$13.0 million was posted in January 2022 in the form of letters of credit.

Per the Surety Agreement, the Participating Sureties have agreed to a standstill through the earlier of December 31, 2025, or the maturity of the Credit Agreement (currently March 31, 2025), during which time, the Participating Sureties will not demand any additional collateral, draw on letters of credit posted for the benefit of themselves or cancel any existing surety bond. The Company will not pay dividends or make share repurchases during the standstill period, unless otherwise agreed between parties. In connection with the Refinancing Transactions, at the Settlement Date, all letters of credit issued under the Company's former revolving credit facility were deemed issued under the Company LC Agreement in support of the same obligations.

The Company periodically evaluates the instruments for on-balance sheet treatment based on the amount of exposure under the instrument and the likelihood of required performance. The Company does not expect any material losses to result from these guarantees or off-balance-sheet instruments in excess of liabilities provided for in the accompanying consolidated balance sheets.

Reclamation Bonding

The Company is required to provide various forms of financial assurance in support of its mining reclamation obligations in the jurisdictions in which it operates. Such requirements are typically established by statute or under mining permits.

At December 31, 2021, the Company's asset retirement obligations of \$719.8 million were supported by surety bonds of \$1,294.7 million, as well as letters of credit issued under the Company's receivables securitization program and Revolver. Letters of credit issued at December 31, 2021, which served as collateral for surety bonds in support of asset retirement obligations, amounted to \$323.0 million.

Accounts Receivable Securitization

The Company entered into the Sixth Amended and Restated Receivables Purchase Agreement, as amended, dated as of April 3, 2017 (the Receivables Purchase Agreement) to extend the Company's receivables securitization facility previously in place and expand that facility to include certain receivables from the Company's Australian operations. The receivables securitization program (Securitization Program) is subject to customary events of default set forth in the Receivables Purchase Agreement. The Receivables Purchase Agreement was amended in January 2022 to extend the Securitization Program to January 2025 and reduce the available funding capacity from \$250.0 million to \$175.0 million. Such funding is accounted for as a secured borrowing, limited to the availability of eligible receivables, and may be secured by a combination of collateral and the trade receivables underlying the program, from time to time. Funding capacity under the Securitization Program may also be utilized for letters of credit in support of other obligations.

Under the terms of the Securitization Program, the Company contributes the trade receivables of its participating subsidiaries on a revolving basis to P&L Receivables, its wholly-owned, bankruptcy-remote subsidiary, which then sells the receivables to unaffiliated banks. P&L Receivables retains the ability to repurchase the receivables in certain circumstances. The assets and liabilities of P&L Receivables are consolidated with Peabody, and the Securitization Program is treated as a secured borrowing for accounting purposes, but the assets of P&L Receivables will be used first to satisfy the creditors of P&L Receivables, not Peabody's creditors. The borrowings under the Securitization Program bear interest at LIBOR plus 1.5% per annum and remain outstanding throughout the term of the agreement, subject to the Company maintaining sufficient eligible receivables, by continuing to contribute trade receivables to P&L Receivables, unless an event of default occurs.

At December 31, 2021, the Company had no outstanding borrowings and \$143.9 million of letters of credit issued under the Securitization Program. The letters of credit were primarily in support of reclamation obligations. Availability under the Securitization Program, which is adjusted for certain ineligible receivables, was \$26.3 million at December 31, 2021. The Company was not required to post cash collateral under the Securitization Program at either December 31, 2021 or 2020.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The Company incurred interest and fees associated with the Securitization Program of \$2.9 million, \$2.6 million and \$3.3 million during the years ended December 31, 2021, 2020 and 2019, respectively, which have been recorded as "Interest expense" in the accompanying statements of operations.

Collateralized Letter of Credit Agreement

In February 2022, the Company entered into a new agreement, which provides up to \$250.0 million of capacity for irrevocable standby letters of credit in support of reclamation bonding. The agreement requires the Company to provide cash collateral at a level of 103% of the aggregate amount of letters of credit outstanding under the arrangement (limited to \$5.0 million total excess collateralization.) Outstanding letters of credit bear a fixed fee in the amount of 0.75% per annum. The Company receives a deposit rate of 0.25% per annum on the amount of cash collateral posted in support of letters of credit, with the rate subject to increases over time. The agreement has an initial expiration date of December 31, 2025.

Cash Collateral Arrangements and Restricted Cash

From time to time, the Company is required to remit cash to certain regulatory authorities and other third parties as collateral for financial assurances associated with a variety of long-term obligations and commitments surrounding employee related matters and the mining, reclamation and shipping of its production. The Company had no such cash collateral or restricted cash requirements as of December 31, 2021, 2020, and 2019.

Other

The Company is the lessee under numerous equipment and property leases. It is common in such commercial lease transactions for the Company, as the lessee, to agree to indemnify the lessor for the value of the property or equipment leased, should the property be damaged or lost during the course of the Company's operations. The Company expects that losses with respect to leased property, if any, may be covered by insurance (subject to deductibles). The Company and certain of its subsidiaries have guaranteed other subsidiaries' performance under various lease obligations. Aside from indemnification of the lessor for the value of the property leased, the Company's maximum potential obligations under its leases are equal to the respective future minimum lease payments, and the Company assumes that no amounts could be recovered from third parties. In this regard, the Company recorded a provision of \$0.3 million during the year ended December 31, 2019, for the loss of leased equipment at the North Goonyella Mine as described in Note 19. "Other Events."

Substantially all of the Company's U.S. subsidiaries provide financial guarantees under long-term debt agreements entered into by the Company. The maximum amounts payable under the Company's debt agreements are equal to the respective principal and interest payments.

(23) Commitments and Contingencies

Commitments

Unconditional Purchase Obligations

As of December 31, 2021, purchase commitments for capital expenditures were \$32.9 million, all of which is obligated within the next four years, with \$24.9 million obligated within the next 12 months.

In Australia, the Company has generally secured the ability to transport coal through rail contracts and ownership interests in five east coast coal export terminals that are primarily funded through take-or-pay arrangements with terms ranging up to 21 years. In the U.S., the Company has entered into certain long-term coal export terminal agreements to secure export capacity through the Gulf Coast. As of December 31, 2021, these Australian and U.S. commitments under take-or-pay arrangements totaled \$1.2 billion, of which approximately \$83 million is obligated within the next year.

Contingencies

From time to time, the Company or its subsidiaries are involved in legal proceedings arising in the ordinary course of business or related to indemnities or historical operations. The Company believes it has recorded adequate reserves for these liabilities. The Company discusses its significant legal proceedings below, including ongoing proceedings and those that impacted the Company's results of operations for the periods presented.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Litigation Relating to Continuing Operations

Securities Class Action. On September 28, 2020, the Oklahoma Firefighters Pension and Retirement System brought a lawsuit, styled *In Re Peabody Energy Corporation Securities Litigation* No. 1:20-cv-08024 (PKC), against the Company and certain of its officers in the U.S. District Court for the Southern District of New York (the Court) on behalf of a putative class of shareholders (Plaintiffs) who held Company stock between April 3, 2017 and October 28, 2019, for alleged violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 and Rule 10b-5 promulgated thereunder (Securities Class Action). Plaintiffs allege that the defendants made false or misleading statements and/or failed to disclose certain adverse facts pertaining to safety practices at the Company's North Goonyella Mine and the events leading up to a fire at the mine, and that, after a September 28, 2018 fire at the mine, made false or misleading statements and/or failed to disclose certain adverse facts pertaining to the feasibility of the Company's plan to restart the mine after the fire. The Company believes the lawsuit lacks merit and intends to vigorously defend against the allegations. On January 12, 2021, the Court appointed the Oregon Public Employees Retirement Fund as lead plaintiff. On January 25, 2021, the Court entered a scheduling order for this matter. Plaintiffs filed their amended complaint on March 19, 2021. The defendants filed a pre-motion letter on April 30, 2021 while the Plaintiffs' response letter was filed on May 6, 2021. The defendants filed their motion to dismiss on June 7, 2021. The Plaintiffs' opposition brief to the motion to dismiss was filed on July 22, 2021. The defendants filed their reply to Plaintiff's opposition on August 23, 2021, completing briefing at this phase of the litigation.

Derivative Actions. On December 22, 2020, a plaintiff (Phelps), putatively on behalf of the Company, brought a shareholder derivative lawsuit, styled *Phelps v. Samantha Algaze, et al.*, Case No. 1:20-cv-01747-UNA (D. Del. filed Dec. 22, 2020), in the U.S. District Court for the District of Delaware against certain directors and former officers of the Company, as defendants. The Company was also named as a nominal defendant. The plaintiff did not make a demand on the Company's board before instituting the lawsuit and alleges such demand would have been futile. In the complaint, the plaintiff alleges that the defendants failed to disclose adverse facts relating to the safety practices at the Company's North Goonyella Mine, thereby leading to a September 28, 2018 fire, and allegedly failed to disclose adverse facts pertaining to the feasibility of reopening the mine. The derivative complaint alleges (i) contribution against certain current and former officers for securities fraud based on the Securities Class Action, and against all defendants, (ii) breach of fiduciary duties, (iii) waste of corporate assets for causing the Company to incur legal liability and (iv) unjust enrichment.

On February 10, 2021, a second plaintiff (Di Fusco), putatively on behalf of the Company, filed a similar shareholder derivative lawsuit, styled *Di Fusco v. Glenn Kellow, et al.*, Case No. 1:21-cv-00183-UNA (D. Del. filed Feb. 10, 2021), in the U.S. District Court for the District of Delaware against the directors and current and former officers of the Company, as defendants. The Company was named as a nominal defendant. This suit makes claims similar to those made in the Phelps matter, but asserts a claim for alleged misstatements in a proxy statement under Section 14(a) of the Securities and Exchange Act of 1934. In late March 2021, the parties filed a stipulation agreeing to consolidate and stay both derivative actions for judicial efficiency and cost until the Court rules on the motion to dismiss in the Securities Class Action. The Company also believes that the derivative actions lack merit and intends to vigorously defend against the allegations.

Other

At times, the Company becomes a party to other disputes, including those related to contract miner performance, claims, lawsuits, arbitration proceedings, regulatory investigations and administrative procedures in the ordinary course of business in the U.S., Australia and other countries where the Company does business. Based on current information, the Company believes that such other pending or threatened proceedings are likely to be resolved without a material adverse effect on its financial condition, results of operations or cash flows. The Company reassesses the probability and estimability of contingent losses as new information becomes available.

(24) Segment and Geographic Information

The Company reports its results of operations primarily through the following reportable segments: Seaborne Thermal Mining, Seaborne Metallurgical Mining, Powder River Basin Mining, Other U.S. Thermal Mining and Corporate and Other.

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The business of the Company's seaborne operating platform is primarily export focused with customers spread across several countries, with a portion of its thermal and metallurgical coal sold within Australia. Generally, revenues from individual countries vary year by year based on electricity and steel demand, the strength of the global economy, governmental policies and several other factors, including those specific to each country. The Company classifies its seaborne mines within the Seaborne Thermal Mining or Seaborne Metallurgical Mining segments based on the primary customer base and coal reserve type of each mining operation. A small portion of the coal mined by the Seaborne Thermal Mining segment is of a metallurgical grade. Similarly, a small portion of the coal mined by the Seaborne Metallurgical Mining segment is of a thermal grade. Additionally, the Company may market some of its metallurgical coal products as a thermal coal product from time to time depending on market conditions.

The Company's Seaborne Thermal Mining operations consist of mines in New South Wales, Australia. The mines in that segment utilize both surface and underground extraction processes to mine low-sulfur, high Btu thermal coal.

The Company's Seaborne Metallurgical Mining operations consist of mines in Queensland, Australia, one in New South Wales, Australia and one in Alabama, USA. The mines in that segment utilize both surface and underground extraction processes to mine various qualities of metallurgical coal. The metallurgical coal qualities include hard coking coal, semi-hard coking coal, semi-soft coking coal and pulverized coal injection coal.

The principal business of the Company's thermal mining segments in the U.S. is the mining, preparation and sale of thermal coal, sold primarily to electric utilities in the U.S. under long-term contracts, with a relatively small portion sold as international exports as conditions warrant. The Company's Powder River Basin Mining operations consist of its mines in Wyoming. The mines in that segment are characterized by surface mining extraction processes, coal with a lower sulfur content and Btu and higher customer transportation costs (due to longer shipping distances). The Company's Other U.S. Thermal Mining operations historically reflect the aggregation of its Illinois, Indiana, New Mexico, Colorado and Arizona mining operations. The mines in that segment are characterized by a mix of surface and underground mining extraction processes, coal with a higher sulfur content and Btu and lower customer transportation costs (due to shorter shipping distances). Geologically, the Company's Powder River Basin Mining operations mine sub-bituminous coal deposits and its Other U.S. Thermal Mining operations mine both bituminous and sub-bituminous coal deposits.

The Company's Corporate and Other segment includes selling and administrative expenses, results from equity affiliates, corporate hedging activities, trading and brokerage activities, minimum charges on certain transportation-related contracts, the closure of inactive mining sites and certain commercial matters.

The Company's chief operating decision maker (CODM) uses Adjusted EBITDA as the primary metric to measure the segments' operating performance. Adjusted EBITDA is a non-GAAP financial measure defined as income (loss) from continuing operations before deducting net interest expense, income taxes, asset retirement obligation expenses and depreciation, depletion and amortization. Adjusted EBITDA is also adjusted for the discrete items that management excluded in analyzing the segments' operating performance, as displayed in the reconciliation below. Management believes non-GAAP performance measures are used by investors to measure the Company's operating performance and lenders to measure the Company's ability to incur and service debt. Adjusted EBITDA is not intended to serve as an alternative to U.S. GAAP measures of performance and may not be comparable to similarly-titled measures presented by other companies.

Segment results for the year ended December 31, 2021 were as follows:

	Seaborne Thermal Mining	Seaborne Metallurgical Mining	Powder River Basin Mining	Other U.S. Thermal Mining	Corporate and Other	Consolidated
	(Dollars in millions)					
Revenues	\$ 934.0	\$ 727.7	\$ 971.2	\$ 689.1	\$ (3.7)	\$ 3,318.3
Adjusted EBITDA	353.1	178.2	134.9	164.2	86.3	916.7
Additions to property, plant, equipment and mine development	88.6	25.1	41.4	24.2	3.8	183.1
Income from equity affiliates	—	—	—	—	(82.1)	(82.1)

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Segment results for the year ended December 31, 2020 were as follows:

	Seaborne Thermal Mining	Seaborne Metallurgical Mining	Powder River Basin Mining	Other U.S. Thermal Mining	Corporate and Other	Consolidated
	(Dollars in millions)					
Revenues	\$ 711.8	\$ 486.5	\$ 991.1	\$ 707.3	\$ (15.6)	\$ 2,881.1
Adjusted EBITDA	163.2	(130.2)	194.8	168.4	(137.4)	258.8
Additions to property, plant, equipment and mine development	100.7	50.8	13.2	23.3	3.4	191.4
Loss from equity affiliates	—	—	—	—	60.1	60.1

Segment results for the year ended December 31, 2019 were as follows:

	Seaborne Thermal Mining	Seaborne Metallurgical Mining	Powder River Basin Mining	Other U.S. Thermal Mining	Corporate and Other	Consolidated
	(Dollars in millions)					
Revenues	\$ 971.7	\$ 1,033.1	\$ 1,228.7	\$ 1,309.4	\$ 80.5	\$ 4,623.4
Adjusted EBITDA	329.4	140.2	221.2	361.4	(169.2)	883.0
Additions to property, plant, equipment and mine development	42.1	143.4	42.8	54.0	3.1	285.4
Income from equity affiliates	—	—	—	—	(3.4)	(3.4)

Asset details are reflected at the division level only for the Company's mining segments and are not allocated between each individual segment as such information is not regularly reviewed by the Company's CODM. Further, some assets service more than one segment within the division and an allocation of such assets would not be meaningful or representative on a segment by segment basis. Assets related to closed, suspended or otherwise inactive mines are included within the Corporate and Other category.

Assets as of December 31, 2021 were as follows:

	Seaborne Mining	U.S. Thermal Mining	Corporate and Other	Consolidated
	(Dollars in millions)			
Total assets	\$ 1,669.6	\$ 1,318.5	\$ 1,961.7	\$ 4,949.8
Property, plant, equipment and mine development, net	1,298.8	1,209.5	442.3	2,950.6
Operating lease right-of-use assets	19.2	3.3	13.0	35.5

Assets as of December 31, 2020 were as follows:

	Seaborne Mining	U.S. Thermal Mining	Corporate and Other	Consolidated
	(Dollars in millions)			
Total assets	\$ 1,763.0	\$ 1,345.3	\$ 1,558.8	\$ 4,667.1
Property, plant, equipment and mine development, net	1,347.3	1,258.8	445.0	3,051.1
Operating lease right-of-use assets	30.8	3.5	15.6	49.9

Assets as of December 31, 2019 were as follows:

	Seaborne Mining	U.S. Thermal Mining	Corporate and Other	Consolidated
	(Dollars in millions)			
Total assets	\$ 2,001.3	\$ 3,044.8	\$ 1,496.7	\$ 6,542.8
Property, plant, equipment and mine development, net	1,610.9	2,776.9	291.3	4,679.1
Operating lease right-of-use assets	32.1	30.3	20.0	82.4

PEABODY ENERGY CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

A reconciliation of consolidated income (loss) from continuing operations, net of income taxes to Adjusted EBITDA follows:

	Year Ended December 31,		
	2021	2020	2019
	(Dollars in millions)		
Income (loss) from continuing operations, net of income taxes	\$ 347.4	\$ (1,859.8)	\$ (188.3)
Depreciation, depletion and amortization	308.7	346.0	601.0
Asset retirement obligation expenses	44.7	45.7	58.4
Restructuring charges	8.3	37.9	24.3
Transaction costs related to joint ventures	—	23.1	21.6
Gain on formation of United Wambo Joint Venture	—	—	(48.1)
Asset impairment	—	1,487.4	270.2
Provision for North Goonyella equipment loss	—	—	83.2
North Goonyella insurance recovery - equipment ⁽¹⁾	—	—	(91.1)
Changes in deferred tax asset valuation allowance and reserves and amortization of basis difference related to equity affiliates	(33.8)	30.9	(18.8)
Interest expense	183.4	139.8	144.0
Net (gain) loss on early debt extinguishment	(33.2)	—	0.2
Interest income	(6.5)	(9.4)	(27.0)
Net mark-to-market adjustment on actuarially determined liabilities	(43.4)	(5.1)	67.4
Unrealized losses (gains) on derivative contracts related to forecasted sales	115.1	29.6	(42.2)
Unrealized losses (gains) on foreign currency option contracts	7.5	(7.1)	(1.2)
Take-or-pay contract-based intangible recognition	(4.3)	(8.2)	(16.6)
Income tax provision	22.8	8.0	46.0
Total Adjusted EBITDA	\$ 916.7	\$ 258.8	\$ 883.0

⁽¹⁾ As described in Note 19, "Other Events," the Company recorded a \$125.0 million insurance recovery during the year ended December 31, 2019 related to losses incurred at its North Goonyella Mine. Of this amount, Adjusted EBITDA excludes an allocated amount applicable to total equipment losses recognized at the time of the insurance recovery settlement, which consisted of \$24.7 million and \$66.4 million recognized during the years ended December 31, 2019 and 2018, respectively. The remaining \$33.9 million, applicable to incremental costs and business interruption losses, is included in Adjusted EBITDA for the year ended December 31, 2019.

The following table presents revenues as a percent of total revenue from external customers by geographic region:

	Year Ended December 31,		
	2021	2020	2019
U.S.	45.5 %	56.2 %	53.6 %
Taiwan	14.4 %	7.7 %	6.0 %
Japan	14.2 %	13.3 %	15.4 %
Australia	7.7 %	6.9 %	5.8 %
India	5.4 %	2.6 %	1.2 %
Indonesia	3.0 %	0.2 %	0.5 %
Vietnam	2.0 %	2.4 %	2.0 %
South Korea	1.4 %	0.8 %	2.9 %
China	— %	3.8 %	3.8 %
Other	6.4 %	6.1 %	8.8 %
Total	100.0 %	100.0 %	100.0 %

The Company attributes revenue to individual countries based on the location of the physical delivery of the coal.

PEABODY ENERGY CORPORATION
SCHEDULE II — VALUATION AND QUALIFYING ACCOUNTS

Description	Balance at Beginning of Period	Charged to Costs and Expenses	Deductions ⁽¹⁾	Other	Balance at End of Period
(Dollars in millions)					
Year Ended December 31, 2021					
Reserves deducted from asset accounts:					
Advance royalty recoupment reserve	\$ 0.3	\$ —	\$ —	\$ —	\$ 0.3
Reserve for materials and supplies	10.4	0.6	(2.0)	—	9.0
Tax valuation allowances	2,287.3	(121.7)	—	(44.8)	2,120.8
Year Ended December 31, 2020					
Reserves deducted from asset accounts:					
Advance royalty recoupment reserve	\$ 0.3	\$ —	\$ —	\$ —	\$ 0.3
Reserve for materials and supplies	7.9	3.5	(1.0)	—	10.4
Tax valuation allowances	2,068.4	373.2	—	(154.3) ⁽²⁾	2,287.3
Year Ended December 31, 2019					
Reserves deducted from asset accounts:					
Advance royalty recoupment reserve	\$ 0.3	\$ —	\$ —	\$ —	\$ 0.3
Reserve for materials and supplies	0.2	8.9	(1.2)	—	7.9
Allowance for credit losses	4.4	(4.4)	—	—	—
Tax valuation allowances	2,094.3	(29.8)	—	3.9	2,068.4

⁽¹⁾ Reserves utilized, unless otherwise indicated.

⁽²⁾ Includes the impact of a decrease in Australia NOLs due to a cancellation of intercompany debt, partially offset by the impact of the increase in the Australian dollar exchange rates.

SERVICE-BASED CASH AWARD AGREEMENT

THIS SERVICE-BASED CASH AWARD AGREEMENT (the "Agreement"), effective January [], 2022 (the "Agreement Date"), is made by and between PEABODY ENERGY CORPORATION, a Delaware corporation (the "Company"), and the undersigned employee of the Company or a Subsidiary who accepts this Agreement in the Plan's online administration site using the Company's online acceptance procedures (the "Grantee"). The grant date for this Cash Award is January [], 2022 (the "Grant Date").

WHEREAS, the Committee has determined that, subject to the provisions of this Agreement, it would be to the advantage and best interest of the Company and its stockholders to grant the opportunity to earn the service-based cash award provided for herein to the Grantee as an incentive for his or her efforts during his or her service with the Company or its Subsidiaries, and has advised the Company thereof and instructed the undersigned officer to enter into this Agreement to evidence this Cash Award opportunity;

WHEREAS, the Company deems it essential to the protection of its confidential information and competitive standing in its market to have its officers and executives have reasonable restrictive covenants in place;

WHEREAS, Grantee agrees and acknowledges that the Company has a legitimate interest to protect its confidential information and competitive standing; and

WHEREAS, the Company deems it essential to the optimal functioning of its business to have its officers and executives provide advance notice to the Company of their termination of employment.

NOW, THEREFORE, in consideration of the mutual covenants herein contained and other good and valuable consideration, receipt of which is hereby acknowledged, the parties hereby agree as follows:

**ARTICLE I.
DEFINITIONS**

Whenever the following terms are used in this Agreement, they shall have the meanings specified below. Capitalized terms not otherwise defined in this Agreement shall have the meanings specified in the Plan.

Section 1.1- "Board" means the Board of Directors of the Company.

Section 1.2- "Cash Award" shall mean the service-based cash award opportunity provided by the Company to the Grantee as evidenced by this Agreement.

Section 1.3- "Cause" shall mean (a) "Cause" as defined in the Grantee's employment agreement with the Company, if any; or (b) if the Grantee does not have an employment agreement with the Company or such agreement does not define "Cause," then: (i) any willful fraud,

dishonesty or misconduct of the Grantee that can reasonably be expected to have a detrimental effect on (A) the reputation or business of the Company or any of its subsidiaries or affiliates or (B) the Grantee's reputation or performance of his or her duties to the Company or any of its subsidiaries or affiliates; (ii) willful refusal or failure of the Grantee to comply with the Company's Code of Business Conduct and Ethics, the Company's Anti-Corruption and Bribery policy or any other material corporate policy of the Company; (iii) the Grantee's willful or repeated failure to meet documented performance objectives or to perform his or her duties or to follow reasonable and lawful directives of his or her manager (other than due to death or Disability); (iv) the Grantee's conviction of, or plea of nolo contendere to (A) any felony, or (B) any other criminal charge that may reasonably be expected to have a material detrimental effect on the reputation or business of the Company or any of its subsidiaries or affiliates; or (v) the Grantee's willful failure to cooperate with a bona fide internal investigation or an investigation by regulatory or law enforcement authorities, whether or not related to the Grantee's employment with the Company, after being instructed to cooperate by the Chairman of the Board and/or Company's Chief Executive Officer or by the Board, or the willful destruction of or willful failure to preserve documents or other material known to be relevant to any such investigation; provided, that with respect to clause (ii) or (iii) above, the Grantee shall have 15 business days following written notice of the conduct which is the basis for the potential termination for "Cause" within which to cure such conduct, to the extent it can be cured, to prevent termination for "Cause" by the Company, and if the Grantee cures the conduct that is the basis for the potential termination for "Cause" within such period, the Company's notice of termination shall be deemed withdrawn.

Section 1.4- "Change in Control" shall mean the occurrence of any one or more of the following: (a) any corporation, person or other entity (other than the Company, a majority-owned subsidiary of the Company or any of its Subsidiaries, or an employee benefit plan (or related trust) sponsored or maintained by the Company or any of its Subsidiaries), including a "group" as defined in Section 13(d)(3) of the Securities Exchange Act of 1934, as amended, becomes the beneficial owner of stock representing more than fifty percent (50%) of the combined voting power of the Company's then outstanding securities; (b) there is consummated (i) a merger, consolidation, plan of arrangement, reorganization or similar transaction or series of transactions in which the Company is involved, other than such a transaction or series of transactions which would result in the shareholders of the Company immediately prior thereto continuing to own (either by remaining outstanding or by being converted into voting securities of the surviving entity) more than fifty percent (50%) of the combined voting power of the securities of the Company or such surviving entity (or the parent, if any) outstanding immediately after such transaction(s) in substantially the same proportions as their ownership immediately prior to such transaction(s); (ii) a sale or other disposition of all or substantially all of the Company's assets; or (iii) approval by the Company's shareholders of a plan of liquidation of the Company; or (c) within any period of 24 consecutive months, persons who were members of the Board immediately prior to such 24-month period, together with persons who were first elected as directors (other than as a result of any settlement of a proxy or consent solicitation contest or any action taken to avoid such a contest) during such 24-month period by or upon the recommendation of persons who were members of the Board immediately prior to such 24-month period and who constituted a majority of the Board at the time of such election, cease to constitute a majority of the Board; provided, however, that to the extent this Cash Award is subject to liability under Code Section 409A and does not qualify for an exemption from Code Section 409A coverage, a Change in Control shall include any event or series of events described in the foregoing provisions of this Section 1.4, but

only to the extent such event or series of events also constitutes a “change of control event” (as described in Treasury Regulation Section 1.409A-3(i)(5)(i)) with respect to the Company.

Section 1.5- “Code” shall mean the Internal Revenue Code of 1986 (and any successor thereto), as amended from time to time. References to a particular section of the Code include references to regulations and rulings thereunder and to successor provisions.

Section 1.6- “Committee” shall mean the Compensation Committee of the Board.

Section 1.7- “Disability” shall mean a mental or physical illness that entitles the Grantee to receive benefits under the long-term disability plan of the Company or any Subsidiary, or if the Grantee is not covered by such a plan or the Grantee is not an employee of the Company or any Subsidiary, a mental or physical illness that renders a Grantee totally and permanently incapable of performing the Grantee’s duties for the Company or a Subsidiary. Notwithstanding the foregoing: (a) a Disability shall not qualify if it is the result of (i) a willfully self-inflicted injury or willfully self-induced sickness; or (ii) an injury or disease contracted, suffered, or incurred while participating in a felony criminal offense; and (b) with respect to this Cash Award if it is subject to liability under Code Section 409A and does not qualify for an exemption from Code Section 409A coverage, Disability shall mean a Grantee’s inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than 12 months.

Section 1.8- “Good Reason” shall mean (a) “Good Reason” as defined in the Grantee’s employment agreement with the Company, if any; or (b) if the Grantee does not have an employment agreement with the Company or such agreement does not define Good Reason, then: (i) a reduction, other than a reduction that generally affects all similarly-situated executives and does not exceed 10% in one year or 20% in the aggregate over three consecutive years, by the Company in the Grantee’s base salary from that in effect immediately prior to the reduction; (ii) a material reduction, other than a reduction that generally affects all similarly-situated executives, by the Company in the Grantee’s target or maximum annual cash incentive award opportunity or target or maximum annual equity-based compensation award opportunity from those in effect immediately prior to any such reduction; (iii) relocation, other than through mutual agreement in writing between the Company and the Grantee or a secondment or temporary relocation for a reasonably finite period of time, of the Grantee’s primary office by more than 50 miles from the location of the Grantee’s primary office as of the Agreement Date; or (iv) any material diminution or material adverse change in the Grantee’s duties or responsibilities as they exist as of the Agreement Date (other than any diminution or change during a period of mental or physical incapacity); provided, that (x) if the Grantee terminates Grantee’s employment for “Good Reason,” the Grantee shall provide written notice to the Company at least 30 days in advance of the date of termination, such notice shall describe the conduct the Grantee believes to constitute “Good Reason” and the Company shall have the opportunity to cure the “Good Reason” within 30 days after receiving such notice, (y) if the Company cures the conduct that is the basis for the potential termination for “Good Reason” within such 30-day period, the Grantee’s notice of termination shall be deemed withdrawn and (z) if the Grantee does not give notice to the Company as described in this Section 1.8 within 90 days after an event giving rise to “Good Reason,” the Grantee’s right to claim “Good Reason” termination on the basis of such event shall be deemed waived.

Section 1.9- "Person" shall mean any individual, sole proprietorship, corporation, partnership, joint venture, limited liability company, association, joint-stock company, trust, unincorporated organization, institution, public benefit corporation, entity or government instrumentality, division, agency, body or department.

Section 1.10- "Plan" shall mean the Peabody Energy Corporation 2017 Incentive Plan, as in effect on the Agreement Date.

Section 1.11- "Retirement" shall mean a Termination of Service on or after age sixty-five (65) or age sixty (60) with at least five (5) years of service with the Company.

Section 1.12- "Section 409A" shall mean Section 409A of the Code and the applicable regulations or other guidance issued thereunder.

Section 1.13- "Subsidiary" shall mean any Person that directly, or through one (1) or more intermediaries, is controlled by the Company and that would be treated as a single employer with the Company under Sections 414(b) and 414(c) of the Code if the language "at least 50 percent" is used instead of "at least 80 percent" each place it appears in Code Sections 1563(a)(1), (2) and (3) and Treasury Regulation Section 1.414(c)-2.

Section 1.14- "Termination of Service" occurs (a) on the first day on which an individual is for any reason no longer providing services to the Company or a Subsidiary in the capacity of an employee, director or consultant or (b) with respect to an individual who is an employee or consultant to a Subsidiary, the first day on which such entity ceases to be a Subsidiary of the Company and such individual is no longer providing services to the Company or another Subsidiary; provided, that the Committee shall have the discretion to determine when a Grantee, who terminates services as an employee, but continues to provide services in the capacity of a consultant immediately following such termination, has incurred a Termination of Service. Notwithstanding the foregoing, in the case of this Cash Award if it is subject to liability under Code Section 409A and does not qualify for an exemption from Code Section 409A coverage, a Termination of Service shall only occur at the time of the Grantee's "separation from service" with the Company within the meaning of Code Section 409A or as otherwise set forth in this Agreement or a deferral election form.

ARTICLE II. GRANT OF CASH AWARD

Section 2.1- Grant of Cash Award. The Company has granted to the Grantee on the Grant Date this Cash Award with respect to the cash amount set forth on the signature page hereto. The grant of the Cash Award has been made in consideration of the services to be rendered by the Grantee to the Company and its Subsidiaries or affiliates and the Grantee's obligations under the Restrictive Covenant Agreement (as referenced in Article V).

Section 2.2- No Obligation of Employment. Nothing in this Agreement shall confer upon the Grantee any right to continue in the employ of the Company, or any Subsidiary or affiliate, or interfere with or restrict in any way the rights of the Company and its Subsidiaries or affiliates, which are hereby expressly reserved, to terminate the employment of the Grantee at any time for any reason whatsoever, with or without Cause.

Section 2.3- Change in Control. In order to maintain Grantee's rights with respect to the Cash Award evidenced hereby, upon the occurrence of a Change in Control, the Committee may take any actions with respect to the Cash Award or make any modifications to the Cash Award as it deems appropriate to reflect such Change in Control; provided that no such action or modification results in a violation of Section 409A.

ARTICLE III. VESTING OF CASH AWARD

Section 3.1- Vesting.

(a) Retirement-Eligible Grantee. If the Grantee is eligible for Retirement as of the Grant Date, the Cash Award shall vest in substantially equal installments on each of the quarterly anniversaries of the Grant Date during the period beginning on the Grant Date and ending on the second anniversary of the Grant Date.

(b) Non-Retirement-Eligible Grantee. If the Grantee is not eligible for Retirement as of the Grant Date, then, except as provided in Section 3.1(c) hereof, the Cash Award shall vest in two substantially equal installments on the first two annual anniversaries of the Grant Date during the period beginning on the Grant Date and ending on the second anniversary of the Grant Date.

(c) Special Rule. In the event the Grantee becomes eligible for Retirement after the Grant Date, the provisions of Section 3.1(a) above shall apply on and after the date the Grantee becomes eligible for Retirement. However, on the first quarterly anniversary of the Grant Date following the date on which the Grantee becomes eligible for Retirement, a portion of the Cash Award shall immediately vest. Such vesting portion shall equal the result of the following formula: $X \text{ multiplied by } (Y/4)$, where "X" is equal to one-half of the aggregate value of the Cash Award (as set forth on the signature page hereto), and "Y" is equal to the number of full calendar quarters that have elapsed between the most recent annual anniversary of the Grant Date and the then current quarterly anniversary of the Grant Date.

Section 3.2- Acceleration Events. Notwithstanding Section 3.1 hereof, the Cash Award shall become fully vested and non-forfeitable upon (a) a Termination of Service within two years following a Change in Control, provided such Termination of Employment is by the Company without Cause or by the Grantee for Good Reason; or (b) the Grantee's death or Disability (each, an "Acceleration Event") (provided, that no payment of the Cash Award shall be accelerated to the extent such payment would cause the Cash Award to be subject to the adverse consequences described in Code Section 409A).

Section 3.3- Effect of Termination of Service. Except as provided in Section 3.2, no portion of the Cash Award shall become vested and non-forfeitable following Termination of Service, and any such non-vested and forfeitable portion of the Cash Award shall be immediately and automatically forfeited upon Termination of Service.

**ARTICLE IV.
SETTLEMENT OF CASH AWARD**

Section 4.1- Calculation of Settlement Amount. Subject to any withholding obligations described in Section 6.3, as soon as administratively feasible following the first to occur of (a) each of the first two anniversaries of the Grant Date or (b) the date an Acceleration Event occurs (each such date, a "Computation Date"), and in no event later than 60 days following the applicable Computation Date, the Company shall, subject to Article V, pay to the Grantee the amount of cash equal to such vested portion of the Cash Award to the extent it has not yet been paid. Notwithstanding the foregoing or anything else in this Agreement to the contrary, if any payment hereunder is triggered by a Termination of Service of the Grantee (other than due to the Grantee's death) and the Grantee is a "specified employee" (as such term is defined in Section 409A and using the identification methodology selected by the Company from time to time), the applicable portion of the Cash Award shall, subject to Article V and any withholding obligations described in Section 6.3, be paid to the Grantee, without interest, on the first day of the seventh month after such Termination of Service.

Section 4.2- Forfeiture of Unvested Portion of Cash Award. To the extent that the Grantee does not vest in a portion of the Cash Award, all interest in such portion of the Cash Award shall be forfeited upon the Grantee's Termination of Service. The Grantee has no right or interest in any portion of the Cash Award that is forfeited.

**ARTICLE V.
CONDITION TO GRANT OF CASH AWARD; OTHER PROVISIONS**

Section 5.1- Restrictive Covenant Agreement. The Grantee shall not be entitled to receive the Cash Award unless the Grantee shall have executed and delivered the Restrictive Covenant Agreement, substantially in the form attached hereto as Exhibit A, and such shall be in full force and effect. Nothing in this Agreement or Restrictive Covenant Agreement prevents the Grantee from providing, without prior notice to the Company, information to governmental authorities regarding possible legal violations or otherwise testifying or participating in any investigation or proceeding by any governmental authorities regarding possible legal violations, and for purpose of clarity the Grantee is not prohibited from providing information voluntarily to the Securities and Exchange Commission pursuant to Section 21F of the Exchange Act.

Section 5.2- Notice Period. The Grantee may terminate the Grantee's employment with the Company or a Subsidiary at any time for any reason by delivery of notice to the Company at least 90 days in advance of the date of termination (the "Notice Period"); provided, however, that no communication, statement or announcement shall be considered to constitute such notice of termination of Grantee's employment unless it complies with Section 6.5 hereof and specifically recites that it is a notice of termination of employment for purposes of this Agreement; and provided, further, that the Company may waive any or all of the Notice Period, in which case Grantee's employment with the Company will terminate on the date determined by the Company.

Section 5.3- Breach of Restrictive Covenant Agreement or Section 5.2. If Grantee materially breaches any provision of the Restrictive Covenant Agreement or Section 5.2 hereof, the Company may, among other available remedies, determine that Grantee (a) will forfeit any

unpaid portion of the Cash Award and (b) will repay to the Company any portion of the Cash Award previously paid to Grantee.

ARTICLE VI. MISCELLANEOUS

Section 6.1- Administration. The Committee has the power to interpret the Cash Award and this Agreement. All actions taken and all interpretations and determinations made by the Committee shall be final and binding upon the Grantee, the Company and all other interested persons. No member of the Committee shall be personally liable for any action, determination or interpretation made in good faith with respect to the Cash Award. In its absolute discretion, the Board may at any time and from time to time exercise any and all rights and duties of the Committee under this Agreement.

Section 6.2- Cash Award Not Transferable. Neither the Cash Award nor any interest or right therein or part thereof shall be liable for the debts, contracts or engagements of the Grantee or his or her successors in interest or shall be subject to disposition by transfer, alienation, anticipation, pledge, encumbrance, assignment or any other means whether such disposition is voluntary or involuntary or by operation of law by judgment, levy, attachment, garnishment or any other legal or equitable proceedings (including bankruptcy), and any attempted disposition thereof shall be null and void and of no effect; provided, however, that this Section 6.2 shall not prevent transfers by will or by the applicable laws of descent and distribution.

Section 6.3- Withholding. Unless the Grantee makes alternative arrangements satisfactory to the Company to personally remit required withholding amounts, then, as of the date that all or a portion of the Cash Award becomes paid pursuant to Section 4.1 hereof, the Company shall withhold a portion of the Cash Award so paid as required by law to be withheld by the Company in connection with such payment for applicable federal, state, local and foreign taxes of any kind. To the extent taxes are to be withheld upon vesting for purposes of federal FICA, FUTA or Medicare taxes, such withholding shall be taken from other income owed by the Company to the Grantee and the Grantee hereby agrees to such withholding. For all purposes, the amount withheld by the Company pursuant to this Section 6.3 shall be deemed to have first been paid to the Grantee.

Section 6.4- Section 409A.

(a) To the extent applicable, this Agreement is intended to comply with Section 409A so that the income inclusion provisions of Section 409A(a)(1) of the Code do not apply to Grantee, and this Agreement shall be construed, interpreted and administered in a manner that is consistent with this intent and the requirements for avoiding additional taxes or penalties under Section 409A. Notwithstanding the foregoing, in no event shall the Company be liable for all or any portion of any taxes, penalties, interest or other expenses that may be incurred by the Grantee on account of Section 409A.

(b) Except as permitted under Section 409A, any deferred compensation (within the meaning of Section 409A) payable to a Grantee or for the Grantee's benefit under this Agreement and grants hereunder may not be reduced by, or offset against, any

amount owing by the Grantee to the Company or any of its Subsidiaries. Each installment of the Cash Award that becomes payable hereunder is a “separate payment” for purposes of Section 409A.

(c) In the event that the Company determines that any amounts payable hereunder may be taxable to the Grantee under Section 409A prior to the payment and/or delivery to the Grantee of such amount, the Committee may adopt such amendments to the Agreement, and appropriate policies and procedures, including amendments and policies with retroactive effect, that the Committee determines necessary or appropriate to preserve the intended tax treatment of the benefits provided by the Cash Award and this Agreement.

(d) Notwithstanding any provision of this Agreement to the contrary, in light of the uncertainty with respect to the proper application of Section 409A, the Company reserves the right to make amendments to this Agreement and the terms of the Cash Award as the Company deems necessary or desirable to avoid the imposition of taxes or penalties under Section 409A. In any case, neither the Company nor any of its affiliates will have any obligation to indemnify or otherwise hold the Grantee harmless from any or all of such taxes or penalties.

Section 6.5- Notices. Any notice to be given under the terms of this Agreement to the Company shall be provided to the Chief Administrative Officer and Corporate Secretary, with a copy to the Grantee’s supervisor, and any notice to be given to the Grantee shall be addressed to him or her at the address set forth in the records of the Company. By a notice given pursuant to this Section 6.5, either party may hereafter designate a different address for notices to be given to him, her or it. Any notice which is required to be given to the Grantee shall, if the Grantee is then deceased, be given to the Grantee’s personal representative if such representative has previously informed the Company of his, her or its status and address by written notice under this Section 6.5. Any notice shall be deemed duly given when enclosed in a properly sealed envelope or wrapper addressed as aforesaid, deposited (with postage prepaid) in a post office or branch post office regularly maintained by the United States Postal Service. Notwithstanding the foregoing, any notice required or permitted hereunder from the Company to the Grantee may be made by electronic means, including by electronic mail to the Company-maintained electronic mailbox of the Grantee, and the Grantee hereby consents to receive such notice by electronic delivery. To the extent permitted in an electronically delivered notice described in the previous sentence, the Grantee shall be permitted to respond to such notice or communication by way of a responsive electronic communication, including by electronic mail.

Section 6.6- Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

Section 6.7- Non-Applicability of the Plan. The Cash Award is not granted pursuant to the Plan.

Section 6.8- Pronouns. The masculine pronoun shall include the feminine and neuter, and the singular the plural, where the context so indicates.

Section 6.9- Amendment. The Committee may amend this Agreement at any time, provided that no such amendment shall materially impair the rights of the Grantee unless reflected in a writing executed by the parties hereto that specifically states that it is amending this Agreement.

Section 6.10- Severability. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, and each provision of this Agreement shall be severable and enforceable to the extent permitted by law.

Section 6.11- Dispute Resolution. Any dispute or controversy arising under or in connection with this Agreement shall be resolved by arbitration in St. Louis, Missouri. Arbitrators shall be selected, and arbitration shall be conducted, in accordance with the rules of the American Arbitration Association. The Company shall pay or reimburse any legal fees in connection with such arbitration in the event that the Grantee prevails on a material element of his or her claim or defense. Legal fees eligible for reimbursement in one year under this Section 6.11 shall not affect the legal fees eligible for reimbursements during a subsequent calendar year, payments or reimbursements under this Section 6.11 may not be exchanged or substituted for another form of compensation to the Grantee, and any such reimbursement or payment will be paid within 60 days after the Grantee prevails, but in no event later than the last day of the Grantee's taxable year following the taxable year in which he incurred the expense giving rise to such reimbursement or payment. This Section 6.11 shall remain in effect throughout the Grantee's employment with the Company and for a period of five years following the Grantee's Termination of Service.

Section 6.12- Governing Law. The laws of the State of Delaware shall govern the interpretation, validity and performance of this Agreement regardless of the law that might be applied under principles of conflicts of laws.

Section 6.13- Successors. All obligations of the Company under this Agreement with respect to the Cash Award shall be binding on any successor to the Company, whether the existence of such successor is the result of a direct or indirect purchase, merger, consolidation, or otherwise, of all or substantially all of the business and/or assets of the Company.

Section 6.14- Cash Award Not Taken Into Account for Other Benefits. The Cash Award shall be a special incentive payment to the Grantee and shall not be taken into account in computing the amount of salary or compensation of the Grantee for purposes of determining any pension, retirement, death or other benefit under (a) any pension, retirement, profit-sharing, bonus, insurance or other employee benefit plan of the Company or its Subsidiaries, except as such plan shall otherwise expressly provide, or (b) any agreement between the Company or its Subsidiaries and the Grantee, except as such agreement shall otherwise expressly provide.

Section 6.15- Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original but all of which together will constitute one and the same instrument. Counterpart signatures to this Agreement transmitted by facsimile, electronic mail, or by any other electronic means intended to preserve the original graphic and pictorial appearance of a document, will have the same effect as physical delivery of the paper document bearing an original signature.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, this Agreement has been executed and delivered by the parties hereto.

PEABODY ENERGY CORPORATION

Scott T. Jarboe
Chief Administrative Officer &
Corporate Secretary

Note: Grantee is deemed to have executed this Agreement upon clicking “Accept” in the Plan’s online administration site.

EXHIBIT A

RESTRICTIVE COVENANT AGREEMENT

THIS RESTRICTIVE COVENANT AGREEMENT (the “RCA”) dated January [___], 2022, is by and between PEABODY ENERGY CORPORATION, a Delaware corporation (the “Company”), and (“Grantee”).

WHEREAS, Grantee is a recipient of a 2022 incentive award under the Company’s Peabody Energy Corporation 2017 Incentive Plan, as amended from time to time (the “Plan,” and such award, the “Incentive Award”) and/or a 2022 service-based cash award opportunity from the Company (the “Cash Award”) (the Incentive Award and/or Cash Award referred to herein as the “Award”);

WHEREAS, Grantee acknowledges and agrees that he or she has access to and/or knowledge of certain trade secrets and other Confidential Information regarding the Company;

WHEREAS, the Company has spent and will continue to expend substantial amounts of time, money, and effort to develop its Confidential Information and Grantee acknowledges benefitting from these efforts;

WHEREAS, the Company deems it essential to the protection of its Confidential Information and competitive standing in its market to have recipients of Awards subject to reasonable restrictive covenants;

WHEREAS, Grantee agrees and acknowledges that the Company has a legitimate interest to protect its confidential information and competitive standing; and

NOW THEREFORE, in consideration for the provisions stated below, and intending to be legally bonded thereby, the parties agree as follows.

1. Grantee has been informed and is aware that the execution of this RCA is a necessary term and condition of Grantee’s receipt of the Award.

2. The term “Confidential Information” as used in this RCA shall be broadly interpreted to include, without limitation, materials and information (whether in written, electronic or other form and whether or not identified as confidential at the time of disclosure) concerning technical matters, business matters, business plans, operations, opportunities, plans, processes, procedures, standards, strategies, policies, programs, software, schematics, models, systems, results, studies, analyses, compilations, forecasts, data, figures, projections, estimates, components, records, methods, criteria, designs, quality control, research, samples, work-in-progress, prototypes, data, materials, clients and prospective clients, customer lists, contracts, projects, suppliers, referral sources, sales, marketing, bidding, purchasing, personnel, financial condition, assets, inventory, accounts payable, accounts receivable, tax matters, books of account, financing, collections, intellectual property, trade secrets and all other know-how and information of the Company or any subsidiary of the Company which has not been published or disclosed to the general public.

a. While employed by the Company and at all times thereafter, Grantee will keep Confidential Information, including trade secrets, confidential and shall not, directly or indirectly, use for himself or herself or use for, or disclose to, any party other than the Company, or any subsidiary of the Company (other than in the ordinary course of Grantee's duties for the benefit of the Company or any subsidiary of the Company), any Confidential Information.

b. At the termination of Grantee's employment or at any other reasonable time the Company or any of its subsidiaries may request, Grantee shall promptly deliver to the Company all memoranda, notes, records, plats, sketches, plans or other documents (including, without limitation, any "soft" copies or computerized or electronic versions thereof) containing Confidential Information, including trade secrets or any other information concerning Company's business, including all copies, then in Grantee's possession or under Grantee's control whether prepared by Grantee or others.

c. Notwithstanding the foregoing paragraphs, Company employees, contractors, and consultants may disclose trade secrets in confidence, either directly or indirectly, to a Federal, State or local government official or to an attorney, solely for the purpose of reporting or investigating a suspected violation of law, or in a complaint or other document filed in a lawsuit or other proceeding if such filing is made under seal. Additionally, Company employees, contractors, and consultants who file retaliation suits for reporting a suspected violation of law may disclose related trade secrets to their attorney and use them in related court proceedings, as long as the individual files documents containing the trade secret under seal and does not otherwise disclose the trade secret except pursuant to Court Order.

3. In consideration of the Company's obligations under the Restricted Stock Unit Agreement and/or the Service-Based Cash Award Agreement (the "Agreement"), Grantee agrees that while employed by the Company and for a period of twelve (12) months thereafter, without the prior written consent of the Board of Directors of the Company (the "Board"), he or she shall not, directly or indirectly, as principal, manager, agent, consultant, officer, director, stockholder, partner, investor, lender or employee or in any other capacity, carry on, be engaged in or have any financial interest in, any entity which is in competition with the business of the Company or its subsidiaries.

4. In consideration of the Company's obligations under the Agreement, Grantee agrees that while employed by the Company and for a period of twelve (12) months thereafter, without the prior written consent of the Board, he or she shall not, on his or her own behalf or on behalf of any person, firm or company, directly or indirectly, (a) solicit or offer employment to or hire any person who is or has been employed by the Company or its subsidiaries at any time during the twelve (12) months immediately preceding such solicitation or (b) solicit or entice away or in any manner attempt to persuade any client, vendor, partner, customer or prospective customer of the Company to discontinue or diminish his, her or its relationship or prospective relationship with the Company or to otherwise provide his, her or its business to any corporation, partnership or other business entity which engages in any line of business in which the Company is engaged (other than the Company).

5. For purposes of this RCA, an entity shall be deemed to be in competition with the Company if it enters into or engages in any business or activity that substantially and directly competes with the business of the Company. For purposes of this paragraph 5, the business of the Company is defined to be: development of new thermal and metallurgical mines, active metallurgical and thermal coal mining, preparation and sale; the marketing, brokering and trading of metallurgical and thermal coal; and the optimization of our metallurgical and thermal coal reserves; in each case by the Company and its direct and indirect subsidiaries or affiliated or related companies. Notwithstanding this paragraph 5 or paragraph 8, nothing herein shall be construed so as to preclude Grantee from investing in any publicly or privately held company, provided that no such investment in the equity securities of an entity with publicly traded equity securities may exceed one percent (1%) of the equity of such entity, and no such investment in any other entity may exceed five percent (5%) of the equity of such entity, without the prior written approval of the Board.

6. Grantee agrees that he or she will not at any time make, directly or indirectly, any negative, derogatory, disparaging or defamatory comment, whether written, oral or in electronic format, to any reporter, author, producer or similar person or entity or to any general public media in any form (including, without limitation, books, articles or writings of any other kind, as well as film, videotape, audio tape, computer/Internet format or any other medium) that concerns directly or indirectly the Company its business or operations, or any of its current or former agents, employees, officers, directors, customers or clients. Grantee understands that nothing in this section or this RCA limits Grantee's ability to communicate with any government agencies or otherwise participate or cooperate with an investigation conducted by the Equal Employment Opportunity Commission, the Securities and Exchange Commission, or other similar agency, including providing documents or other information, without notice to the Company.

7. Upon the termination of Grantee's employment for any reason, Grantee or his or her estate shall surrender to the Company all correspondence, letters, files, contracts, mailing lists, customer lists, advertising materials, ledgers, supplies, equipment, checks, and all other materials and records of any kind that are the property of the Company or any of its subsidiaries or affiliates, that may be in Grantee's possession or under his control, including, without limitation, any "soft" copies or computerized or electronic versions thereof.

8. Grantee agrees that the covenant not to compete, the covenants not to solicit and the covenant not to make disparaging comments are reasonable under the circumstances and will not interfere with his or her ability to earn a living or otherwise to meet his or her financial obligations. Grantee and the Company agree that if in the opinion of any court of competent jurisdiction such restraint is not reasonable in any respect, such court shall have the right, power and authority to excise or modify such provision or provisions of this covenant which appear unreasonable and to enforce the remainder of the covenant as so amended. Grantee agrees that any breach of the covenants contained in this RCA would irreparably injure the Company. Accordingly, Grantee agrees that, in the event that Grantee violates this RCA, the Company may, in addition to pursuing any other remedies it may have in law or in equity, cease making any payments otherwise required under the agreements evidencing the Award, cancel and recoup any portion of the Award already paid to the extent required by law, regulation or listing requirement, or permitted by any Company policy adopted pursuant thereto. The Company may also seek an

injunction against Grantee from any court having jurisdiction over the matter restraining any further violation of this RCA by Grantee.

9. No waiver or modification of all or any part of this RCA will be effective unless set forth in a written document signed by both the Company and Grantee expressly indicating their intention to waive or modify the specified provisions of this RCA. If the Company chooses not to enforce its rights in the event Grantee or any other recipient of an Award breaches some or all of the terms of this RCA, the Company's rights with respect to any such breach shall not be considered a waiver of a future breach by Grantee of this RCA, regardless of whether the breach is of a similar nature or not.

10. This RCA accurately sets forth and entirely sets forth the understandings reached between Grantee and the Company with respect to the matters treated herein. If there are any prior written or oral understandings or agreements pertaining to the subject matter addressed in this RCA, they are specifically superseded by this RCA and have no effect, except, should Grantee be subject to non-compete and non-solicitation obligations ("Restrictive Covenants") pursuant to an employment agreement or other agreement between Grantee and Company or one of its subsidiaries or affiliates, Grantee shall continue to be bound by the terms of those Restrictive Covenants and they shall run concurrently with those set forth in this RCA. This RCA is binding on Grantee and the Company, and our respective successors, assigns and representatives.

11. Because of Company's and Grantee's substantial contacts with the State of Missouri, the fact that Company's headquarters is located in Missouri, the parties' interests in ensuring that disputes regarding the interpretation, validity, and enforceability of this RCA are resolved on a uniform basis, and Company's making and execution of this Agreement in Missouri, the parties agree that the RCA shall be interpreted and governed by the laws of the State of Missouri, without regard for any conflict of law principles. The parties agree that the exclusive venue and jurisdiction for any litigation concerning or arising out of or based on this RCA shall be the federal and state courts located in Missouri. The parties expressly consent to the personal jurisdiction and venue of said courts. The provisions of this paragraph shall not restrict the ability of Company or Grantee to enforce in any court any judgment obtained in Missouri federal or state court.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, this RCA has been executed and delivered by the parties hereto.

PEABODY ENERGY CORPORATION

Scott T. Jarboe
Chief Administrative Officer &
Corporate Secretary

**Note: Grantee is deemed to have executed this Agreement upon clicking
“Accept” in the Plan’s online administration site.**

PEABODY ENERGY CORPORATION**PERFORMANCE-BASED CASH AWARD AGREEMENT**

THIS PERFORMANCE-BASED CASH AWARD AGREEMENT (the "Agreement"), effective January [], 2022, is made by and between **PEABODY ENERGY CORPORATION**, a Delaware corporation (the "Company"), and the undersigned employee of the Company or a Subsidiary of the Company (the "Grantee"). The Grant Date for the Performance-Based Cash Award evidenced by this Agreement is January [], 2022 (the "Grant Date").

WHEREAS, the Compensation Committee of the Board (the "Committee") has determined that, subject to the provisions of this Agreement, it would be to the advantage and best interest of the Company and its stockholders to grant the opportunity to earn the performance-based cash award provided for herein to the Grantee as an incentive for his or her efforts during his or her service with the Company or its Subsidiaries, and has advised the Company thereof and instructed the undersigned officer to enter into this Agreement to evidence this Performance-Based Cash Award opportunity;

WHEREAS, the Company deems it essential to the protection of its confidential information and competitive standing in its market to have its key employees have reasonable restrictive covenants in place;

WHEREAS, the Grantee agrees and acknowledges that the Company has a legitimate interest to protect its confidential information and competitive standing; and

WHEREAS, the Company deems it essential to the optimal functioning of its business to have its key employees provide advance notice to the Company of their termination of employment.

NOW, THEREFORE, in consideration of the mutual covenants herein contained and other good and valuable consideration, receipt of which is hereby acknowledged, the parties hereby agree as follows:

**ARTICLE I
DEFINITIONS**

Whenever the following terms are used in this Agreement, they shall have the meanings specified below. Capitalized terms not otherwise defined in this Agreement shall have the meanings specified in the Plan.

Section 1.1 - "Affiliate" shall mean any other Person directly or indirectly controlling, controlled by, or under common control with the Company. For the purposes of this definition, the term "control" (including, with correlative meanings, the terms "controlling", "controlled by" and "under common control with"), as applied to any Person, means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of that Person, whether through the ownership of voting securities, by contract or otherwise.

Section 1.2 - “Board” means the Board of Directors of the Company.

Section 1.3 - “Cause” shall mean (a) “Cause” as defined in the Grantee’s employment agreement with the Company, if any; or (b) if the Grantee does not have an employment agreement with the Company or such agreement does not define “Cause,” then: (i) any willful fraud, dishonesty or misconduct of the Grantee that can reasonably be expected to have a detrimental effect on (A) the reputation or business of the Company or any of its subsidiaries or affiliates or (B) the Grantee’s reputation or performance of his or her duties to the Company or any of its subsidiaries or affiliates; (ii) willful refusal or failure of the Grantee to comply with the Company’s Code of Business Conduct and Ethics, the Company’s Anti-Corruption and Bribery policy or any other material corporate policy of the Company; (iii) the Grantee’s willful or repeated failure to meet documented performance objectives or to perform his or her duties or to follow reasonable and lawful directives of his or her manager (other than due to death or Disability); (iv) the Grantee’s conviction of, or plea of nolo contendere to (A) any felony, or (B) any other criminal charge that may reasonably be expected to have a material detrimental effect on the reputation or business of the Company or any of its subsidiaries or affiliates; or (v) the Grantee’s willful failure to cooperate with a bona fide internal investigation or an investigation by regulatory or law enforcement authorities, whether or not related to the Grantee’s employment with the Company, after being instructed to cooperate by the Chairman of the Board and/or Company’s Chief Executive Officer or by the Board, or the willful destruction of or willful failure to preserve documents or other material known to be relevant to any such investigation; provided, that with respect to clause (ii) or (iii) above, the Grantee shall have 15 business days following written notice of the conduct which is the basis for the potential termination for “Cause” within which to cure such conduct, to the extent it can be cured, to prevent termination for “Cause” by the Company, and if the Grantee cures the conduct that is the basis for the potential termination for “Cause” within such period, the Company’s notice of termination shall be deemed withdrawn.

Section 1.4 - “Change in Control” shall mean the occurrence of any one or more of the following: (a) any corporation, person or other entity (other than the Company, a majority-owned subsidiary of the Company or any of its Subsidiaries, or an employee benefit plan (or related trust) sponsored or maintained by the Company or any of its Subsidiaries), including a “group” as defined in Section 13(d)(3) of the Securities Exchange Act of 1934, as amended, becomes the beneficial owner of stock representing more than fifty percent (50%) of the combined voting power of the Company’s then outstanding securities; (b) there is consummated (i) a merger, consolidation, plan of arrangement, reorganization or similar transaction or series of transactions in which the Company is involved, other than such a transaction or series of transactions which would result in the shareholders of the Company immediately prior thereto continuing to own (either by remaining outstanding or by being converted into voting securities of the surviving entity) more than fifty percent (50%) of the combined voting power of the securities of the Company or such surviving entity (or the parent, if any) outstanding immediately after such transaction(s) in substantially the same proportions as their ownership immediately prior to such transaction(s); (ii) a sale or other disposition of all or substantially all of the Company’s assets; or (iii) approval by the Company’s shareholders of a plan of liquidation of the Company; or (c) within any period of 24 consecutive months, persons who were members of the Board immediately prior to such 24-month period, together with persons who were first elected as directors (other than as a result of any settlement of a proxy or consent solicitation contest or any action taken to avoid such a contest) during such 24-month period by or upon the recommendation of persons who were

members of the Board immediately prior to such 24-month period and who constituted a majority of the Board at the time of such election, cease to constitute a majority of the Board; provided, however, that to the extent this Performance-Based Cash Award is subject to liability under Code Section 409A and does not qualify for an exemption from Code Section 409A coverage, a Change in Control shall include any event or series of events described in the foregoing provisions of this Section 1.4, but only to the extent such event or series of events also constitutes a “change of control event” (as described in Treasury Regulation Section 1.409A-3(i)(5)(i)) with respect to the Company.

Section 1.5 - “Code” shall mean the Internal Revenue Code of 1986 (and any successor thereto), as amended from time to time. References to a particular section of the Code include references to regulations and rulings thereunder and to successor provisions.

Section 1.6 - “Committee” shall mean the Compensation Committee of the Board.

Section 1.7 - “Disability” shall mean a mental or physical illness that entitles the Grantee to receive benefits under the long-term disability plan of the Company or any Subsidiary, or if the Grantee is not covered by such a plan or the Grantee is not an employee of the Company or any Subsidiary, a mental or physical illness that renders a Grantee totally and permanently incapable of performing the Grantee’s duties for the Company or a Subsidiary. Notwithstanding the foregoing: (a) a Disability shall not qualify if it is the result of (i) a willfully self-inflicted injury or willfully self-induced sickness; or (ii) an injury or disease contracted, suffered, or incurred while participating in a felony criminal offense; and (b) with respect to this Performance-Based Cash Award if it is subject to liability under Code Section 409A and does not qualify for an exemption from Code Section 409A coverage, Disability shall mean a Grantee’s inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than 12 months.

Section 1.8 - “First Determination Date” shall mean December 31, 2022.

Section 1.9 - “Good Reason” shall mean (a) “Good Reason” as defined in the Grantee’s employment agreement with the Company, if any; or (b) if the Grantee does not have an employment agreement with the Company or such agreement does not define Good Reason, then: (i) a material reduction, other than a reduction that generally affects all similarly-situated executives and does not exceed 10% in one year or 20% in the aggregate over three consecutive years, by the Company in the Grantee’s base salary from that in effect immediately prior to the reduction; (ii) a material reduction, other than a reduction that generally affects all similarly-situated executives, by the Company in the Grantee’s target or maximum annual cash incentive award opportunity or target or maximum annual equity-based compensation award opportunity from those in effect immediately prior to any such reduction; (iii) relocation, other than through mutual agreement in writing between the Company and the Grantee or a secondment or temporary relocation for a reasonably finite period of time, of the Grantee’s primary office by more than 50 miles from the location of the Grantee’s primary office as of the Agreement date; or (iv) any material diminution or material adverse change in the Grantee’s duties or responsibilities as they exist as of the Agreement date (other than any diminution or change during a period of mental or physical incapacity); provided, that (x) if the Grantee terminates the Grantee’s employment for “Good Reason,” the Grantee shall provide written notice to the Company at least 30 days in

advance of the date of termination, such notice shall describe the conduct the Grantee believes to constitute “Good Reason” and the Company shall have the opportunity to cure the “Good Reason” within 30 days after receiving such notice, (y) if the Company cures the conduct that is the basis for the potential termination for “Good Reason” within such 30-day period, the Grantee’s notice of termination shall be deemed withdrawn and (z) if the Grantee does not give notice to the Company as described in this Section 1.9 within 90 days after an event giving rise to “Good Reason,” the Grantee’s right to claim “Good Reason” termination on the basis of such event shall be deemed waived.

Section 1.10 - “Performance Period” shall mean January 1, 2022 through December 31, 2023.

Section 1.11 - “Performance-Based Cash Award” shall mean the performance-based cash award opportunity provided by the Company to the Grantee as evidenced by this Agreement.

Section 1.12 - “Person” shall mean any individual, sole proprietorship, corporation, partnership, joint venture, limited liability company, association, joint-stock company, trust, unincorporated organization, institution, public benefit corporation, entity or government instrumentality, division, agency, body or department.

Section 1.13 - “Plan” shall mean the Peabody Energy Corporation 2017 Incentive Plan, as amended or amended and restated from time to time.

Section 1.14 - “Retirement” shall mean a Termination of Service on or after age sixty-five or age sixty (60) with at least five (5) years of service with the Company.

Section 1.15 - “Second Determination Date” shall mean December 31, 2023.

Section 1.16 - “Section 409A” shall mean Section 409A of the Code and the applicable regulations or other guidance issued thereunder.

Section 1.17 - “Subsidiary” shall mean any Person that directly, or through one (1) or more intermediaries, is controlled by the Company and that would be treated as a single employer with the Company under Sections 414(b) and 414(c) of the Code if the language “at least 50 percent” is used instead of “at least 80 percent” each place it appears in Code Sections 1563(a)(1), (2) and (3) and Treasury Regulation Section 1.414(c)-2.

Section 1.18 - “Termination of Service” occurs (a) on the first day on which an individual is for any reason no longer providing services to the Company or a Subsidiary in the capacity of an employee, director or consultant or (b) with respect to an individual who is an employee or consultant to a Subsidiary, the first day on which such entity ceases to be a Subsidiary of the Company and such individual is no longer providing services to the Company or another Subsidiary; provided, that the Committee shall have the discretion to determine when a Grantee, who terminates services as an employee, but continues to provide services in the capacity of a consultant immediately following such termination, has incurred a Termination of Service. Notwithstanding the foregoing, in the case of this Performance-Based Cash Award if it is subject to liability under Code Section 409A and does not qualify for an exemption from Code Section 409A coverage, a Termination of Service shall only occur at the time of the Grantee’s “separation from service”

with the Company within the meaning of Code Section 409A or as otherwise set forth in this Agreement or a deferral election form.

ARTICLE II GRANT OF PERFORMANCE-BASED CASH AWARD

Section 2.1 - Grant of Performance-Based Cash Award. The Company has granted to the Grantee a Performance-Based Cash Award with the target amount set forth on the signature page hereof (the "Target Amount") upon the terms and subject to the conditions set forth in this Agreement. Subject to the degree of attainment of the applicable Performance Goals established for this Performance-Based Cash Award, as approved by the Committee and thereafter communicated to the Grantee (the "Statement of Performance Goals"), the Grantee may earn from 0% to 150% of the Target Amount. The grant of this Performance-Based Cash Award was made in consideration of the services to be rendered by the Grantee to the Company and its Subsidiaries and Affiliates and the Grantee's obligations under the Restrictive Covenant Agreement (as referenced in Article IV).

Section 2.2 - No Obligation of Employment. Nothing in this Agreement shall confer upon the Grantee any right to continue in the employ of the Company or any Subsidiary or Affiliate or interfere with or restrict in any way the rights of the Company and its Subsidiaries or Affiliates, which rights are hereby expressly reserved, to terminate the employment of the Grantee at any time for any reason whatsoever, with or without Cause.

Section 2.3 - Change in Control. In order to maintain the Grantee's rights with respect to the Performance-Based Cash Award evidenced hereby, upon the occurrence of a Change in Control, the Committee may take such actions with respect to the Performance-Based Cash Award or make such modifications to the Performance-Based Cash Award as it deems appropriate to reflect such Change in Control; provided that no such action or modification results in a violation of Section 409A.

ARTICLE III VESTING AND FORFEITURE OF PERFORMANCE-BASED CASH AWARD

Section 3.1 - Normal Vesting. Unless otherwise provided in this Article III, the Performance-Based Cash Award shall vest as to the First FCF Award (as defined in the Statement of Performance Goals) on the First Determination Date and as to the Second FCF Award and the ENV Award (as defined in the Statement of Performance Goals) on the Second Determination Date to the extent that the applicable Performance Goals described in the Statement of Performance Goals for this Performance-Based Cash Award are certified by the Committee, in its sole discretion, as having been achieved during the applicable portion of the Performance Period, provided that the Grantee has remained in continuous service with the Company or a Subsidiary through the First Determination Date or Second Determination Date, as applicable.

Section 3.2 - Effect of Certain Events. Notwithstanding the foregoing Section 3.1, prior to the Second Determination Date:

(a) in the event of the Grantee's Termination of Service either (i) within twenty four months following a Change in Control, provided such Termination of Service is by

the Company without Cause or by the Grantee for Good Reason; or (ii) on account of the Grantee's death or Disability, the Performance-Based Cash Award shall become earned and vest on the basis of the relative achievement of the applicable Performance Goals determined in accordance with Section 3.1 as if the Grantee had remained in continuous service with the Company or a Subsidiary through the Second Determination Date;

(b) in the event of the earlier of: (i) a Termination of Service on account of Retirement; or (ii) except as provided in Section 3.2(a) above, a Termination of Service by the Company without Cause or by the Grantee for Good Reason, a pro-rata portion of the Performance-Based Cash Award, based on the number of days that the Grantee provided services to the Company or a Subsidiary from the beginning of the Performance Period through the date of Termination of Service compared to the number of days in the Performance Period, shall become earned and vest on the basis of the relative achievement of the applicable Performance Goals determined in accordance with Section 3.1 as if the Grantee had remained in continuous service with the Company or a Subsidiary through the applicable Determination Date; and

(c) in the event of the earlier of (i) a Termination of Service by the Company for Cause; and (ii) a Termination of Service by the Grantee without Good Reason, the Performance-Based Cash Award shall terminate and the Grantee shall not be entitled to any payment hereunder.

The portion of the Performance-Based Cash Award that vests and become earned in accordance with this Section 3.2 shall be settled as set forth in Article IV of this Agreement.

ARTICLE IV

SETTLEMENT OF PERFORMANCE-BASED CASH AWARD; CONDITIONS TO GRANT AND SETTLEMENT

Section 4.1 - Form and Time of Payment.

(a) Subject to any withholding obligations described in Section 5.3, as soon as administratively feasible following the First Determination Date and the Committee's certification as described in Section 3.1, but in no event later than March 15, 2023, the Company shall, subject to Article V, pay to the Grantee the amount of cash equal to (i) 40% of the Target Amount multiplied by (ii) the percentage of the First FCF Award earned.

(b) Subject to any withholding obligations described in Section 5.3, as soon as administratively feasible following the Second Determination Date and the Committee's certification as described in Section 3.1, but in no event later than March 15, 2024, the Company shall, subject to Article V, pay to the Grantee the amount of cash equal to (i)(A) 40% of the Target Amount multiplied by (B) the percentage of the Second FCF Award earned; plus (ii)(A) 20% of the Target Amount multiplied by (B) the percentage of the ENV Award earned.

(c) Specified Employee. Notwithstanding anything in this Agreement to the contrary, if the Grantee is a U.S. taxpayer under the Code, at the time of the Grantee's Termination of Service, the Grantee is a "specified employee" (as such term is defined in

Section 409A, but generally meaning one of the Company's key employees within the meaning of Code Section 416(i)), and the payment of the cash amount pursuant to Section 4.1(a) is considered to be a "deferral of compensation" (as such phrase is defined for purposes of Section 409A), the cash amount shall be paid to the Grantee on the earlier of (i) first day of the seventh month after the Grantee's "separation from service" with the Company (as determined in accordance with Section 409A) and (ii) the Grantee's death.

Section 4.2 - Restrictive Covenant Agreement. The Grantee shall not be entitled to receive the Performance-Based Cash Award unless the Grantee shall have executed and delivered the Restrictive Covenant Agreement, substantially in the form attached hereto as Exhibit A, and such shall be in full force and effect.

Section 4.3 - Notice Period. The Grantee may terminate the Grantee's employment with the Company or a Subsidiary at any time for any reason by delivery of notice to the Company at least (90) days in advance of the date of termination (the "Notice Period"); provided, however, that no communication, statement or announcement shall be considered to constitute such notice of termination of the Grantee's employment unless it complies with Section 5.4 hereof and specifically recites that it is a notice of termination of employment for purposes of this Agreement; and provided, further, that the Company may waive any or all of the Notice Period, in which case the Grantee's employment with the Company or a Subsidiary or Affiliate will terminate on the date determined by the Company.

Section 4.4 - Breach of Restrictive Covenant Agreement or Section 4.3. Subject to Section 4.2, if the Grantee materially breaches any provision of the Restrictive Covenant Agreement or Section 4.3 hereof, the Company may, among other available remedies, determine that the Grantee (a) will forfeit any unpaid portion of the Performance-Based Cash Award evidenced by this Agreement and (b) will repay to the Company any portion of the Performance-Based Cash Award evidenced by this Agreement previously paid to the Grantee.

Section 4.5 - Restrictions. The Performance-Based Cash Award granted pursuant to this Agreement shall be subject to all applicable policies and guidelines of the Company that relate to recovery of compensation (i.e., clawbacks).

ARTICLE V MISCELLANEOUS

Section 5.1 - Administration. The Committee has the power to interpret the terms of the Performance-Based Cash Award and this Agreement. All actions taken and all interpretations and determinations made by the Committee shall be final and binding upon the Grantee, the Company and all other interested persons. No member of the Committee shall be personally liable for any action, determination or interpretation made in good faith with respect to the Performance-Based Cash Award. In its absolute discretion, subject to applicable law, the Board may at any time and from time to time exercise any and all rights and duties of the Committee under this Agreement.

Section 5.2 - Performance-Based Cash Award Not Transferable. Neither the Performance-Based Cash Award nor any interest or right therein or part thereof shall be liable for the debts, contracts or engagements of the Grantee or his or her successors in interest or shall be subject to disposition by transfer, alienation, anticipation, pledge, encumbrance, assignment or any

other means whether such disposition is voluntary or involuntary or by operation of law by judgment, levy, attachment, garnishment or any other legal or equitable proceedings (including bankruptcy), and any attempted disposition thereof shall be null and void and of no effect; provided, however, that this Section 5.2 shall not prevent transfers by will or by the applicable laws of descent and distribution.

Section 5.3 - Withholding. Unless the Grantee makes alternative arrangements satisfactory to the Company to personally remit required withholding amounts, then, as of the date that all or a portion of the Performance-Based Cash Award becomes paid pursuant to Section 4.1 hereof, the Company shall withhold a portion of the Performance-Based Cash Award so paid as required by law to be withheld by the Company in connection with such payment for applicable federal, state, local and foreign taxes of any kind. To the extent taxes are to be withheld upon vesting for purposes of federal FICA, FUTA or Medicare taxes, such withholding shall be taken from other income owed by the Company to the Grantee and the Grantee hereby agrees to such withholding. For all purposes, the amount withheld by the Company pursuant to this Section 5.3 shall be deemed to have first been paid to the Grantee.

Section 5.4 - Notices. Any notice to be given under the terms of this Agreement to the Company shall be addressed to the Chief Administrative Officer and Corporate Secretary, with a copy to the Grantee's supervisor, and any notice to be given to the Grantee shall be addressed to him or her at the address set forth in the records of the Company. By a notice given pursuant to this Section 5.4, either party may hereafter designate a different address for notices to be given to him, her or it. Any notice which is required to be given to the Grantee shall, if the Grantee is then deceased, be given to the Grantee's personal representative if such representative has previously informed the Company of his, her or its status and address by written notice under this Section 5.4. Any notice shall be deemed duly given when enclosed in a properly sealed envelope or wrapper addressed as aforesaid, deposited (with postage prepaid) in a post office or branch post office regularly maintained by the United States Postal Service. Notwithstanding the foregoing, any notice required or permitted hereunder from the Company to the Grantee may be made by electronic means, including by electronic mail to the Company-maintained electronic mailbox of the Grantee, and the Grantee hereby consents to receive such notice by electronic delivery. To the extent permitted in an electronically delivered notice described in the previous sentence, the Grantee shall be permitted to respond to such notice or communication by way of a responsive electronic communication, including by electronic mail.

Section 5.5 - Information Sharing. Notwithstanding anything in this Agreement to the contrary, nothing in this Agreement or the Restrictive Covenant Agreement prevents the Grantee from providing, without prior notice to the Company, information to governmental authorities regarding possible legal violations or otherwise testifying or participating in any investigation or proceeding by any governmental authorities regarding possible legal violations, and for purpose of clarity the Grantee is not prohibited from providing information voluntarily to the Securities and Exchange Commission pursuant to Section 21F of the Exchange Act.

Section 5.6 - Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

Section 5.7 - Pronouns. The masculine pronoun shall include the feminine and neuter, and the singular the plural, where the context so indicates.

Section 5.8 - Non-Applicability of the Plan. The Performance-Based Cash Award is not granted pursuant to the Plan.

Section 5.9 - Amendment. The Committee may amend this Agreement at any time, provided that no such amendment shall materially impair the rights of the Grantee unless reflected in a writing executed by the parties hereto that specifically states that it is amending this Agreement.

Section 5.10 - Severability. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, and each provision of this Agreement shall be severable and enforceable to the extent permitted by law.

Section 5.11 - Dispute Resolution. Any dispute or controversy arising under or in connection with this Agreement shall be resolved by arbitration in St. Louis, Missouri. Arbitrators shall be selected, and arbitration shall be conducted, in accordance with the rules of the American Arbitration Association. The Company shall pay or reimburse any legal fees in connection with such arbitration in the event that the Grantee prevails on a material element of his or her claim or defense. Payments or reimbursements of legal fees made under this Section 5.11 that are provided during one calendar year shall not affect the amount of such payments or reimbursements provided during a subsequent calendar year, payments or reimbursements under this Section 5.11 may not be exchanged or substituted for another form of compensation to the Grantee, and any such reimbursement or payment will be paid within sixty (60) days after the Grantee prevails, but in no event later than the last day of the Grantee's taxable year following the taxable year in which he incurred the expense giving rise to such reimbursement or payment. This Section 5.11 shall remain in effect throughout the Grantee's employment with the Company or any Subsidiary and for a period of five (5) years following the Grantee's Termination of Service.

Section 5.12 - Section 409A.

(a) To the extent applicable, this Agreement is intended to comply with Section 409A so that the income inclusion provisions of Section 409A(a)(1) of the Code do not apply to the Grantee, and this Agreement shall be construed, interpreted and administered in a manner that is consistent with this intent and the requirements for avoiding additional taxes or penalties under Section 409A. Notwithstanding the foregoing, in no event shall the Company be liable for all or any portion of any taxes, penalties, interest or other expenses that may be incurred by the Grantee on account of Section 409A.

(b) Except as permitted under Section 409A, any deferred compensation (within the meaning of Section 409A) payable to the Grantee or for the Grantee's benefit under this Agreement and grants hereunder may not be reduced by, or offset against, any amount owing by the Grantee to the Company or any of its Subsidiaries.

(c) In the event that the Company determines that any amounts payable hereunder may be taxable to the Grantee under Section 409A prior to the payment and/or delivery to the Grantee of such amount, the Committee may adopt such amendments to the Agreement, and appropriate policies and procedures, including amendments and policies

with retroactive effect, that the Committee determines necessary or appropriate to preserve the intended tax treatment of the benefits provided by this Agreement.

(d) Notwithstanding any provision of this Agreement to the contrary, in light of the uncertainty with respect to the proper application of Section 409A, the Company reserves the right to make amendments to this Agreement as the Company deems necessary or desirable to avoid the imposition of taxes or penalties under Section 409A. In any case, neither the Company nor any of its Subsidiaries or affiliates will have any obligation to indemnify or otherwise hold the Grantee harmless from any or all of such taxes or penalties.

Section 5.13 - Governing Law. The laws of the State of Delaware shall govern the interpretation, validity and performance of the terms of this Agreement regardless of the law that might be applied under principles of conflicts of laws.

Section 5.14 - Performance-Based Cash Award Not Taken Into Account for Other Benefits. The Performance-Based Cash Award shall be a special incentive payment to the Grantee and shall not be taken into account in computing the amount of salary or compensation of the Grantee for purposes of determining any pension, retirement, death or other benefit under (a) any pension, retirement, profit-sharing, bonus, insurance or other employee benefit plan of the Company or its Subsidiaries, except as such plan shall otherwise expressly provide, or (b) any agreement between the Company or its Subsidiaries and the Grantee, except as such agreement shall otherwise expressly provide.

Section 5.15 - Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original but all of which together will constitute one and the same instrument. Counterpart signatures to this Agreement transmitted by facsimile, electronic mail, or by any other electronic means intended to preserve the original graphic and pictorial appearance of a document, will have the same effect as physical delivery of the paper document bearing an original signature.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, this Agreement has been executed and delivered by the parties hereto.

PEABODY ENERGY CORPORATION

Scott T. Jarboe
Chief Administrative Officer &
Corporate Secretary

**Note: The Grantee is deemed to have executed this Agreement upon clicking
“Accept” in the Plan’s online administration site.**

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Exhibit A

RESTRICTIVE COVENANT AGREEMENT

THIS RESTRICTIVE COVENANT AGREEMENT (the “RCA”) dated January [__], 2022, is by and between PEABODY ENERGY CORPORATION, a Delaware corporation (the “Company”), and (“Grantee”).

WHEREAS, Grantee is a recipient of a 2022 Performance-Based Cash Award (the “Award”);

WHEREAS, Grantee acknowledges and agrees that he or she has access to and/or knowledge of certain trade secrets and other Confidential Information regarding the Company;

WHEREAS, the Company has spent and will continue to expend substantial amounts of time, money, and effort to develop its Confidential Information and Grantee acknowledges benefitting from these efforts;

WHEREAS, the Company deems it essential to the protection of its Confidential Information and competitive standing in its market to have recipients of Awards subject to reasonable restrictive covenants;

WHEREAS, Grantee agrees and acknowledges that the Company has a legitimate interest to protect its confidential information and competitive standing; and

NOW THEREFORE, in consideration for the provisions stated below, and intending to be legally bonded thereby, the parties agree as follows.

1. Grantee has been informed and is aware that the execution of this RCA is a necessary term and condition of Grantee’s receipt of the Award.

2. The term “Confidential Information” as used in this RCA shall be broadly interpreted to include, without limitation, materials and information (whether in written, electronic or other form and whether or not identified as confidential at the time of disclosure) concerning technical matters, business matters, business plans, operations, opportunities, plans, processes, procedures, standards, strategies, policies, programs, software, schematics, models, systems, results, studies, analyses, compilations, forecasts, data, figures, projections, estimates, components, records, methods, criteria, designs, quality control, research, samples, work-in-progress, prototypes, data, materials, clients and prospective clients, customer lists, contracts, projects, suppliers, referral sources, sales, marketing, bidding, purchasing, personnel, financial condition, assets, inventory, accounts payable, accounts receivable, tax matters, books of account, financing, collections, intellectual property, trade secrets and all other know-how and information of the Company or any subsidiary of the Company which has not been published or disclosed to the general public.

a. While employed by the Company and at all times thereafter, Grantee will keep Confidential Information, including trade secrets, confidential and shall not, directly or indirectly, use for himself or herself or use for, or disclose to, any party other than the

Company, or any subsidiary of the Company (other than in the ordinary course of Grantee's duties for the benefit of the Company or any subsidiary of the Company), any Confidential Information.

b. At the termination of Grantee's employment or at any other reasonable time the Company or any of its subsidiaries may request, Grantee shall promptly deliver to the Company all memoranda, notes, records, plats, sketches, plans or other documents (including, without limitation, any "soft" copies or computerized or electronic versions thereof) containing Confidential Information, including trade secrets or any other information concerning Company's business, including all copies, then in Grantee's possession or under Grantee's control whether prepared by Grantee or others.

c. Notwithstanding the foregoing paragraphs, Company employees, contractors, and consultants may disclose trade secrets in confidence, either directly or indirectly, to a Federal, State or local government official or to an attorney, solely for the purpose of reporting or investigating a suspected violation of law, or in a complaint or other document filed in a lawsuit or other proceeding if such filing is made under seal. Additionally, Company employees, contractors, and consultants who file retaliation suits for reporting a suspected violation of law may disclose related trade secrets to their attorney and use them in related court proceedings, as long as the individual files documents containing the trade secret under seal and does not otherwise disclose the trade secret except pursuant to Court Order.

3. In consideration of the Company's obligations under the Performance-Based Cash Award Agreement (the "Agreement"), Grantee agrees that while employed by the Company and for a period of twelve (12) months thereafter, without the prior written consent of the Board of Directors of the Company (the "Board"), he or she shall not, directly or indirectly, as principal, manager, agent, consultant, officer, director, stockholder, partner, investor, lender or employee or in any other capacity, carry on, be engaged in or have any financial interest in, any entity which is in competition with the business of the Company or its subsidiaries.

4. In consideration of the Company's obligations under the Agreement, Grantee agrees that while employed by the Company and for a period of twelve (12) months thereafter, without the prior written consent of the Board, he or she shall not, on his or her own behalf or on behalf of any person, firm or company, directly or indirectly, (a) solicit or offer employment to or hire any person who is or has been employed by the Company or its subsidiaries at any time during the twelve (12) months immediately preceding such solicitation or (b) solicit or entice away or in any manner attempt to persuade any client, vendor, partner, customer or prospective customer of the Company to discontinue or diminish his, her or its relationship or prospective relationship with the Company or to otherwise provide his, her or its business to any corporation, partnership or other business entity which engages in any line of business in which the Company is engaged (other than the Company).

5. For purposes of this RCA, an entity shall be deemed to be in competition with the Company if it enters into or engages in any business or activity that substantially and directly competes with the business of the Company. For purposes of this paragraph 5, the business of the Company is defined to be: development of new thermal and metallurgical mines, active metallurgical and thermal coal mining, preparation and sale; the marketing, brokering and trading

of metallurgical and thermal coal; and the optimization of our metallurgical and thermal coal reserves; in each case by the Company and its direct and indirect subsidiaries or affiliated or related companies. Notwithstanding this paragraph 5 or paragraph 8, nothing herein shall be construed so as to preclude Grantee from investing in any publicly or privately held company, provided that no such investment in the equity securities of an entity with publicly traded equity securities may exceed one percent (1%) of the equity of such entity, and no such investment in any other entity may exceed five percent (5%) of the equity of such entity, without the prior written approval of the Board.

6. Grantee agrees that he or she will not at any time make, directly or indirectly, any negative, derogatory, disparaging or defamatory comment, whether written, oral or in electronic format, to any reporter, author, producer or similar person or entity or to any general public media in any form (including, without limitation, books, articles or writings of any other kind, as well as film, videotape, audio tape, computer/Internet format or any other medium) that concerns directly or indirectly the Company its business or operations, or any of its current or former agents, employees, officers, directors, customers or clients. Grantee understands that nothing in this section or this RCA limits Grantee's ability to communicate with any government agencies or otherwise participate or cooperate with an investigation conducted by the Equal Employment Opportunity Commission, the Securities and Exchange Commission, or other similar agency, including providing documents or other information, without notice to the Company.

7. Upon the termination of Grantee's employment for any reason, Grantee or his or her estate shall surrender to the Company all correspondence, letters, files, contracts, mailing lists, customer lists, advertising materials, ledgers, supplies, equipment, checks, and all other materials and records of any kind that are the property of the Company or any of its subsidiaries or affiliates, that may be in Grantee's possession or under his control, including, without limitation, any "soft" copies or computerized or electronic versions thereof.

8. Grantee agrees that the covenant not to compete, the covenants not to solicit and the covenant not to make disparaging comments are reasonable under the circumstances and will not interfere with his or her ability to earn a living or otherwise to meet his or her financial obligations. Grantee and the Company agree that if in the opinion of any court of competent jurisdiction such restraint is not reasonable in any respect, such court shall have the right, power and authority to excise or modify such provision or provisions of this covenant which appear unreasonable and to enforce the remainder of the covenant as so amended. Grantee agrees that any breach of the covenants contained in this RCA would irreparably injure the Company. Accordingly, Grantee agrees that, in the event that Grantee violates this RCA, the Company may, in addition to pursuing any other remedies it may have in law or in equity, cease making any payments otherwise required under the agreements evidencing the Award, cancel and recoup any portion of the Award already paid to the extent required by law, regulation or listing requirement, or permitted by any Company policy adopted pursuant thereto. The Company may also seek an injunction against Grantee from any court having jurisdiction over the matter restraining any further violation of this RCA by Grantee.

9. No waiver or modification of all or any part of this RCA will be effective unless set forth in a written document signed by both the Company and Grantee expressly indicating their intention to waive or modify the specified provisions of this RCA. If the Company chooses not to enforce its rights in the event Grantee or any other recipient of an Award breaches some or all of

the terms of this RCA, the Company's rights with respect to any such breach shall not be considered a waiver of a future breach by Grantee of this RCA, regardless of whether the breach is of a similar nature or not.

10. This RCA accurately sets forth and entirely sets forth the understandings reached between Grantee and the Company with respect to the matters treated herein. If there are any prior written or oral understandings or agreements pertaining to the subject matter addressed in this RCA, they are specifically superseded by this RCA and have no effect, except, should Grantee be subject to non-compete and non-solicitation obligations ("Restrictive Covenants") pursuant to an employment agreement or other agreement between Grantee and Company or one of its subsidiaries or affiliates, Grantee shall continue to be bound by the terms of those Restrictive Covenants and they shall run concurrently with those set forth in this RCA. This RCA is binding on Grantee and the Company, and our respective successors, assigns and representatives.

11. Because of Company's and Grantee's substantial contacts with the State of Missouri, the fact that Company's headquarters is located in Missouri, the parties' interests in ensuring that disputes regarding the interpretation, validity, and enforceability of this RCA are resolved on a uniform basis, and Company's making and execution of this Agreement in Missouri, the parties agree that the RCA shall be interpreted and governed by the laws of the State of Missouri, without regard for any conflict of law principles. The parties agree that the exclusive venue and jurisdiction for any litigation concerning or arising out of or based on this RCA shall be the federal and state courts located in Missouri. The parties expressly consent to the personal jurisdiction and venue of said courts. The provisions of this paragraph shall not restrict the ability of Company or Grantee to enforce in any court any judgment obtained in Missouri federal or state court.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, this RCA has been executed and delivered by the parties hereto.

PEABODY ENERGY CORPORATION

—
Scott T. Jarboe
Chief Administrative Officer &
Corporate Secretary

**Note: Grantee is deemed to have executed this Agreement upon clicking
“Accept” in the Plan’s online administration site.**

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Statement of Performance Goals

This Statement of Performance Goals applies to the Performance-Based Cash Award granted to the Grantee on the Grant Date as evidenced by the Performance-Based Cash Award Agreement between the Company and the Grantee (the "Agreement"). Capitalized terms used in this Statement of Performance Goals that are not specifically defined in this Statement of Performance Goals have the meanings assigned to them in the Agreement or in the Plan, as applicable.

1. **Definitions.** For purposes hereof, as determined by the Committee:
 - (a) "**Environmental Reclamation**" shall mean the amount of acres graded compared to the amount of acres disturbed, whereas the term "graded" means returning the land to the final contour grading prior to soil replacement and the term "disturbed" means new acres impacted for mining purposes.
 - (b) "**Free Cash Flow**" shall mean the Company's net cash provided by/used in operating activities less the net cash provided by/used in investing activities (as disclosed in the Company's public filings with the U.S. Securities and Exchange Commission).
2. **Calculation of Performance-Based Cash Award Earned.** Eighty percent (80%) of the target Performance-Based Cash Award evidenced by this Agreement (the "**FCF Award**") shall be earned based on achievement of Free Cash Flow during the Performance Period and twenty percent (20%) of the target Performance-Based Cash Award evidenced by this Agreement (the "**ENV Award**") shall be earned based on achievement of Environmental Reclamation during the Performance Period. Fifty percent (50%) of the FCF Award shall be earned based on the achievement of Free Cash Flow during the period between January 1, 2022 and the First Determination Date (the "**First FCF Award**"). The remaining fifty percent (50%) of the FCF Award shall be earned based on the achievement of Free Cash Flow during the entire Performance Period (the "**Second FCF Award**").
3. **First Determination Date.** Following the First Determination Date, the Committee shall determine whether and to what extent the Free Cash Flow goal has been satisfied with respect to the first twelve months of the Performance Period and shall determine the percentage of target First FCF Award that shall become Vested under the Agreement in accordance with the following First FCF Performance Matrix:
 - (a) **First FCF Performance Matrix.** The percentage of target First FCF Award earned shall be determined based on achievement of FCF during the first twelve months of the Performance Period as follows:

Performance Level	FCF for First 12 Months of Performance Period	First FCF Award Earned
Below Threshold		0%
Threshold		50%
Target		100%
Maximum		150%

To the extent the FCF is between the FCF targets listed in the First FCF Performance Matrix, then the percentage of the target First FCF Award earned shall be determined using linear interpolation.

4. Second Determination Date. Following the Second Determination Date, the Committee shall determine whether and to what extent the Free Cash Flow and Environmental Reclamation goals have been satisfied for the Performance Period and shall determine the percentage of target Second FCF Award and target ENV Award that shall become Vested under the Agreement in accordance with the following Second FCF Performance Matrix and Environmental Reclamation Performance Matrix:

- (a) Second FCF Performance Matrix. The percentage of target Second FCF Award earned shall be determined based on achievement of FCF during the Performance Period as follows:

Performance Level	FCF for Performance Period	Second FCF Award Earned
Below Threshold		0%
Threshold		50%
Target		100%
Maximum		150%

To the extent the FCF is between the FCF targets listed in the Second FCF Performance Matrix, then the percentage of the target Second FCF Award earned shall be determined using linear interpolation.

- (b) Environmental Reclamation Performance Matrix. The percentage of target ENV Award earned shall be determined based on achievement of Environmental Reclamation during the Performance Period (i.e., the average of 2022 ratio and 2023) as follows:

Performance Level	Environmental Reclamation for Performance Period	ENV Award Earned
Below Threshold		0%
Threshold		50%
Target		100%
Maximum		150%

***The maximum achievement for environmental reclamation will be capped at target. The 2-year FCF achievement will be used as a modifier to exceed target. If Environmental Reclamation ratio is at target or higher **AND** FCF achievement is above target, then Environmental Reclamation target achievement will be multiplied by the FCF achievement, otherwise no adjustment will be made. See table below.*

FCF Modifier to Exceed Environmental Reclamation Target	Incentive Earned
Env. Reclamation achievement is < 100%	No Adjustment for FCF
Env. Reclamation achievement is 100% AND FCF achievement is 100%	No Adjustment for FCF
Env. Reclamation achievement is 100% AND FCF achievement is > 100%	100% multiplied by FCF achievement

To the extent the Environmental Reclamation Percentile Ranking is between the listed rankings, then the percentage of target ENV Award earned shall be determined using linear interpolation.

PEABODY ENERGY CORPORATION
2017 INCENTIVE PLAN

RESTRICTED STOCK UNIT AGREEMENT

THIS RESTRICTED STOCK UNIT AGREEMENT (the "Agreement"), effective as of January [___], 2022, is made by and between **PEABODY ENERGY CORPORATION**, a Delaware corporation (the "Company"), and the undersigned employee of the Company or a Subsidiary of the Company (the "Grantee"). The Grant Date for the Restricted Stock Units evidenced by this Agreement is January [___], 2022 (the "Grant Date").

WHEREAS, the Company wishes to carry out the Plan, the terms of which are hereby incorporated by reference and made a part of this Agreement;

WHEREAS, the Company deems it essential to the protection of its confidential information and competitive standing in its market to have its key employees have reasonable restrictive covenants in place;

WHEREAS, the Grantee agrees and acknowledges that the Company has a legitimate interest to protect its confidential information and competitive standing;

WHEREAS, the Company deems it essential to the optimal functioning of its business to have its key employees provide advance notice to the Company of their termination of employment; and

WHEREAS, the Compensation Committee of the Board (the "Committee") has determined that, subject to the provisions of this Agreement and the Plan, it would be to the advantage and best interest of the Company and its shareholders to grant the Restricted Stock Units evidenced hereby to the Grantee as an incentive for his or her efforts during his or her term of service with the Company or its Subsidiaries or Affiliates, and has advised the Company thereof and instructed the undersigned officer to enter into this Agreement to evidence such Restricted Stock Units.

NOW, THEREFORE, in consideration of the mutual covenants herein contained and other good and valuable consideration, receipt of which is hereby acknowledged, the parties hereby agree as follows:

ARTICLE I
DEFINITIONS

Whenever the following terms are used in this Agreement, they shall have the meanings specified below. Capitalized terms not otherwise defined in this Agreement shall have the meanings specified in the Plan.

Section 1.1 - "Affiliate" shall mean any other Person directly or indirectly controlling, controlled by, or under common control with the Company. For the purposes of this definition, the term "control" (including, with correlative meanings, the terms "controlling", "controlled by" and "under common control with"), as applied to any Person, means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of that Person, whether through the ownership of voting securities, by contract or otherwise.

Section 1.2 - "Award" shall mean the number of Restricted Stock Units evidenced by this Agreement.

Section 1.3 - "Plan" shall mean the Peabody Energy Corporation 2017 Incentive Plan, as amended or amended and restated from time to time.

Section 1.4 - "Retirement" shall mean, for purposes of this Agreement, a Termination of Service, other than for Cause, death or Disability, on or after reaching age 65 or age 60 with five (5) years of service with the Company or a Subsidiary.

Section 1.5 - "Section 409A" shall mean Section 409A of the Code and the applicable regulations or other guidance issued thereunder.

ARTICLE II GRANT OF RESTRICTED STOCK UNITS

Section 2.1 - Grant of Restricted Stock Units. Pursuant to Section 9 of the Plan, the Company has granted to the Grantee an Award consisting of the number of Restricted Stock Units set forth on the signature page hereof upon the terms and subject to the conditions set forth in this Agreement and the Plan. The grant of the Restricted Stock Units was made in consideration of the services to be rendered by the Grantee to the Company and its Subsidiaries and Affiliates and the Grantee's obligations under the Restrictive Covenant Agreement (as referenced in Article V).

Section 2.2 - No Obligation of Employment. Nothing in this Agreement or in the Plan shall confer upon the Grantee any right to continue in the employ of the Company or any Subsidiary or Affiliate or interfere with or restrict in any way the rights of the Company and its Subsidiaries or Affiliates, which rights are hereby expressly reserved, to terminate the employment of the Grantee at any time for any reason whatsoever, with or without Cause.

Section 2.3 - Adjustments in Restricted Stock Units. In the event of the occurrence of one of the corporate transactions or other events listed in Section 4.2 or 13.2 of the Plan, the Committee shall make such substitution or adjustment as provided in Sections 4.2 or 13.2 of the Plan or otherwise in the terms of the Restricted Stock Units in order to equitably reflect such corporate transaction or other event. Any such adjustment made by the Committee shall be final and binding upon the Grantee, the Company and all other interested persons.

Section 2.4 - Change in Control. In the event of a Change in Control, the treatment of the Restricted Stock Units evidenced hereby will be determined in accordance with the Plan.

ARTICLE III
VESTING AND FORFEITURE OF RESTRICTED STOCK UNITS

Section 3.1 - Normal Vesting. Subject to Sections 2.4, 3.2 and 3.3, the Restricted Stock Units evidenced by this Agreement shall become nonforfeitable and payable to the Grantee pursuant to Article IV as follows:

(a) Retirement-Eligible Grantee. If the Grantee is eligible for Retirement as of the Grant Date, the Restricted Stock Units shall vest in substantially equal installments on each of the quarterly anniversaries of the Grant Date during the period beginning on the Grant Date and ending on the second anniversary of the Grant Date, conditioned upon the Grantee's continuous employment with the Company or a Subsidiary through each such date.

(b) Non-Retirement-Eligible Grantee. If the Grantee is not eligible for Retirement as of the Grant Date, the Restricted Stock Units shall vest in substantially equal installments on each of the first and second anniversaries of the Grant Date, conditioned upon the Grantee's continuous employment with the Company or a Subsidiary through each such date.

(c) Special Rule. If the Grantee becomes eligible for Retirement after the Grant Date, the provisions of Section 3.1(a) above shall apply on and after the date the Grantee becomes eligible for Retirement. However, on the first quarterly anniversary of the Grant Date following the date on which the Grantee becomes eligible for Retirement, a portion of the Restricted Stock Units shall vest. Such vesting portion shall equal the result of the following formula: $X \text{ multiplied by } (Y/4)$, where "X" is equal to one-half of the aggregate number of Restricted Stock Units granted under this Agreement, and "Y" is equal to the number of full calendar quarters that have elapsed between the Grant Date (or the most recent annual anniversary of the Grant Date) and the then current quarterly anniversary of the Grant Date.

(d) Example. The following example of the operation of Sections 3.1(b) and (c) hereof is for illustrative purposes only. A non-Retirement-eligible individual receives 360 Restricted Stock Units on January 2, 2021. On January 2, 2022, 180 of the Restricted Stock Units vest and become nonforfeitable. On July 1, 2022, such individual becomes eligible for Retirement. Vesting of 90 Restricted Stock Units would occur on July 2, 2022. On October 2, 2022 and each quarterly anniversary of the Grant Date thereafter until January 2, 2023, 45 Restricted Stock Units shall become vested (1/8 of the aggregate grant).

(e) For purposes of this Agreement, "continuously employed" (or substantially similar terms) means the absence of any interruption or termination of the Grantee's employment with the Company or a Subsidiary. Continuous employment shall not be considered interrupted or terminated in the case of transfers between locations of the Company and its Subsidiaries. Each installment of Restricted Stock Units that becomes nonforfeitable and payable hereunder is a "separate payment" for purposes of Section 409A.

Section 3.2 - Accelerated Vesting Events. Notwithstanding Section 3.1, upon the Grantee's death or Disability, 100% of the unvested Restricted Stock Units evidenced by this Agreement shall, to the extent not already forfeited, become immediately nonforfeitable and shall be settled in accordance with Article IV below.

Section 3.3 - Effect of Certain Terminations of Service. The Grantee will forfeit any and all unvested Restricted Stock Units upon (a) the Grantee's voluntary Termination of Service, (b) the Grantee's Termination of Service by the Company or a Subsidiary for Cause, or (c) subject to Section 2.4, the Grantee's Termination of Service by the Company or a Subsidiary without Cause.

Section 3.4 - Enhancement Restricted Stock Units.

(a) Promptly on or following the second anniversary of the Grant Date, the Committee, in its sole discretion, shall determine whether the Company has achieved the performance metrics set forth on Exhibit B attached hereto (the "Performance Metrics"). In the event the Committee determines that the Performance Metrics have been achieved, an additional number of Restricted Stock Units determined as set forth on Exhibit B attached hereto (the "Enhancement Restricted Stock Units") shall vest and become nonforfeitable, conditioned upon the Grantee's continuous employment with the Company or a Subsidiary through the second anniversary of the Grant Date (except as otherwise set forth below). In the event that the Company does not achieve the Performance Metrics, all Enhancement Restricted Stock Units will be forfeited.

(b) Effect of Certain Terminations of Service. The Grantee will forfeit the unvested Enhancement Restricted Stock Units upon (i) the Grantee's voluntary Termination of Service prior to becoming eligible for Retirement, (ii) the Grantee's Termination of Service by the Company or a Subsidiary for Cause, or (iii) subject to Section 2.4, the Grantee's Termination of Service by the Company or a Subsidiary without Cause prior to becoming eligible for Retirement.

(c) Retirement. In the event of the Grantee's Termination of Service other than for Cause after becoming eligible for Retirement, the Enhancement Restricted Stock Units will remain eligible to vest and become nonforfeitable as set forth in Section 3.4(a), and, to the extent vested, shall be settled in accordance with Article IV below; provided that the number of Enhancement Restricted Stock Units eligible to vest and become nonforfeitable will be prorated based on the number of full months of the Grantee's continuous employment during the period between the Grant Date and the second anniversary of the Grant Date.

(d) Death or Disability. In the event of the Grantee's Termination of Service due to death or Disability prior to the second anniversary of the Grant Date, the Enhancement Restricted Stock Units will remain eligible to vest and become nonforfeitable as set forth in Section 3.4(a) and, to the extent vested, shall be settled in accordance with Article IV below.

**ARTICLE IV
SETTLEMENT OF RESTRICTED STOCK UNITS**

Section 4.1 - Settlement of Vested Restricted Stock Units. Subject to Sections 4.2 and 13.2 of the Plan and the exception set forth in Section 4.2 of this Agreement, as well as to any withholding obligations described in Section 6.3 of this Agreement, one Share will be issued or delivered for each nonforfeitable Restricted Stock Unit (including Enhancement Restricted Stock Units) evidenced by this Agreement as soon as practicable following the date on which the Restricted Stock Unit becomes nonforfeitable as set forth in Section 3.1, Section 3.2 or Section 3.4, as applicable, but in all cases within the “short term deferral” period determined under Treasury Regulation Section 1.409A-1(b)(4). For the sake of clarity, the settlement of Shares in respect of nonforfeitable Restricted Stock Units is intended to comply with Treasury Regulation Section 1.409A-1(b)(4) and will be construed and administered in such a manner. As a result, the Shares will be issued no later than the date that is the 15th day of the third calendar month of the applicable year following the year in which the Shares subject to the Restricted Stock Units are no longer subject to a “substantial risk of forfeiture” within the meaning of Treasury Regulation Section 1.409A-1(d).

Section 4.2 - Settlement of Restricted Stock Units Vested in Accordance with Section 3.1(a). Notwithstanding Section 4.1 of this Agreement, if the Grantee is eligible for Retirement as of the Grant Date or becomes eligible pursuant to Section 3.1(c) and the Restricted Stock Units vest in substantially equal installments on each of the quarterly anniversaries of the Grant Date pursuant to Section 3.1(a) or 3.1(c), the Shares underlying the vested Restricted Stock Units shall be issued or delivered upon the earlier of (a) each of the first and second year anniversaries of the Grant Date on or immediately following the quarterly vesting dates and (b) as soon as practicable following Retirement, but in all cases within the “short term deferral” period determined under U.S. Treasury Regulation Section 1.409A-1(b)(4) as described in Section 4.1 of this Agreement.

Section 4.3 - Forfeiture of Unvested Restricted Stock Units. To the extent that the Grantee does not vest in all or any portion of the Restricted Stock Units subject to the Award, all interest in such unvested Restricted Stock Units shall be forfeited upon the Grantee’s Termination of Service. The Grantee has no right or interest in any Restricted Stock Unit that is forfeited.

Section 4.4 - Treatment of Fractional Restricted Stock Units. Notwithstanding anything in this Agreement to the contrary, in the event that any fractional Restricted Stock Unit is produced under the terms of the Plan or this Agreement, immediately prior to payment thereof, such fractional Restricted Stock Unit shall be rounded to the nearest whole Restricted Stock Unit; as a result, there will be no fractional Restricted Stock Units to settle under this Agreement.

**ARTICLE V
CONDITION TO GRANT OF AWARD; OTHER PROVISIONS**

Section 5.1 - Restrictive Covenant Agreement. The Grantee shall not be entitled to receive the Award unless the Grantee shall have executed and delivered the Restrictive Covenant Agreement, substantially in the form attached hereto as Exhibit A, and such shall be in full force and effect. Nothing in this Agreement or the Restrictive Covenant Agreement prevents the Grantee from providing, without prior notice to the Company, information to governmental authorities regarding possible legal violations or otherwise testifying or participating in any investigation or

proceeding by any governmental authorities regarding possible legal violations, and for purpose of clarity the Grantee is not prohibited from providing information voluntarily to the Securities and Exchange Commission pursuant to Section 21F of the Exchange Act.

Section 5.2 - Notice Period. The Grantee may terminate the Grantee's employment with the Company or a Subsidiary at any time for any reason by delivery of notice to the Company at least 90 days in advance of the date of termination (the "Notice Period"); provided, however, that no communication, statement or announcement shall be considered to constitute such notice of termination of the Grantee's employment unless it complies with Section 6.4 hereof and specifically recites that it is a notice of termination of employment for purposes of this Agreement; and provided, further, that the Company may waive any or all of the Notice Period, in which case the Grantee's employment with the Company or a Subsidiary or Affiliate will terminate on the date determined by the Company.

Section 5.3 - Breach of Restrictive Covenant Agreement or Section 5.2. Subject to Section 5.1, if the Grantee materially breaches any provision of the Restrictive Covenant Agreement or Section 5.2 hereof, the Company may, among other available remedies, determine that the Grantee (a) will forfeit any unpaid portion of the Restricted Stock Units evidenced by this Agreement and (b) will repay to the Company any portion of the Restricted Stock Units evidenced by this Agreement previously paid to the Grantee.

Section 5.4 - Conditions to Issuance of Shares. The Shares deliverable hereunder may be either previously authorized but unissued Shares or issued Shares that have been reacquired by the Company. Such Shares shall be fully paid and nonassessable. The Company shall not be required to issue or deliver any certificate or certificates (or other documentation that indicates ownership) for Shares paid hereunder prior to the fulfillment of both of the following conditions:

(a) The obtaining of approval or other clearance from any state or federal governmental agency that the Committee, in its absolute discretion, determines to be necessary or advisable; and

(b) The lapse of such reasonable period of time following the grant as the Committee may establish from time to time for administrative convenience (subject to, and in compliance with the requirements of Section 409A, including any requirements necessary to comply with Treasury Regulation Section 1.409A-1(b)(4)).

Section 5.5 - Rights as a Shareholder; Dividend Equivalents. The Grantee shall not be, and shall not have any of the rights or privileges of, a shareholder of the Company in respect of any Shares underlying Restricted Stock Units evidenced by this Agreement unless and until certificates representing such Shares shall have been issued by the Company to the Grantee or such ownership has otherwise been indicated and documented by the Company. From and after the Grant Date and until the earlier of (a) the time when the Restricted Stock Units become nonforfeitable and are paid in accordance with Article IV hereof or (b) the time when the Grantee's right to receive payment for the Restricted Stock Units is forfeited in accordance with the provisions of this Agreement, on the date that the Company pays a cash dividend (if any) to holders of Shares generally, the Grantee shall be credited with a number of additional Restricted Stock Units (which need not be a whole number) equal to the quotient of (x) the product of (i) the dividend declared per Share multiplied by (ii) the applicable number of Restricted Stock Units that

remain subject to this Agreement (including any Restricted Stock Units representing previously-credited Dividend Equivalents), divided by (y) the Fair Market Value of a Share on the date such dividend is paid to shareholders. Any amounts credited pursuant to the immediately preceding sentence shall be subject to the same applicable terms and conditions (including vesting, payment and forfeitability) as apply to the Restricted Stock Units based on which the Dividend Equivalents were credited, and such additional Restricted Stock Units (rounded to the nearest whole Restricted Stock Unit) shall be paid in Shares at the same time as the Restricted Stock Units to which they relate are paid.

Section 5.6 - Restrictions. Restricted Stock Units granted pursuant to this Agreement shall be subject to Section 5.9 of the Plan and all applicable policies and guidelines of the Company that relate to (a) share ownership requirements, or (b) recovery of compensation (i.e., clawbacks).

ARTICLE VI MISCELLANEOUS

Section 6.1 - Administration. The Committee has the power to interpret the terms of the Restricted Stock Units, the Plan and this Agreement and to adopt such rules for the administration, interpretation and application of the Plan as are consistent therewith and to interpret or revoke any such rules. All actions taken and all interpretations and determinations made by the Committee shall be final and binding upon the Grantee, the Company and all other interested persons. No member of the Committee shall be personally liable for any action, determination or interpretation made in good faith with respect to the Plan or the Restricted Stock Units. In its absolute discretion, the Board may at any time and from time to time exercise any and all rights and duties of the Committee under the Plan and this Agreement.

Section 6.2 - Restricted Stock Units Not Transferable. Neither the Restricted Stock Units nor any interest or right therein or part thereof shall be liable for the debts, contracts or engagements of the Grantee or his or her successors in interest or shall be subject to disposition by transfer, alienation, anticipation, pledge, encumbrance, assignment or any other means whether such disposition is voluntary or involuntary or by operation of law by judgment, levy, attachment, garnishment or any other legal or equitable proceedings (including bankruptcy), and any attempted disposition thereof shall be null and void and of no effect; provided, however, that this Section 6.2 shall not prevent transfers by will or by the applicable laws of descent and distribution.

Section 6.3 - Withholding. As of the date that all or a portion of the Restricted Stock Units become settled pursuant to Section 4.1 or 4.2 hereof, the Company will, on a mandatory basis in accordance with Section 16.1(a) of the Plan, withhold a number of Shares underlying the then vested Restricted Stock Units with a fair market value equal to the aggregate amount required by law to be withheld by the Company in connection with such vesting for applicable federal, state, local and foreign taxes of any kind. To the extent taxes are to be withheld upon vesting for purposes of federal FICA, FUTA or Medicare taxes, such withholding shall be taken from other income owed by the Company to the Grantee and the Grantee hereby agrees to such withholding. For all purposes, the amount withheld by the Company pursuant to this Section 6.3 shall be deemed to have first been paid to the Grantee.

Section 6.4 - Notices. Any notice to be given under the terms of this Agreement to the Company shall be provided to the Chief Administrative Officer and Corporate Secretary, with a

copy to the Grantee's supervisor, and any notice to be given to the Grantee shall be addressed to him or her at the address set forth in the records of the Company. By a notice given pursuant to this Section 6.4, either party may hereafter designate a different address for notices to be given to him, her or it. Any notice which is required to be given to the Grantee shall, if the Grantee is then deceased, be given to the Grantee's personal representative if such representative has previously informed the Company of his, her or its status and address by written notice under this Section 6.4. Any notice shall be deemed duly given when enclosed in a properly sealed envelope or wrapper addressed as aforesaid, deposited (with postage prepaid) in a post office or branch post office regularly maintained by the United States Postal Service. Notwithstanding the foregoing, any notice required or permitted hereunder from the Company to the Grantee may be made by electronic means, including by electronic mail to the Company-maintained electronic mailbox of the Grantee, and the Grantee hereby consents to receive such notice by electronic delivery. To the extent permitted in an electronically delivered notice described in the previous sentence, the Grantee shall be permitted to respond to such notice or communication by way of a responsive electronic communication, including by electronic mail.

Section 6.5 - Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

Section 6.6 - Pronouns. The masculine pronoun shall include the feminine and neuter, and the singular the plural, where the context so indicates.

Section 6.7 - Applicability of Plan. The Restricted Stock Units and the Shares issued to the Grantee, if any, shall be subject to all of the terms and provisions of the Plan, to the extent applicable to the Restricted Stock Units and such Shares. In the event of any conflict between this Agreement and the Plan, the terms of the Plan shall control.

Section 6.8 - Amendment. The Committee may amend this Agreement at any time, provided that no such amendment shall materially impair the rights of the Grantee unless reflected in a writing executed by the parties hereto that specifically states that it is amending this Agreement.

Section 6.9 - Severability. The invalidity or unenforceability of any provision of the Plan or this Agreement shall not affect the validity or enforceability of any other provision of the Plan or this Agreement, and each provision of the Plan and this Agreement shall be severable and enforceable to the extent permitted by law.

Section 6.10 - Dispute Resolution. Any dispute or controversy arising under or in connection with this Agreement shall be resolved by arbitration in St. Louis, Missouri. Arbitrators shall be selected, and arbitration shall be conducted, in accordance with the rules of the American Arbitration Association. The Company shall pay or reimburse any legal fees in connection with such arbitration in the event that the Grantee prevails on a material element of his or her claim or defense. Payments or reimbursements of legal fees made under this Section 6.10 that are provided during one calendar year shall not affect the amount of such payments or reimbursements provided during a subsequent calendar year, payments or reimbursements under this Section 6.10 may not be exchanged or substituted for another form of compensation to the Grantee, and any such reimbursement or payment will be paid within 60 days after the Grantee prevails, but in no event later than the last day of the Grantee's taxable year following the taxable year in which he incurred

the expense giving rise to such reimbursement or payment. This Section 6.10 shall remain in effect throughout the Grantee's employment with the Company or any Subsidiary and for a period of five (5) years following the Grantee's Termination of Service.

Section 6.11 - Section 409A.

(a) The Award is intended to comply with the "short-term deferral" rule set forth in Treasury Regulation Section 1.409A-1(b)(4) and, to the maximum extent permitted, this Agreement shall be construed and administered consistent with such intent. Notwithstanding anything contained herein to the contrary, if the Award fails to satisfy the requirements of the short-term deferral rule and is otherwise not exempt from, and therefore deemed to be deferred compensation subject to, Section 409A, references in this Agreement (including in Section 4.1), to payment or settlement of amounts under this Agreement within the "short-term deferral" period determined under Treasury Regulation Section 1.409A-1(b)(4), shall not apply, and instead payments will be made on the applicable payment date or a later date within the same taxable year of the Grantee, or if such timing is administratively impracticable, by the 15th day of the third calendar month following the date specified herein. For clarity, the Grantee is not permitted to designate the taxable year of payment. Notwithstanding anything contained herein to the contrary, if the Grantee is a "specified employee" (within the meaning set forth Section 409A(a)(2)(B)(i) of the Code) as of the date of the Grantee's "separation from service" (within the meaning of Treasury Regulation Section 1.409A-1(h)), then the issuance of any Shares that would otherwise be made on the date of the separation from service or within the first six months thereafter will not be made on the originally scheduled dates and will instead be issued in a lump sum on the date that is six months and one day after the date of the separation from service (or upon death, if earlier), with the balance of the Shares issued thereafter in accordance with the original vesting and issuance schedule set forth above, but if and only if such delay in the issuance of the Shares is necessary to avoid the imposition of taxation in respect of the Shares under Section 409A. A termination of employment or service shall not be deemed to have occurred for purposes of this Agreement providing for the payment of any amounts that are considered deferred compensation under Section 409A upon or following a termination of employment or service, unless such termination is also a "separation from service" (within the meaning of Treasury Regulation Section 1.409A-1(h)) and the payment thereof prior to a "separation from service" would violate Section 409A. Each installment of Shares that becomes payable in respect of vested Restricted Stock Units subject to the Award is a "separate payment" for purposes of Treasury Regulation Section 1.409A-2(b)(2). In no event shall the Company be liable for all or any portion of any taxes, penalties, interest or other expenses that may be incurred by the Grantee on account of Section 409A.

(b) In the event that the Company determines that any amounts payable hereunder may be taxable to the Grantee under Section 409A prior to the payment and/or delivery to the Grantee of such amount, the Committee may adopt such amendments to the Agreement, and appropriate policies and procedures, including amendments and policies with retroactive effect, that the Committee determines necessary or appropriate to preserve the intended tax treatment of the benefits provided by the Restricted Stock Units and this Agreement.

(c) Notwithstanding any provision of this Agreement to the contrary, in light of the uncertainty with respect to the proper application of Section 409A, the Company reserves the right to make amendments to this Agreement and the terms of the Restricted Stock Units as the Company deems necessary or desirable to avoid the imposition of taxes or penalties under Section 409A. In any case, neither the Company nor any of its affiliates will have any obligation to indemnify or otherwise hold the Grantee harmless from any or all of such taxes or penalties.

Section 6.12 - Governing Law. The laws of the State of Delaware shall govern the interpretation, validity and performance of the terms of this Agreement regardless of the law that might be applied under principles of conflicts of laws.

Section 6.13 - Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original but all of which together will constitute one and the same instrument. Counterpart signatures to this Agreement transmitted by facsimile, electronic mail, or by any other electronic means intended to preserve the original graphic and pictorial appearance of a document, will have the same effect as physical delivery of the paper document bearing an original signature.

Section 6.14 - Acceptance of the Plan. The Grantee hereby acknowledges receipt of a copy of the Plan and this Agreement. The Grantee has read and understands the terms and provisions thereof, and accepts the Restricted Stock Units subject to all the terms and conditions of the Plan and this Agreement. The Grantee acknowledges that there may be adverse tax consequences upon the vesting or settlement of the Restricted Stock Units and that the Grantee has been advised to consult a tax advisor prior to such vesting or settlement.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, this Agreement has been executed and delivered by the parties hereto.

PEABODY ENERGY CORPORATION

—
Scott T. Jarboe
Chief Administrative Officer &
Corporate Secretary

Note: The Grantee is deemed to have executed this Agreement upon clicking “Accept” in the Plan’s online administration site.

EXHIBIT A
RESTRICTIVE COVENANT AGREEMENT

THIS RESTRICTIVE COVENANT AGREEMENT (the “RCA”) dated January [___], 2022, is by and between PEABODY ENERGY CORPORATION, a Delaware corporation (the “Company”), and (“Grantee”).

WHEREAS, Grantee is a recipient of a 2022 Restricted Stock Unit Grant (the “Award”) under the Company’s Peabody Energy Corporation 2017 Incentive Plan, as amended from time to time (the “Plan”);

WHEREAS, Grantee acknowledges and agrees that he or she has access to and/or knowledge of certain trade secrets and other Confidential Information regarding the Company;

WHEREAS, the Company has spent and will continue to expend substantial amounts of time, money, and effort to develop its Confidential Information and Grantee acknowledges benefitting from these efforts;

WHEREAS, the Company deems it essential to the protection of its Confidential Information and competitive standing in its market to have recipients of Awards subject to reasonable restrictive covenants;

WHEREAS, Grantee agrees and acknowledges that the Company has a legitimate interest to protect its confidential information and competitive standing; and

NOW THEREFORE, in consideration for the provisions stated below, and intending to be legally bonded thereby, the parties agree as follows.

1. Grantee has been informed and is aware that the execution of this RCA is a necessary term and condition of Grantee’s receipt of the Award.

2. The term “Confidential Information” as used in this RCA shall be broadly interpreted to include, without limitation, materials and information (whether in written, electronic or other form and whether or not identified as confidential at the time of disclosure) concerning technical matters, business matters, business plans, operations, opportunities, plans, processes, procedures, standards, strategies, policies, programs, software, schematics, models, systems, results, studies, analyses, compilations, forecasts, data, figures, projections, estimates, components, records, methods, criteria, designs, quality control, research, samples, work-in-progress, prototypes, data, materials, clients and prospective clients, customer lists, contracts, projects, suppliers, referral sources, sales, marketing, bidding, purchasing, personnel, financial condition, assets, inventory, accounts payable, accounts receivable, tax matters, books of account, financing, collections, intellectual property, trade secrets and all other know-how and information of the Company or any subsidiary of the Company which has not been published or disclosed to the general public.

a. While employed by the Company and at all times thereafter, Grantee will keep Confidential Information, including trade secrets, confidential and shall not, directly or indirectly, use for himself or herself or use for, or disclose to, any party other than the Company, or any subsidiary of the Company (other than in the ordinary course of Grantee’s

duties for the benefit of the Company or any subsidiary of the Company), any Confidential Information.

b. At the termination of Grantee's employment or at any other reasonable time the Company or any of its subsidiaries may request, Grantee shall promptly deliver to the Company all memoranda, notes, records, plats, sketches, plans or other documents (including, without limitation, any "soft" copies or computerized or electronic versions thereof) containing Confidential Information, including trade secrets or any other information concerning Company's business, including all copies, then in Grantee's possession or under Grantee's control whether prepared by Grantee or others.

c. Notwithstanding the foregoing paragraphs, Company employees, contractors, and consultants may disclose trade secrets in confidence, either directly or indirectly, to a Federal, State or local government official or to an attorney, solely for the purpose of reporting or investigating a suspected violation of law, or in a complaint or other document filed in a lawsuit or other proceeding if such filing is made under seal. Additionally, Company employees, contractors, and consultants who file retaliation suits for reporting a suspected violation of law may disclose related trade secrets to their attorney and use them in related court proceedings, as long as the individual files documents containing the trade secret under seal and does not otherwise disclose the trade secret except pursuant to Court Order.

3. In consideration of the Company's obligations under the Restricted Stock Unit Agreement (the "Agreement"), Grantee agrees that while employed by the Company and for a period of twelve (12) months thereafter, without the prior written consent of the Board of Directors of the Company (the "Board"), he or she shall not, directly or indirectly, as principal, manager, agent, consultant, officer, director, stockholder, partner, investor, lender or employee or in any other capacity, carry on, be engaged in or have any financial interest in, any entity which is in competition with the business of the Company or its subsidiaries.

4. In consideration of the Company's obligations under the Agreement, Grantee agrees that while employed by the Company and for a period of twelve (12) months thereafter, without the prior written consent of the Board, he or she shall not, on his or her own behalf or on behalf of any person, firm or company, directly or indirectly, (a) solicit or offer employment to or hire any person who is or has been employed by the Company or its subsidiaries at any time during the twelve (12) months immediately preceding such solicitation or (b) solicit or entice away or in any manner attempt to persuade any client, vendor, partner, customer or prospective customer of the Company to discontinue or diminish his, her or its relationship or prospective relationship with the Company or to otherwise provide his, her or its business to any corporation, partnership or other business entity which engages in any line of business in which the Company is engaged (other than the Company).

5. For purposes of this RCA, an entity shall be deemed to be in competition with the Company if it enters into or engages in any business or activity that substantially and directly competes with the business of the Company. For purposes of this paragraph 5, the business of the Company is defined to be: development of new thermal and metallurgical mines, active metallurgical and thermal coal mining, preparation and sale; the marketing, brokering and trading of metallurgical and thermal coal; and the optimization of our metallurgical and thermal coal

reserves; in each case by the Company and its direct and indirect subsidiaries or affiliated or related companies. Notwithstanding this paragraph 5 or paragraph 8, nothing herein shall be construed so as to preclude Grantee from investing in any publicly or privately held company, provided that no such investment in the equity securities of an entity with publicly traded equity securities may exceed one percent (1%) of the equity of such entity, and no such investment in any other entity may exceed five percent (5%) of the equity of such entity, without the prior written approval of the Board.

6. Grantee agrees that he or she will not at any time make, directly or indirectly, any negative, derogatory, disparaging or defamatory comment, whether written, oral or in electronic format, to any reporter, author, producer or similar person or entity or to any general public media in any form (including, without limitation, books, articles or writings of any other kind, as well as film, videotape, audio tape, computer/Internet format or any other medium) that concerns directly or indirectly the Company its business or operations, or any of its current or former agents, employees, officers, directors, customers or clients. Grantee understands that nothing in this section or this RCA limits Grantee's ability to communicate with any government agencies or otherwise participate or cooperate with an investigation conducted by the Equal Employment Opportunity Commission, the Securities and Exchange Commission, or other similar agency, including providing documents or other information, without notice to the Company.

7. Upon the termination of Grantee's employment for any reason, Grantee or his or her estate shall surrender to the Company all correspondence, letters, files, contracts, mailing lists, customer lists, advertising materials, ledgers, supplies, equipment, checks, and all other materials and records of any kind that are the property of the Company or any of its subsidiaries or affiliates, that may be in Grantee's possession or under his control, including, without limitation, any "soft" copies or computerized or electronic versions thereof.

8. Grantee agrees that the covenant not to compete, the covenants not to solicit and the covenant not to make disparaging comments are reasonable under the circumstances and will not interfere with his or her ability to earn a living or otherwise to meet his or her financial obligations. Grantee and the Company agree that if in the opinion of any court of competent jurisdiction such restraint is not reasonable in any respect, such court shall have the right, power and authority to excise or modify such provision or provisions of this covenant which appear unreasonable and to enforce the remainder of the covenant as so amended. Grantee agrees that any breach of the covenants contained in this RCA would irreparably injure the Company. Accordingly, Grantee agrees that, in the event that Grantee violates this RCA, the Company may, in addition to pursuing any other remedies it may have in law or in equity, cease making any payments otherwise required under the agreements evidencing the Award, cancel and recoup any portion of the Award already paid to the extent required by law, regulation or listing requirement, or permitted by any Company policy adopted pursuant thereto. The Company may also seek an injunction against Grantee from any court having jurisdiction over the matter restraining any further violation of this RCA by Grantee.

9. No waiver or modification of all or any part of this RCA will be effective unless set forth in a written document signed by both the Company and Grantee expressly indicating their intention to waive or modify the specified provisions of this RCA. If the Company chooses not to enforce its rights in the event Grantee or any other recipient of an Award breaches some or all of the terms of this RCA, the Company's rights with respect to any such breach shall not be

considered a waiver of a future breach by Grantee of this RCA, regardless of whether the breach is of a similar nature or not.

10. This RCA accurately sets forth and entirely sets forth the understandings reached between Grantee and the Company with respect to the matters treated herein. If there are any prior written or oral understandings or agreements pertaining to the subject matter addressed in this RCA, they are specifically superseded by this RCA and have no effect, except, should Grantee be subject to non-compete and non-solicitation obligations (“Restrictive Covenants”) pursuant to an employment agreement or other agreement between Grantee and Company or one of its subsidiaries or affiliates, Grantee shall continue to be bound by the terms of those Restrictive Covenants and they shall run concurrently with those set forth in this RCA. This RCA is binding on Grantee and the Company, and our respective successors, assigns and representatives.

11. Because of Company’s and Grantee’s substantial contacts with the State of Missouri, the fact that Company’s headquarters is located in Missouri, the parties’ interests in ensuring that disputes regarding the interpretation, validity, and enforceability of this RCA are resolved on a uniform basis, and Company’s making and execution of this Agreement in Missouri, the parties agree that the RCA shall be interpreted and governed by the laws of the State of Missouri, without regard for any conflict of law principles. The parties agree that the exclusive venue and jurisdiction for any litigation concerning or arising out of or based on this RCA shall be the federal and state courts located in Missouri. The parties expressly consent to the personal jurisdiction and venue of said courts. The provisions of this paragraph shall not restrict the ability of Company or Grantee to enforce in any court any judgment obtained in Missouri federal or state court.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, this RCA has been executed and delivered by the parties hereto.

PEABODY ENERGY CORPORATION

Scott T. Jarboe
Chief Administrative Officer &
Corporate Secretary

**Note: Grantee is deemed to have executed this Agreement upon clicking
“Accept” in the Plan’s online administration site.**

EXHIBIT B
Enhancement Performance Factors

Enhancement Restricted Stock Units will be eligible to vest based on [EBITDA over plan during the period from [] to []], as set forth below.

	[% of EBITDA Over Plan]	Enhancement Restricted Stock Units Eligible to Vest
Threshold Level of EBITDA	[]	50% of Restricted Stock Units set forth on signature page hereto
Maximum Level of EBITDA	[] or greater	100% of Restricted Stock Units set forth on signature page hereto

Number of Enhancement Restricted Stock Units eligible to vest for performance between the Threshold Level and the Maximum Level will be based on a straight line interpolation.

Form of Global Restricted Stock Unit Agreement
(AUS Employees)
2022 Award (with stretch incentive)

PEABODY ENERGY CORPORATION
2017 INCENTIVE PLAN

GLOBAL RESTRICTED STOCK UNIT AGREEMENT

THIS GLOBAL RESTRICTED STOCK UNIT AGREEMENT (the “Agreement”), effective as of [__] January 2022, is made by and between **PEABODY ENERGY CORPORATION**, a Delaware corporation (the “Company”), and the undersigned employee of the Company or a Subsidiary of the Company (the “Grantee”). The Grant Date for the Restricted Stock Units evidenced by this Agreement is [__] January 2022 (the “Grant Date”).

WHEREAS, the Company wishes to carry out the Plan, the terms of which are hereby incorporated by reference and made a part of this Agreement;

WHEREAS, the Company deems it essential to the protection of its confidential information and competitive standing in its market to have its key employees have reasonable restrictive covenants in place;

WHEREAS, the Grantee agrees and acknowledges that the Company has a legitimate interest to protect its confidential information and competitive standing;

WHEREAS, the Company deems it essential to the optimal functioning of its business to have its key employees provide advance notice to the Company of their termination of employment; and

WHEREAS, the Compensation Committee of the Board (the “Committee”) has determined that, subject to the provisions of this Agreement and the Plan, it would be to the advantage and best interest of the Company and its shareholders to grant the Restricted Stock Units evidenced hereby to the Grantee as an incentive for his or her efforts during his or her term of service with the Company or its Subsidiaries or Affiliates, and has advised the Company thereof and instructed the undersigned officer to enter into this Agreement to evidence such Restricted Stock Units.

NOW, THEREFORE, in consideration of the mutual covenants herein contained and other good and valuable consideration, receipt of which is hereby acknowledged, the parties hereby agree as follows:

**ARTICLE I
DEFINITIONS**

Whenever the following terms are used in this Agreement, they shall have the meanings specified below. Capitalized terms not otherwise defined in this Agreement shall have the meanings specified in the Plan.

Section 1.1 - “Affiliate” shall mean any other Person directly or indirectly controlling, controlled by, or under common control with the Company. For the purposes of this definition, the term “control” (including, with correlative meanings, the terms “controlling”, “controlled by” and “under common control with”), as applied to any Person, means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of that Person, whether through the ownership of voting securities, by contract or otherwise.

Section 1.2 - “Award” shall mean the number of Restricted Stock Units evidenced by this Agreement.

Section 1.3 - “Plan” shall mean the Peabody Energy Corporation 2017 Incentive Plan, as amended or amended and restated from time to time.

Section 1.4 - “Retirement” shall mean, for purposes of this Agreement, a Termination of Service, other than for Cause, death or Disability, on or after reaching age 65 or age 60 with five (5) years of service with the Company or a Subsidiary.

Section 1.5 - “Section 409A” shall mean Section 409A of the Code and the applicable regulations or other guidance issued thereunder.

ARTICLE II GRANT OF RESTRICTED STOCK UNITS

Section 2.1 - Grant of Restricted Stock Units. Pursuant to Section 9 of the Plan, the Company has granted to the Grantee an Award consisting of the number of Restricted Stock Units set forth on the signature page hereof upon the terms and subject to the conditions set forth in this Agreement and the Plan. The grant of the Restricted Stock Units was made in consideration of the services to be rendered by the Grantee to the Company and its Subsidiaries and Affiliates and the Grantee’s obligations under the Restrictive Covenant Agreement (as referenced in Article V).

Section 2.2 - No Obligation of Employment. Nothing in this Agreement or in the Plan shall be interpreted as forming or amending an employment or service contract with the Company nor shall it confer upon the Grantee any right to continue in the employ of the Company or any Subsidiary or Affiliate or interfere with or restrict in any way the rights of the Company and its Subsidiaries or Affiliates, which rights are hereby expressly reserved, to terminate the employment of the Grantee at any time for any reason whatsoever, with or without Cause.

Section 2.3 - Nature of Grant. In accepting the Restricted Stock Units, the Grantee acknowledges, understands and agrees that:

(a) the Plan is established voluntarily by the Company, it is discretionary in nature and it may be amended, altered or discontinued by the Company at any time, to the extent permitted by the Plan;

(b) the grant of the Restricted Stock Units is exceptional, voluntary and occasional and does not create any contractual or other right to receive future grants of Restricted Stock Units, or benefits in lieu of Restricted Stock Units, even if Restricted Stock Units have been granted in the past;

- (c) all decisions with respect to future Restricted Stock Unit grants, if any, will be at the sole discretion of the Company;
- (d) the Grantee is voluntarily participating in the Plan;
- (e) the Restricted Stock Units and the Shares subject to the Restricted Stock Units, and the income and value of same, are not intended to replace any pension rights or compensation;
- (f) the Restricted Stock Units and the Shares subject to the Restricted Stock Units, and the income and value of same, are not part of normal or expected compensation or salary for purposes of calculating any severance, resignation, termination, redundancy, dismissal, end-of-service payments, holiday pay, bonuses, long-service awards, pension, retirement or welfare benefits or similar mandatory payments;
- (g) the future value of the underlying Shares is unknown, indeterminable and cannot be predicted;
- (h) unless otherwise agreed with the Company, the Restricted Stock Units and the Shares underlying the Restricted Stock Units, and the income and value of same, are not granted as consideration for, or in connection with, the service the Grantee may provide as a director of a Subsidiary or Affiliate; and
- (i) if the Grantee is providing services outside of the United States (“U.S.”):
 - (i) the Restricted Stock Units and the Shares subject to the Restricted Stock Units, and the income and value of same, are not part of normal or expected compensation or salary for any purpose; and
 - (ii) neither the Company nor any Subsidiary shall be liable for any foreign exchange rate fluctuation between the Grantee’s local currency and the U.S. Dollar that may affect the value of the Restricted Stock Units or any Shares delivered to the Grantee upon vesting of the Restricted Stock Units or of any proceeds resulting from the Grantee’s sale of such Shares.

Section 2.4 - Adjustments in Restricted Stock Units. In the event of the occurrence of one of the corporate transactions or other events listed in Section 4.2 or 13.2 of the Plan, the Committee shall make such substitution or adjustment as provided in Sections 4.2 or 13.2 of the Plan or otherwise in the terms of the Restricted Stock Units in order to equitably reflect such corporate transaction or other event. Any such adjustment made by the Committee shall be final and binding upon the Grantee, the Company and all other interested persons.

Section 2.5 - Change in Control. In the event of a Change in Control, the treatment of the Restricted Stock Units evidenced hereby will be determined in accordance with the Plan.

ARTICLE III
VESTING AND FORFEITURE OF RESTRICTED STOCK UNITS

Section 3.1 - Normal Vesting. Subject to Sections 2.5, 3.2 and 3.3, the Restricted Stock Units evidenced by this Agreement shall become nonforfeitable and payable to the Grantee pursuant to Article IV as follows:

(a) Retirement-Eligible Grantee. If the Grantee is eligible for Retirement as of the Grant Date, the Restricted Stock Units shall vest in substantially equal installments on each of the quarterly anniversaries of the Grant Date during the period beginning on the Grant Date and ending on the second anniversary of the Grant Date, conditioned upon the Grantee's continuous employment with the Company or a Subsidiary through each such date.

(b) Non-Retirement-Eligible Grantee. If the Grantee is not eligible for Retirement as of the Grant Date, the Restricted Stock Units shall vest in substantially equal installments on each of the first and second anniversaries of the Grant Date, conditioned upon the Grantee's continuous employment with the Company or a Subsidiary through each such date.

(c) Special Rule. If the Grantee becomes eligible for Retirement after the Grant Date, the provisions of Section 3.1(a) above shall apply on and after the date the Grantee becomes eligible for Retirement. However, on the first quarterly anniversary of the Grant Date following the date on which the Grantee becomes eligible for Retirement, a portion of the Restricted Stock Units shall vest. Such vesting portion shall equal the result of the following formula: X multiplied by $(Y/4)$, where " X " is equal to one-half of the aggregate number of Restricted Stock Units granted under this Agreement, and " Y " is equal to the number of full calendar quarters that have elapsed between the Grant Date (or the most recent annual anniversary of the Grant Date) and the then current quarterly anniversary of the Grant Date.

(d) Example. The following example of the operation of Sections 3.1(b) and (c) hereof is for illustrative purposes only. A non-Retirement-eligible individual receives 360 Restricted Stock Units on January 2, 2021. On January 2, 2022, 180 of the Restricted Stock Units vest and become non-forfeitable. On July 1, 2022, such individual becomes eligible for Retirement. Vesting of 90 Restricted Stock Units would occur on July 2, 2022. On October 2, 2022 and each quarterly anniversary of the Grant Date thereafter until January 2, 2023, 45 Restricted Stock Units shall become vested (1/8 of the aggregate grant).

(e) For purposes of this Agreement, "continuously employed" (or substantially similar terms) means the absence of any interruption or termination of the Grantee's employment with the Company or a Subsidiary. Continuous employment shall not be considered interrupted or terminated in the case of transfers between locations of the Company and its Subsidiaries. Each installment of Restricted Stock Units that becomes nonforfeitable and payable hereunder is a "separate payment" for purposes of Section 409A.

Section 3.2 - Accelerated Vesting Events. Notwithstanding Section 3.1, upon the Grantee's death or Disability, 100% of the unvested Restricted Stock Units evidenced by this Agreement shall, to the extent not already forfeited, become immediately nonforfeitable and shall be settled in accordance with Article IV below.

Section 3.3 - Effect of Certain Terminations of Service. The Grantee will forfeit any and all unvested Restricted Stock Units upon (a) the Grantee's voluntary Termination of Service, (b) the Grantee's Termination of Service by the Company or a Subsidiary for Cause, or (c) subject to Section 2.5, the Grantee's Termination of Service by the Company or a Subsidiary without Cause.

Section 3.4 - Enhancement Restricted Stock Units.

(a) Promptly on or following the second anniversary of the Grant Date, the Committee, in its sole discretion, shall determine whether the Company has achieved the performance metrics set forth on Exhibit B attached hereto (the "Performance Metrics"). In the event the Committee determines that the Performance Metrics have been achieved, an additional number of Restricted Stock Units determined as set forth on Exhibit B attached hereto (the "Enhancement Restricted Stock Units") shall vest and become nonforfeitable, conditioned upon the Grantee's continuous employment with the Company or a Subsidiary through the second anniversary of the Grant Date (except as otherwise set forth below). In the event that the Company does not achieve the Performance Metrics, all Enhancement Restricted Stock Units will be forfeited.

(b) Effect of Certain Terminations of Service. The Grantee will forfeit the unvested Enhancement Restricted Stock Units upon (i) the Grantee's voluntary Termination of Service prior to becoming eligible for Retirement, (ii) the Grantee's Termination of Service by the Company or a Subsidiary for Cause, or (iii) subject to Section 2.5, the Grantee's Termination of Service by the Company or a Subsidiary without Cause prior to becoming eligible for Retirement.

(c) Retirement. In the event of the Grantee's Termination of Service other than for Cause after becoming eligible for Retirement, the Enhancement Restricted Stock Units will remain eligible to vest and become nonforfeitable as set forth in Section 3.4(a), and, to the extent vested, shall be settled in accordance with Article IV below; provided that the number of Enhancement Restricted Stock Units eligible to vest and become nonforfeitable will be prorated based on the number of full months of the Grantee's continuous employment during the period between the Grant Date and the second anniversary of the Grant Date.

(d) Death or Disability. In the event of the Grantee's Termination of Service due to death or Disability prior to the second anniversary of the Grant Date, the Enhancement Restricted Stock Units will remain eligible to vest and become nonforfeitable as set forth in Section 3.4(a) and, to the extent vested, shall be settled in accordance with Article IV below.

Section 3.5 - For purposes of this Article III, the date of the Grantee's Termination of Service will be the date the Grantee is no longer actively providing services to the Company or any of its Subsidiaries (regardless of the reason for such termination and whether or not later found to

be invalid or in breach of employment laws in the jurisdiction where the Grantee is employed or the terms of the Grantee's employment agreement, if any), and the Grantee's employment will not be extended by any notice period (e.g., the Grantee's period of service would not include any contractual notice period or any period of "garden leave" or similar period mandated under employment laws in the jurisdiction where the Grantee is employed or the terms of the Grantee's employment agreement, if any). The Committee shall have the exclusive discretion to determine when the Grantee is no longer actively providing services for purposes of the Grantee's Restricted Share Unit grant (including whether the Grantee may still be considered to be providing services while on a leave of absence).

ARTICLE IV SETTLEMENT OF RESTRICTED STOCK UNITS

Section 4.1 - Settlement of Vested Restricted Stock Units. Subject to Sections 4.2 and 13.2 of the Plan and the exception set forth in Section 4.2 of this Agreement, as well as to any withholding obligations described in Section 6.4 of this Agreement, one Share will be issued or delivered for each nonforfeitable Restricted Stock Unit (including Enhancement Restricted Stock Units) evidenced by this Agreement as soon as practicable following the date on which the Restricted Stock Unit becomes nonforfeitable as set forth in Section 3.1, Section 3.2 or Section 3.4, as applicable, but in all cases within the "short term deferral" period determined under U.S. Treasury Regulation Section 1.409A-1(b)(4). For the sake of clarity, the settlement of Shares in respect of nonforfeitable Restricted Stock Units is intended to comply with U.S. Treasury Regulation Section 1.409A-1(b)(4) and will be construed and administered in such a manner. As a result, the Shares will be issued no later than the date that is the 15th day of the third calendar month of the applicable year following the year in which the Shares subject to the Restricted Stock Units are no longer subject to a "substantial risk of forfeiture" within the meaning of U.S. Treasury Regulation Section 1.409A-1(d).

Section 4.2 - Settlement of Restricted Stock Units Vested in Accordance with Section 3.1(a). Notwithstanding Section 4.1 of this Agreement, if the Grantee is eligible for Retirement as of the Grant Date or becomes eligible pursuant to Section 3.1(c) and the Restricted Stock Units vest in substantially equal installments on each of the quarterly anniversaries of the Grant Date pursuant to Section 3.1(a) or 3.1(c), the Shares underlying the vested Restricted Stock Units shall be issued or delivered upon the earlier of (a) each of the first and second year anniversaries of the Grant Date on or immediately following the quarterly vesting dates and (b) as soon as practicable following Retirement, but in all cases within the "short term deferral" period determined under U.S. Treasury Regulation Section 1.409A-1(b)(4) as described in Section 4.1 of this Agreement.

Section 4.3 - Forfeiture of Unvested Restricted Stock Units. To the extent that the Grantee does not vest in all or any portion of the Restricted Stock Units subject to the Award, all interest in such unvested Restricted Stock Units shall be forfeited upon the Grantee's Termination of Service. The Grantee has no right or interest in any Restricted Stock Unit that is forfeited. Further, no claim or entitlement to compensation or damages shall arise from forfeiture of the Restricted Stock Units resulting from the Grantee's Termination of Service (for any reason whatsoever, whether or not later found to be invalid or in breach of employment laws in the jurisdiction where the Grantee is employed or the terms of the Grantee's employment agreement, if any).

Section 4.4 - Treatment of Fractional Restricted Stock Units. Notwithstanding anything in this Agreement to the contrary, in the event that any fractional Restricted Stock Unit is produced under the terms of the Plan or this Agreement, immediately prior to payment thereof, such fractional Restricted Stock Unit shall be rounded to the nearest whole Restricted Stock Unit; as a result, there will be no fractional Restricted Stock Units to settle under this Agreement.

ARTICLE V CONDITION TO GRANT OF AWARD; OTHER PROVISIONS

Section 5.1 - Restrictive Covenant Agreement. The Grantee shall not be entitled to receive the Award unless the Grantee shall have executed and delivered the Restrictive Covenant Agreement, substantially in the form attached hereto as Exhibit A, and such shall be in full force and effect. Nothing in this Agreement or the Restrictive Covenant Agreement prevents the Grantee from providing, without prior notice to the Company, information to governmental authorities regarding possible legal violations or otherwise testifying or participating in any investigation or proceeding by any governmental authorities regarding possible legal violations, and for purpose of clarity the Grantee is not prohibited from providing information voluntarily to the Securities and Exchange Commission pursuant to Section 21F of the Exchange Act.

Section 5.2 - Notice Period. The Grantee may terminate the Grantee's employment with the Company or a Subsidiary at any time for any reason by delivery of notice to the Company at least (90) days in advance of the date of termination (the "Notice Period"); provided, however, that no communication, statement or announcement shall be considered to constitute such notice of termination of the Grantee's employment unless it complies with Section 6.6 hereof and specifically recites that it is a notice of termination of employment for purposes of this Agreement; and provided, further, that the Company may waive any or all of the Notice Period, in which case the Grantee's employment with the Company or a Subsidiary or Affiliate will terminate on the date determined by the Company.

Section 5.3 - Breach of Restrictive Covenant Agreement or Section 5.2. Subject to Section 5.1, if the Grantee materially breaches any provision of the Restrictive Covenant Agreement or Section 5.2 hereof, the Company may, among other available remedies, determine that the Grantee (a) will forfeit any unpaid portion of the Restricted Stock Units evidenced by this Agreement and (b) will repay to the Company any portion of the Restricted Stock Units evidenced by this Agreement previously paid to the Grantee.

Section 5.4 - Conditions to Issuance of Shares. The Shares deliverable hereunder may be either previously authorized but unissued Shares or issued Shares that have been reacquired by the Company. Such Shares shall be fully paid and nonassessable. The Company shall not be required to issue or deliver any certificate or certificates (or other documentation that indicates ownership) for Shares paid hereunder prior to the fulfillment of both of the following conditions:

- (a) The obtaining of approval or other clearance from any state, federal or foreign governmental agency that the Committee, in its absolute discretion, determines to be necessary or advisable; and
- (b) The lapse of such reasonable period of time following the grant as the Committee may establish from time to time for administrative convenience (subject to, and

in compliance with the requirements of Section 409A, including any requirements necessary to comply with U.S. Treasury Regulation Section 1.409A-1(b)(4)).

Section 5.5 - Rights as a Shareholder; Dividend Equivalents. The Grantee shall not be, and shall not have any of the rights or privileges of, a shareholder of the Company in respect of any Shares underlying Restricted Stock Units evidenced by this Agreement unless and until certificates representing such Shares shall have been issued by the Company to the Grantee or such ownership has otherwise been indicated and documented by the Company. From and after the Grant Date and until the earlier of (a) the time when the Restricted Stock Units become nonforfeitable and are paid in accordance with Article IV hereof or (b) the time when the Grantee's right to receive payment for the Restricted Stock Units is forfeited in accordance with the provisions of this Agreement, on the date that the Company pays a cash dividend (if any) to holders of Shares generally, the Grantee shall be credited with a number of additional Restricted Stock Units (which need not be a whole number) equal to the quotient of (x) the product of (i) the dividend declared per Share multiplied by (ii) the applicable number of Restricted Stock Units that remain subject to this Agreement (including any Restricted Stock Units representing previously-credited Dividend Equivalents), divided by (y) the Fair Market Value of a Share on the date such dividend is paid to shareholders. Any amounts credited pursuant to the immediately preceding sentence shall be subject to the same applicable terms and conditions (including vesting, payment and forfeitability) as apply to the Restricted Stock Units based on which the Dividend Equivalents were credited, and such additional Restricted Stock Units (rounded to the nearest whole Restricted Stock Unit) shall be paid in Shares at the same time as the Restricted Stock Units to which they relate are paid.

Section 5.6 - Restrictions. Restricted Stock Units granted pursuant to this Agreement shall be subject to Section 5.9 of the Plan and all applicable policies and guidelines of the Company that relate to (a) share ownership requirements, or (b) recovery of compensation (i.e., clawbacks).

ARTICLE VI MISCELLANEOUS

Section 6.1 - Administration. The Committee has the power to interpret the terms of the Restricted Stock Units, the Plan and this Agreement and to adopt such rules for the administration, interpretation and application of the Plan as are consistent therewith and to interpret or revoke any such rules. All actions taken and all interpretations and determinations made by the Committee shall be final and binding upon the Grantee, the Company and all other interested persons. No member of the Committee shall be personally liable for any action, determination or interpretation made in good faith with respect to the Plan or the Restricted Stock Units. In its absolute discretion, the Board may at any time and from time to time exercise any and all rights and duties of the Committee under the Plan and this Agreement.

Section 6.2 - Restricted Stock Units Not Transferable. Neither the Restricted Stock Units nor any interest or right therein or part thereof shall be liable for the debts, contracts or engagements of the Grantee or his or her successors in interest or shall be subject to disposition by transfer, alienation, anticipation, pledge, encumbrance, assignment or any other means whether such disposition is voluntary or involuntary or by operation of law by judgment, levy, attachment, garnishment or any other legal or equitable proceedings (including bankruptcy), and any attempted disposition thereof shall be null and void and of no effect; provided, however, that this Section 6.2 shall not prevent transfers by will or by the applicable laws of descent and distribution.

Section 6.3 - Responsibility for Taxes. The Grantee acknowledges that, regardless of any action taken by the Company or, if different, Grantee's employer (the "Employer"), the ultimate liability for all income tax, social insurance, payroll tax, fringe benefits tax, payment on account or other tax-related items related to the Grantee's participation in the Plan and legally applicable to the Grantee ("Tax-Related Items") is and remains the Grantee's responsibility and may exceed the amount actually withheld by the Company or the Employer, if any. The Grantee further acknowledges that the Company and the Employer (i) make no representation or undertaking regarding the treatment of any Tax-Related Items in connection with any aspect of the Restricted Stock Units; and (ii) do not commit to and are under no obligation to structure the terms of the grant or any aspect of the Restricted Stock Unit to reduce or eliminate the Grantee's liability for Tax-Related Items or achieve any particular tax result. Further, if the Grantee is subject to Tax Related Items in more than one jurisdiction, the Grantee acknowledges that the Company and/or the Employer (or former employer, as applicable) may be required to withhold or account for Tax-Related Items in more than one jurisdiction.

Section 6.4 - Withholding.

(a) As of the date that all or a portion of the Restricted Stock Units become settled pursuant to Section 4.1 or 4.2 hereof, the Company will, on a mandatory basis in accordance with Section 16.1(a) of the Plan, withhold a number of Shares underlying the then vested Restricted Stock Units with a fair market value equal to the aggregate amount required by law to be withheld by the Company in connection with such vesting for applicable federal, state, local and foreign taxes of any kind. To the extent taxes are to be withheld upon vesting for purposes of U.S. federal FICA, FUTA or Medicare taxes, such withholding shall be taken from other income owed by the Company to the Grantee and the Grantee hereby agrees to such withholding. For all purposes, the amount withheld by the Company pursuant to this Section 6.4 shall be deemed to have first been paid to the Grantee.

(b) In the event that such withholding in Shares is problematic under applicable tax or securities law or has materially adverse accounting consequences, by the Grantee's acceptance of the Restricted Stock Units, the Grantee authorizes that the Company, or the Employer, as applicable, to satisfy any withholding obligation by (1) withholding from any compensation otherwise due to the Grantee, or (2) requiring payment in cash.

(c) Depending upon the withholding method, the Company or the Employer may withhold or account for Tax-Related Items by considering applicable minimum statutory withholding amounts (in accordance with Section 16.1 of the Plan) or other applicable withholding rates, including maximum applicable rates, in which case the Grantee may receive a refund of any over-withheld amount in cash and will have no entitlement to the equivalent Shares.

Section 6.5 - Data Privacy.

(a) **Data Collection and Usage**. *The Company and the Employer collect, process and use certain personal information about the Grantee, including, but not limited to, the Grantee's name, home address and telephone number, email address, date of birth, social insurance, passport or other identification number, salary, nationality, job title,*

any Shares or directorships held in the Company, details of all Restricted Stock Units or any other entitlement to shares or equivalent benefits awarded, canceled, exercised, vested, unvested or outstanding in the Grantee's favor ("Data"), for the purposes of implementing, administering and managing the Plan. The legal basis, where required, for the processing of Data is the Grantee's consent.

(b) Stock Plan Administration Service Providers. The Company will transfer Data to E*TRADE Financial Corporate Services, Inc. (including its affiliated companies) (collectively, "E*TRADE"), which is assisting the Company with the implementation, administration and management of the Plan. The Grantee may be asked to agree on separate terms and data processing practices with E*TRADE, with such agreement being a condition to the ability to participate in the Plan. In the future, the Company may select different or additional service providers and share Data with such other provider(s) serving in a similar manner.

(c) International Data Transfers. The Company and E*TRADE are based in the U.S., which means that it will be necessary for Data to be transferred to, and processed in, the U.S. If the Grantee is outside the U.S., the Grantee should note that his or her country has enacted data privacy laws that are different from the U.S. For example, the European Commission has issued a limited adequacy finding with respect to the U.S. that applies only to the extent companies register for the EU-U.S. Privacy Shield program. As a result, in the absence of appropriate safeguards, the transfer of Data to the U.S. or, as the case may be, other countries might not be subject to substantive data processing principles or supervision by data protection authorities. The Company's legal basis, where required, for the transfer of Data is the Grantee's consent.

(d) Data Retention. The Company will hold and use Data only as long as is necessary to implement, administer and manage the Grantee's participation in the Plan, or as required to comply with legal or regulatory obligations, including under tax, exchange control, labor and securities laws.

(e) Voluntariness and Consequences of Consent Denial or Withdrawal. Participation in the Plan is voluntary, and the Grantee is providing the consents herein on a purely voluntary basis. If the Grantee does not consent, or if the Grantee later seeks to revoke his or her consent, the Grantee's salary from or employment and career with the Employer will not be affected; the only consequence of refusing or withdrawing consent is that the Company would not be able to grant the Restricted Stock Units or other equity awards to the Grantee or administer or maintain such awards.

(f) Data Subject Rights. The Grantee may have a number of rights under data privacy laws in the Grantee's jurisdiction. Depending on where the Grantee is based, such rights may include the right to (i) request access or copies of Data the Company processes, (ii) rectification of incorrect Data, (iii) deletion of Data, (iv) restrictions on processing of Data, (v) portability of Data, (vi) lodge complaints with competent authorities in the Grantee's jurisdiction, and/or (vii) receive a list with the names and addresses of any potential recipients of Data. To receive clarification regarding these rights or to exercise these rights, the Grantee can contact the local human resources representative.

By accepting the Restricted Stock Units and indicating consent via the Company's acceptance procedure, the Grantee is declaring agreement with the data processing practices described herein and consents to the collection, processing and use of Data by the Company and the transfer of Data to the recipients mentioned above, including recipients located in countries which do not adduce an adequate level of protection from a European (or other non-U.S.) data protection law perspective, for the purposes described above.

Finally, the Grantee understands that the Company may rely on a different basis for the processing or transfer of Data in the future and/or request that the Grantee provide another data privacy consent. If applicable, the Grantee agrees that upon request of the Company or the Employer, the Grantee will provide an executed acknowledgement or data privacy consent form (or any other agreements or consents) that the Company and/or the Employer may deem necessary to obtain from the Grantee for the purpose of administering the Grantee's participation in the Plan in compliance with the data privacy laws in the Grantee's country, either now or in the future. The Grantee understands and agrees that he or she will not be able to participate in the Plan if he or she fails to provide any such consent or agreement requested by the Company and/or the Employer.

Section 6.6 - Notices. Any notice to be given under the terms of this Agreement to the Company shall be provided to the Chief Administrative Officer and Corporate Secretary, with a copy to the Grantee's supervisor, and any notice to be given to the Grantee shall be addressed to him or her at the address set forth in the records of the Company. By a notice given pursuant to this Section 6.6, either party may hereafter designate a different address for notices to be given to him, her or it. Any notice which is required to be given to the Grantee shall, if the Grantee is then deceased, be given to the Grantee's personal representative if such representative has previously informed the Company of his, her or its status and address by written notice under this Section 6.6. Any notice shall be deemed duly given when enclosed in a properly sealed envelope or wrapper addressed as aforesaid, deposited (with postage prepaid) in a post office or branch post office regularly maintained by the United States Postal Service. Notwithstanding the foregoing, any notice required or permitted hereunder from the Company to the Grantee may be made by electronic means, including by electronic mail to the Company-maintained electronic mailbox of the Grantee, and the Grantee hereby consents to receive such notice by electronic delivery. To the extent permitted in an electronically delivered notice described in the previous sentence, the Grantee shall be permitted to respond to such notice or communication by way of a responsive electronic communication, including by electronic mail.

Section 6.7 - Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

Section 6.8 - Pronouns. The masculine pronoun shall include the feminine and neuter, and the singular the plural, where the context so indicates.

Section 6.9 - Applicability of Plan. The Restricted Stock Units and the Shares issued to the Grantee, if any, shall be subject to all of the terms and provisions of the Plan, to the extent applicable to the Restricted Stock Units and such Shares. In the event of any conflict between this Agreement and the Plan, the terms of the Plan shall control.

Section 6.10 - Amendment. The Committee may amend this Agreement at any time, provided that no such amendment shall materially impair the rights of the Grantee unless reflected in a writing executed by the parties hereto that specifically states that it is amending this Agreement.

Section 6.11 - Severability. The invalidity or unenforceability of any provision of the Plan or this Agreement shall not affect the validity or enforceability of any other provision of the Plan or this Agreement, and each provision of the Plan and this Agreement shall be severable and enforceable to the extent permitted by law.

Section 6.12 - Dispute Resolution. Any dispute or controversy arising under or in connection with this Agreement shall be resolved by arbitration in St. Louis, Missouri. Arbitrators shall be selected, and arbitration shall be conducted, in accordance with the rules of the American Arbitration Association. The Company shall pay or reimburse any legal fees in connection with such arbitration in the event that the Grantee prevails on a material element of his or her claim or defense. Payments or reimbursements of legal fees made under this Section 6.12 that are provided during one calendar year shall not affect the amount of such payments or reimbursements provided during a subsequent calendar year, payments or reimbursements under this Section 6.12 may not be exchanged or substituted for another form of compensation to the Grantee, and any such reimbursement or payment will be paid within 60 days after the Grantee prevails, but in no event later than the last day of the Grantee's taxable year following the taxable year in which he incurred the expense giving rise to such reimbursement or payment. This Section 6.12 shall remain in effect throughout the Grantee's employment with the Company or any Subsidiary and for a period of five (5) years following the Grantee's Termination of Service.

Section 6.13 - Section 409A.

(a) The Award is intended to comply with the "short-term deferral" rule set forth in U.S. Treasury Regulation Section 1.409A-1(b)(4) and, to the maximum extent permitted, this Agreement shall be construed and administered consistent with such intent. Notwithstanding anything contained herein to the contrary, if the Award fails to satisfy the requirements of the short-term deferral rule and is otherwise not exempt from, and therefore deemed to be deferred compensation subject to, Section 409A, references in this Agreement (including in Section 4.1), to payment or settlement of amounts under this Agreement within the "short-term deferral" period determined under U.S. Treasury Regulation Section 1.409A-1(b)(4), shall not apply, and instead payments will be made on the applicable payment date or a later date within the same taxable year of the Grantee, or if such timing is administratively impracticable, by the 15th day of the third calendar month following the date specified herein. For clarity, the Grantee is not permitted to designate the taxable year of payment. Notwithstanding anything contained herein to the contrary, if the Grantee is a "specified employee" (within the meaning set forth Section 409A(a)(2)(B)(i) of the Code) as of the date of the Grantee's "separation from service" (within the meaning of U.S. Treasury Regulation Section 1.409A-1(h)), then the issuance of any Shares that would otherwise be made on the date of the separation from service or within the first six months thereafter will not be made on the originally scheduled dates and will instead be issued in a lump sum on the date that is six months and one day after the date of the separation from service (or upon death, if earlier), with the balance of the Shares issued thereafter in accordance with the original vesting and issuance schedule set forth above, but if and only if such delay in the issuance of the Shares is necessary to avoid

the imposition of taxation in respect of the Shares under Section 409A. A termination of employment or service shall not be deemed to have occurred for purposes of this Agreement providing for the payment of any amounts that are considered deferred compensation under Section 409A upon or following a termination of employment or service, unless such termination is also a “separation from service” (within the meaning of U.S. Treasury Regulation Section 1.409A-1(h)) and the payment thereof prior to a “separation from service” would violate Section 409A. Each installment of Shares that becomes payable in respect of vested Restricted Stock Units subject to the Award is a “separate payment” for purposes of U.S. Treasury Regulation Section 1.409A-2(b)(2). In no event shall the Company be liable for all or any portion of any taxes, penalties, interest or other expenses that may be incurred by the Grantee on account of Section 409A.

(b) In the event that the Company determines that any amounts payable hereunder may be taxable to the Grantee under Section 409A prior to the payment and/or delivery to the Grantee of such amount, the Committee may adopt such amendments to the Agreement, and appropriate policies and procedures, including amendments and policies with retroactive effect, that the Committee determines necessary or appropriate to preserve the intended tax treatment of the benefits provided by the Restricted Stock Units and this Agreement.

(c) Notwithstanding any provision of this Agreement to the contrary, in light of the uncertainty with respect to the proper application of Section 409A, the Company reserves the right to make amendments to this Agreement and the terms of the Restricted Stock Units as the Company deems necessary or desirable to avoid the imposition of taxes or penalties under Section 409A. In any case, neither the Company nor any of its affiliates will have any obligation to indemnify or otherwise hold the Grantee harmless from any or all of such taxes or penalties.

Section 6.14 - Governing Law. The laws of the State of Delaware shall govern the interpretation, validity and performance of the terms of this Agreement regardless of the law that might be applied under principles of conflicts of laws.

Section 6.15 - Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original but all of which together will constitute one and the same instrument. Counterpart signatures to this Agreement transmitted by facsimile, electronic mail, or by any other electronic means intended to preserve the original graphic and pictorial appearance of a document, will have the same effect as physical delivery of the paper document bearing an original signature.

Section 6.16 - Insider Trading/Market Abuse Laws. The Grantee acknowledges that depending on the Grantee’s country, the broker’s country, or where Shares of the Company are listed, the Grantee may be subject to insider trading and/or market abuse laws in applicable jurisdictions, which affect the Grantee’s ability to accept, acquire, sell or otherwise dispose of Shares, rights to such Shares (*e.g.*, Restricted Stock Units) or rights linked to the value of Shares under the Plan during such times as the Grantee is considered to have “material nonpublic information” or “inside information” (as defined by the laws or regulations in the relevant jurisdiction). Any restrictions under these laws or regulations are separate from and in addition to any restrictions that may be imposed under the Company’s Insider Trading Policy. The Grantee

acknowledges that it is his or her responsibility to be informed of and compliant with any such laws, and that the Grantee should speak to his or her personal advisor on this matter.

Section 6.17 - Foreign Asset/Account Reporting and Tax Requirements. The Grantee acknowledges that there may be certain foreign asset and/or account reporting requirements which may affect the Grantee's ability to acquire or hold Shares acquired under the Plan or cash received from participating in the Plan (including from any dividends and/or Dividend Equivalents paid on Shares acquired under the Plan) in a brokerage or bank account outside the Grantee's country. The Grantee may be required to report such accounts, assets or transactions to the tax or other authorities in his or her country. The Grantee also may be required to repatriate sale proceeds or other funds received as a result of the Grantee's participation in the Plan to his or her country through a designated bank or broker within a certain time after receipt. In addition, the Grantee may be subject to tax payment and/or reporting obligations in connection with any income received under the Plan and/or from the sale of Shares. The Grantee acknowledges that it is the Grantee's responsibility to be compliant with such regulations, and the Grantee should consult his or her personal legal advisor for any details.

Section 6.18 - Imposition of Other Requirements. The Company reserves the right to impose other requirements on the Grantee's participation in the Plan, on the Restricted Stock Units and on any Shares acquired under the Plan, to the extent the Company determines it is necessary or advisable for legal or administrative reasons, and to require the Grantee to sign any additional agreements or undertakings that may be necessary to accomplish the foregoing.

Section 6.19 - Country-Specific Terms and Conditions. Notwithstanding any provisions in this Agreement, the Restricted Stock Units and the Shares subject to the Restricted Stock Units shall be subject to any special terms and conditions for the Grantee's country set forth in the Appendix attached hereto. Moreover, if the Grantee relocates to one of the countries included in the Appendix, the special terms and conditions for such country will apply to the Grantee, to the extent the Company determines that the application of such terms and conditions is necessary or advisable for legal or administrative reasons. The Appendix constitutes part of this Agreement.

Section 6.20 - Language. The Grantee acknowledges and represents that he or she is proficient in the English language or has consulted with an advisor who is sufficiently proficient in English, as to allow the Grantee to understand the terms of this Agreement and any other documents related to the Plan. If the Grantee has received this Agreement or any other document related to the Plan translated into a language other than English and if the meaning of the translated version is different than the English version, the English version will control.

Section 6.21 - Waiver. The Grantee acknowledges that a waiver by the Company of breach of any provision of this Agreement shall not operate or be construed as a waiver of any other provision of this Agreement, or of any subsequent breach by the Grantee or any other interested persons.

Section 6.22 - Electronic Delivery and Participation. The Company may, in its sole discretion, decide to deliver any documents related to participation in the Plan by electronic means. The Grantee hereby consents to receive such documents by electronic delivery and agrees to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

Section 6.23 - Acceptance of the Plan. The Grantee hereby acknowledges receipt of a copy of the Plan and this Agreement. The Grantee has read and understands the terms and provisions thereof, and accepts the Restricted Stock Units subject to all the terms and conditions of the Plan and this Agreement. The Grantee acknowledges that there may be adverse tax consequences upon the vesting or settlement of the Restricted Stock Units. The Grantee further acknowledges the Company is not providing any tax, legal or financial advice, nor is the Company making any recommendations regarding the Grantee's participation in the Plan, or the Grantee's acquisition or sale of the underlying Shares. The Grantee understands and agrees that the Grantee should consult with his or her own personal tax, legal and financial advisors regarding the Grantee's participation in the Plan and before taking any action related to the Plan.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, this Agreement has been executed and delivered by the parties hereto.

PEABODY ENERGY CORPORATION

By: Scott T. Jarboe

Its: Chief Administrative Officer &
Corporate Secretary

The Grantee declares that he or she expressly agrees with the data processing practices described in Section 6.5 of this Agreement and consents to the collection, processing and use of Data by the Company and the transfer of Data to the recipients mentioned in Section 6.5 of this Agreement, including recipients located in countries which do not provide an adequate level of protection from a European (or other non-U.S.) data protection law perspective, for the purposes described in Section 6.5 of this Agreement. The Grantee understands that by clicking "Accept" in the Plan's online administration site is a condition of receiving the Restricted Stock Units and that the Company may forfeit the Restricted Stock Units if a signature is not obtained. The Grantee understands that he or she may withdraw consent at any time with future effect for any or no reason as described in Section 6.5 of this Agreement.

Note: The Grantee is deemed to have executed this Agreement upon clicking "Accept" in the Plan's online administration site.

APPENDIX

**PEABODY ENERGY CORPORATION
2017 INCENTIVE PLAN**

GLOBAL RESTRICTED STOCK UNIT AGREEMENT

COUNTRY-SPECIFIC TERMS AND CONDITIONS

This Appendix includes special *terms and conditions* applicable to the Grantee if the Grantee is in one of the countries listed below. These terms and conditions supplement or replace (as indicated) the terms and conditions set forth in the Agreement. If the Grantee is a citizen or resident of a country other than the one in which he or she is currently working, or if the Grantee transfers employment or residency to another country after the Restricted Stock Units are granted, the Company, in its discretion, will determine the extent to which the terms and conditions set forth in this Appendix will apply to the Grantee.

This Appendix also includes *notifications* relating to exchange control, foreign asset / account reporting requirements and other issues of which the Grantee should be aware with respect to his or her participation in the Plan. The information is based on the exchange control, securities and other laws in effect in the respective countries as of January 2021. Such laws are often complex and change frequently. As a result, the Grantee should not rely on the information herein as the only source of information relating to the consequences of participation in the Plan because the information may be out of date at the time the Restricted Stock Units vest or the Shares acquired under the Plan are sold.

In addition, the information is general in nature and may not apply to the Grantee's particular situation. The Company is not in a position to assure the Grantee of any particular result. Accordingly, the Grantee should seek appropriate professional advice as to how the relevant laws in his or her country may apply to his or her situation. Finally, if the Grantee is a citizen or resident of a country other than the one in which he or she is currently working, or if the Grantee transfers employment or residency to another country after the Restricted Stock Units are granted, the information contained herein may not be applicable to the Grantee.

AUSTRALIA

Terms and Conditions

Australian Offer Document. The offer of Restricted Stock Units is intended to comply with the provisions of the Corporations Act 2001, Australian Securities & Investments Commission (“ASIC”) Regulatory Guide 49 and ASIC Class Order 14/1000. Additional details are set forth in the Offer Document for the offer of Restricted Stock Units to Australian resident employees, which will be provided to the Grantee with the Agreement.

Notifications

Exchange Control Information. Exchange control reporting is required for cash transactions exceeding AUD 10,000 and for international fund transfers (such as the transfer of proceeds of the sale of Shares back to Australia). If an Australian bank is assisting with the transaction, the bank will file the report on the Grantee’s behalf. If there is no Australian bank involved with the transaction, then the Grantee will need to file report on his or her own behalf.

Tax Information. The Plan is a plan to which subdivision 83A-C of the Income Tax Assessment Act 1997 (Cth) applies (subject to conditions in the Act).

CHINA

Terms and Conditions

Settlement of Vested Restricted Stock Units. This provision replaces Section 4.1 of the Agreement with respect to the form of settlement of the Restricted Stock Units:

Notwithstanding anything in the Agreement, the Restricted Stock Units do not provide the Grantee with any right to receive Shares. Upon vesting, the Restricted Stock Units shall be settled and paid only in cash through local payroll in an amount equal to the fair market value of the Shares at vesting less any Tax-Related Items. The Grantee agrees to bear any currency fluctuation risk between the time the Restricted Stock Units vest and the time the cash payment is distributed to the Grantee.

UNITED KINGDOM

Terms and Conditions

Responsibility for Taxes. This section supplements Section 6.3 of the Agreement:

Without limitation to Section 6.3 of the Agreement, the Grantee agrees to be liable for any Tax-Related Items and hereby covenants to pay any such Tax-Related Items, as and when requested by the Company or, if different, the Employer or by Her Majesty’s Revenue & Customs (“HMRC”) (or any other tax authority or any other relevant authority). The Grantee also agrees to indemnify and keep indemnified the Company and, if different, the Employer against any Tax-Related Items that they are required to pay or withhold or have paid or will pay to HMRC (or any other tax authority or any other relevant authority) on the Grantee’s behalf.

Notwithstanding the foregoing, if the Grantee is a director or executive officer of the Company (within the meaning Section 13(k) of the Exchange Act) at the time of the taxable event, the terms of the immediately foregoing provision may not apply to the Grantee if the indemnification is viewed as a loan. In such case, if the amount of any income tax due is not collected from or paid by the Grantee within 90 days of the end of the U.K. tax year in which an event giving rise to the indemnification described above occurs, the amount of any uncollected income tax may constitute an additional benefit to the Grantee on which additional income tax and National Insurance Contributions (“NICs”) may be payable. The Grantee will be responsible for reporting and paying any income tax due on this additional benefit directly to HMRC under the self-assessment regime and for reimbursing the Company or the Employer (as appropriate) for the value of any employee NICs due on this additional benefit, which the Company or the Employer may recover from the Grantee by any of the means referred to in the Plan or Section 6.4 of the Agreement.

EXHIBIT A

RESTRICTIVE COVENANT AGREEMENT

THIS RESTRICTIVE COVENANT AGREEMENT (the “RCA”) dated [__] January 2022, is by and between PEABODY ENERGY CORPORATION, a Delaware corporation and PEABODY ENERGY AUSTRALIA COAL PTY LTD (collectively the “Company”), and (“Grantee”).

WHEREAS, Grantee has been offered employment with PEABODY ENERGY AUSTRALIA COAL PTY LTD pursuant to an employment agreement (the “Employment Agreement”);

WHEREAS, Grantee is a recipient of a 2022 Global Restricted Stock Unit Grant (the “Award”) under the Company’s Peabody Energy Corporation 2017 Incentive Plan, as amended from time to time (the “Plan”);

WHEREAS, Grantee acknowledges and agrees that he or she has access to and/or knowledge of certain trade secrets and other Confidential Information regarding the Company;

WHEREAS, the Company has spent and will continue to expend substantial amounts of time, money, and effort to develop its Confidential Information and Grantee acknowledges benefitting from these efforts;

WHEREAS, the Company deems it essential to the protection of its Confidential Information and competitive standing in its market to have senior employees such as Grantee who are recipients of Awards subject to reasonable restrictive covenants;

WHEREAS, Grantee agrees and acknowledges that the Company has a legitimate interest to protect its Confidential Information and competitive standing; and

NOW THEREFORE, in consideration for the provisions stated below, and intending to be legally bonded thereby, the parties agree as follows.

1. Grantee has been informed and is aware that the execution of this RCA is a necessary term and condition of Grantee’s Employment Agreement and the receipt of the Award.

2. The term “Confidential Information” as used in this RCA shall be broadly interpreted to include, without limitation, materials and information (whether in written, electronic or other form and whether or not identified as confidential at the time of disclosure) concerning technical matters, business matters, business plans, operations, opportunities, plans, processes, procedures, standards, strategies, policies, programs, software, schematics, models, systems, results, studies, analyses, compilations, forecasts, data, figures, projections, estimates, components, records, methods, criteria, designs, quality control, research, samples, work-in-progress, prototypes, data, materials, clients and prospective clients, customer lists, contracts, projects, suppliers, referral sources, sales, marketing, bidding, purchasing, personnel, financial condition, assets, inventory, accounts payable, accounts receivable, tax matters, books of account, financing, collections, intellectual property, trade secrets and all other know-how and information

of the Company or any subsidiary of the Company which has not been published or disclosed to the general public.

a. While employed by the Company and at all times thereafter, Grantee will keep Confidential Information, including trade secrets, confidential and shall not directly or indirectly, use for himself or herself or use for, or disclose to, any party other than the Company, or any subsidiary of the Company (other than in the ordinary course of Grantee's duties for the benefit of the Company or any subsidiary of the Company), any secret or Confidential Information.

b. At the termination of Grantee's employment or at any other reasonable time the Company or any of its subsidiaries may request, Grantee shall promptly deliver to the Company all memoranda, notes, records, plats, sketches, plans or other documents (including, without limitation, any "soft" copies or computerized or electronic versions thereof) containing Confidential Information, including trade secrets or any other information concerning Company's business, including all copies, then in Grantee's possession or under Grantee's control whether prepared by Grantee or others.

3. In consideration of the Company's obligations under the Employment Agreement, and the Global Restricted Stock Unit Agreement ("Agreement"), Grantee agrees that while employed by the Company and for the Non-Compete Period thereafter, without the prior written consent of the Board of Directors of the Company (the "Board"), he or she shall not, directly or indirectly, as principal, manager, agent, consultant, officer, director, stockholder, partner, investor, lender or employee or in any other capacity, carry on, be engaged in or have any financial interest in, any entity which is in competition with the business of the Company or its subsidiaries within the Restraint Area.

4. In consideration of the Company's obligations under the Employment Agreement and the Agreement, Grantee agrees that while employed by the Company and for the Non-Solicit Period thereafter, without the prior written consent of the Board, he or she shall not, on his or her own behalf or on behalf of any person, firm or company, directly or indirectly, (a) solicit or offer employment to or hire any person who is employed by the Company and who Grantee had contact with in the twelve (12) months which preceded the termination of Grantee's employment with the Company or (b) solicit or entice away or in any manner attempt to persuade any client, vendor, partner, customer or prospective customer of the Company who Grantee had contact with in the twelve (12) months which preceded the termination of Grantee's employment with the Company to discontinue or diminish his, her or its relationship or prospective relationship with the Company or to otherwise provide his, her or its business to any corporation, partnership or other business entity which engages in any line of business in which the Company is engaged (other than the Company).

5. For purposes of this RCA, an entity shall be deemed to be in competition with the Company if it enters into or engages in any business or activity that substantially and directly competes with the business of the Company. For purposes of this paragraph 5, the business of the Company is defined to be: development of new thermal and metallurgical mines, active metallurgical and thermal coal mining, preparation and sale; the marketing, brokering and trading of metallurgical and thermal coal; and the optimization of our metallurgical and thermal coal reserves; in each case by the Company and its direct and indirect subsidiaries or affiliated or related companies. Notwithstanding this paragraph 5 or paragraph 8, nothing herein shall be

construed so as to preclude Grantee from investing in any publicly or privately held company, provided that no such investment in the equity securities of an entity with publicly traded equity securities may exceed one percent (1%) of the equity of such entity, and no such investment in any other entity may exceed five percent (5%) of the equity of such entity, without the prior written approval of the Board.

6. Grantee agrees that he or she will not at any time make, directly or indirectly, any negative, derogatory, disparaging or defamatory comment, whether written, oral or in electronic format, to any reporter, author, producer or similar person or entity or to any general public media in any form (including, without limitation, books, articles or writings of any other kind, as well as film, videotape, audio tape, computer/Internet format or any other medium) that concerns directly or indirectly the Company its business or operations, or any of its current or former agents, employees, officers, directors, customers or clients. This restriction is not intended to prevent or restrict the Grantee from participating in normal employment processes or accessing internal grievance procedures including the Tell Peabody procedure, nor is it intended to restrict or prevent the Grantee from making an external disclosure which is protected by whistleblower protection legislation.

7. Upon the termination of Grantee's employment for any reason, Grantee or his or her estate shall surrender to the Company all correspondence, letters, files, contracts, mailing lists, customer lists, advertising materials, ledgers, supplies, equipment, checks, and all other materials and records of any kind that are the property of the Company or any of its subsidiaries or affiliates, that may be in Grantee's possession or under his or her control, including, without limitation, any "soft" copies or computerized or electronic versions thereof.

8. Grantee agrees that the covenant not to compete, the covenant not to solicit and the covenant not to make disparaging comments are reasonable under the circumstances and will not interfere with his or her ability to earn a living or otherwise to meet his or her financial obligations. Grantee and the Company agree that if in the opinion of any court of competent jurisdiction such restraint is not reasonable in any respect, such court shall have the right, power and authority to excise or modify such provision or provisions of this covenant which appear unreasonable and to enforce the remainder of the covenant as so amended. Grantee agrees that any breach of the covenants contained in this RCA would irreparably injure the Company. Accordingly, Grantee agrees that, in the event that Grantee violates this RCA, the Company may, in addition to pursuing any other remedies it may have in law or in equity, cease making any payments otherwise required under the agreements evidencing the Award, cancel and recoup any portion of the Award already paid to the extent required by law, regulation or listing requirement, or permitted by any Company policy adopted pursuant thereto. The Company may also seek an injunction against Grantee from any court having jurisdiction over the matter restraining any further violation of this RCA by Grantee.

9. Within this RCA, "Non-Compete Period" means:

- a. 12 months, but if that is unenforceable;
- b. 6 months, but if that is unenforceable;
- c. 3 months, but if that is unenforceable;

d. 1 month.

10. Within this RCA, “Non-Solicit Period” means:

a. 12 months, but if that is unenforceable;

b. 6 months, but if that is unenforceable;

c. 3 months, but if that is unenforceable;

d. 1 month.

11. Within this RCA, “Restraint Area” means:

a. The world, but if that is unenforceable;

b. Australia, the U.S. and other countries in which the Company has operations, but if that is unenforceable;

c. Australia and the U.S., but if that is unenforceable;

d. Australia.

12. No waiver or modification of all or any part of this RCA will be effective unless set forth in a written document signed by both the Company and Grantee expressly indicating their intention to waive or modify the specified provisions of this RCA. If the Company chooses not to enforce its rights in the event Grantee or any other recipient of an Award breaches some or all of the terms of this RCA, the Company’s rights with respect to any such breach shall not be considered a waiver of a future breach by Grantee of this RCA, regardless of whether the breach is of a similar nature or not.

13. This RCA accurately sets forth and entirely sets forth the understandings reached between Grantee and the Company with respect to the matters treated herein. If there are any prior written or oral understandings or agreements pertaining to the subject matter addressed in this RCA, they are specifically superseded by this RCA and have no effect except, should Grantee be subject to non-compete and non-solicitation obligations (“Restrictive Covenants”) pursuant to an employment agreement or other agreement between Grantee and the Company or one of its subsidiaries or affiliates, Grantee shall continue to be bound by the terms of those Restrictive Covenants and they shall run concurrently with those set forth in this RCA. Further, notwithstanding the foregoing, Grantee agrees that if Grantee is subject to a longer Notice Period pursuant to an employment agreement or other agreement between the Grantee and Company or one of its subsidiaries or affiliates other than that set forth in Section 5.2 of the Global Restricted Stock Unit Agreement, Grantee shall continue to be bound by the longer notice period. This RCA is binding on Grantee and the Company, and their respective successors, assigns and representatives.

14. The parties each agree that (a) this RCA (including any counterpart of this RCA) may be executed by a party giving their electronic signature (or 'e signature') through an electronic communication rather than signing below; (b) consent to the receipt of an electronic signature

through an electronic communication from any other party for the purposes of the execution of this RCA; and (c) acknowledge that the giving of an electronic signature through an electronic communication by any party will (i) capture data to identify that party and the fact they have provided their electronic signature; and (ii) indicate the intention of that party to execute and be bound by this RCA.

15. This RCA shall be construed, interpreted and governed in accordance with the laws of Queensland, Australia, without reference to rules relating to conflicts of law.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, this RCA has been executed and delivered by the parties hereto.

PEABODY ENERGY CORPORATION

By: [_____]

Its: [_____]

**PEABODY ENERGY AUSTRALIA
COAL PTY LTD**

By: [_____]

Its: [_____]

**Note: The Grantee is deemed to have executed this RCA upon clicking “Accept”
in the Plan’s online administration site.**

EXHIBIT B
Enhancement Performance Factors

Enhancement Restricted Stock Units will be eligible to vest based on [EBITDA over plan during the period from [] to []], as set forth below.

	[% of EBITDA Over Plan]	Enhancement Restricted Stock Units Eligible to Vest
Threshold Level of EBITDA	[]	50% of Restricted Stock Units set forth on signature page hereto
Maximum Level of EBITDA	[] or greater	100% of Restricted Stock Units set forth on signature page hereto

Number of Enhancement Restricted Stock Units eligible to vest for performance between the Threshold Level and the Maximum Level will be based on a straight line interpolation.

OFFER DOCUMENT**PEABODY ENERGY CORPORATION
2017 INCENTIVE PLAN****OFFER OF RESTRICTED STOCK UNITS TO
AUSTRALIAN RESIDENT GRANTEEES**

Investment in shares of common stock involves a degree of risk. Grantees who elect to participate in the Incentive Plan should monitor their participation and consider all risk factors relevant to Peabody Energy Corporation common stock as set out in this Offer Document and the Additional Documents. More information about potential factors that could affect Peabody Energy Corporation's business and financial results is included in its most recent Annual Report on Form 10-K and other filings made from time to time with the U.S. Securities and Exchange Commission. Copies of these reports are available at <http://sec.gov> and upon request to Peabody Energy Corporation.

The information contained in this Offer Document and the Additional Documents is general information only. It is not advice or information specific to any Grantees' particular circumstances.

Grantees should consider obtaining their own financial product advice from an independent person who is licensed by the Australian Securities and Investments Commission to give advice about participation in the Plan.

OFFER OF RESTRICTED STOCK UNITS TO AUSTRALIAN RESIDENT GRANTEES

PEABODY ENERGY CORPORATION 2017 INCENTIVE PLAN

We are pleased to provide you with this offer to participate in the Peabody Energy Corporation 2017 Incentive Plan (the “Plan”).

Peabody Energy Corporation (the “Company”) has adopted the Plan to help attract and retain employees, consultants and directors, and to motivate such employees, consultants and directors to achieve the Company’s goals and to more closely align their interests with those of the Company’s other shareholders by encouraging the acquisition of a proprietary interest in the Company.

This Offer Document sets out information regarding the grant of Restricted Stock Units over shares of common stock of the Company (“Common Stock”) to Australian resident Grantees of the Company and its Australian Subsidiary(ies). The offer of Restricted Stock Units under the Plan to Australian resident Grantees and this Offer Document are intended to comply with the provisions of the Australian Corporations Act 2001 (Cth) (“Corporations Act”), Australian Securities and Investments Commission (“ASIC”) Regulatory Guide 49 and ASIC Class Order 14/1000.

Any capitalized term used but not defined herein shall have the meaning given to such term in the Plan.

1. OFFER

This is an offer made by the Company, under the Plan, to certain Eligible Persons resident in Australia, of Restricted Stock Units, as may be granted from time to time in accordance with the Plan.

2. TERMS OF GRANT

The terms of the Restricted Stock Units incorporate the rules of the Plan, this Offer Document and the Restricted Stock Unit Agreement (the “Agreement”). By accepting a grant of Restricted Stock Units, you will be bound by the rules of the Plan, this Offer Document and the Agreement.

3. ADDITIONAL DOCUMENTS

In addition to the information set out in this Offer Document, the following documents (collectively, the “Additional Documents”) are made available to you:

- (a) the Plan;
- (b) the Plan Prospectus;
- (c) the Agreement, including any exhibits thereto; and
- (d) a Restricted Stock Unit grant letter.

The Additional Documents provide details about your participation in the Plan, including the consequences of a change in the nature or status of your employment on your eligibility to continue

to vest in your Restricted Stock Units. They also provide further information to help you make an informed investment decision in relation to your participation in the Plan. Please note that the Plan Prospectus for the securities offered under the Plan is not a prospectus for purposes of the Corporations Act.

4. RELIANCE ON STATEMENTS

You should not rely upon any oral statements made to you in relation to this offer. You should only rely upon the statements contained in this Offer Document and the Additional Documents when considering your participation in the Plan.

5. ACCEPTING AN AWARD

To accept your Restricted Stock Unit award, you must electronically accept the Agreement by clicking “Accept” in the Plan’s online administration site within the time period specified by the Company.

6. WHAT ARE THE MATERIAL TERMS OF THE RESTRICTED STOCK UNITS?

(a) What are Restricted Stock Units?

The Restricted Stock Units represent the right to receive shares of Common Stock upon fulfilment of the vesting conditions set out in your Agreement. When your Restricted Stock Units vest, you will be issued shares of Common Stock at no monetary cost (other than applicable taxes, as discussed below) to you. Notwithstanding anything to the contrary in any document forming part of this offer, Restricted Stock Units granted to Grantees in Australia shall not be settled in cash. The Restricted Stock Units are considered “restricted” because they will be subject to forfeiture and restrictions on transfer until they vest.

In addition, in connection with any Restricted Stock Unit granted, at the Company’s sole discretion, you may be granted the right to receive Dividend Equivalents, which will be payable in Common Stock. Any additional shares of Common Stock payable pursuant to Dividend Equivalents will be issued to you only if the underlying Restricted Stock Units vest.

As mentioned in Section 6(d) below, you will have no right to receive cash dividends until you are the owner of shares of Common Stock, which will occur if and when the Restricted Stock Units vest and shares of Common Stock are issued to you.

(b) Do I have to pay any money to receive the Restricted Stock Unit Award?

You pay no monetary consideration to receive the Restricted Stock Unit award, nor do you pay anything to receive the shares of Common Stock upon vesting.

(c) How many shares of Common Stock will I receive upon vesting of my Restricted Stock Unit Award?

The number of shares of Common Stock subject to your Restricted Stock Unit award is set out in the grant letter provided to you by the Company and is also available on the website of the applicable Plan broker.

(d) When do I become a shareholder?

You are not a shareholder merely as a result of holding Restricted Stock Units and the Restricted Stock Units will not entitle you to vote or receive cash dividends, notices of meeting, proxy statements and other materials provided to shareholders until the restrictions lapse, at which time the Restricted Stock Units vest and will be paid out in shares of Common Stock. In this regard, you are not recorded as the owner of the shares of Common Stock prior to vesting of the Restricted Stock Units. You should refer to your Agreement for details of the consequences of a change in the nature of your employment.

(e) Can I transfer the Restricted Stock Unit Award to someone else?

The Restricted Stock Units are non-transferable until they vest; however, once shares of Common Stock are issued upon vesting, the shares of Common Stock will be freely tradeable (subject to Company's Insider Trading Policy and applicable laws regarding insider trading).

7. WHAT IS A SHARE OF COMMON STOCK IN THE COMPANY?

As defined in the Plan (and above), a share of "Common Stock" is a share of common stock of the Company. A share of common stock of a U.S. corporation is analogous to ordinary shares of an Australian corporation. Each holder of common stock is entitled to one vote for every share of common stock held in the Company.

Generally, cash dividends may be paid on the shares of Common Stock out of any funds of the Company legally available for dividends at the discretion of the Board of Directors of the Company. Pursuant to the Company's Dividend Policy, it is uncertain whether or when the Company will pay cash dividends or other distributions with respect to its Common Stock. The Company's senior secured term loan facility and the indenture governing its outstanding notes limit the Company's ability to pay cash dividends. In addition, restrictive covenants in certain other debt instruments to which the Company is, or may be, a party, may limit the Company's ability to pay cash dividends (or to receive dividends from its operating companies).

The shares of Common Stock are listed on the New York Stock Exchange ("NYSE") in the United States of America and are traded under the symbol "BTU".

The shares of Common Stock are not liable to any further calls for payment of capital or for other assessment by the Company and have no sinking fund provisions, pre-emptive rights, conversion rights or redemption provisions.

8. HOW CAN I OBTAIN UPDATED INDICATIVE EXAMPLES OF THE CURRENT MARKET PRICE IN AUSTRALIAN DOLLARS?

You may ascertain the market price of the shares of Common Stock by obtaining the current trading price of a share of the Company's common stock on the NYSE at <http://www.nyse.com> under the ticker "BTU". The Australian dollar equivalent of that price can be obtained at: <http://www.rba.gov.au/statistics/frequency/exchange-rates.html>.

9. WHAT ADDITIONAL RISK FACTORS APPLY TO AUSTRALIAN RESIDENTS' PARTICIPATION IN THE PLAN?

You should have regard to risk factors relevant to investment in securities generally and, in particular, to the holding of shares of Common Stock. For example, the price at which the shares of Common Stock are quoted on the NYSE may increase or decrease due to a number of factors. There is no guarantee that the price of the shares of Common Stock will increase. Factors which may affect the price of the shares of Common Stock include fluctuations in the domestic and international market for the listed stocks, general economic conditions, including interest rates, inflation rates, legislation or regulation, the nature of the markets in which the Company operates and general operational and business risks.

More information about potential factors that could affect the Company's business and financial results is included in the Company's most recent Annual Report on Form 10-K and other filings the Company may make from time to time with the U.S. Securities and Exchange Commission. Copies of these reports are available at <http://sec.gov> and upon request to the Company.

In addition, you should be aware that the Australian dollar value of the shares of Common Stock you may acquire under the Plan will be affected by the U.S./Australian dollar exchange rate. Participating in the Plan involves risks related to fluctuations in this rate of exchange.

10. PLAN MODIFICATION, TERMINATION ETC.

The Board of Directors of the Company may at any time amend, alter, suspend, discontinue or terminate the Plan, in whole or in part, without the approval of the Company's shareholders; provided, however, that certain amendments shall require shareholder approval pursuant to the rules of any federal or state law or regulation and/or the principal securities exchange on which the shares of Common Stock are listed. No such termination, amendment or modification of the Plan or an amendment of a Restricted Stock Unit previously granted under the Plan shall adversely affect in any material way any Restricted Stock Unit previously granted under the Plan without your express consent.

11. WHAT ARE THE AUSTRALIAN TAXATION CONSEQUENCES OF PARTICIPATION IN THE PLAN?

Summary of Australian Taxation Consequences

The taxation consequences of the Restricted Stock Units granted to you are summarized in the table below. (Please also see the sample tax calculation attached as Appendix 1.)

This summary makes certain assumptions, including that the date of “Vesting” is the earliest occurring “deferred taxing point” (see below for further information on the deferred taxing point), which may not apply to you.

You are strongly advised to review the more detailed explanation of the Australian Taxation Consequences of Participation in the Plan in sections 11(a) - (i) below and to seek appropriate professional advice as to how the tax or other laws in Australia and in any other applicable country apply to your specific situation.

Event	Taxation Consequences
Grant of Restricted Stock Units	None (taxing point is deferred).
Vesting of Restricted Stock Units (i.e., conditions for nonforfeiture of the Restricted Stock Units in your award agreement are satisfied and a Peabody Energy Corporation share is issued in exchange for each vested Restricted Stock Unit)	<p>(a) You sell the shares issued to you within 30 days of Vesting</p> <p>You will be subject to income tax on the <i>sale proceeds</i> you receive upon sale of the shares. You may also be subject to Medicare Levy and surcharge (if applicable) on this amount.</p> <p>Note that under this scenario, you are not taxed under the Capital Gains Tax provisions of the Income Tax Assessment Act.</p> <p>OR</p> <p>(b) You hold the shares for more than 30 days after Vesting</p> <p>You will be subject to income tax on the market value of the shares on the Vesting date.</p> <p>When you subsequently sell the shares in an arm's length transaction, you will be subject to Capital Gains Tax on the sale proceeds less the market value of the shares at Vesting.</p> <p>When shares are held for more than 12 months before sale, only 50% of any capital gain is assessable.</p>

Australian Taxation Consequences of Participation in the Plan

The Plan is a plan to which Subdivision 83A-C of the Income Tax Assessment Act 1997 Cth applies (subject to conditions in that Act).

The following is a summary of the taxation consequences as of **January 2022** for an Australian resident Grantee who receives Restricted Stock Units under the Plan. This summary is necessarily general in nature and does not purport to be tax advice in relation to an actual or potential recipient of Restricted Stock Units.

If you are a citizen or resident of another country or are considered a citizen or resident of another country for local law purposes, or transfer employment and/or residence after you are granted the Restricted Stock Units, the information contained in this summary may not be applicable to you.

If you intend to accept Restricted Stock Units under the Plan, then you should not rely on the summary as anything other than a broad guide and you should seek appropriate professional advice as to how the tax or other laws in Australia and in any other applicable country apply to your specific situation before making the decision to accept.

(a) What is the effect of the grant of the Restricted Stock Units?

The Australian tax legislation contains specific rules, in Division 83A of the *Income Tax Assessment Act 1997*, governing the taxation of shares and rights (called "ESS interests") acquired by employees under employee share schemes. The Restricted Stock Units granted under the Plan should be regarded as a right to acquire shares and accordingly, an ESS interest for these purposes.

Your assessable income includes the ESS interest at grant, unless the ESS interest is subject to a real risk of forfeiture, in which case there will be deferred taxation.

In the case of restricted stock units, the real risk of forfeiture test requires that:

- (i) there must be a real risk that, under the conditions of the stock plan, the participant will forfeit the restricted stock units or lose them (other than by disposing of them or vesting in them), or
- (ii) there must be a real risk that, under the conditions of the stock plan, if the restricted stock units vest, the participant will forfeit the underlying shares of stock, or lose them, other than by disposing of them.

The terms of your Restricted Stock Unit grant are set out in the Plan and the Agreement. It is generally understood that your Restricted Stock Units should satisfy the real risk of forfeiture test described above because you will forfeit the Restricted Stock Units if certain conditions are not met. In addition, your Restricted Stock Units are non-transferable. Accordingly, you will be subject to deferred taxation (i.e., you generally should not be subject to tax when the Restricted Stock Units are granted to you).

(b) When will my Restricted Stock Units be taxed if they are subject to a real risk of forfeiture?

You will be required to include an amount in your assessable income for the income year (*i.e.*, the financial year ending 30 June) in which the earliest of the following events occurs in relation to the Restricted Stock Units (the “ESS deferred taxing point”):

- (i) when there are no longer any genuine restrictions on the vesting of the Restricted Stock Units or the disposal of the underlying shares of Common Stock, and there is no real risk of your forfeiting the Restricted Stock Units or the underlying shares of Common Stock; or
- (ii) cessation of employment with the Company or any Subsidiary (but see section 11(e) below).

Typically, this means that you will be subject to tax when your Restricted Stock Units vest. However, the ESS deferred taxing point for your Restricted Stock Units will be moved to when you sell the underlying shares of Common Stock if you sell the underlying shares of Common Stock within 30 days of the original ESS deferred taxing point.

A Peabody-mandated blackout period is considered a genuine restriction on the disposal of the underlying shares. Accordingly, if the Restricted Stock Units vest and shares are issued within a blackout period, the deferred taxing point will not occur until the blackout period ends and you may freely dispose of the shares of Common Stock.

In addition to income taxes, the assessable amount may be subject to Medicare Levy and surcharge (if applicable).

(c) What is the amount that I must include in my assessable income if an ESS deferred taxing point occurs?

The amount you must include in your assessable income in the income year (*i.e.*, the financial year ending 30 June) in which the ESS deferred taxing point occurs in relation to the Restricted Stock Units will be the difference between the “market value” of the underlying shares of Common Stock at the ESS deferred taxing point and the cost base of the Restricted Stock Units (which should be nil because you do not pay anything to acquire the Restricted Stock Units or the underlying shares of Common Stock).

If, however, you sell the underlying shares of Common Stock in an arm’s length transaction within 30 days of the ESS deferred taxing point (*i.e.*, *typically* within 30 days of vesting; please see the exceptions described in section 11(b) above), the amount to be included in your assessable income in the income year in which the sale occurs will be equal to the difference between the sale proceeds and the cost base of the Restricted Stock Units (which should be nil).

(d) What is the market value of the underlying shares of Common Stock?

The “market value” of the underlying shares of Common Stock at the ESS deferred taxing point is determined according to the ordinary meaning of “market value” expressed in Australian currency. The Company will determine the market value in accordance with guidelines prepared by the Australian Tax Office.

The Company has the obligation to provide you with certain information about your participation in the Plan at certain times, including after the end of the income year in which the ESS deferred taxing point occurs. This may assist you in determining the market value of the underlying shares of Common Stock at the ESS deferred taxing point. However, this estimate may not be correct if you sell the shares of Common Stock within 30 days of the vesting date, in which case it is your responsibility to report and pay the appropriate amount of tax based on the sale proceeds.

(e) What happens if I cease employment before my Restricted Stock Units vest?

If you cease employment with the Company or any Subsidiary prior to the vesting date of some or all of the Restricted Stock Units and the Restricted Stock Units do not vest upon termination of employment (*i.e.*, they are forfeited), you may be treated as if you never acquired the forfeited Restricted Stock Units, in which case no amount will be included in your assessable income.

(f) What tax consequences will apply when I sell my shares of Common Stock?

If you are issued shares of Common Stock upon vesting, you may also be subject to capital gains tax when you subsequently sell the shares of Common Stock (other than gains realized on the disposal of shares of Common Stock within 30 days after the original ESS deferred taxing point, in which case your treatment will be limited to the income tax consequences described above in section 11(b)).

The assessable capital gain will be (subject to you first applying prior year or current year capital losses against the full capital gain):

- (i) where you have held the shares of Common Stock for less than one year – the difference between the sale proceeds (where the disposal is an arm’s length transaction) or market value (where the disposal is a non-arm’s length transaction) and the cost base of the shares of Common Stock; or
- (ii) where you have held the shares of Common Stock for at least one year – one-half of the difference between the sale proceeds (where the disposal is in an arm’s length transaction) or market value (where the disposal is a non-arm’s length transaction) and the cost base of the shares of Common Stock.

If the ESS deferred taxing point occurs at vesting (as the case should be), the cost base of the shares of Common Stock will be equal to the market value of the shares of Common Stock at vesting (plus any incremental costs incurred in connection with the sale such as broker fees).

If the sale proceeds of the shares of Common Stock at the time of disposal are less than the cost base of the shares of Common Stock, then a capital loss equal to the difference will be available to offset same year or future year capital gains. A capital loss cannot be used to offset other income (including salary or wage income).

If the shares of Common Stock are sold in a non-arm's length transaction, a capital loss will only be available where the market value of the shares of Common Stock is less than the cost base.

(g) What are the tax consequences if a cash dividend is paid on the shares of Common Stock?

If you vest in the Restricted Stock Units and become a Company shareholder, you may be entitled to receive cash dividends on the shares of Common Stock if the Board, in its discretion, declares a dividend. Any cash dividends paid on shares of Common Stock must be included in your assessable income in the tax year they are received. The cash dividends are also subject to U.S. federal withholding tax at source. You may be entitled to a foreign tax credit against your Australian income tax for the U.S. federal income tax withheld on any cash dividends.

(h) What are the tax consequences if Dividend Equivalents are paid in connection with the Restricted Stock Units?

Any Dividend Equivalents credited to you as additional Restricted Stock Units between the Grant Date and the vesting date(s) specified in the Agreement will be subject to the same terms and conditions (including vesting, payment and forfeitability) as apply to the Restricted Stock Units based on which the Dividend Equivalents were credited. If you vest in the Restricted Stock Units, the market value of any shares of Common Stock issued to you pursuant to Dividend Equivalents must be included in your assessable income in the income year in which it is paid to you.

(i) What are the tax withholding and reporting obligations in relation to any income that I may realize pursuant to my participation in the Plan?

You will be responsible for reporting any income attributable to your Restricted Stock Units in your tax return and paying any tax liability. It is also your responsibility to report and pay any Australian tax liability on any dividends or Dividend Equivalents received and/or any capital gains arising from the disposal of the shares of Common Stock that you acquire under the Plan.

Your employer will be required to withhold the tax due at the ESS deferred taxing point only if you have not provided your Tax File Number ("TFN") to your employer.

However, your employer must provide to you (by no later than 14 July after the end of the income year) and the Commissioner of Taxation (by no later than 14 August after the end of the income year) a statement containing certain information about your participation in the Plan in the income year in which the original ESS deferred taxing point occurs (*typically* in the year of vesting; please see the

exceptions described in section 11(b) above), including an estimate of the market value of the underlying shares of Common Stock at the taxing point. Please note that, if you sell the shares of Common Stock within 30 days of acquisition, your taxing point will not be at vesting; as such, the amount reported by your employer may differ from your actual taxable amount (which would be based on the value of the shares of Common Stock when sold, not the vesting date). *It is your responsibility to ensure that you complete your tax return properly.*

12. WHAT ARE THE U.S. TAX CONSEQUENCES OF PARTICIPATION IN THE PLAN?

Grantees (who are not U.S. citizens or permanent residents) will not be subject to U.S. tax by reason only of the grant and vesting of the Restricted Stock Units or the sale of shares of Common Stock, except as described in the dividends section above. However, liability for U.S. taxes (including U.S. estate taxes) may accrue if a Grantee is otherwise subject to U.S. taxes.

The above is an indication only of the likely U.S. taxation consequences for Australian resident Grantees awarded Restricted Stock Units under the Plan. Grantees should seek their own advice as to the U.S. taxation consequences of Plan participation.

* * * * *

We urge you to carefully review the information contained in this Offer Document and the Additional Documents.

Your sincerely,

PEABODY ENERGY CORPORATION

Appendix 1

Sample Tax Calculation

The following example is provided solely to illustrate the tax implications as outlined in the Summary of Taxation Consequences in section 11 of the Offer Document. The example is not included to provide any indication or assurance of the possible or likely Peabody Energy Corporation ("Peabody") share price.

You should refer to your award agreement for the vesting schedule and other terms of your Restricted Stock Units ("RSUs").

The following assumptions have been made (all values are assumed to be AUD values on the applicable dates):

Vesting of RSUs occurs in three installments on each of the first, second and third anniversaries of the grant date.

The market value of Peabody shares at the date of grant is \$20.00.

At Vesting, the market value of Peabody shares is \$25.00.

At Sale, the market value of Peabody shares is \$30.00.

The marginal tax rate is 47% (including the 2% Medicare Levy).

You do not have any capital losses available to offset potential capital gains.

- Year 0:** Assume you are granted 1,500 RSUs. The market value of a Peabody share when the RSUs are granted is \$20.00 per share.
- Years 1, 2 & 3:** On the first anniversary of the grant date, one third of the RSUs vest and 500 Peabody shares are issued to you. On the second anniversary of the grant date, one third of the RSUs vest and 500 Peabody shares are issued to you. On the third anniversary of the grant date, the remaining one third of the RSUs vest and 500 Peabody shares are issued to you. Vesting is the earliest deferred taxing point. The Peabody share price at each Vesting is \$25.00. You choose not to sell the acquired shares immediately.
- Year 5:** You sell the acquired Peabody shares for \$30.00 each. Assume that there is no brokerage and associated sale costs.

	Tax (\$)
Year 0 (Restricted Stock Units are Granted)	
Taxable value of RSUs	N/A
Tax on RSU income	N/A
Years 1 (Vesting of 33% - deferred taxing point)	
Taxable value of RSUs (500 x \$25)	12,500
Tax Payable (at 47%)	(5,875)
Year 2 (Vesting of 33% – deferred taxing point 2)	
Taxable Value of RSUs (500 x \$25)	12,500
Tax Payable (at 47%)	(5,875)
Year 3 (Vesting of remaining 33% – deferred taxing point 3)	
Taxable Value of RSUs (500 x \$25)	12,500
Tax Payable (at 47%)	(5,875)
Year 5 (Sale of Stock)	
Sale Proceeds (1,500 x \$30)	45,000
Less: market value of RSUs (1,500 x \$25)	(37,500)
Net Gain	7,500
Taxable Capital Gain (at 50%)	3,750
Tax Payable (at 47%)	(1,762.50)
Summary of Transactions	
Sale Proceeds	45,000
Less: Tax payable at grant	Nil
Less: Tax payable at Vesting (Year 1 + Year 2 + Year 3)	(17,625)
Less: Tax payable upon sale of Stock	(1,762.50)
Net Proceeds (cash) after Tax	25,612.50

Service-Based Cash Award Agreement (AUS Employees)
2022 Grant

SERVICE-BASED CASH AWARD AGREEMENT

THIS SERVICE-BASED CASH AWARD AGREEMENT (the "Agreement"), effective [] January 2022 (the "Agreement Date"), is made by and between PEABODY ENERGY CORPORATION, a Delaware corporation (the "Company"), and the undersigned employee of the Company or a Subsidiary who accepts this Agreement in the Plan's online administration site using the Company's online acceptance procedures (the "Grantee"). The grant date for this Cash Award is [] January 2022 (the "Grant Date").

WHEREAS, the Committee has determined that, subject to the provisions of this Agreement, it would be to the advantage and best interest of the Company and its stockholders to grant the opportunity to earn the service-based cash award provided for herein to the Grantee as an incentive for his or her efforts during his or her service with the Company or its Subsidiaries, and has advised the Company thereof and instructed the undersigned officer to enter into this Agreement to evidence this Cash Award opportunity;

WHEREAS, the Company deems it essential to the protection of its confidential information and competitive standing in its market to have its key employees have reasonable restrictive covenants in place;

WHEREAS, the Grantee agrees and acknowledges that the Company has a legitimate interest to protect its confidential information and competitive standing; and

WHEREAS, the Company deems it essential to the optimal functioning of its business to have its key employees provide advance notice to the Company of their termination of employment.

NOW, THEREFORE, in consideration of the mutual covenants herein contained and other good and valuable consideration, receipt of which is hereby acknowledged, the parties hereby agree as follows:

**ARTICLE I.
DEFINITIONS**

Whenever the following terms are used in this Agreement, they shall have the meanings specified below. Capitalized terms not otherwise defined in this Agreement shall have the meanings specified in the Plan.

Section 1.1- "Board" means the Board of Directors of the Company.

Section 1.2- "Cash Award" shall mean the service-based cash award opportunity provided by the Company to the Grantee as evidenced by this Agreement.

Section 1.3- "Cause" shall mean (a) "Cause" as defined in the Grantee's employment agreement with the Company, if any; or (b) if the Grantee does not have an employment agreement with the Company or such agreement does not define "Cause," then: (i) any willful fraud, dishonesty or misconduct of the Grantee that can reasonably be expected to have a detrimental effect on (A) the reputation or business of the Company or any of its subsidiaries or affiliates or (B) the Grantee's reputation or performance of his or her duties to the Company or any of its subsidiaries or affiliates;

(ii) willful refusal or failure of the Grantee to comply with the Company's Code of Business Conduct and Ethics, the Company's Anti-Corruption and Bribery policy or any other material corporate policy of the Company; (iii) the Grantee's willful or repeated failure to meet documented performance objectives or to perform his or her duties or to follow reasonable and lawful directives of his or her manager (other than due to death or Disability); (iv) the Grantee's conviction of, or plea of nolo contendere to (A) any felony, or (B) any other criminal charge that may reasonably be expected to have a material detrimental effect on the reputation or business of the Company or any of its subsidiaries or affiliates; or (v) the Grantee's willful failure to cooperate with a bona fide internal investigation or an investigation by regulatory or law enforcement authorities, whether or not related to the Grantee's employment with the Company, after being instructed to cooperate by the Chairman of the Board and/or Company's Chief Executive Officer or by the Board, or the willful destruction of or willful failure to preserve documents or other material known to be relevant to any such investigation; provided, that with respect to clause (ii) or (iii) above, the Grantee shall have 15 business days following written notice of the conduct which is the basis for the potential termination for "Cause" within which to cure such conduct, to the extent it can be cured, to prevent termination for "Cause" by the Company, and if the Grantee cures the conduct that is the basis for the potential termination for "Cause" within such period, the Company's notice of termination shall be deemed withdrawn.

Section 1.4- "Change in Control" shall mean the occurrence of any one or more of the following: (a) any corporation, person or other entity (other than the Company, a majority-owned subsidiary of the Company or any of its Subsidiaries, or an employee benefit plan (or related trust) sponsored or maintained by the Company or any of its Subsidiaries), including a "group" as defined in Section 13(d)(3) of the Securities Exchange Act of 1934, as amended, becomes the beneficial owner of stock representing more than fifty percent (50%) of the combined voting power of the Company's then outstanding securities; (b) there is consummated (i) a merger, consolidation, plan of arrangement, reorganization or similar transaction or series of transactions in which the Company is involved, other than such a transaction or series of transactions which would result in the shareholders of the Company immediately prior thereto continuing to own (either by remaining outstanding or by being converted into voting securities of the surviving entity) more than fifty percent (50%) of the combined voting power of the securities of the Company or such surviving entity (or the parent, if any) outstanding immediately after such transaction(s) in substantially the same proportions as their ownership immediately prior to such transaction(s); (ii) a sale or other disposition of all or substantially all of the Company's assets; or (iii) approval by the Company's shareholders of a plan of liquidation of the Company; or (c) within any period of 24 consecutive months, persons who were members of the Board immediately prior to such 24-month period, together with persons who were first elected as directors (other than as a result of any settlement of a proxy or consent solicitation contest or any action taken to avoid such a contest) during such 24-month period by or upon the recommendation of persons who were members of the Board immediately prior to such 24-month period and who constituted a majority of the Board at the time of such election, cease to constitute a majority of the Board; provided, however, that to the extent this Cash Award is subject to liability under Code Section 409A and does not qualify for an exemption from Code Section 409A coverage, a Change in Control shall include any event or series of events described in the foregoing provisions of this Section 1.4, but only to the extent such event or series of events also constitutes a "change of control event" (as described in Treasury Regulation Section 1.409A-3(i)(5)(i)) with respect to the Company.

Section 1.5- “Code” shall mean the Internal Revenue Code of 1986 (and any successor thereto), as amended from time to time. References to a particular section of the Code include references to regulations and rulings thereunder and to successor provisions.

Section 1.6- “Committee” shall mean the Compensation Committee of the Board.

Section 1.7- “Disability” shall mean a mental or physical illness that entitles the Grantee to receive benefits under the long-term disability plan of the Company or any Subsidiary, or if the Grantee is not covered by such a plan or the Grantee is not an employee of the Company or any Subsidiary, a mental or physical illness that renders a Grantee totally and permanently incapable of performing the Grantee’s duties for the Company or a Subsidiary. Notwithstanding the foregoing: (a) a Disability shall not qualify if it is the result of (i) a willfully self-inflicted injury or willfully self-induced sickness; or (ii) an injury or disease contracted, suffered, or incurred while participating in a felony criminal offense; and (b) with respect to this Cash Award if it is subject to liability under Code Section 409A and does not qualify for an exemption from Code Section 409A coverage, Disability shall mean a Grantee’s inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than 12 months.

Section 1.8- “Good Reason” shall mean (a) “Good Reason” as defined in the Grantee’s employment agreement with the Company, if any; or (b) if the Grantee does not have an employment agreement with the Company or such agreement does not define Good Reason, then: (i) a reduction, other than a reduction that generally affects all similarly-situated executives and does not exceed 10% in one year or 20% in the aggregate over three consecutive years, by the Company in the Grantee’s base salary from that in effect immediately prior to the reduction; (ii) a material reduction, other than a reduction that generally affects all similarly-situated executives, by the Company in the Grantee’s target or maximum annual cash incentive award opportunity or target or maximum annual equity-based compensation award opportunity from those in effect immediately prior to any such reduction; (iii) relocation, other than through mutual agreement in writing between the Company and the Grantee or a secondment or temporary relocation for a reasonably finite period of time, of the Grantee’s primary office by more than 50 miles from the location of the Grantee’s primary office as of the Agreement Date; or (iv) any material diminution or material adverse change in the Grantee’s duties or responsibilities as they exist as of the Agreement Date (other than any diminution or change during a period of mental or physical incapacity); provided, that (x) if the Grantee terminates Grantee’s employment for “Good Reason,” the Grantee shall provide written notice to the Company at least 30 days in advance of the date of termination, such notice shall describe the conduct the Grantee believes to constitute “Good Reason” and the Company shall have the opportunity to cure the “Good Reason” within 30 days after receiving such notice, (y) if the Company cures the conduct that is the basis for the potential termination for “Good Reason” within such 30-day period, the Grantee’s notice of termination shall be deemed withdrawn and (z) if the Grantee does not give notice to the Company as described in this Section 1.8 within 90 days after an event giving rise to “Good Reason,” the Grantee’s right to claim “Good Reason” termination on the basis of such event shall be deemed waived.

Section 1.9- “Person” shall mean any individual, sole proprietorship, corporation, partnership, joint venture, limited liability company, association, joint-stock company, trust,

unincorporated organization, institution, public benefit corporation, entity or government instrumentality, division, agency, body or department.

Section 1.10- "Plan" shall mean the Peabody Energy Corporation 2017 Incentive Plan, as in effect on the Agreement Date.

Section 1.11- "Retirement" shall mean a Termination of Service on or after age sixty-five (65) or age sixty (60) with at least five (5) years of service with the Company.

Section 1.12- "Section 409A" shall mean Section 409A of the Code and the applicable regulations or other guidance issued thereunder.

Section 1.13- "Subsidiary" shall mean any Person that directly, or through one (1) or more intermediaries, is controlled by the Company and that would be treated as a single employer with the Company under Sections 414(b) and 414(c) of the Code if the language "at least 50 percent" is used instead of "at least 80 percent" each place it appears in Code Sections 1563(a)(1), (2) and (3) and Treasury Regulation Section 1.414(c)-2.

Section 1.14- "Termination of Service" occurs (a) on the first day on which an individual is for any reason no longer providing services to the Company or a Subsidiary in the capacity of an employee, director or consultant or (b) with respect to an individual who is an employee or consultant to a Subsidiary, the first day on which such entity ceases to be a Subsidiary of the Company and such individual is no longer providing services to the Company or another Subsidiary; in either case regardless of the reason for such termination and whether or not later found to be invalid or in breach of employment laws in the jurisdiction where the Grantee is employed or the terms of the Grantee's employment agreement, if any, and the Grantee's employment will not be extended by any notice period or any period of "garden leave" or similar period mandated under employment laws in the jurisdiction where the Grantee is employed or the terms of the Grantee's employment agreement, if any; provided, that the Committee shall have the discretion to determine when a Grantee, who terminates services as an employee, but continues to provide services in the capacity of a consultant immediately following such termination, has incurred a Termination of Service. Notwithstanding the foregoing, in the case of this Cash Award if it is subject to liability under Code Section 409A and does not qualify for an exemption from Code Section 409A coverage, a Termination of Service shall only occur at the time of the Grantee's "separation from service" with the Company within the meaning of Code Section 409A or as otherwise set forth in this Agreement or a deferral election form.

ARTICLE II. GRANT OF CASH AWARD

Section 2.1- Grant of Cash Award. The Company has granted to the Grantee on the Grant Date this Cash Award with respect to the cash amount set forth on the signature page hereto. The grant of the Cash Award has been made in consideration of the services to be rendered by the Grantee to the Company and its Subsidiaries or affiliates and the Grantee's obligations under the Restrictive Covenant Agreement (as referenced in Article V).

Section 2.2- No Obligation of Employment. Nothing in this Agreement shall be interpreted as forming or amending an employment or service contract with the Company, nor shall it confer

upon the Grantee any right to continue in the employ of the Company, or any Subsidiary or affiliate, or interfere with or restrict in any way the rights of the Company and its Subsidiaries or affiliates, which rights are hereby expressly reserved, to terminate the employment of the Grantee at any time for any reason whatsoever, with or without Cause.

Section 2.3- Change in Control. In order to maintain Grantee's rights with respect to the Cash Award evidenced hereby, upon the occurrence of a Change in Control, the Committee may take any actions with respect to the Cash Award or make any modifications to the Cash Award as it deems appropriate to reflect such Change in Control, provided that no such action or modification results in a violation of Section 409A.

ARTICLE III. VESTING OF CASH AWARD

Section 3.1- Vesting.

(a) Retirement-Eligible Grantee. If the Grantee is eligible for Retirement as of the Grant Date, the Cash Award shall vest in substantially equal installments on each of the quarterly anniversaries of the Grant Date during the period beginning on the Grant Date and ending on the second anniversary of the Grant Date.

(b) Non-Retirement-Eligible Grantee. If the Grantee is not eligible for Retirement as of the Grant Date, then, except as provided in Section 3.1(c) hereof, the Cash Award shall vest in two substantially equal installments on the first two annual anniversaries of the Grant Date during the period beginning on the Grant Date and ending on the second anniversary of the Grant Date.

(c) Special Rule. In the event the Grantee becomes eligible for Retirement after the Grant Date, the provisions of Section 3.1(a) above shall apply on and after the date the Grantee becomes eligible for Retirement. However, on the first quarterly anniversary of the Grant Date following the date on which the Grantee becomes eligible for Retirement, a portion of the Cash Award shall immediately vest. Such vesting portion shall equal the result of the following formula: $X \text{ multiplied by } (Y/4)$, where "X" is equal to one-half of the aggregate value of the Cash Award (as set forth on the signature page hereto), and "Y" is equal to the number of full calendar quarters that have elapsed between the most recent annual anniversary of the Grant Date and the then current quarterly anniversary of the Grant Date.

Section 3.2- Acceleration Events. Notwithstanding Section 3.1 hereof, the Cash Award shall become fully vested and non-forfeitable upon (a) a Termination of Service within two years following a Change in Control, provided such Termination of Employment is by the Company without Cause or by the Grantee for Good Reason; or (b) the Grantee's death or Disability (each, an "Acceleration Event") (provided, that no payment of the Cash Award shall be accelerated to the extent such payment would cause the Cash Award to be subject to the adverse consequences described in Code Section 409A).

Section 3.3- Effect of Termination of Service. Except as provided in Section 3.2, no portion of the Cash Award shall become vested and non-forfeitable following Termination of

Service, and any such non-vested and forfeitable portion of the Cash Award shall be immediately and automatically forfeited upon Termination of Service.

**ARTICLE IV.
SETTLEMENT OF CASH AWARD**

Section 4.1- Calculation of Settlement Amount. Subject to any withholding obligations described in Section 6.3, as soon as administratively feasible following the first to occur of (a) each of the first two anniversaries of the Grant Date or (b) the date an Acceleration Event occurs (each such date, a “Computation Date”), and in no event later than 60 days following the applicable Computation Date, the Company shall, subject to Article V, pay to the Grantee the amount of cash equal to such vested portion of the Cash Award to the extent it has not yet been paid. Notwithstanding the foregoing or anything else in this Agreement to the contrary, if any payment hereunder is triggered by a Termination of Service of the Grantee (other than due to the Grantee’s death) and the Grantee is a “specified employee” (as such term is defined in Section 409A and using the identification methodology selected by the Company from time to time), the applicable portion of the Cash Award shall, subject to Article V and any withholding obligations described in Section 6.3, be paid to the Grantee, without interest, on the first day of the seventh month after such Termination of Service.

Section 4.2- Forfeiture of Unvested Portion of Cash Award. To the extent that the Grantee does not vest in a portion of the Cash Award, all interest in such portion of the Cash Award shall be forfeited upon the Grantee’s Termination of Service. The Grantee has no right or interest in any portion of the Cash Award that is forfeited. Further, no claim or entitlement to compensation or damages shall arise from forfeiture of the Cash Award resulting from the Grantee’s Termination of Service (for any reason whatsoever, whether or not later found to be invalid or in breach of employment laws in the jurisdiction where the Grantee is employed or the terms of the Grantee’s employment agreement, if any).

**ARTICLE V.
CONDITION TO GRANT OF CASH AWARD; OTHER PROVISIONS**

Section 5.1- Restrictive Covenant Agreement. The Grantee shall not be entitled to receive the Cash Award unless the Grantee shall have executed and delivered the Restrictive Covenant Agreement, substantially in the form attached hereto as Exhibit A, and such shall be in full force and effect. Nothing in this Agreement or Restrictive Covenant Agreement prevents the Grantee from providing, without prior notice to the Company, information to governmental authorities regarding possible legal violations or otherwise testifying or participating in any investigation or proceeding by any governmental authorities regarding possible legal violations, and for purposes of clarity the Grantee is not prohibited from providing information voluntarily to the Securities and Exchange Commission pursuant to Section 21F of the Exchange Act.

Section 5.2- Notice Period. The Grantee may terminate the Grantee’s employment with the Company or a Subsidiary at any time for any reason by delivery of notice to the Company at least (90) days in advance of the date of termination (the “Notice Period”); provided, however, that no communication, statement or announcement shall be considered to constitute such notice of termination of the Grantee’s employment unless it complies with Section 6.7 hereof and specifically

recites that it is a notice of termination of employment for purposes of this Agreement; and provided, further, that the Company may waive any or all of the Notice Period, in which case the Grantee's employment with the Company or a Subsidiary or affiliate will terminate on the date determined by the Company.

Section 5.3- Breach of Restrictive Covenant Agreement or Section 5.2. If the Grantee materially breaches any provision of the Restrictive Covenant Agreement or Section 5.2 hereof, the Company may, among other available remedies, determine that the Grantee (a) will forfeit any unpaid portion of the Cash Award and (b) will repay to the Company any portion of the Cash Award previously paid to the Grantee.

ARTICLE VI. MISCELLANEOUS

Section 6.1- Administration. The Committee has the power to interpret the Cash Award and this Agreement. All actions taken and all interpretations and determinations made by the Committee shall be final and binding upon the Grantee, the Company and all other interested persons. No member of the Committee shall be personally liable for any action, determination or interpretation made in good faith with respect to the Cash Award. In its absolute discretion, the Board may at any time and from time to time exercise any and all rights and duties of the Committee under this Agreement.

Section 6.2- Cash Award Not Transferable. Neither the Cash Award nor any interest or right therein or part thereof shall be liable for the debts, contracts or engagements of the Grantee or his or her successors in interest or shall be subject to disposition by transfer, alienation, anticipation, pledge, encumbrance, assignment or any other means whether such disposition is voluntary or involuntary or by operation of law by judgment, levy, attachment, garnishment or any other legal or equitable proceedings (including bankruptcy), and any attempted disposition thereof shall be null and void and of no effect; provided, however, that this Section 6.2 shall not prevent transfers by will or by the applicable laws of descent and distribution.

Section 6.3- Responsibility for Taxes. The Grantee acknowledges that, regardless of any action taken by the Company or, if different, Grantee's employer (the "Employer"), the ultimate liability for all income tax, social insurance, payroll tax, fringe benefit tax, payment on account or other tax-related items related to the Grantee's participation in the Plan and legally applicable to the Grantee ("Tax-Related Items") is and remains the Grantee's responsibility and may exceed the amount actually withheld by the Company or the Employer, if any. The Grantee further acknowledges that the Company and the Employer (i) make no representation or undertaking regarding the treatment of any Tax-Related Items in connection with any aspect of the Cash Award; and (ii) do not commit to and are under no obligation to structure the terms of the Cash Award to reduce or eliminate the Grantee's liability for Tax-Related Items or achieve any particular tax result. Further, if the Grantee is subject to Tax-Related Items in more than one jurisdiction, the Grantee acknowledges that the Company and/or the Employer (or former employer, as applicable) may be required to withhold or account for Tax-Related Items in more than one jurisdiction

Section 6.4- Withholding. Unless the Grantee makes alternative arrangements satisfactory to the Company to personally remit required withholding amounts, then, as of the date that all or a

portion of the Cash Award becomes paid pursuant to Section 4.1 hereof, the Company shall withhold a portion of the Cash Award so paid as required by law to be withheld by the Company in connection with such payment for applicable federal, state, local and foreign taxes of any kind. To the extent taxes are to be withheld upon vesting for purposes of federal FICA, FUTA or Medicare taxes, such withholding shall be taken from other income owed by the Company to the Grantee and the Grantee hereby agrees to such withholding. For all purposes, the amount withheld by the Company pursuant to this Section 6.4 shall be deemed to have first been paid to the Grantee.

Section 6.5- **Data Privacy.**

(a) **Data Collection and Usage.** *The Company and the Employer collect, process and use certain personal information about the Grantee, including, but not limited to, the Grantee's name, home address and telephone number, email address, date of birth, social insurance, passport or other identification number, salary, nationality, job title, any Shares or directorships held in the Company, details of all Cash Awards or any other entitlement to equivalent benefits awarded, canceled, exercised, vested, unvested or outstanding in the Grantee's favor ("Data"), for the purposes of implementing, administering and managing the Agreement. The legal basis, where required, for the processing of Data is the Grantee's consent.*

(b) **Administration Service Providers.** *The Company will transfer Data to E*TRADE Financial Corporate Services, Inc. (including its affiliated companies) (collectively, "E*TRADE"), which is assisting the Company with the implementation, administration and management of the Agreement. The Grantee may be asked to agree on separate terms and data processing practices with E*TRADE, with such agreement being a condition to the ability receive the Cash Award pursuant to this Agreement. In the future, the Company may select different or additional service providers and share Data with such other provider(s) serving in a similar manner.*

(c) **International Data Transfers.** *The Company and E*TRADE are based in the U.S., which means that it will be necessary for Data to be transferred to, and processed in, the U.S. If the Grantee is outside the U.S., the Grantee should note that his or her country has enacted data privacy laws that are different from the U.S. For example, the European Commission has issued a limited adequacy finding with respect to the U.S. that applies only to the extent companies register for the EU-U.S. Privacy Shield program. As a result, in the absence of appropriate safeguards, the transfer of Data to the U.S. or, as the case may be, other countries might not be subject to substantive data processing principles or supervision by data protection authorities. The Company's legal basis, where required, for the transfer of Data is the Grantee's consent.*

(d) **Data Retention.** *The Company will hold and use Data only as long as is necessary to implement, administer and manage the Grantee's Cash Award pursuant to this Agreement, or as required to comply with legal or regulatory obligations, including under tax, exchange control, labor and securities laws.*

(e) **Voluntariness and Consequences of Consent Denial or Withdrawal.** *Receipt of the Cash Award pursuant to the Agreement is voluntary, and the Grantee is*

providing the consents herein on a purely voluntary basis. If the Grantee does not consent, or if the Grantee later seeks to revoke his or her consent, the Grantee's salary from or employment and career with the Employer will not be affected; the only consequence of refusing or withdrawing consent is that the Company would not be able to provide the Cash Award or other incentive awards to the Grantee or administer or maintain such awards.

(f) ***Data Subject Rights.*** *The Grantee may have a number of rights under data privacy laws in the Grantee's jurisdiction. Depending on where the Grantee is based, such rights may include the right to (i) request access or copies of Data the Company processes, (ii) rectification of incorrect Data, (iii) deletion of Data, (iv) restrictions on processing of Data, (v) portability of Data, (vi) lodge complaints with competent authorities in the Grantee's jurisdiction, and/or (vii) receive a list with the names and addresses of any potential recipients of Data. To receive clarification regarding these rights or to exercise these rights, the Grantee can contact the local human resources representative.*

By accepting the Cash Award pursuant to this Agreement and indicating consent via the Company's acceptance procedure, the Grantee is declaring agreement with the data processing practices described herein and consents to the collection, processing and use of Data by the Company and the transfer of Data to the recipients mentioned above, including recipients located in countries which do not adduce an adequate level of protection from a European (or other non-U.S.) data protection law perspective, for the purposes described above.

Finally, the Grantee understands that the Company may rely on a different basis for the processing or transfer of Data in the future and/or request that the Grantee provide another data privacy consent. If applicable, the Grantee agrees that upon request of the Company or the Employer, the Grantee will provide an executed acknowledgement or data privacy consent form (or any other agreements or consents) that the Company and/or the Employer may deem necessary to obtain from the Grantee for the purpose of administering the Grantee's Cash Award pursuant to this Agreement in compliance with the data privacy laws in the Grantee's country, either now or in the future. The Grantee understands and agrees that he or she will not be able to receive the Cash Award pursuant to this Agreement if he or she fails to provide any such consent or agreement requested by the Company and/or the Employer

Section 6.6- Section 409A.

(a) To the extent applicable, this Agreement is intended to comply with Section 409A so that the income inclusion provisions of Section 409A(a)(1) of the Code do not apply to Grantee, and this Agreement shall be construed, interpreted and administered in a manner that is consistent with this intent and the requirements for avoiding additional taxes or penalties under Section 409A. Notwithstanding the foregoing, in no event shall the Company be liable for all or any portion of any taxes, penalties, interest or other expenses that may be incurred by the Grantee on account of Section 409A.

(b) Except as permitted under Section 409A, any deferred compensation (within the meaning of Section 409A) payable to a Grantee or for the Grantee's benefit under this

Agreement and grants hereunder may not be reduced by, or offset against, any amount owing by the Grantee to the Company or any of its Subsidiaries. Each installment of the Cash Award that becomes payable hereunder is a “separate payment” for purposes of Section 409A

(c) In the event that the Company determines that any amounts payable hereunder may be taxable to the Grantee under Section 409A prior to the payment and/or delivery to the Grantee of such amount, the Committee may adopt such amendments to the Agreement, and appropriate policies and procedures, including amendments and policies with retroactive effect, that the Committee determines necessary or appropriate to preserve the intended tax treatment of the benefits provided by the Cash Award and this Agreement.

(d) Notwithstanding any provision of this Agreement to the contrary, in light of the uncertainty with respect to the proper application of Section 409A, the Company reserves the right to make amendments to this Agreement and the terms of the Cash Award as the Company deems necessary or desirable to avoid the imposition of taxes or penalties under Section 409A. In any case, neither the Company nor any of its affiliates will have any obligation to indemnify or otherwise hold the Grantee harmless from any or all of such taxes or penalties.

Section 6.7- Notices. Any notice to be given under the terms of this Agreement to the Company shall be provided to the Chief Administrative Officer and Corporate Secretary, with a copy to the Grantee’s supervisor, and any notice to be given to the Grantee shall be addressed to him or her at the address set forth in the records of the Company. By a notice given pursuant to this Section 6.7, either party may hereafter designate a different address for notices to be given to him, her or it. Any notice which is required to be given to the Grantee shall, if the Grantee is then deceased, be given to the Grantee’s personal representative if such representative has previously informed the Company of his, her or its status and address by written notice under this Section 6.7. Any notice shall be deemed duly given when enclosed in a properly sealed envelope or wrapper addressed as aforesaid, deposited (with postage prepaid) in a post office or branch post office regularly maintained by the United States Postal Service. Notwithstanding the foregoing, any notice required or permitted hereunder from the Company to the Grantee may be made by electronic means, including by electronic mail to the Company-maintained electronic mailbox of the Grantee, and the Grantee hereby consents to receive such notice by electronic delivery. To the extent permitted in an electronically delivered notice described in the previous sentence, the Grantee shall be permitted to respond to such notice or communication by way of a responsive electronic communication, including by electronic mail.

Section 6.8- Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

Section 6.9- Non-Applicability of the Plan. The Cash Award is not granted pursuant to the Plan.

Section 6.10- Pronouns. The masculine pronoun shall include the feminine and neuter, and the singular the plural, where the context so indicates.

Section 6.11- Amendment. The Committee may amend this Agreement at any time, provided that no such amendment shall materially impair the rights of the Grantee unless reflected in a writing executed by the parties hereto that specifically states that it is amending this Agreement.

Section 6.12- Severability. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, and each provision of this Agreement shall be severable and enforceable to the extent permitted by law.

Section 6.13- Dispute Resolution. Any dispute or controversy arising under or in connection with this Agreement shall be resolved by arbitration in St. Louis, Missouri. Arbitrators shall be selected, and arbitration shall be conducted, in accordance with the rules of the American Arbitration Association. The Company shall pay or reimburse any legal fees in connection with such arbitration in the event that the Grantee prevails on a material element of his or her claim or defense. Legal fees eligible for reimbursement in one year under this Section 6.13 shall not affect the legal fees eligible for reimbursements during a subsequent calendar year, payments or reimbursements under this Section 6.13 may not be exchanged or substituted for another form of compensation to the Grantee, and any such reimbursement or payment will be paid within 60 days after the Grantee prevails, but in no event later than the last day of the Grantee's taxable year following the taxable year in which he incurred the expense giving rise to such reimbursement or payment. This Section 6.13 shall remain in effect throughout the Grantee's employment with the Company and for a period of five years following the Grantee's Termination of Service.

Section 6.14- Governing Law. The laws of the State of Delaware shall govern the interpretation, validity and performance of this Agreement regardless of the law that might be applied under principles of conflicts of laws.

Section 6.15- Country-Specific Terms and Conditions. Notwithstanding any provisions in this Agreement, the Cash Award shall be subject to any special terms and conditions for the Grantee's country set forth in the Appendix attached hereto. Moreover, if the Grantee relocates to one of the countries included in the Appendix, the special terms and conditions for such country will apply to the Grantee, to the extent the Company determines that the application of such terms and conditions is necessary or advisable for legal or administrative reasons. The Appendix constitutes part of this Agreement.

Section 6.16- Successors. All obligations of the Company under this Agreement with respect to the Cash Award shall be binding on any successor to the Company, whether the existence of such successor is the result of a direct or indirect purchase, merger, consolidation, or otherwise, of all or substantially all of the business and/or assets of the Company.

Section 6.17- Cash Award Not Taken Into Account for Other Benefits. The Cash Award shall be a special incentive payment to the Grantee and shall not be taken into account in computing the amount of salary or compensation of the Grantee for purposes of determining any pension, retirement, death or other benefit under (a) any pension, retirement, profit-sharing, bonus, insurance or other employee benefit plan of the Company or its Subsidiaries, except as such plan shall otherwise expressly provide, or (b) any agreement between the Company or its Subsidiaries and the Grantee, except as such agreement shall otherwise expressly provide.

Section 6.18- Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original but all of which together will constitute one and the same instrument. Counterpart signatures to this Agreement transmitted by facsimile, electronic mail, or by any other electronic means intended to preserve the original graphic and pictorial appearance of a document, will have the same effect as physical delivery of the paper document bearing an original signature.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, this Agreement has been executed and delivered by the parties hereto.

PEABODY ENERGY CORPORATION

Scott T. Jarboe
Chief Administrative Officer &
Corporate Secretary

The Grantee declares that he or she expressly agrees with the data processing practices described in Section 6.5 of this Agreement and consents to the collection, processing and use of Data by the Company and the transfer of Data to the recipients mentioned in Section 6.5 of this Agreement, including recipients located in countries which do not provide an adequate level of protection from a European (or other non-U.S.) data protection law perspective, for the purposes described in Section 6.5 of this Agreement. The Grantee understands that by clicking "Accept" in the Plan's online administration site is a condition of receiving the Cash Award and that the Company may forfeit the Cash Award if a signature is not obtained. The Grantee understands that he or she may withdraw consent at any time with future effect for any or no reason as described in Section 6.5 of this Agreement.

Note: The Grantee is deemed to have executed this Agreement upon clicking "Accept" in the Plan's online administration site.

APPENDIX

PEABODY ENERGY CORPORATION

SERVICE-BASED CASH AWARD AGREEMENT

COUNTRY-SPECIFIC TERMS AND CONDITIONS

This Appendix includes special *terms and conditions* applicable to the Grantee if the Grantee is in one of the countries listed below. These terms and conditions supplement or replace (as indicated) the terms and conditions set forth in the Agreement. If the Grantee is a citizen or resident of a country other than the one in which he or she is currently working, or if the Grantee transfers employment or residency to another country after the Cash Award is granted, the Company, in its discretion, will determine the extent to which the terms and conditions set forth in this Appendix will apply to the Grantee.

This Appendix also includes *notifications* relating to exchange control, foreign asset / account reporting requirements and other issues of which the Grantee should be aware with respect to his or her receipt of the Cash Award. The information is based on the exchange control, securities and other laws in effect in the respective countries as of January 2022. Such laws are often complex and change frequently. As a result, the Grantee should not rely on the information herein as the only source of information relating to the consequences of receipt of the Cash Award because the information may be out of date at the time the Cash Award vests.

In addition, the information is general in nature and may not apply to the Grantee's particular situation. The Company is not in a position to assure the Grantee of any particular result. Accordingly, the Grantee should seek appropriate professional advice as to how the relevant laws in his or her country may apply to his or her situation. Finally, if the Grantee is a citizen or resident of a country other than the one in which he or she is currently working, or if the Grantee transfers employment or residency to another country after the Cash Award is granted, the information contained herein may not be applicable to the Grantee.

AUSTRALIA

Notifications

Exchange Control Information. Exchange control reporting is required for cash transactions exceeding AUD 10,000 and for international fund transfers (such as the transfer of proceeds of the sale of Shares back to Australia). If an Australian bank is assisting with the transaction, the bank will file the report on the Grantee's behalf. If there is no Australian bank involved with the transaction, then the Grantee will need to file report on his or her own behalf.

UNITED KINGDOM

Terms and Conditions

Responsibility for Taxes. This section supplements Section 6.3 of the Agreement:

Without limitation to Section 6.3 of the Agreement, the Grantee agrees to be liable for any Tax-Related Items and hereby covenants to pay any such Tax-Related Items, as and when requested by the Company or, if different, the Employer or by Her Majesty's Revenue & Customs ("HMRC") (or any other tax authority or any other relevant authority). The Grantee also agrees to indemnify and keep indemnified the Company and, if different, the Employer against any Tax-Related Items that they are required to pay or withhold or have paid or will pay to HMRC (or any other tax authority or any other relevant authority) on the Grantee's behalf.

Notwithstanding the foregoing, if the Grantee is a director or executive officer of the Company (within the meaning Section 13(k) of the Exchange Act) at the time of the taxable event, the terms of the immediately foregoing provision may not apply to the Grantee if the indemnification is viewed as a loan. In such case, if the amount of any income tax due is not collected from or paid by the Grantee within 90 days of the end of the U.K. tax year in which an event giving rise to the indemnification described above occurs, the amount of any uncollected income tax may constitute an additional benefit to the Grantee on which additional income tax and National Insurance Contributions ("NICs") may be payable. The Grantee will be responsible for reporting and paying any income tax due on this additional benefit directly to HMRC under the self-assessment regime and for reimbursing the Company or the Employer (as appropriate) for the value of any employee NICs due on this additional benefit, which the Company or the Employer may recover from the Grantee by any of the means referred to in Section 6.4 of the Agreement.

EXHIBIT A

RESTRICTIVE COVENANT AGREEMENT

THIS RESTRICTIVE COVENANT AGREEMENT (the “RCA”) dated [] January 2022, is by and between PEABODY ENERGY CORPORATION, a Delaware corporation and PEABODY ENERGY AUSTRALIA COAL PTY LTD (collectively the “Company”), and (“Grantee”).

WHEREAS, Grantee has been offered employment with PEABODY ENERGY AUSTRALIA COAL PTY LTD pursuant to an employment agreement (the “Employment Agreement”);

WHEREAS, Grantee is a recipient of a 2022 incentive award under the Company’s Peabody Energy Corporation 2017 Incentive Plan, as amended from time to time (the “Plan”, and such award, the “Incentive Award”) and/or a 2022 service-based cash award opportunity from the Company (the “Cash Award”) (the Incentive Award and/or Cash Award referred to herein as the “Award”);

WHEREAS, Grantee acknowledges and agrees that he or she has access to and/or knowledge of certain trade secrets and other Confidential Information regarding the Company;

WHEREAS, the Company has spent and will continue to expend substantial amounts of time, money, and effort to develop its Confidential Information and Grantee acknowledges benefitting from these efforts;

WHEREAS, the Company deems it essential to the protection of its Confidential Information and competitive standing in its market to have senior employees such as Grantee who are recipients of Awards subject to reasonable restrictive covenants;

WHEREAS, Grantee agrees and acknowledges that the Company has a legitimate interest to protect its confidential information and competitive standing; and

NOW THEREFORE, in consideration for the provisions stated below, and intending to be legally bonded thereby, the parties agree as follows.

1. Grantee has been informed and is aware that the execution of this RCA is a necessary term and condition of the Grantee’s Employment Agreement and the receipt of the Award.

2. The term “Confidential Information” as used in this RCA shall be broadly interpreted to include, without limitation, materials and information (whether in written, electronic or other form and whether or not identified as confidential at the time of disclosure) concerning technical matters, business matters, business plans, operations, opportunities, plans, processes, procedures, standards, strategies, policies, programs, software, schematics, models, systems, results, studies, analyses, compilations, forecasts, data, figures, projections, estimates, components, records, methods, criteria, designs, quality control, research, samples, work-in-progress, prototypes, data, materials, clients and prospective clients, customer lists, contracts, projects, suppliers, referral sources, sales, marketing, bidding, purchasing, personnel, financial condition, assets, inventory,

accounts payable, accounts receivable, tax matters, books of account, financing, collections, intellectual property, trade secrets and all other know-how and information of the Company or any subsidiary of the Company which has not been published or disclosed to the general public.

a. While employed by the Company and at all times thereafter, Grantee will keep Confidential Information, including trade secrets, confidential and shall not directly or indirectly, use for himself or herself or use for, or disclose to, any party other than the Company, or any subsidiary of the Company (other than in the ordinary course of Grantee's duties for the benefit of the Company or any subsidiary of the Company), any secret or Confidential Information.

b. At the termination of Grantee's employment or at any other reasonable time the Company or any of its subsidiaries may request, Grantee shall promptly deliver to the Company all memoranda, notes, records, plats, sketches, plans or other documents (including, without limitation, any "soft" copies or computerized or electronic versions thereof) containing Confidential Information, including trade secrets or any other information concerning Company's business, including all copies, then in Grantee's possession or under Grantee's control whether prepared by Grantee or others.

c. Notwithstanding the foregoing paragraphs, Company employees, contractors, and consultants may disclose trade secrets in confidence, either directly or indirectly, to a Federal, State, or local government official or to an attorney, solely for the purpose of reporting or investigating a suspected violation of law, or in a complaint or other document filed in a lawsuit or other proceeding if such filing is made under seal. Additionally, Company employees, contractors, and consultants who file retaliation suits for reporting a suspected violation of law may disclose related trade secrets to their attorney and use them in related court proceedings, as long as the individual files documents containing the trade secret under seal and does not otherwise disclose the trade secret except pursuant to Court Order.

3. In consideration of the Company's obligations under the Employment Agreement, Incentive Award and/or the Cash Award, Grantee agrees that while employed by the Company and for the Non-Compete Period thereafter, without the prior written consent of the Board of Directors of the Company (the "**Board**"), he or she shall not, directly or indirectly, as principal, manager, agent, consultant, officer, director, stockholder, partner, investor, lender or employee or in any other capacity, carry on, be engaged in or have any financial interest in, any entity which is in competition with the business of the Company or its subsidiaries within the Restraint Area.

4. In consideration of the Company's obligations under the Employment Agreement, Incentive Award and/or the Cash Award, Grantee agrees that while employed by the Company and for the Non-Solicit Period thereafter, without the prior written consent of the Board, he or she shall not, on his or her own behalf or on behalf of any person, firm or company, directly or indirectly, (a) solicit or offer employment to or hire any person who is employed by the Company and who Grantee had contact with in the twelve (12) months which preceded the termination of Grantee's employment with the Company or (b) solicit or entice away or in any manner attempt to persuade any client, vendor, partner, customer or prospective customer of the Company who Grantee had contact with in the twelve (12) months which preceded the termination of Grantee's employment with the Company to discontinue or diminish his, her or its relationship or prospective relationship with the Company or to otherwise provide his, her or its business to any

corporation, partnership or other business entity which engages in any line of business in which the Company is engaged (other than the Company).

5. For purposes of this RCA, an entity shall be deemed to be in competition with the Company if it enters into or engages in any business or activity that substantially and directly competes with the business of the Company. For purposes of this paragraph 5, the business of the Company is defined to be: development of new thermal and metallurgical mines, active metallurgical and thermal coal mining, preparation and sale; the marketing, brokering and trading of metallurgical and thermal coal; and the optimization of our metallurgical and thermal coal reserves; in each case by the Company and its direct and indirect subsidiaries or affiliated or related companies. Notwithstanding this paragraph 5 or paragraph 8, nothing herein shall be construed so as to preclude Grantee from investing in any publicly or privately held company, provided that no such investment in the equity securities of an entity with publicly traded equity securities may exceed one percent (1%) of the equity of such entity, and no such investment in any other entity may exceed five percent (5%) of the equity of such entity, without the prior written approval of the Board.

6. Grantee agrees that he or she will not at any time make, directly or indirectly, any negative, derogatory, disparaging or defamatory comment, whether written, oral or in electronic format, to any reporter, author, producer or similar person or entity or to any general public media in any form (including, without limitation, books, articles or writings of any other kind, as well as film, videotape, audio tape, computer/Internet format or any other medium) that concerns directly or indirectly the Company its business or operations, or any of its current or former agents, employees, officers, directors, customers or clients. This restriction is not intended to prevent or restrict the Grantee from participating in normal employment processes or accessing internal grievance procedures including the Tell Peabody procedure, nor is it intended to restrict or prevent the Grantee from making an external disclosure which is protected by whistleblower protection legislation.

7. Upon the termination of Grantee's employment for any reason, Grantee or his or her estate shall surrender to the Company all correspondence, letters, files, contracts, mailing lists, customer lists, advertising materials, ledgers, supplies, equipment, checks, and all other materials and records of any kind that are the property of the Company or any of its subsidiaries or affiliates, that may be in Grantee's possession or under his or her control, including, without limitation, any "soft" copies or computerized or electronic versions thereof.

8. Grantee agrees that the covenant not to compete, the covenant not to solicit and the covenant not to make disparaging comments are reasonable under the circumstances and will not interfere with his or her ability to earn a living or otherwise to meet his or her financial obligations. Grantee and the Company agree that if in the opinion of any court of competent jurisdiction such restraint is not reasonable in any respect, such court shall have the right, power and authority to excise or modify such provision or provisions of this covenant which appear unreasonable and to enforce the remainder of the covenant as so amended. Grantee agrees that any breach of the covenants contained in this RCA would irreparably injure the Company. Accordingly, Grantee agrees that, in the event that Grantee violates this RCA, the Company may, in addition to pursuing any other remedies it may have in law or in equity, cease making any payments otherwise required under the agreements evidencing the Incentive Award and/or the Cash Award, cancel and recoup

any portion of the Incentive Award and/or Cash Award already paid to the extent required by law, regulation or listing requirement, or permitted by any Company policy adopted pursuant thereto. The Company may also seek an injunction against Grantee from any court having jurisdiction over the matter restraining any further violation of this RCA by Grantee.

9. Within this RCA, “Non-Compete Period” means:

- a. 12 months, but if that is unenforceable;
- b. 6 months, but if that is unenforceable;
- c. 3 months, but if that is unenforceable;
- d. 1 month.

10. Within this RCA, “Non-Solicit Period” means:

- a. 12 months, but if that is unenforceable;
- b. 6 months, but if that is unenforceable;
- c. 3 months, but if that is unenforceable;
- d. 1 month.

11. Within this RCA, “Restraint Area” means:

- a. The world, but if that is unenforceable;
- b. Australia, the United States of America and other countries in which the Company has operations, but if that is unenforceable;
- c. Australia and the United States of America, but if that is unenforceable;
- d. Australia.

12. No waiver or modification of all or any part of this RCA will be effective unless set forth in a written document signed by both the Company and Grantee expressly indicating their intention to waive or modify the specified provisions of this RCA. If the Company chooses not to enforce its rights in the event Grantee or any other recipient of a Cash Award and/or Incentive Award breaches some or all of the terms of this RCA, the Company’s rights with respect to any such breach shall not be considered a waiver of a future breach by Grantee of this RCA, regardless of whether the breach is of a similar nature or not.

13. This RCA accurately sets forth and entirely sets forth the understandings reached between Grantee and the Company with respect to the matters treated herein. If there are any prior written or oral understandings or agreements pertaining to the subject matter addressed in this RCA, they are specifically superseded by this RCA and have no effect except, should the Grantee be subject to non-compete and non-solicitation obligations (“Restrictive Covenants”) pursuant to an

employment agreement or other agreement between Grantee and the Company or one of its subsidiaries or affiliates, Grantee shall continue to be bound by the terms of those Restrictive Covenants and they shall run concurrently with those set forth in this RCA. Further, notwithstanding the foregoing, Grantee agrees that if Grantee is subject to a longer Notice Period pursuant to an employment agreement or other agreement between the Grantee and Company or one of its subsidiaries or affiliates other than that set forth in Section 5.2 of the Service-Based Cash Award Agreement, Grantee shall continue to be bound by the longer notice period. This RCA is binding on Grantee and the Company, and their respective successors, assigns and representatives.

14. The parties each agree that (a) this RCA (including any counterpart of this RCA) may be executed by a party giving their electronic signature (or 'e signature') through an electronic communication rather than signing below; (b) consent to the receipt of an electronic signature through an electronic communication from any other party for the purposes of the execution of this RCA; and (c) acknowledge that the giving of an electronic signature through an electronic communication by any party will (i) capture data to identify that party and the fact they have provided their electronic signature; and (ii) indicate the intention of that party to execute and be bound by this RCA.

15. This RCA shall be construed, interpreted and governed in accordance with the laws of Queensland, Australia, without reference to rules relating to conflicts of law.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, this RCA has been executed and delivered by the parties hereto.

PEABODY ENERGY CORPORATION

By: [_____]

Its: [_____]

**PEABODY ENERGY AUSTRALIA
COAL PTY LTD**

By: [_____]

Its: [_____]

**Note: The Grantee is deemed to have executed this RCA upon clicking “Accept”
in the Plan’s online administration site.**

**Performance-Based Cash Award Agreement (AUS Employees - ELT)
2022 Award****PERFORMANCE-BASED CASH AWARD AGREEMENT**

THIS PERFORMANCE-BASED CASH AWARD AGREEMENT (the “Agreement”), effective [] January 2022 (the “Agreement Date”), is made by and between PEABODY ENERGY CORPORATION, a Delaware corporation (the “Company”), and the undersigned employee of the Company or a Subsidiary who accepts this Agreement in the Plan’s online administration site using the Company’s online acceptance procedures (the “Grantee”). The grant date for this Performance-Based Cash Award is [] January 2022 (the “Grant Date”).

WHEREAS, the Committee has determined that, subject to the provisions of this Agreement, it would be to the advantage and best interest of the Company and its stockholders to grant the opportunity to earn the performance-based cash award provided for herein to the Grantee as an incentive for his or her efforts during his or her service with the Company or its Subsidiaries, and has advised the Company thereof and instructed the undersigned officer to enter into this Agreement to evidence this Performance-Based Cash Award opportunity;

WHEREAS, the Company deems it essential to the protection of its confidential information and competitive standing in its market to have its key employees have reasonable restrictive covenants in place;

WHEREAS, the Grantee agrees and acknowledges that the Company has a legitimate interest to protect its confidential information and competitive standing; and

WHEREAS, the Company deems it essential to the optimal functioning of its business to have its key employees provide advance notice to the Company of their termination of employment.

NOW, THEREFORE, in consideration of the mutual covenants herein contained and other good and valuable consideration, receipt of which is hereby acknowledged, the parties hereby agree as follows:

**ARTICLE I.
DEFINITIONS**

Whenever the following terms are used in this Agreement, they shall have the meanings specified below. Capitalized terms not otherwise defined in this Agreement shall have the meanings specified in the Plan.

Section 1.1 “Board” means the Board of Directors of the Company.

Section 1.2 “Cause” shall mean (a) “Cause” as defined in the Grantee’s employment agreement with the Company, if any; or (b) if the Grantee does not have an employment agreement with the Company or such agreement does not define “Cause,” then: (i) any willful fraud, dishonesty or misconduct of the Grantee that can reasonably be expected to have a detrimental effect on (A) the reputation or business of the Company or any of its subsidiaries or affiliates or (B) the Grantee’s reputation or performance of his or her duties to the Company or any of its subsidiaries or affiliates; (ii) willful refusal or failure of the Grantee to comply with the Company’s Code of Business Conduct and Ethics, the Company’s Anti-Corruption and Bribery policy or any other material corporate

policy of the Company; (iii) the Grantee's willful or repeated failure to meet documented performance objectives or to perform his or her duties or to follow reasonable and lawful directives of his or her manager (other than due to death or Disability); (iv) the Grantee's conviction of, or plea of nolo contendere to (A) any felony, or (B) any other criminal charge that may reasonably be expected to have a material detrimental effect on the reputation or business of the Company or any of its subsidiaries or affiliates; or (v) the Grantee's willful failure to cooperate with a bona fide internal investigation or an investigation by regulatory or law enforcement authorities, whether or not related to the Grantee's employment with the Company, after being instructed to cooperate by the Chairman of the Board and/or Company's Chief Executive Officer or by the Board, or the willful destruction of or willful failure to preserve documents or other material known to be relevant to any such investigation; provided, that with respect to clause (ii) or (iii) above, the Grantee shall have 15 business days following written notice of the conduct which is the basis for the potential termination for "Cause" within which to cure such conduct, to the extent it can be cured, to prevent termination for "Cause" by the Company, and if the Grantee cures the conduct that is the basis for the potential termination for "Cause" within such period, the Company's notice of termination shall be deemed withdrawn.

Section 1.3 "Change in Control" shall mean the occurrence of any one or more of the following: (a) any corporation, person or other entity (other than the Company, a majority-owned subsidiary of the Company or any of its Subsidiaries, or an employee benefit plan (or related trust) sponsored or maintained by the Company or any of its Subsidiaries), including a "group" as defined in Section 13(d)(3) of the Securities Exchange Act of 1934, as amended, becomes the beneficial owner of stock representing more than fifty percent (50%) of the combined voting power of the Company's then outstanding securities; (b) there is consummated (i) a merger, consolidation, plan of arrangement, reorganization or similar transaction or series of transactions in which the Company is involved, other than such a transaction or series of transactions which would result in the shareholders of the Company immediately prior thereto continuing to own (either by remaining outstanding or by being converted into voting securities of the surviving entity) more than fifty percent (50%) of the combined voting power of the securities of the Company or such surviving entity (or the parent, if any) outstanding immediately after such transaction(s) in substantially the same proportions as their ownership immediately prior to such transaction(s); (ii) a sale or other disposition of all or substantially all of the Company's assets; or (iii) approval by the Company's shareholders of a plan of liquidation of the Company; or (c) within any period of 24 consecutive months, persons who were members of the Board immediately prior to such 24-month period, together with persons who were first elected as directors (other than as a result of any settlement of a proxy or consent solicitation contest or any action taken to avoid such a contest) during such 24-month period by or upon the recommendation of persons who were members of the Board immediately prior to such 24-month period and who constituted a majority of the Board at the time of such election, cease to constitute a majority of the Board; provided, however, that to the extent this Performance-Based Cash Award is subject to liability under Code Section 409A and does not qualify for an exemption from Code Section 409A coverage, a Change in Control shall include any event or series of events described in the foregoing provisions of this Section 1.4, but only to the extent such event or series of events also constitutes a "change of control event" (as described in Treasury Regulation Section 1.409A-3(i)(5)(i)) with respect to the Company.

Section 1.4 “Code” shall mean the Internal Revenue Code of 1986 (and any successor thereto), as amended from time to time. References to a particular section of the Code include references to regulations and rulings thereunder and to successor provisions.

Section 1.5 “Committee” shall mean the Compensation Committee of the Board.

Section 1.6 “Disability” shall mean a mental or physical illness that entitles the Grantee to receive benefits under the long-term disability plan of the Company or any Subsidiary, or if the Grantee is not covered by such a plan or the Grantee is not an employee of the Company or any Subsidiary, a mental or physical illness that renders a Grantee totally and permanently incapable of performing the Grantee’s duties for the Company or a Subsidiary. Notwithstanding the foregoing: (a) a Disability shall not qualify if it is the result of (i) a willfully self-inflicted injury or willfully self-induced sickness; or (ii) an injury or disease contracted, suffered, or incurred while participating in a felony criminal offense; and (b) with respect to this Performance-Based Cash Award if it is subject to liability under Code Section 409A and does not qualify for an exemption from Code Section 409A coverage, Disability shall mean a Grantee’s inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than 12 months.

Section 1.7 “First Determination Date” shall mean 31 December 2022.

Section 1.8 “Good Reason” shall mean (a) “Good Reason” as defined in the Grantee’s employment agreement with the Company, if any; or (b) if the Grantee does not have an employment agreement with the Company or such agreement does not define Good Reason, then: (i) a material reduction, other than a reduction that generally affects all similarly-situated executives and does not exceed 10% in one year or 20% in the aggregate over three consecutive years, by the Company in the Grantee’s base salary from that in effect immediately prior to the reduction; (ii) a material reduction, other than a reduction that generally affects all similarly-situated executives, by the Company in the Grantee’s target or maximum annual cash incentive award opportunity or target or maximum annual equity-based compensation award opportunity from those in effect immediately prior to any such reduction; (iii) relocation, other than through mutual agreement in writing between the Company and the Grantee or a secondment or temporary relocation for a reasonably finite period of time, of the Grantee’s primary office by more than 50 miles from the location of the Grantee’s primary office as of the Agreement Date; or (iv) any material diminution or material adverse change in the Grantee’s duties or responsibilities as they exist as of the Agreement Date (other than any diminution or change during a period of mental or physical incapacity); provided, that (x) if the Grantee terminates the Grantee’s employment for “Good Reason,” the Grantee shall provide written notice to the Company at least 30 days in advance of the date of termination, such notice shall describe the conduct the Grantee believes to constitute “Good Reason” and the Company shall have the opportunity to cure the “Good Reason” within 30 days after receiving such notice, (y) if the Company cures the conduct that is the basis for the potential termination for “Good Reason” within such 30-day period, the Grantee’s notice of termination shall be deemed withdrawn and (z) if the Grantee does not give notice to the Company as described in this Section 1.8 within 90 days after an event giving rise to “Good Reason,” the Grantee’s right to claim “Good Reason” termination on the basis of such event shall be deemed waived.

Section 1.9 “Performance Period” shall mean 1 January 2022 through 31 December 2023.

Section 1.10 “Performance-Based Cash Award” shall mean the performance-based cash award opportunity provided by the Company to the Grantee as evidenced by this Agreement.

Section 1.11 “Person” shall mean any individual, sole proprietorship, corporation, partnership, joint venture, limited liability company, association, joint-stock company, trust, unincorporated organization, institution, public benefit corporation, entity or government instrumentality, division, agency, body or department.

Section 1.12 “Plan” shall mean the Peabody Energy Corporation 2017 Incentive Plan, as in effect on the Agreement Date.

Section 1.13 “Retirement” shall mean a Termination of Service on or after age sixty-five or age sixty (60) with at least five (5) years of service with the Company.

Section 1.14 “Second Determination Date” shall mean 31 December 2023.

Section 1.15 “Section 409A” shall mean Section 409A of the Code and the applicable regulations or other guidance issued thereunder.

Section 1.16 “Subsidiary” shall mean any Person that directly, or through one (1) or more intermediaries, is controlled by the Company and that would be treated as a single employer with the Company under Sections 414(b) and 414(c) of the Code if the language “at least 50 percent” is used instead of “at least 80 percent” each place it appears in Code Sections 1563(a)(1), (2) and (3) and Treasury Regulation Section 1.414(c)-2.

Section 1.17 “Termination of Service” occurs (a) on the first day on which an individual is for any reason no longer providing services to the Company or a Subsidiary in the capacity of an employee, director or consultant or (b) with respect to an individual who is an employee or consultant to a Subsidiary, the first day on which such entity ceases to be a Subsidiary of the Company and such individual is no longer providing services to the Company or another Subsidiary; in either case regardless of the reason for such termination and whether or not later found to be invalid or in breach of employment laws in the jurisdiction where the Grantee is employed or the terms of the Grantee’s employment agreement, if any, and the Grantee’s employment will not be extended by any notice period or any period of “garden leave” or similar period mandated under employment laws in the jurisdiction where the Grantee is employed or the terms of the Grantee’s employment agreement, if any; provided, that the Committee shall have the discretion to determine when a Grantee, who terminates services as an employee, but continues to provide services in the capacity of a consultant immediately following such termination, has incurred a Termination of Service. Notwithstanding the foregoing, in the case of this Performance-Based Cash Award if it is subject to liability under Code Section 409A and does not qualify for an exemption from Code Section 409A coverage, a Termination of Service shall only occur at the time of the Grantee’s “separation from service” with the Company within the meaning of Code Section 409A or as otherwise set forth in this Agreement or a deferral election form.

**ARTICLE II.
GRANT OF PERFORMANCE-BASED CASH AWARD**

Section 2.1 Grant of Performance-Based Cash Award. The Company has granted to the Grantee on the Grant Date this Performance-Based Cash Award with the target amount set forth on the signature page hereof (the "Target Amount") upon the terms and subject to the conditions set forth in this Agreement. Subject to the degree of attainment of the applicable Performance Goals established for this Performance-Based Cash Award, as approved by the Committee and thereafter communicated to the Grantee (the "Statement of Performance Goals"), the Grantee may earn from 0% to 150% of the Target Amount. The grant of this Performance-Based Cash Award was made in consideration of the services to be rendered by the Grantee to the Company and its Subsidiaries or affiliates and the Grantee's obligations under the Restrictive Covenant Agreement (as referenced in Article V).

Section 2.2 No Obligation of Employment. Nothing in this Agreement shall be interpreted as forming or amending an employment or service contract with the Company, nor shall it confer upon the Grantee any right to continue in the employ of the Company, or any Subsidiary or affiliate, or interfere with or restrict in any way the rights of the Company and its Subsidiaries or affiliates, which rights are hereby expressly reserved, to terminate the employment of the Grantee at any time for any reason whatsoever, with or without Cause.

Section 2.3 Change in Control. In order to maintain Grantee's rights with respect to the Performance-Based Cash Award evidenced hereby, upon the occurrence of a Change in Control, the Committee may take any actions with respect to the Performance-Based Cash Award or make any modifications to the Performance-Based Cash Award as it deems appropriate to reflect such Change in Control, provided that no such action or modification results in a violation of Section 409A.

**ARTICLE III.
VESTING AND FORFEITURE OF PERFORMANCE-BASED CASH AWARD**

Section 3.1 Normal Vesting. Unless otherwise provided in this Article III, the Performance-Based Cash Award shall vest as to the First FCF Award (as defined in the Statement of Performance Goals) on the First Determination Date, and as to the Second FCF Award and the ENV Award (as defined in the Statement of Performance Goals) on the Second Determination Date, to the extent that the applicable Performance Goals described in the Statement of Performance Goals for this Performance-Based Cash Award are certified by the Committee, in its sole discretion, as having been achieved during the applicable portion of the Performance Period, provided that the Grantee has remained in continuous service with the Company or a Subsidiary through the First Determination Date or Second Determination Date, as applicable.

Section 3.2 Effect of Certain Events. Notwithstanding the foregoing Section 3.1 hereof, prior to the Second Determination Date:

(a) In the event of the Grantee's Termination of Service either (i) within two years following a Change in Control, provided such Termination of Service is by the Company without Cause or by the Grantee for Good Reason; or (ii) on account of the Grantee's death or Disability, the Performance-Based Cash Award shall become earned and

vest on the basis of the relative achievement of the applicable Performance Goals determined in accordance with Section 3.1 as if the Grantee had remained in continuous service with the Company or a Subsidiary through the Second Determination Date;

(b) In the event of the earlier of (i) a Termination of Service on account of Retirement; or (ii) except as provided in Section 3.2(a) above, a Termination of Service by the Company without Cause or by the Grantee for Good Reason, a pro-rata portion of the Performance-Based Cash Award, based on the number of days that the Grantee provided services to the Company or a Subsidiary from the beginning of the Performance Period through the date of the Termination of Service compared to the number of days in the Performance Period, shall become earned and vest on the basis of the relative achievement of the applicable Performance Goals determined in accordance with Section 3.1 as if the Grantee had remained in continuous service with the Company or a Subsidiary through the applicable Determination Date; and

(c) In the event of the earlier of (i) a Termination of Service by the Company for Cause; and (ii) a Termination of Service by the Grantee without Good Reason, the Performance-Based Cash Award shall terminate and the Grantee shall not be entitled to any payment hereunder.

(d) The portion of the Performance-Based Cash Award that vests and becomes earned in accordance with this Section 3.2 shall be settled as set forth in Article IV of this Agreement.

ARTICLE IV.

SETTLEMENT OF PERFORMANCE-BASED CASH AWARD; CONDITIONS TO GRANT AND SETTLEMENT

Section 4.1 Form and Time of Payment.

(a) Subject to any withholding obligations described in Section 6.4, as soon as administratively feasible following the First Determination Date and the Committee's certification as described in Section 3.1, but in no event later than 15 March 2023, the Company shall, subject to Article V, pay to the Grantee the amount of cash equal to (i) 40% of the Target Amount multiplied by (ii) the percentage of the First FCF Award earned.

(b) Subject to any withholding obligations described in Section 6.4, as soon as administratively feasible following the Second Determination Date and the Committee's certification as described in Section 3.1, but in no event later than 15 March 2024, the Company shall, subject to Article V, pay to the Grantee the amount of cash equal to (i) (A) 40% of the Target Amount multiplied by (B) the percentage of the Second FCF Award earned; plus (ii) (A) 20% of the Target Amount multiplied by (B) the percentage of the ENV Award earned.

Section 4.2 Specified Employee. Notwithstanding the foregoing or anything else in this Agreement to the contrary, if any payment hereunder is triggered by a Termination of Service of the Grantee (other than due to the Grantee's death) and the Grantee is a "specified employee" (as such term is defined in Section 409A and using the identification methodology selected by the Company

from time to time), the applicable portion of the Performance-Based Cash Award shall, subject to Article V and any withholding obligations described in Section 6.4, be paid to the Grantee, without interest, on the first day of the seventh month after such Termination of Service.

**ARTICLE V.
CONDITION TO GRANT OF PERFORMANCE-BASED CASH AWARD; OTHER PROVISIONS**

Section 5.1 Restrictive Covenant Agreement. The Grantee shall not be entitled to receive the Performance-Based Cash Award unless the Grantee shall have executed and delivered the Restrictive Covenant Agreement, substantially in the form attached hereto as Exhibit A, and such shall be in full force and effect. Nothing in this Agreement or Restrictive Covenant Agreement prevents the Grantee from providing, without prior notice to the Company, information to governmental authorities regarding possible legal violations or otherwise testifying or participating in any investigation or proceeding by any governmental authorities regarding possible legal violations, and for purposes of clarity the Grantee is not prohibited from providing information voluntarily to the Securities and Exchange Commission pursuant to Section 21F of the Exchange Act.

Section 5.2 Notice Period. The Grantee may terminate the Grantee's employment with the Company or a Subsidiary at any time for any reason by delivery of notice to the Company at least 90 days in advance of the date of termination (the "Notice Period"); provided, however, that no communication, statement or announcement shall be considered to constitute such notice of termination of the Grantee's employment unless it complies with Section 6.7 hereof and specifically recites that it is a notice of termination of employment for purposes of this Agreement; and provided, further, that the Company may waive any or all of the Notice Period, in which case the Grantee's employment with the Company or a Subsidiary or affiliate will terminate on the date determined by the Company.

Section 5.3 Breach of Restrictive Covenant Agreement or Section 5.2. If the Grantee materially breaches any provision of the Restrictive Covenant Agreement or Section 5.2 hereof, the Company may, among other available remedies, determine that the Grantee (a) will forfeit any unpaid portion of the Performance-Based Cash Award and (b) will repay to the Company any portion of the Performance-Based Cash Award previously paid to the Grantee.

**ARTICLE VI.
MISCELLANEOUS**

Section 6.1 Administration. The Committee has the power to interpret the Performance-Based Cash Award and this Agreement. All actions taken and all interpretations and determinations made by the Committee shall be final and binding upon the Grantee, the Company and all other interested persons. No member of the Committee shall be personally liable for any action, determination or interpretation made in good faith with respect to the Performance-Based Cash Award. In its absolute discretion, the Board may at any time and from time to time exercise any and all rights and duties of the Committee under this Agreement.

Section 6.2 Performance-Based Cash Award Not Transferable. Neither the Performance-Based Cash Award nor any interest or right therein or part thereof shall be liable for the debts, contracts or engagements of the Grantee or his or her successors in interest or shall be subject to disposition by transfer, alienation, anticipation, pledge, encumbrance, assignment or any other means whether such disposition is voluntary or involuntary or by operation of law by judgment, levy, attachment, garnishment or any other legal or equitable proceedings (including bankruptcy), and any attempted disposition thereof shall be null and void and of no effect; provided, however, that this Section 6.2 shall not prevent transfers by will or by the applicable laws of descent and distribution.

Section 6.3 Responsibility for Taxes. The Grantee acknowledges that, regardless of any action taken by the Company or, if different, Grantee's employer (the "Employer"), the ultimate liability for all income tax, social insurance, payroll tax, fringe benefit tax, payment on account or other tax-related items related to the Grantee's participation in the Plan and legally applicable to the Grantee ("Tax-Related Items") is and remains the Grantee's responsibility and may exceed the amount actually withheld by the Company or the Employer, if any. The Grantee further acknowledges that the Company and the Employer (i) make no representation or undertaking regarding the treatment of any Tax-Related Items in connection with any aspect of the Performance-Based Cash Award; and (ii) do not commit to and are under no obligation to structure the terms of the Performance-Based Cash Award to reduce or eliminate the Grantee's liability for Tax-Related Items or achieve any particular tax result. Further, if the Grantee is subject to Tax-Related Items in more than one jurisdiction, the Grantee acknowledges that the Company and/or the Employer (or former employer, as applicable) may be required to withhold or account for Tax-Related Items in more than one jurisdiction

Section 6.4 Withholding. Unless the Grantee makes alternative arrangements satisfactory to the Company to personally remit required withholding amounts, then, as of the date that all or a portion of the Performance-Based Cash Award becomes paid pursuant to Section 4.1 hereof, the Company shall withhold a portion of the Performance-Based Cash Award so paid as required by law to be withheld by the Company in connection with such payment for applicable federal, state, local and foreign taxes of any kind. To the extent taxes are to be withheld upon vesting for purposes of federal FICA, FUTA or Medicare taxes, such withholding shall be taken from other income owed by the Company to the Grantee and the Grantee hereby agrees to such withholding. For all purposes, the amount withheld by the Company pursuant to this Section 6.4 shall be deemed to have first been paid to the Grantee.

Section 6.5 Data Privacy.

(a) **Data Collection and Usage**. *The Company and the Employer collect, process and use certain personal information about the Grantee, including, but not limited to, the Grantee's name, home address and telephone number, email address, date of birth, social insurance, passport or other identification number, salary, nationality, job title, any Shares or directorships held in the Company, details of all Performance-Based Cash Awards or any other entitlement to equivalent benefits awarded, canceled, exercised, vested, unvested or outstanding in the Grantee's favor ("Data"), for the purposes of implementing, administering and managing the Agreement. The legal basis, where required, for the processing of Data is the Grantee's consent.*

(b) Administration Service Providers. The Company will transfer Data to E*TRADE Financial Corporate Services, Inc. (including its affiliated companies) (collectively, “E*TRADE”), which is assisting the Company with the implementation, administration and management of the Agreement. The Grantee may be asked to agree on separate terms and data processing practices with E*TRADE, with such agreement being a condition to the ability receive the Performance-Based Cash Award pursuant to this Agreement. In the future, the Company may select different or additional service providers and share Data with such other provider(s) serving in a similar manner.

(c) International Data Transfers. The Company and E*TRADE are based in the U.S., which means that it will be necessary for Data to be transferred to, and processed in, the U.S. If the Grantee is outside the U.S., the Grantee should note that his or her country has enacted data privacy laws that are different from the U.S. For example, the European Commission has issued a limited adequacy finding with respect to the U.S. that applies only to the extent companies register for the EU-U.S. Privacy Shield program. As a result, in the absence of appropriate safeguards, the transfer of Data to the U.S. or, as the case may be, other countries might not be subject to substantive data processing principles or supervision by data protection authorities. The Company’s legal basis, where required, for the transfer of Data is the Grantee’s consent.

(d) Data Retention. The Company will hold and use Data only as long as is necessary to implement, administer and manage the Grantee’s Performance-Based Cash Award pursuant to this Agreement, or as required to comply with legal or regulatory obligations, including under tax, exchange control, labor and securities laws.

(e) Voluntariness and Consequences of Consent Denial or Withdrawal. Receipt of the Performance-Based Cash Award pursuant to the Agreement is voluntary, and the Grantee is providing the consents herein on a purely voluntary basis. If the Grantee does not consent, or if the Grantee later seeks to revoke his or her consent, the Grantee’s salary from or employment and career with the Employer will not be affected; the only consequence of refusing or withdrawing consent is that the Company would not be able to provide the Performance-Based Cash Award or other incentive awards to the Grantee or administer or maintain such awards.

(f) Data Subject Rights. The Grantee may have a number of rights under data privacy laws in the Grantee’s jurisdiction. Depending on where the Grantee is based, such rights may include the right to (i) request access or copies of Data the Company processes, (ii) rectification of incorrect Data, (iii) deletion of Data, (iv) restrictions on processing of Data, (v) portability of Data, (vi) lodge complaints with competent authorities in the Grantee’s jurisdiction, and/or (vii) receive a list with the names and addresses of any potential recipients of Data. To receive clarification regarding these rights or to exercise these rights, the Grantee can contact the local human resources representative.

By accepting the Performance-Based Cash Award pursuant to this Agreement and indicating consent via the Company’s acceptance procedure, the Grantee is declaring agreement with the data processing practices described herein and consents to the collection, processing and use of Data by the Company and the transfer of Data to the

recipients mentioned above, including recipients located in countries which do not adduce an adequate level of protection from a European (or other non-U.S.) data protection law perspective, for the purposes described above.

Finally, the Grantee understands that the Company may rely on a different basis for the processing or transfer of Data in the future and/or request that the Grantee provide another data privacy consent. If applicable, the Grantee agrees that upon request of the Company or the Employer, the Grantee will provide an executed acknowledgement or data privacy consent form (or any other agreements or consents) that the Company and/or the Employer may deem necessary to obtain from the Grantee for the purpose of administering the Grantee's Performance-Based Cash Award pursuant to this Agreement in compliance with the data privacy laws in the Grantee's country, either now or in the future. The Grantee understands and agrees that he or she will not be able to receive the Performance-Based Cash Award pursuant to this Agreement if he or she fails to provide any such consent or agreement requested by the Company and/or the Employer.

Section 6.6 Section 409A.

(a) To the extent applicable, this Agreement is intended to comply with Section 409A so that the income inclusion provisions of Section 409A(a)(1) of the Code do not apply to Grantee, and this Agreement shall be construed, interpreted and administered in a manner that is consistent with this intent and the requirements for avoiding additional taxes or penalties under Section 409A. Notwithstanding the foregoing, in no event shall the Company be liable for all or any portion of any taxes, penalties, interest or other expenses that may be incurred by the Grantee on account of Section 409A.

(b) Except as permitted under Section 409A, any deferred compensation (within the meaning of Section 409A) payable to a Grantee or for the Grantee's benefit under this Agreement and grants hereunder may not be reduced by, or offset against, any amount owing by the Grantee to the Company or any of its Subsidiaries. Each installment of the Performance-Based Cash Award that becomes payable hereunder is a "separate payment" for purposes of Section 409A.

(c) In the event that the Company determines that any amounts payable hereunder may be taxable to the Grantee under Section 409A prior to the payment and/or delivery to the Grantee of such amount, the Committee may adopt such amendments to the Agreement, and appropriate policies and procedures, including amendments and policies with retroactive effect, that the Committee determines necessary or appropriate to preserve the intended tax treatment of the benefits provided by the Performance-Based Cash Award and this Agreement.

(d) Notwithstanding any provision of this Agreement to the contrary, in light of the uncertainty with respect to the proper application of Section 409A, the Company reserves the right to make amendments to this Agreement and the terms of the Performance-Based Cash Award as the Company deems necessary or desirable to avoid the imposition of taxes or penalties under Section 409A. In any case, neither the Company nor any of its affiliates

will have any obligation to indemnify or otherwise hold the Grantee harmless from any or all of such taxes or penalties.

Section 6.7 Notices. Any notice to be given under the terms of this Agreement to the Company shall be provided to the Chief Administrative Officer and Corporate Secretary, with a copy to the Grantee's supervisor, and any notice to be given to the Grantee shall be addressed to him or her at the address set forth in the records of the Company. By a notice given pursuant to this Section 6.7, either party may hereafter designate a different address for notices to be given to him, her or it. Any notice which is required to be given to the Grantee shall, if the Grantee is then deceased, be given to the Grantee's personal representative if such representative has previously informed the Company of his, her or its status and address by written notice under this Section 6.6. Any notice shall be deemed duly given when enclosed in a properly sealed envelope or wrapper addressed as aforesaid, deposited (with postage prepaid) in a post office or branch post office regularly maintained by the United States Postal Service. Notwithstanding the foregoing, any notice required or permitted hereunder from the Company to the Grantee may be made by electronic means, including by electronic mail to the Company-maintained electronic mailbox of the Grantee, and the Grantee hereby consents to receive such notice by electronic delivery. To the extent permitted in an electronically delivered notice described in the previous sentence, the Grantee shall be permitted to respond to such notice or communication by way of a responsive electronic communication, including by electronic mail.

Section 6.8 Titles. Titles are provided herein for convenience only and are not to serve as a basis for interpretation or construction of this Agreement.

Section 6.9 Non-Applicability of the Plan. The Performance-Based Cash Award is not granted pursuant to the Plan.

Section 6.10 Pronouns. The masculine pronoun shall include the feminine and neuter, and the singular the plural, where the context so indicates.

Section 6.11 Amendment. The Committee may amend this Agreement at any time, provided that no such amendment shall materially impair the rights of the Grantee unless reflected in a writing executed by the parties hereto that specifically states that it is amending this Agreement.

Section 6.12 Severability. The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, and each provision of this Agreement shall be severable and enforceable to the extent permitted by law.

Section 6.13 Dispute Resolution. Any dispute or controversy arising under or in connection with this Agreement shall be resolved by arbitration in St. Louis, Missouri. Arbitrators shall be selected, and arbitration shall be conducted, in accordance with the rules of the American Arbitration Association. The Company shall pay or reimburse any legal fees in connection with such arbitration in the event that the Grantee prevails on a material element of his or her claim or defense. Legal fees eligible for reimbursement in one year under this Section 6.13 shall not affect the legal fees eligible for reimbursements during a subsequent calendar year, payments or reimbursements under this Section 6.13 may not be exchanged or substituted for another form of compensation to the Grantee,

and any such reimbursement or payment will be paid within 60 days after the Grantee prevails, but in no event later than the last day of the Grantee's taxable year following the taxable year in which he incurred the expense giving rise to such reimbursement or payment. This Section 6.13 shall remain in effect throughout the Grantee's employment with the Company and for a period of five years following the Grantee's Termination of Service.

Section 6.14 Governing Law. The laws of the State of Delaware shall govern the interpretation, validity and performance of this Agreement regardless of the law that might be applied under principles of conflicts of laws.

Section 6.15 Country-Specific Terms and Conditions. Notwithstanding any provisions in this Agreement, the Cash Award shall be subject to any special terms and conditions for the Grantee's country set forth in the Appendix attached hereto. Moreover, if the Grantee relocates to one of the countries included in the Appendix, the special terms and conditions for such country will apply to the Grantee, to the extent the Company determines that the application of such terms and conditions is necessary or advisable for legal or administrative reasons. The Appendix constitutes part of this Agreement.

Section 6.16 Successors. All obligations of the Company under this Agreement with respect to the Performance-Based Cash Award shall be binding on any successor to the Company, whether the existence of such successor is the result of a direct or indirect purchase, merger, consolidation, or otherwise, of all or substantially all of the business and/or assets of the Company.

Section 6.17 Performance-Based Cash Award Not Taken Into Account for Other Benefits. The Performance-Based Cash Award shall be a special incentive payment to the Grantee and shall not be taken into account in computing the amount of salary or compensation of the Grantee for purposes of determining any pension, retirement, death or other benefit under (a) any pension, retirement, profit-sharing, bonus, insurance or other employee benefit plan of the Company or its Subsidiaries, except as such plan shall otherwise expressly provide, or (b) any agreement between the Company or its Subsidiaries and the Grantee, except as such agreement shall otherwise expressly provide.

Section 6.18 Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original but all of which together will constitute one and the same instrument. Counterpart signatures to this Agreement transmitted by facsimile, electronic mail, or by any other electronic means intended to preserve the original graphic and pictorial appearance of a document, will have the same effect as physical delivery of the paper document bearing an original signature.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, this Agreement has been executed and delivered by the parties hereto.

PEABODY ENERGY CORPORATION

Scott T. Jarboe
Chief Administrative Officer &
Corporate Secretary

The Grantee declares that he or she expressly agrees with the data processing practices described in Section 6.5 of this Agreement and consents to the collection, processing and use of Data by the Company and the transfer of Data to the recipients mentioned in Section 6.5 of this Agreement, including recipients located in countries which do not provide an adequate level of protection from a European (or other non-U.S.) data protection law perspective, for the purposes described in Section 6.5 of this Agreement. The Grantee understands that by clicking "Accept" in the Plan's online administration site is a condition of receiving the Performance-Based Cash Award and that the Company may forfeit the Performance-Based Cash Award if a signature is not obtained. The Grantee understands that he or she may withdraw consent at any time with future effect for any or no reason as described in Section 6.5 of this Agreement.

Note: The Grantee is deemed to have executed this Agreement upon clicking "Accept" in the Plan's online administration site.

APPENDIX

PEABODY ENERGY CORPORATION

PERFORMANCE-BASED CASH AWARD AGREEMENT

COUNTRY-SPECIFIC TERMS AND CONDITIONS

This Appendix includes special *terms and conditions* applicable to the Grantee if the Grantee is in one of the countries listed below. These terms and conditions supplement or replace (as indicated) the terms and conditions set forth in the Agreement. If the Grantee is a citizen or resident of a country other than the one in which he or she is currently working, or if the Grantee transfers employment or residency to another country after the Cash Award is granted, the Company, in its discretion, will determine the extent to which the terms and conditions set forth in this Appendix will apply to the Grantee.

This Appendix also includes *notifications* relating to exchange control, foreign asset / account reporting requirements and other issues of which the Grantee should be aware with respect to his or her receipt of the Cash Award. The information is based on the exchange control, securities and other laws in effect in the respective countries as of January 2022. Such laws are often complex and change frequently. As a result, the Grantee should not rely on the information herein as the only source of information relating to the consequences of receipt of the Cash Award because the information may be out of date at the time the Cash Award vests.

In addition, the information is general in nature and may not apply to the Grantee's particular situation. The Company is not in a position to assure the Grantee of any particular result. Accordingly, the Grantee should seek appropriate professional advice as to how the relevant laws in his or her country may apply to his or her situation. Finally, if the Grantee is a citizen or resident of a country other than the one in which he or she is currently working, or if the Grantee transfers employment or residency to another country after the Cash Award is granted, the information contained herein may not be applicable to the Grantee.

AUSTRALIA

Notifications

Exchange Control Information. Exchange control reporting is required for cash transactions exceeding AUD 10,000 and for international fund transfers (such as the transfer of proceeds of the sale of Shares back to Australia). If an Australian bank is assisting with the transaction, the bank will file the report on the Grantee's behalf. If there is no Australian bank involved with the transaction, then the Grantee will need to file report on his or her own behalf.

UNITED KINGDOM

Terms and Conditions

Responsibility for Taxes. This section supplements Section 6.3 of the Agreement:

Without limitation to Section 6.3 of the Agreement, the Grantee agrees to be liable for any Tax-Related Items and hereby covenants to pay any such Tax-Related Items, as and when requested by the Company or, if different, the Employer or by Her Majesty's Revenue & Customs ("HMRC") (or any other tax authority or any other relevant authority). The Grantee also agrees to indemnify and keep indemnified the Company and, if different, the Employer against any Tax-Related Items that they are required to pay or withhold or have paid or will pay to HMRC (or any other tax authority or any other relevant authority) on the Grantee's behalf.

Notwithstanding the foregoing, if the Grantee is a director or executive officer of the Company (within the meaning Section 13(k) of the Exchange Act) at the time of the taxable event, the terms of the immediately foregoing provision may not apply to the Grantee if the indemnification is viewed as a loan. In such case, if the amount of any income tax due is not collected from or paid by the Grantee within 90 days of the end of the U.K. tax year in which an event giving rise to the indemnification described above occurs, the amount of any uncollected income tax may constitute an additional benefit to the Grantee on which additional income tax and National Insurance Contributions ("NICs") may be payable. The Grantee will be responsible for reporting and paying any income tax due on this additional benefit directly to HMRC under the self-assessment regime and for reimbursing the Company or the Employer (as appropriate) for the value of any employee NICs due on this additional benefit, which the Company or the Employer may recover from the Grantee by any of the means referred to in Section 6.4 of the Agreement.

EXHIBIT A

RESTRICTIVE COVENANT AGREEMENT

THIS RESTRICTIVE COVENANT AGREEMENT (the “RCA”) dated [__] January 2022, is by and between PEABODY ENERGY CORPORATION, a Delaware corporation and PEABODY ENERGY AUSTRALIA COAL PTY LTD (collectively the “Company”), and (“Grantee”).

WHEREAS, Grantee has been offered employment with PEABODY ENERGY AUSTRALIA COAL PTY LTD pursuant to an employment agreement (the “Employment Agreement”);

WHEREAS, Grantee is a recipient of a 2022 incentive award under the Company’s Peabody Energy Corporation 2017 Incentive Plan, as amended from time to time (the “Plan”, and such award, the “Incentive Award”) and/or a 2022 performance-based cash award opportunity from the Company (the “Cash Award”) (the Incentive Award and/or Cash Award referred to herein as the “Award”);

WHEREAS, Grantee acknowledges and agrees that he or she has access to and/or knowledge of certain trade secrets and other Confidential Information regarding the Company;

WHEREAS, the Company has spent and will continue to expend substantial amounts of time, money, and effort to develop its Confidential Information and Grantee acknowledges benefitting from these efforts;

WHEREAS, the Company deems it essential to the protection of its Confidential Information and competitive standing in its market to have senior employees such as Grantee who are recipients of Awards subject to reasonable restrictive covenants;

WHEREAS, Grantee agrees and acknowledges that the Company has a legitimate interest to protect its confidential information and competitive standing; and

NOW THEREFORE, in consideration for the provisions stated below, and intending to be legally bonded thereby, the parties agree as follows.

1. Grantee has been informed and is aware that the execution of this RCA is a necessary term and condition of the Grantee’s Employment Agreement and the receipt of the Award.

2. The term “Confidential Information” as used in this RCA shall be broadly interpreted to include, without limitation, materials and information (whether in written, electronic or other form and whether or not identified as confidential at the time of disclosure) concerning technical matters, business matters, business plans, operations, opportunities, plans, processes, procedures, standards, strategies, policies, programs, software, schematics, models, systems, results, studies, analyses, compilations, forecasts, data, figures, projections, estimates, components, records, methods, criteria, designs, quality control, research, samples, work-in-progress, prototypes, data, materials, clients and prospective clients, customer lists, contracts, projects, suppliers, referral sources, sales, marketing, bidding, purchasing, personnel, financial condition, assets, inventory,

accounts payable, accounts receivable, tax matters, books of account, financing, collections, intellectual property, trade secrets and all other know-how and information of the Company or any subsidiary of the Company which has not been published or disclosed to the general public.

a. While employed by the Company and at all times thereafter, Grantee will keep Confidential Information, including trade secrets, confidential and shall not directly or indirectly, use for himself or herself or use for, or disclose to, any party other than the Company, or any subsidiary of the Company (other than in the ordinary course of Grantee's duties for the benefit of the Company or any subsidiary of the Company), any secret or Confidential Information.

b. At the termination of Grantee's employment or at any other reasonable time the Company or any of its subsidiaries may request, Grantee shall promptly deliver to the Company all memoranda, notes, records, plats, sketches, plans or other documents (including, without limitation, any "soft" copies or computerized or electronic versions thereof) containing Confidential Information, including trade secrets or any other information concerning Company's business, including all copies, then in Grantee's possession or under Grantee's control whether prepared by Grantee or others.

c. Notwithstanding the foregoing paragraphs, Company employees, contractors, and consultants may disclose trade secrets in confidence, either directly or indirectly, to a Federal, State, or local government official or to an attorney, solely for the purpose of reporting or investigating a suspected violation of law, or in a complaint or other document filed in a lawsuit or other proceeding if such filing is made under seal. Additionally, Company employees, contractors, and consultants who file retaliation suits for reporting a suspected violation of law may disclose related trade secrets to their attorney and use them in related court proceedings, as long as the individual files documents containing the trade secret under seal and does not otherwise disclose the trade secret except pursuant to Court Order.

3. In consideration of the Company's obligations under the Employment Agreement, Incentive Award and/or the Cash Award, Grantee agrees that while employed by the Company and for the Non-Compete Period thereafter, without the prior written consent of the Board of Directors of the Company (the "**Board**"), he or she shall not, directly or indirectly, as principal, manager, agent, consultant, officer, director, stockholder, partner, investor, lender or employee or in any other capacity, carry on, be engaged in or have any financial interest in, any entity which is in competition with the business of the Company or its subsidiaries within the Restraint Area.

4. In consideration of the Company's obligations under the Employment Agreement, Incentive Award and/or the Cash Award, Grantee agrees that while employed by the Company and for the Non-Solicit Period thereafter, without the prior written consent of the Board, he or she shall not, on his or her own behalf or on behalf of any person, firm or company, directly or indirectly, (a) solicit or offer employment to or hire any person who is employed by the Company and who Grantee had contact with in the twelve (12) months which preceded the termination of Grantee's employment with the Company or (b) solicit or entice away or in any manner attempt to persuade any client, vendor, partner, customer or prospective customer of the Company who Grantee had contact with in the twelve (12) months which preceded the termination of Grantee's employment with the Company to discontinue or diminish his, her or its relationship or prospective relationship with the Company or to otherwise provide his, her or its business to any

corporation, partnership or other business entity which engages in any line of business in which the Company is engaged (other than the Company).

5. For purposes of this RCA, an entity shall be deemed to be in competition with the Company if it enters into or engages in any business or activity that substantially and directly competes with the business of the Company. For purposes of this paragraph 5, the business of the Company is defined to be: development of new thermal and metallurgical mines, active metallurgical and thermal coal mining, preparation and sale; the marketing, brokering and trading of metallurgical and thermal coal; and the optimization of our metallurgical and thermal coal reserves; in each case by the Company and its direct and indirect subsidiaries or affiliated or related companies. Notwithstanding this paragraph 5 or paragraph 8, nothing herein shall be construed so as to preclude Grantee from investing in any publicly or privately held company, provided that no such investment in the equity securities of an entity with publicly traded equity securities may exceed one percent (1%) of the equity of such entity, and no such investment in any other entity may exceed five percent (5%) of the equity of such entity, without the prior written approval of the Board.

6. Grantee agrees that he or she will not at any time make, directly or indirectly, any negative, derogatory, disparaging or defamatory comment, whether written, oral or in electronic format, to any reporter, author, producer or similar person or entity or to any general public media in any form (including, without limitation, books, articles or writings of any other kind, as well as film, videotape, audio tape, computer/Internet format or any other medium) that concerns directly or indirectly the Company its business or operations, or any of its current or former agents, employees, officers, directors, customers or clients. This restriction is not intended to prevent or restrict the Grantee from participating in normal employment processes or accessing internal grievance procedures including the Tell Peabody procedure, nor is it intended to restrict or prevent the Grantee from making an external disclosure which is protected by whistleblower protection legislation.

7. Upon the termination of Grantee's employment for any reason, Grantee or his or her estate shall surrender to the Company all correspondence, letters, files, contracts, mailing lists, customer lists, advertising materials, ledgers, supplies, equipment, checks, and all other materials and records of any kind that are the property of the Company or any of its subsidiaries or affiliates, that may be in Grantee's possession or under his or her control, including, without limitation, any "soft" copies or computerized or electronic versions thereof.

8. Grantee agrees that the covenant not to compete, the covenant not to solicit and the covenant not to make disparaging comments are reasonable under the circumstances and will not interfere with his or her ability to earn a living or otherwise to meet his or her financial obligations. Grantee and the Company agree that if in the opinion of any court of competent jurisdiction such restraint is not reasonable in any respect, such court shall have the right, power and authority to excise or modify such provision or provisions of this covenant which appear unreasonable and to enforce the remainder of the covenant as so amended. Grantee agrees that any breach of the covenants contained in this RCA would irreparably injure the Company. Accordingly, Grantee agrees that, in the event that Grantee violates this RCA, the Company may, in addition to pursuing any other remedies it may have in law or in equity, cease making any payments otherwise required under the agreements evidencing the Incentive Award and/or the Cash Award, cancel and recoup

any portion of the Incentive Award and/or Cash Award already paid to the extent required by law, regulation or listing requirement, or permitted by any Company policy adopted pursuant thereto. The Company may also seek an injunction against Grantee from any court having jurisdiction over the matter restraining any further violation of this RCA by Grantee.

9. Within this RCA, “Non-Compete Period” means:

- a. 12 months, but if that is unenforceable;
- b. 6 months, but if that is unenforceable;
- c. 3 months, but if that is unenforceable;
- d. 1 month.

10. Within this RCA, “Non-Solicit Period” means:

- a. 12 months, but if that is unenforceable;
- b. 6 months, but if that is unenforceable;
- c. 3 months, but if that is unenforceable;
- d. 1 month.

11. Within this RCA, “Restraint Area” means:

- a. The world, but if that is unenforceable;
- b. Australia, the United States of America and other countries in which the Company has operations, but if that is unenforceable;
- c. Australia and the United States of America, but if that is unenforceable;
- d. Australia.

12. No waiver or modification of all or any part of this RCA will be effective unless set forth in a written document signed by both the Company and Grantee expressly indicating their intention to waive or modify the specified provisions of this RCA. If the Company chooses not to enforce its rights in the event Grantee or any other recipient of a Cash Award and/or Incentive Award breaches some or all of the terms of this RCA, the Company’s rights with respect to any such breach shall not be considered a waiver of a future breach by Grantee of this RCA, regardless of whether the breach is of a similar nature or not.

13. This RCA accurately sets forth and entirely sets forth the understandings reached between Grantee and the Company with respect to the matters treated herein. If there are any prior written or oral understandings or agreements pertaining to the subject matter addressed in this RCA, they are specifically superseded by this RCA and have no effect except, should the Grantee be subject to non-compete and non-solicitation obligations (“Restrictive Covenants”) pursuant to an

employment agreement or other agreement between Grantee and the Company or one of its subsidiaries or affiliates, Grantee shall continue to be bound by the terms of those Restrictive Covenants and they shall run concurrently with those set forth in this RCA. Further, notwithstanding the foregoing, Grantee agrees that if Grantee is subject to a longer Notice Period pursuant to an employment agreement or other agreement between the Grantee and Company or one of its subsidiaries or affiliates other than that set forth in Section 5.2 of the Performance-Based Cash Award Agreement, Grantee shall continue to be bound by the longer notice period. This RCA is binding on Grantee and the Company, and their respective successors, assigns and representatives.

14. The parties each agree that (a) this RCA (including any counterpart of this RCA) may be executed by a party giving their electronic signature (or 'e signature') through an electronic communication rather than signing below; (b) consent to the receipt of an electronic signature through an electronic communication from any other party for the purposes of the execution of this RCA; and (c) acknowledge that the giving of an electronic signature through an electronic communication by any party will (i) capture data to identify that party and the fact they have provided their electronic signature; and (ii) indicate the intention of that party to execute and be bound by this RCA.

15. This RCA shall be construed, interpreted and governed in accordance with the laws of Queensland, Australia, without reference to rules relating to conflicts of law.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, this RCA has been executed and delivered by the parties hereto.

PEABODY ENERGY CORPORATION

By: [_____]

Its: [_____]

**PEABODY ENERGY AUSTRALIA
COAL PTY LTD**

By: [_____]

Its: [_____]

**Note: The Grantee is deemed to have executed this RCA upon clicking “Accept”
in the Plan’s online administration site.**

Statement of Performance Goals

This Statement of Performance Goals applies to the Performance-Based Cash Award granted to the Grantee on the Grant Date as evidenced by the Performance-Based Cash Award Agreement between the Company and the Grantee (the "Agreement"). Capitalized terms used in this Statement of Performance Goals that are not specifically defined in this Statement of Performance Goals have the meanings assigned to them in the Agreement or in the Plan, as applicable.

1. **Definitions**. For purposes hereof, as determined by the Committee:
 - (a) "**Environmental Reclamation**" shall mean the amount of acres graded compared to the amount of acres disturbed, whereas the term "graded" means returning the land to the final contour grading prior to soil replacement and the term "disturbed" means new acres impacted for mining purposes.
 - (b) "**Free Cash Flow**" shall mean the Company's net cash provided by/used in operating activities less the net cash provided by/used in investing activities (as disclosed in the Company's public filings with the U.S. Securities and Exchange Commission).
2. **Calculation of Performance-Based Cash Award Earned**. Eighty percent (80%) of the target Performance-Based Cash Award evidenced by this Agreement (the "**FCF Award**") shall be earned based on achievement of Free Cash Flow during the Performance Period and twenty percent (20%) of the target Performance-Based Cash Award evidenced by this Agreement (the "**ENV Award**") shall be earned based on achievement of Environmental Reclamation during the Performance Period. Fifty percent (50%) of the FCF Award shall be earned based on the achievement of Free Cash Flow during the period between 1 January 2022 and the First Determination Date (the "**First FCF Award**"). The remaining fifty percent (50%) of the FCF Award shall be earned based on the achievement of Free Cash Flow during the entire Performance Period (the "**Second FCF Award**").
3. **First Determination Date**. Following the First Determination Date, the Committee shall determine whether and to what extent the Free Cash Flow goal has been satisfied with respect to the first twelve months of the Performance Period and shall determine the percentage of target First FCF Award that shall become Vested under the Agreement in accordance with the following First FCF Performance Matrix:
 - (a) **First FCF Performance Matrix**. The percentage of target First FCF Award earned shall be determined based on achievement of FCF during the first twelve months of the Performance Period as follows:

Performance Level	FCF for First 12 Months of Performance Period	First FCF Award Earned
Below Threshold		0%
Threshold		50%
Target		100%
Maximum		150%

To the extent the FCF is between the FCF targets listed in the First FCF Performance Matrix, then the percentage of the target First FCF Award earned shall be determined using linear interpolation.

4. Second Determination Date. Following the Second Determination Date, the Committee shall determine whether and to what extent the Free Cash Flow and Environmental Reclamation goals have been satisfied for the Performance Period and shall determine the percentage of target Second FCF Award and target ENV Award that shall become Vested under the Agreement in accordance with the following Second FCF Performance Matrix and Environmental Reclamation Performance Matrix:

- (a) Second FCF Performance Matrix. The percentage of target Second FCF Award earned shall be determined based on achievement of FCF during the Performance Period as follows:

Performance Level	FCF for Performance Period	Second FCF Award Earned
Below Threshold		0%
Threshold		50%
Target		100%
Maximum		150%

To the extent the FCF is between the FCF targets listed in the Second FCF Performance Matrix, then the percentage of the target Second FCF Award earned shall be determined using linear interpolation.

- (b) Environmental Reclamation Performance Matrix. The percentage of target ENV Award earned shall be determined based on achievement of Environmental Reclamation during the Performance Period (i.e., the average of 2022 ratio and 2023) as follows:

Performance Level	Environmental Reclamation for Performance Period	ENV Award Earned
Below Threshold		0%
Threshold		50%
Target		100%
Maximum		150%

***The maximum achievement for environmental reclamation will be capped at target. The 2-year FCF achievement will be used as a modifier to exceed target. If Environmental Reclamation ratio is at target or higher **AND** FCF achievement is above target, then Environmental Reclamation target achievement will be multiplied by the FCF achievement, otherwise no adjustment will be made. See table below.*

FCF Modifier to Exceed Environmental Reclamation Target	Incentive Earned
Env. Reclamation achievement is < 100%	No Adjustment for FCF
Env. Reclamation achievement is ≥ 100% AND FCF achievement ≤ 100%	No Adjustment for FCF
Env. Reclamation achievement is ≥ 100% AND FCF achievement > 100%	100% multiplied by FCF achievement

To the extent the Environmental Reclamation Percentile Ranking is between the listed rankings, then the percentage of target ENV Award earned shall be determined using linear interpolation.

AGREEMENT FOR IRREVOCABLE STANDBY LETTERS OF CREDIT

This Agreement for Irrevocable Standby Letters of Credit (this “**Agreement**”), dated as of February 17, 2022, is made by and between PEABODY ENERGY CORPORATION, a Delaware corporation, as applicant (“**Applicant**”), and GOLDMAN SACHS BANK USA, as issuing bank (“**Issuer**”).

Subject to the terms and conditions set forth herein (and following its receipt of an Application (as defined below) from Applicant) Issuer may, in its sole discretion, issue one or more irrevocable standby letters of credit (each such letter of credit issued pursuant hereto, together with any replacements, extensions, amendments or modifications, a “**Credit**”) for the account of Applicant or any account party named on such Credit (each, an “**Account Party**”), each such Credit to be issued pursuant hereto and subject to the terms and conditions hereof, and to be (a) issued in an amount so as not to exceed \$250,000,000 in the aggregate for all Credits issued and outstanding pursuant hereto from time to time, and on such other specific terms as Applicant and Issuer may agree from time to time, (b) issued in a form and in substance acceptable to Issuer, and (c) issued for the benefit of the party or parties named by Applicant in such Credit (each such party, a “**Beneficiary**”). Each such Credit may be used to support Applicant’s obligations or the obligations of its subsidiaries and / or affiliates.

In consideration of Issuer issuing Credits for the account of Applicant (and/or for the account of the relevant Account Parties, if any), Applicant and any Account Party agree as follows:

1. **Applications/Instructions.** Each request (each, an “**Application**”) to issue a Credit shall be irrevocable and made in the form attached hereto as Exhibit I or in such other form as Issuer shall from time to time require or agree to accept (including any type of electronic form or means of communication). In addition, Issuer may, upon request of Applicant made in substantially the form attached hereto as Exhibit I, deem and accept then-existing letters of credit from time to time previously issued and/or maintained by Issuer for the account of Applicant under a separate credit facility or letter of credit issuance facility between, *inter alios*, Issuer and Applicant (“**Existing Credits**”) to become a Credit hereunder, after which such Existing Credits shall be “Credits” for all purposes hereof, and shall be in all respects subject to, and governed by, the terms and conditions of this Agreement. Inquiries, communications and instructions (whether oral, telephonic, written, telegraphic, facsimile, electronic or other) regarding a Credit, each Application and this Agreement are each referred to herein as an “**Instruction**” or “**Instructions**” (and the term “Application” is subsumed within such terms). Issuer’s records of the content of any Instruction shall be conclusive. Applicant shall be responsible for the final text of a Credit notwithstanding Issuer’s recommendation, assistance or drafting or Issuer’s use, non-use or refusal to use text submitted by Applicant.

Without in any way limiting Issuer’s sole and absolute discretion to issue, increase, extend the expiration date or otherwise amend a Credit, no Credit shall have an expiration date that is later than the earlier of (x) the Initial Expiration Date (as defined below) and (y) the first anniversary of its issuance, unless either (i) Issuer and Applicant shall have agreed in writing (including by electronic mail), each in its sole discretion, to a later expiration date or (ii) such Credit is a Credit that expressly provides that the stated expiration date of such Credit will automatically be extended for one or more successive periods of time provided that Issuer may send or deliver to the beneficiary of such Credit notice within sixty (60) days of the stated expiration date that Issuer has elected in its sole discretion not to extend such stated expiration date.

Applicant acknowledges and agrees that notwithstanding anything to the contrary in any Credit (or in any "Application for Irrevocable Standby Letter of Credit" with respect to a Credit) requested pursuant hereto, or issued under this Agreement, which may state or indicate that the "Account Party", "Applicant", "applicant", "Requesting Party" or any similar designation with respect to such requested Credit is a Person (as defined below) other than PEABODY ENERGY CORPORATION, (i) PEABODY ENERGY CORPORATION is, and shall at all times remain, the "Applicant" (as defined in Section 5-102(a) of the Uniform Commercial Code, as in effect in the State of New York) with respect to each Credit issued by Issuer pursuant to this Agreement and the obligor with respect to all reimbursement obligations in respect of such Credit under the terms hereof, and (ii) all such Credits shall constitute "Credits" under, and as defined in, this Agreement.

2. **Payment Terms; Obligations Absolute.** (a) For each Credit, Applicant shall pay to Issuer on the dates specified below or immediately on demand: (i) the amount of each drawing paid by Issuer under such Credit, due and payable immediately upon any payment by Issuer with respect to such drawing; (ii) a letter of credit exposure fee in the amount equal to 0.75% per annum times the average daily maximum amount available to be drawn under all Credits (calculated on the basis of a 360-day year for the actual number of days elapsed, and determined as of the close of business on any date of determination), such exposure fee to be due and payable in arrears on each April 1, July 1, October 1 and January 1 for the quarterly period ending immediately prior to such date for which such fee shall not have previously been paid; (iii) such other commissions, fees and charges in respect of such Credit (including, commissions and fees for transfer, assignment of proceeds, amendments, and drawings of Issuer and of any adviser, confirming institution or entity or other nominated person), at such rates, amounts, and times as Issuer and Applicant shall mutually agree in writing (or, if no agreement, the amounts then customarily charged by Issuer); (iv) interest on each amount under this Agreement for each day from and including the date such payment is due through the date of payment at a rate per annum (calculated on the basis of a 360-day year for the actual number of days elapsed) equal to the lesser of (A) Prime Rate plus 0.75% and (B) the highest rate permitted by applicable law; (v) Issuer's charges, costs and expenses (including reasonable outside counsel fees, expenses and charges) incurred in connection with the protection or enforcement of Issuer's rights under this Agreement and any correspondent's charges, with interest from the date paid or incurred by Issuer through the date of payment by Applicant at a rate per annum equal to Prime Rate plus 0.75% (calculated on the basis of a 360-day year for the actual number of days elapsed); and (vi) if as a result of any Regulatory Change, Issuer determines that (A) the cost to Issuer of issuing or maintaining any Credit is increased, or any amount received or receivable by Issuer hereunder is reduced, or Issuer is required to make any payment in connection with any transaction contemplated hereby, including, but not limited to, any reserve, special deposit or similar requirement against assets of, deposits with or for the account of, or credit extended by, Issuer, then Applicant shall pay to Issuer on demand such additional amount or amounts as Issuer determines will compensate Issuer for such increased cost, reduction or payment, or (B) capital or liquidity requirements have or would have the effect of reducing the rate of return on Issuer's capital or on the capital of Issuer's holding company, if any, as a consequence of this Agreement or any Credit to a level below that which Issuer or Issuer's holding company, if any, could have achieved but for such Regulatory Change (taking into consideration Issuer's policies and the policies of Issuer's holding company, if any, with respect to capital adequacy or liquidity), then from time to time Applicant will pay to Issuer such additional amount or amounts as will compensate Issuer or Issuer's holding company, if any, for any such reduction suffered. **"Regulatory Change"** means any change after the date hereof in United States federal, state or foreign laws or regulations (including Regulation D of the Board of Governors of the Federal Reserve System as amended or supplemented from time to time) or the adoption or making after such date of any interpretations, directives or requests applying to a class of banks including Issuer or under any United States federal or state, or any foreign, laws or regulations (whether or not having the force of law) by any court or governmental or monetary authority charged with the interpretation or administration thereof. It is understood and agreed that each of (x) the Dodd-Frank Wall Street Reform and Consumer Protection Act, all laws relating thereto, all interpretations and applications thereof and compliance by Issuer with any request or directive relating thereto, and (y) all requests, rules, guidelines or directives promulgated by the Bank for International Settlements, the Basel Committee on Banking Supervision (or any successor or similar authority) or the United States or

foreign regulatory authorities, in each case pursuant to Basel III, shall for purposes of this Agreement, be deemed to be adopted subsequent to the date hereof. In addition to any amount payable under Section 2(v) or Section 2(vi) above, if any amount of reimbursement obligation, interest, fees or any other amounts payable by Applicant hereunder is not paid within five (5) Business Days (as defined below) of the date such amount is due, whether at stated maturity, upon acceleration or otherwise, such overdue amount shall bear interest, after as well as before judgment, at a variable rate per annum equal to the rate provided in Section 2(v) or Section 2(vi) above, as applicable, plus 2.00%. “**Business Day**” means any day on which interbank wire transfers can be made on the Fedwire system and which is not: (i) a Saturday or a Sunday or (ii) any day on which banks in New York City, New York or Dallas, Texas, are authorized or required to be closed for business. “**Prime Rate**” means the rate of interest quoted in the print edition of The Wall Street Journal, Money Rates Section as the Prime Rate (currently defined as the base rate on corporate loans posted by at least 75% of the nation’s thirty (30) largest banks), as in effect from time to time. The Prime Rate is a reference rate and does not necessarily represent the lowest or best rate actually charged to any customer.

(b) All payments shall be made in United States dollars in immediately available funds, free and clear of and without deduction for any present or future taxes, levies, imposts, deductions, charges, withholdings, set-off or other liabilities. Applicant shall pay all withholding, stamp and other taxes or duties imposed by any taxing authority on payment under any Credit and this Agreement and shall indemnify Issuer against all liabilities, costs, claims, and expenses resulting from Issuer having to pay or from any omission to pay or delay in paying any duty or tax.

(c) Issuer may (but shall not be required to), without demand for payment or notice to Applicant, and in addition to any other right of set-off which Issuer may have, (i) debit any account or accounts maintained by Applicant with any office of Issuer or with any Affiliate (as defined below) of Issuer (now or in the future) and set-off and apply (X) any balance or deposits (general, special, time, demand, provisional, final, matured, unmatured, contingent or absolute) in the account(s) and (Y) any sums due or payable from Issuer, to the payment of any and all amounts owed by Applicant to Issuer and/or (ii) advance funds to Applicant under any line of credit (committed or uncommitted) made available to Applicant by Issuer and apply such funds to said payment obligations.

(d) Applicant’s payment obligations under this Section 2 are absolute, unconditional and irrevocable and shall be performed strictly in accordance with the terms of this Agreement under any and all circumstances whatsoever, including, without limitation: (i) any lack of validity, enforceability or legal effect of any Credit or this Agreement, or any term or provision therein or herein; (ii) payment against presentation of any draft, demand or claim for payment under any Credit or other document presented for purposes of drawing under any Credit (“**Drawing Document**”) that does not comply in whole or in part with the terms of the applicable Credit or which proves to be fraudulent, forged or invalid in any respect or any statement therein being untrue or inaccurate in any respect, or which is signed, issued or presented by a Person (as defined below) (or a transferee of such Person) purporting to be a successor or transferee of the beneficiary of such Credit; (iii) Issuer or any of its branches or Affiliates being beneficiary of any Credit; (iv) Issuer or any correspondent honoring a drawing against a Drawing Document up to the amount available under any Credit even if such Drawing Document claims an amount in excess of the amount available under such Credit; (v) the existence of any claim, set-off, defense or other right that Applicant or any other Person may have at any time against any beneficiary, any assignee of proceeds, Issuer or any other Person; (vi) Issuer or any correspondent having previously paid against fraudulently signed or presented Drawing Documents (whether or not Applicant reimbursed Issuer for such drawing); and (vii) any other event, circumstance or conduct whatsoever, whether or not similar to any of the foregoing, that might, but for this paragraph, constitute a legal or equitable defense to or discharge of, or provide a right of set-off against, Applicant’s obligations hereunder (whether against Issuer, Beneficiary or any other Person); provided, however, that subject to Section 4 hereof, the foregoing shall not exculpate Issuer from such liability to Applicant for direct damages as may be judicially determined in a final, non-appealable independent legal action or proceeding brought by Applicant against Issuer following payment in full of Applicant’s obligations under this Agreement, to have resulted directly from the gross negligence or willful misconduct of Issuer. “**Person**” means any

natural Person, corporation, limited liability company, trust, joint venture, association, company, partnership, governmental authority or other entity. “**Affiliate**” means, as applied to any Person, any other Person directly or indirectly controlling, controlled by, or under common control with, that Person.

3. **Amendment; Waiver.** Issuer shall not be deemed to have amended or modified any term hereof, or waived any of its rights unless Issuer consents in writing to such amendment, modification or waiver. No such waiver, unless expressly stated therein, shall be effective as to any transaction which occurs subsequent to such waiver, nor as to any continuance of a breach after such waiver. Issuer’s consent to any amendment, waiver, or modification does not mean that Issuer shall consent or has consented to any other or subsequent Instruction to amend, modify, or waive a term of this Agreement or any Credit. No delay or omission of Issuer to exercise any right under this Agreement shall impair such right or be construed to be a waiver of any Event of Default or an acquiescence therein.

4. **Indemnification; Limitation of Liability; Administration of Credit.** (a) Applicant shall indemnify and hold harmless Issuer, its parent, each of its Affiliates and correspondents and each of their respective directors, officers, members, partners, employees and agents (each, including Issuer, an “**Indemnified Person**”) from and against any and all claims, suits, judgments, costs, losses, fines, penalties, damages, liabilities, and expenses, including expert witness fees and legal fees, charges and disbursements of any counsel for any Indemnified Person (“**Costs**”), arising out of, in connection with, or as a result of: (i) any Credit or any pre-advice of its issuance; (ii) any transfer, sale, delivery, surrender, or endorsement of any Drawing Document at any time(s) held by any Indemnified Person in connection with any Credit; (iii) any action or proceeding arising out of or in connection with any Credit or this Agreement (whether administrative, judicial or in connection with arbitration), including any action or proceeding to compel or restrain any presentation or payment under any Credit, or for the wrongful dishonor of or honoring a presentation under any Credit; (iv) any independent undertakings issued by the beneficiary of any Credit; (v) any unauthorized Instruction or error in computer transmission; (vi) an adviser, confirmer or other nominated person seeking to be reimbursed, indemnified or compensated; (vii) any third party seeking to enforce the rights of an applicant, beneficiary, nominated person, transferee, assignee of letter of credit proceeds or holder of an instrument or document; (viii) the fraud, forgery or illegal action of parties other than the Indemnified Person; (ix) Issuer’s entry into, or performance under, this Agreement, or the enforcement of this Agreement or any rights or remedies under or in connection with this Agreement or any Credit; (x) Issuer’s performance of the obligations of a confirming institution or entity that wrongfully dishonors a confirmation; (xi) Issuer dishonoring any presentation upon or during the continuance of any Event of Default (as hereinafter defined) or for which Applicant is unable or unwilling to make any payment to Issuer required under Section 2 above; or (xii) the acts or omissions, whether rightful or wrongful, of any present or future de jure or de facto governmental or regulatory authority or cause or event beyond the control of such Indemnified Person; in each case, including that resulting from Issuer’s own negligence, provided, however, that such indemnity shall not be available to any Person claiming indemnification under clauses (i) through (xii) above to the extent that such Costs are found in a final, non-appealable judgment by a court of competent jurisdiction to have resulted directly from the gross negligence or willful misconduct of the Indemnified Person claiming indemnity. If and to the extent that the obligations of Applicant under this paragraph are unenforceable for any reason, Applicant shall make the maximum contribution to the Costs permissible under applicable law.

(b) The liability of Issuer (or any other Indemnified Person) under, in connection with and/or arising out of this Agreement or any Credit (or any pre-advice), regardless of the form or legal grounds of the action or proceeding, shall be limited to any direct damages suffered by Applicant that are caused directly by Issuer's gross negligence or willful misconduct in (i) honoring a presentation that does not at least substantially comply with a Credit, (ii) failing to honor a presentation that strictly complies with a Credit or (iii) retaining Drawing Documents presented under a Credit. In no event shall Issuer be deemed to have failed to act with due diligence or reasonable care if Issuer's conduct is in accordance with Standard Letter of Credit Practice or in accordance with this Agreement, including Section 4(d) below. Applicant's aggregate remedies against Issuer and any Indemnified Person for wrongfully honoring a presentation under any Credit or wrongfully retaining honored Drawing Documents shall in no event exceed the aggregate amount paid by Applicant to Issuer in respect of the honored presentation in respect of such Credit under Section 2 above, plus interest. **Notwithstanding anything to the contrary herein, Issuer and the other Indemnified Persons shall not, under any circumstances whatsoever, be liable for any punitive, consequential, indirect or special damages or losses regardless of whether Issuer or any Indemnified Person shall have been advised of the possibility thereof or of the form of action in which such damages or losses may be claimed.** Applicant shall take action to avoid and mitigate the amount of any damages claimed against Issuer or any Indemnified Person, including by enforcing its rights in the underlying transaction. Any claim by Applicant for damages under or in connection with this Agreement or any Credit shall be reduced by an amount equal to the sum of (i) the amount saved by Applicant as a result of the breach or alleged wrongful conduct and (ii) the amount of the loss that would have been avoided had Applicant mitigated damages. "Standard Letter of Credit Practice" means, for Issuer, any letter of credit practices applicable in the City of New York, New York. Such practices shall be (i) of banks that regularly issue Credits in New York and (ii) required or permitted under ISP98 or UCP600, as selected in the applicable Credit. "ISP98" means, International Standby Practices 1998 (International Chamber of Commerce Publication No. 590) and "UCP600" means, Uniform Customs and Practice for Documentary Credits, 2007 Revision, International Chamber of Commerce Publication No. 600.

(c) Without limiting any other provision of this Agreement, Issuer and each other Indemnified Person (if applicable), shall not be responsible to Applicant for, and Issuer's rights and remedies against Applicant and Applicant's obligation to reimburse Issuer shall not be impaired by: (i) honor of a presentation under any Credit which on its face substantially complies with the terms of such Credit; (ii) honor of a presentation of any Drawing Documents which appear on their face to have been signed, presented or issued (X) by any purported successor or transferee of any beneficiary or other party required to sign, present or issue the Drawing Documents or (Y) under a new name of any beneficiary; (iii) acceptance as a draft of any written or electronic demand or request for payment under any Credit, even if nonnegotiable or not in the form of a draft, and may disregard any requirement that such draft, demand or request bear any or adequate reference to such Credit; (iv) the identity or authority of any presenter or signer of any Drawing Document or the form, accuracy, genuineness, or legal effect of any presentation under any Credit or of any Drawing Documents; (v) disregard of any non-documentary conditions stated in any Credit; (vi) acting upon any Instruction which it, in Good Faith (as defined below), believes to have been given by a Person or entity authorized to give such Instruction; (vii) any errors, omissions, interruptions or delays in transmission or delivery of any message, advice or document (regardless of how sent or transmitted) or for errors in interpretation of technical terms or in translation; (viii) any delay in giving or failing to give any notice; (ix) any acts, omissions or fraud by, or the solvency of, any beneficiary, any nominated Person or any other Person; (x) any breach of contract between Beneficiary and Applicant or any of the parties to the underlying transaction; (xi) assertion or waiver of any provision of the ISP which primarily benefits an issuer of a letter of credit, including, any requirement that any Drawing Document be presented to it at a particular hour or place; (xii) payment to any paying or negotiating bank (designated or permitted by the terms of the applicable Credit) claiming that it rightfully honored or is entitled to reimbursement or indemnity under the Standard Letter of Credit Practice applicable to it; (xiii) dishonor of any presentation upon or during any Event of Default or for which Applicant is unable or unwilling to reimburse or indemnify Issuer (provided that Applicant acknowledges that if Issuer shall later be required to honor the presentation, Applicant shall be liable therefor in accordance with Section 2 hereof); (xiv) acting (or declining to act, as the case may

be) in each case as is required or permitted under Standard Letter of Credit Practice applicable to where it has issued, confirmed, advised or negotiated such Credit, as the case may be; and (xvi) acting (or failing to act, as the case may be) in contravention of the Standard Letter of Credit Practice applicable to where it has issued, confirmed, advised or negotiated such Credit, as the case may be, where the express terms set forth herein differ from such Standard Letter of Credit Practice, and such action or inaction is in accordance with the terms hereof. **“Good Faith”** means honesty in fact in the conduct of the transaction concerned.

(d) Applicant shall notify Issuer in writing of (i) any noncompliance with any Instruction, any other irregularity with respect to the text of any Credit or any amendment thereto or any claim of an unauthorized, fraudulent or otherwise improper Instruction, within one (1) Business Day of Applicant’s receipt of a copy of such Credit or amendment and (ii) any objection Applicant may have to Issuer’s honor or dishonor of any presentation under any Credit or any other action or inaction taken or proposed to be taken by Issuer under or in connection with this Agreement or any Credit, within three (3) Business Days after Applicant receives oral or written notice of the objectionable action or inaction. The failure to so notify Issuer within said times shall discharge Issuer from any loss or liability that Issuer could have avoided or mitigated had it received such written notice, to the extent that Issuer could be held liable for damages hereunder; provided that, if Applicant shall not provide such notice to Issuer within three (3) Business Days of the date of receipt thereof, Issuer shall have no liability whatsoever for such noncompliance, irregularity, action or inaction and Applicant shall be precluded from raising such noncompliance, irregularity or objection as a defense or claim against Issuer. Applicant’s acceptance or retention of a Drawing Document presented under or in connection with any Credit (whether or not the document is genuine) or any property that is the subject of a Drawing Document presented under or in connection with any Credit shall ratify Issuer’s honor of the presentation and preclude Applicant from raising a defense, set-off or claim with respect to Issuer’s honor of such Credit. Issuer shall not be required to seek any waiver of discrepancies from Applicant or to grant any waiver of discrepancies which Applicant approves or requests.

(e) Applicant will: (i) comply in all material respects with all foreign and domestic laws, rules and regulations (including the USA PATRIOT Act, foreign exchange control regulations, foreign asset control regulations and other trade-related regulations) now or hereafter applicable to each Credit, the transactions underlying such Credit or Applicant’s execution, delivery and performance of this Agreement; and (ii) to the extent not provided to Issuer under other agreements or publicly available, promptly upon request, furnish Issuer with Applicant’s most recent quarterly and year-end financial statements (as audited, if available) and such other information as Issuer shall reasonably request regarding the financial condition, business or operations of Applicant. Further, the undersigned acknowledges and agrees to provide Issuer additional information, records, and documentation as reasonably requested by Issuer, including, if required by law or necessary to assist Issuer with its compliance with applicable law or regulations, relevant information concerning Beneficiary, pursuant to Issuer’s programs enacted to comply with Section 326 of the USA PATRIOT Act, the applicable regulations promulgated thereunder, and Issuer’s Know Your Customer/Customer Identification Program and authorizes Issuer to verify information as per the USA PATRIOT Act Regulation.

(f) Applicant acknowledges that this Agreement and each Credit is entered into (or will be entered into) for commercial purposes. To the extent that Applicant may now or hereafter be entitled, in any jurisdiction in which judicial proceedings may at any time be commenced with respect to this Agreement or any Credit, to claim for itself or its revenues or properties any immunity from the jurisdiction of any court or from legal process (whether from service or notice, attachment prior to judgment, attachment in aid of execution of judgment, execution of judgment or otherwise), and to the extent that in any such jurisdiction there may be attributed to Applicant any such immunity (whether or not claimed), Applicant hereby irrevocably agrees not to claim, and hereby waives, such immunity in respect of its obligations under this Agreement or any Credit.

(g) If Beneficiary is a bank or other financial institution which, in reliance on any Credit, is asked to issue its own guarantee or letter of credit on your behalf, Issuer shall have no responsibility to you for the wording of such guarantee or letter of credit or their legal effect.

(h) Issuer shall have no duty to amend or extend any Credit once issued, and if any Credit provides for Issuer to have the option whether to give Beneficiary notice of Issuer's election not to extend, not to renew, not to reinstate or to cancel or terminate such Credit, then Issuer shall have sole discretion whether or not to give or refrain from giving such notice.

5. **Conditions Precedent.**

The effectiveness of this Agreement is subject to the satisfaction of the following conditions (the "**Effective Date**" being the date that all of the following conditions have been satisfied, or waived by Issuer): (a) Issuer shall have received, each in form and substance satisfactory to Issuer, (i) from each party hereto and thereto either (x) a counterpart of this Agreement and that certain Blocked Account Control Agreement, dated as of the date hereof, by and among Applicant, Issuer and the depository bank party thereto (the "**Control Agreement**") signed on behalf of such party or (y) written evidence satisfactory to Issuer (which may include telecopy or email transmission of a signed signature page to this Agreement and the Control Agreement) that such party has signed a counterpart of this Agreement and the Control Agreement, (ii) such customary certificates of resolutions or other action, incumbency certificates and/or other certificates of officers of Applicant as Issuer may reasonably require evidencing the identity, authority and capacity of each officer thereof authorized to act as an officer in connection with this Agreement, (iii) such other documents and certificates (including organizational documents and good standing certificates) as Issuer may reasonably request relating to the organization, existence and good standing of Applicant and any other legal matters relating to Applicant, this Agreement or the transactions contemplated thereby, (iv) a customary legal opinion of Womble Bond Dickinson LLP, counsel to Applicant, addressed to Issuer and dated the Effective Date, (v) a solvency certificate in form and substance reasonably satisfactory to Issuer and (vi) at least three (3) Business Days prior to the Effective Date, all documentation and other information required by regulatory authorities under applicable "know your customer" and anti-money laundering rules and regulations, including the USA Patriot Act and 31 C.F.R. § 1010.230 (the "**Beneficial Ownership Regulation**"); (b) the representations and warranties set forth in this Agreement shall be true and correct in all material respects on and as of the Effective Date, except to the extent such representations and warranties expressly relate to an earlier date, in which case such representations and warranties shall have been true and correct in all material respects as of such earlier date; (c) at the time of and after giving effect to this Agreement, no Event of Default shall have occurred and be continuing; and (d) Issuer shall have received all fees and other amounts due and payable on or prior to the Effective Date, including, to the extent previously invoiced, reimbursement or payment of all out of pocket expenses (including expenses of counsel Issuer) required to be reimbursed or paid by Applicant hereunder.

In addition, each issuance, amendment or renewal of any Credit is subject to the following conditions: (i) Issuer shall have received, in form and substance reasonably satisfactory to Issuer, an Application; (ii) at the time of and after giving effect to such issuance, amendment or renewal of such Credit, no Event of Default shall have occurred and be continuing; and (iii) at the time of and after giving effect to such issuance, amendment or renewal of such Credit, the representations and warranties of Applicant set forth in this Agreement shall be true and correct in all material respects with the same effect as though such representations and warranties had been made on and as of the Effective Date, except to the extent such representations and warranties expressly relate to an earlier date, in which case such representations and warranties shall have been true and correct in all material respects as of such earlier date.

6. **Representations and Warranties and Covenants.** Applicant hereby represents and warrants as of the date of this Agreement (and with each Instruction for the issuance of a Credit represents and warrants as of the date of such Instruction) that: (a) Applicant, if an individual, is competent to enter into and perform its obligations under this Agreement (including, without limitation, to pledge the Collateral (as defined below)), and if a corporation, limited liability company, partnership, trust or other legal entity (each an “**entity**”), is duly organized and validly existing in good standing under the laws of its jurisdiction of formation, is duly qualified and in good standing in all such foreign jurisdictions where its business or property so requires and has the power and authority to enter into this Agreement and the Control Agreement, and perform its obligations hereunder and thereunder; (b) it has obtained all authorizations, consents and approvals required for it to enter into and perform this Agreement in accordance with its terms; (c) this Agreement and the Control Agreement each constitute the legal, valid and binding obligations of Applicant, enforceable against it in accordance with their respective terms; (d) the execution, delivery and performance of this Agreement and the Control Agreement by Applicant does not and will not contravene (i) if an entity, its charter, by-laws or other organizational documents, (ii) any order or writ binding on or affecting Applicant or its properties or subsidiaries, or (iii) any agreement or arrangement to which Applicant is a party or by which it or its properties or subsidiaries may otherwise be bound, the contravention of which agreement or arrangement would have a Material Adverse Effect on Applicant; (e) the financial statements most recently furnished to Issuer by Applicant fairly present in all material respects the financial condition of the entities covered thereby in accordance with generally accepted accounting principles, and there has been no material adverse change in Applicant’s business, condition or prospects (in each case, financial or otherwise) or results of operation since the date of such financial statements; (f) no information now or hereafter furnished by Applicant to Issuer in connection with this Agreement or any Credit is or shall be materially false or misleading when furnished; (g) there is no pending or threatened action which may materially adversely affect its financial condition or business or which purports to affect the validity or enforceability of this Agreement, any Credit or any transaction related to any Credit; (h) it owns the Collateral free and clear of any mortgage, pledge, hypothecation, assignment, deposit arrangement, encumbrance, lien (statutory or other), charge or other security interest or any preference, priority or other security agreement or preferential arrangement of any kind or nature whatsoever (including any conditional sale or other title retention agreement and any capital lease having substantially the same economic effect as any of the foregoing) (collectively, “**Lien**”) other than Permitted Liens (defined below); (i) it has implemented policies, procedures and controls designed to ensure compliance with all United States economic, financial, anti-narcotics trafficking, anti-money laundering, anti-terrorism, and other sanctions laws and regulations (“**US Sanctions**”) and that neither Applicant nor any Beneficiary nor any of Applicant’s or any of Beneficiary’s respective directors, officers, employees, agents, representatives, members, subsidiaries or affiliates is: a person or is owned or controlled by a person: (1) with whom transactions are currently prohibited under or is the subject of any US Sanctions or any similar sanctions (economic, financial or otherwise) imposed by the European Union or any member state thereof, the United Kingdom, the United Nations or any other body, governmental or other, to which Applicant is subject (collectively, “**Other Economic Sanctions**”), (2) located, organized, resident or doing business in, or operating from a country or territory that is the subject of any US Sanctions or Other Economic Sanctions, (3) designated on the OFAC list of Specially Designated Nationals, or (4) otherwise targeted under US Sanctions or Other Economic Sanctions (and Applicant hereby covenants and agrees that it will immediately notify Issuer if it determines that Applicant or any Beneficiary or any of Applicant’s or any of Beneficiary’s directors, officers, agents, representatives or affiliates becomes a person, or is owned or controlled by a person, described in any of clauses (1)-(4) above; (j) it complies with all U.S. laws and regulations prohibiting any U.S. person or company from complying with an unsanctioned foreign boycott, and will not comply with any such request relating to any underlying transaction supported by any Credit; (k) it and any Beneficiary will refrain from taking any action that would result in violation by Issuer of U.S. Sanctions or Other Economic Sanctions; (l) in connection with any underlying transaction supported by any Credit, it has not and warrants that it will not (1) make (or cause to be made) any payments or gifts of anything of value or any offers or promises of payments or gifts of anything of value, directly or indirectly, to any Public Official (as defined below) or to any other person to secure an improper advantage or obtain or retain business or an advantage in the conduct of this business or otherwise to perform their duties improperly, or (2) pay, or offer, or agree to pay (or cause to

be paid, offered or agreed to be paid) any political contributions or donations. In performing this Agreement, Applicant agrees to not make or permit to be made or knowingly allow a third party to make any payments, which, if made by Applicant, would violate this Agreement; (m) the Obligations (as defined below) are "first lien debt" and "senior debt" or "designated senior debt" (or any comparable terms) under, and as may be defined in, any indenture or document governing any applicable indebtedness that is subordinated in right of payment to such Obligations; (n) Applicant is not required to be registered as an "investment company" under the Investment Company Act of 1940; and (o) as of the date of this Agreement, none of the Collateral is margin stock as defined in Regulation U of the Board of Governors of the United States Federal Reserve System, or any successor thereto ("**Margin Stock**"), and neither Applicant nor any of its subsidiaries are engaged nor will they engage, principally or as one of their or its important activities, in the business of purchasing or carrying Margin Stock, or extending credit for the purpose of purchasing or carrying Margin Stock, and no Credit will be used for any purpose that violates Regulation U. As used in this Agreement, (x) "**Public Official**" means any person holding an elected or appointed office and any other officer or employee of a government or a department, agency, instrumentality or part thereof (including a state owned or controlled enterprise or joint venture/partnership and its partners and shareholders) or of a public international organization or a political party in each case in a relevant jurisdiction; or any person exercising a public function or acting in an official capacity for or on behalf of any of the foregoing and (y) "**Material Adverse Effect**" means (a) a material adverse change in, or a material adverse effect upon, the operations, business, properties, liabilities (actual or contingent) or financial condition of Applicant or Applicant and its subsidiaries taken as a whole; or (b) a material adverse effect on (i) the ability of Applicant to perform its Obligations under this Agreement or any other agreement entered in connection herewith (collectively, the "**Credit Documents**"), (ii) the legality, validity, binding effect or enforceability against Applicant of any Credit Document or (iii) the rights, remedies and benefits available to, or conferred upon, Issuer under any Credit Documents.

Further, (a) Applicant shall not create or suffer to exist any Lien on the Collateral (as defined below) (other than (i) security interests granted to Issuer, (ii) liens for taxes or other governmental charges which are not delinquent or which are being contested in good faith and for which a reserve shall have been established in accordance with generally accepted accounting principles in the United States as in effect from time to time and (iii) statutory and other liens imposed by law created in the ordinary course of business for amounts not yet due or which are being contested in good faith by appropriate proceedings diligently conducted and with respect to which adequate bonds have been posted (the liens described in clauses (i), (ii) and (iii) are collectively referred to herein as "**Permitted Liens**")); (b) at any time, upon the written request of Issuer, and at the sole expense of Applicant, Applicant will promptly and duly execute and deliver, and have recorded, such further instruments and documents and take such further actions as Issuer may reasonably request for the purpose of obtaining or preserving the full benefits of this Agreement and of the rights and powers herein granted; (c) Applicant shall defend any security interest granted to Issuer hereunder against the claims and demands of all Persons (other than Issuer) whomsoever; (d) Applicant shall preserve, renew and maintain in full force and effect its legal existence and good standing under the laws of the jurisdiction of its organization and take all reasonable action to maintain all rights, privileges, permits, licenses and franchises necessary or desirable in the normal conduct of its business, except to the extent that failure to do so could not reasonably be expected to have a Material Adverse Effect; (e) Applicant shall promptly notify Issuer of the occurrence of any Event of Default; and (f) Applicant shall use each Credit for general corporate purposes not in contravention of any applicable law.

7. Pledge & Security Interest; Cash Collateralization. (a) As security for the full and punctual payment and performance when due of all Obligations (as hereinafter defined), Applicant hereby grants to Issuer a first priority continuing lien and perfected security interest in, and pledges and assigns to Issuer all of Applicant's present and future right, title and interest in, to and under all of the following property (whether now existing or hereafter created or acquired): (i) all deposit accounts and other accounts identified on Schedule A attached hereto and made part hereof (whether one or more, collectively, the "**Collateral Accounts**"), and any and all of their respective successor, replacement or substitute accounts with any office of Issuer wherever located; (ii) all cash, checks or other assets

deposited or held in or credited to the Collateral Accounts; (iii) all interest and other property received, receivable or otherwise distributed or distributable in respect of, or in exchange for any of the foregoing; (iv) all certificates and instruments evidencing any of the foregoing; (v) all property which has been or at any time shall be delivered to or otherwise come into the possession, custody or control of any office of Issuer or any correspondent (which shall be deemed a collateral agent or a bailee of Issuer for the purpose of perfecting a security interest in the property) for any purpose, whether or not for the express purpose of being used by any such entity as collateral security or for safekeeping, custody, pledge, transmission or otherwise; (vi) all claims of Applicant against Issuer; (vii) all claims and rights of Applicant against any beneficiary of any Credit arising in connection with such Credit or the transaction underlying such Credit; and (viii) all products and proceeds of any of the foregoing ((i)-(viii) collectively, the “**Collateral**”). Issuer is authorized to file or amend any financing statements under the Uniform Commercial Code (the “**UCC**”) (or equivalent(s) under the laws of any other applicable jurisdiction) with respect to the Collateral. Applicant will, at its own expense, execute such documents and take such further action as Issuer may reasonably request to preserve, protect, or maintain the Collateral and the validity, perfection and priority of Issuer’s security interest therein, including, but not limited to, control agreements relating to the Collateral from time to time, in form and substance mutually agreeable to Applicant and Issuer.

(b) As long as any Credit is outstanding or any drawing thereunder shall not have been fully reimbursed to Issuer, the aggregate sum in United States dollars on deposit in the Collateral Accounts shall not be less than the lesser of (i) 103% of the Credit Exposure (defined below) at such time and (ii) \$5,000,000 in excess of the Credit Exposure (defined below) at such time (the “**Minimum Collateral Amount**”). If at any time the aggregate sum on deposit in the Collateral Accounts shall be less than the Minimum Collateral Amount, Applicant shall within one (1) Business Day deposit in the Collateral Accounts an amount sufficient to eliminate such shortfall. As used herein, “**Credit Exposure**” means, at any time, the sum of (i) the aggregate outstanding amounts available to be drawn under all Credits, plus (ii) the aggregate amount of all drawings (if any) under any Credits that have not been fully reimbursed to Issuer. The Collateral Accounts shall be blocked accounts of Applicant under the sole control of Issuer, as to which Applicant shall have no right to draw checks or give other instructions or orders except as expressly permitted by this Agreement. Each of Issuer and Applicant hereby agrees that (i) each Collateral Account is a “deposit account” within the meaning of Section 9-102(a)(29) of the Uniform Commercial Code as in effect of the State of New York from time to time (the “**New York UCC**”) and (ii) for purposes of Part 3 or Article 9 of the New York UCC, the State of New York shall be deemed to be Issuer’s jurisdiction within the meaning of Section 9-3014(b)(1) of the New York UCC.

8. **Events of Default; Obligations Due; Remedies.** (a) Each of the following shall be an “**Event of Default**” under this Agreement: (i) Applicant shall fail to pay any sum payable upon or in respect of any of the obligations and liabilities of Applicant in respect of any and all Credits issued hereunder (if any) and all obligations and liabilities under this Agreement and under any other agreement executed in connection herewith, in each case, whether matured or unmatured, absolute or contingent, now existing or hereafter incurred (“**Obligations**”), when due; (ii) Applicant shall fail to perform any agreement contained herein or in any other agreement executed in connection herewith, including, but not limited to, Section 7(b) hereof; (iii) Applicant shall fail to pay any taxes when due, and such nonpayment shall have a Material Adverse Effect on Applicant; (iv) there shall be commenced against Applicant any proceeding for enforcement of a money judgment reasonably expected to have a Material Adverse Effect on Applicant; (v) any statement made, or any information, report or Instruction furnished by or for Applicant to Issuer contains any misstatement of a material fact or omits to state a material fact or any fact necessary to make any statement contained therein not misleading; (vi) the dissolution or termination or, if an individual, death or declaration by an appropriate legal authority of incompetency, of Applicant; (vii) [reserved]; (viii) Applicant shall become insolvent (however such insolvency may be evidenced or defined) or generally not be able to pay its debts as they become due, shall make a general assignment for the benefit of creditors, or shall suspend the transaction of its usual business or be expelled or suspended from any exchange, or if an application is made by any judgment creditor of Applicant for any order directing Issuer to pay over money or to deliver other property, or a petition in bankruptcy shall be filed by or against Applicant or any proceeding shall be instituted by or against

Applicant for any relief under any bankruptcy or insolvency laws or any law relating to the relief of debtors, readjustment of indebtedness, reorganization, composition or extensions, or if any governmental authority or any court at the instance of any governmental authority shall take possession of any substantial part of the property of Applicant or shall assume control over the affairs or operations of Applicant, or if a receiver or custodian shall be appointed for, or a writ or order of attachment or garnishment shall be issued or made against, any of the property or assets of Applicant or Applicant shall indicate that any of the foregoing has occurred or will occur; (ix) there shall occur in one or a series of transactions, in each case unless Issuer consents thereto in writing, (A) the sale or transfer of the assets of Applicant, or the creation or assertion of a lien over, a substantial portion of the assets of Applicant, (B) an acquisition, directly or indirectly, of the power to direct or cause the direction of the management or policies of Applicant, whether by means of contract, voting power or otherwise, by parties other than those holding such power on the date hereof, or (C) the division, merger or consolidation of Applicant; or (x) any security agreement purporting to secure any of Applicant's obligations hereunder shall for any reason fail to create a valid security interest in the collateral purported to be granted thereby or such security interest shall not be perfected or have the priority required thereby.

(b) Upon an Event of Default, all of the Obligations shall be immediately due and payable without notice or demand (whether or not a drawing or claim had in fact been made or paid) and Issuer may, in addition to all other rights and remedies it may have at law or in equity, (i) exercise any remedies of a creditor under applicable law or contract, including under the UCC, (ii) charge, debit and/or set-off against any general or special account of Applicant maintained at any office of Issuer (whether matured or unmatured) for the amount of the Obligations, (iii) amend or terminate, or transfer drawing rights or cure one or more discrepancies under, any Credit, and/or (iv) make payment in satisfaction of the Obligations or hold all amounts, proceeds and collateral as security for each Credit.

9. **Continuing Rights and Obligations.** Issuer's rights and liens hereunder shall continue unimpaired, and Applicant shall be and remain obligated in accordance with the terms and provisions hereof, notwithstanding the release and/or substitution of any property which may be held as security hereunder at any time, or of any rights or interest therein. Applicant waives any defense whatsoever which might constitute a defense available to, or discharge of, a surety or a guarantor. If more than one Person signs this Agreement, each of them shall be jointly and severally liable hereunder and all the terms and provisions regarding liabilities, obligations and property of such Persons shall apply to any liabilities, obligations and property of any and all of them.

10. **Jurisdiction; Service of Process.** SUBJECT TO CLAUSE (E) OF THE FOLLOWING SENTENCE, ALL JUDICIAL PROCEEDINGS BROUGHT AGAINST ANY PARTY ARISING OUT OF OR RELATING TO THIS AGREEMENT, ANY INSTRUCTION, ANY SECURITY AGREEMENT EXECUTED IN CONNECTION HERewith OR ANY CREDIT ISSUED PURSUANT HERETO, **SHALL BE BROUGHT IN ANY FEDERAL COURT OF THE UNITED STATES OF AMERICA SITTING IN THE BOROUGH OF MANHATTAN OR, IF THAT COURT DOES NOT HAVE SUBJECT MATTER JURISDICTION, IN ANY STATE COURT LOCATED IN THE CITY AND COUNTY OF NEW YORK.** BY EXECUTING AND DELIVERING THIS AGREEMENT, ISSUER, APPLICANT AND ANY ACCOUNT PARTY, FOR ITSELF AND IN CONNECTION WITH ITS PROPERTIES, IRREVOCABLY (A) ACCEPTS GENERALLY AND UNCONDITIONALLY THE EXCLUSIVE JURISDICTION AND VENUE OF SUCH COURTS (OTHER THAN WITH RESPECT TO ACTIONS BY ISSUER IN RESPECT OF RIGHTS UNDER ANY SECURITY AGREEMENT GOVERNED BY LAWS OTHER THAN THE LAWS OF THE STATE OF NEW YORK OR WITH RESPECT TO ANY COLLATERAL SUBJECT THERETO, IN WHICH CASE AND TO THAT EXTENT ONLY THE JURISDICTION OF SUCH COURTS IN NEW YORK SHALL BE NON-EXCLUSIVE); (B) WAIVES ANY DEFENSE OF FORUM NON CONVENIENS; (C) AGREES THAT SERVICE OF ALL PROCESS IN ANY SUCH PROCEEDING IN ANY SUCH COURT MAY BE MADE BY REGISTERED OR CERTIFIED MAIL, RETURN RECEIPT REQUESTED, TO ISSUER, APPLICANT OR ACCOUNT PARTY, IF ANY, AS APPLICABLE, AT ITS ADDRESS PROVIDED ON THE COVER PAGE OF THIS AGREEMENT;

(D) AGREES THAT SERVICE AS PROVIDED IN CLAUSE (C) ABOVE IS SUFFICIENT TO CONFER PERSONAL JURISDICTION OVER APPLICANT AND ACCOUNT PARTY, AS APPLICABLE, IN ANY SUCH PROCEEDING IN ANY SUCH COURT, AND OTHERWISE CONSTITUTES EFFECTIVE AND BINDING SERVICE IN EVERY RESPECT; AND (E) AGREES THAT ISSUER RETAINS THE RIGHT TO SERVE PROCESS IN ANY OTHER MANNER PERMITTED BY LAW OR TO BRING PROCEEDINGS AGAINST APPLICANT AND ANY ACCOUNT PARTY IN THE COURTS OF ANY OTHER JURISDICTION IN CONNECTION WITH THE EXERCISE OF ANY RIGHTS UNDER ANY SECURITY AGREEMENT OR THE ENFORCEMENT OF ANY JUDGMENT.

11. **Waiver of Jury Trial; Limitation on Actions.** (a) ISSUER, APPLICANT AND ANY ACCOUNT PARTY EACH HEREBY AGREES TO WAIVE ITS RESPECTIVE RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING HEREUNDER, ANY INSTRUCTION, ANY SECURITY EXECUTED IN CONNECTION HERewith OR UNDER ANY CREDIT ISSUED HEREUNDER OR ANY DEALINGS RELATING TO THE SUBJECT MATTER OF THIS AGREEMENT. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT AND THAT RELATE TO THE SUBJECT MATTER OF THIS TRANSACTION, INCLUDING CONTRACT CLAIMS, TORT CLAIMS, BREACH OF DUTY CLAIMS AND ALL OTHER COMMON LAW AND STATUTORY CLAIMS. EACH PARTY HERETO ACKNOWLEDGES (AND ISSUER BY ISSUING ANY CREDIT ACKNOWLEDGES) THAT THIS WAIVER IS A MATERIAL INDUCEMENT TO ENTER INTO A BUSINESS RELATIONSHIP, THAT EACH HAS ALREADY RELIED ON THIS WAIVER IN ENTERING INTO THIS AGREEMENT, AND THAT EACH WILL CONTINUE TO RELY ON THIS WAIVER IN ITS RELATED FUTURE DEALINGS. EACH PARTY HERETO FURTHER WARRANTS AND REPRESENTS THAT IT HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL AND THAT IT KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL. THIS WAIVER IS IRREVOCABLE, MEANING THAT IT MAY NOT BE MODIFIED EITHER ORALLY OR IN WRITING, AND THIS WAIVER SHALL APPLY TO ANY SUBSEQUENT AMENDMENTS, RENEWALS, SUPPLEMENTS OR MODIFICATIONS HERETO OR OF ANY CREDIT. IN THE EVENT OF LITIGATION, THIS AGREEMENT MAY BE FILED AS A WRITTEN CONSENT TO A TRIAL BY THE COURT.

(b) No legal action or proceeding arising out of or in connection with this Agreement, any Instruction or any Credit may be brought by Applicant against Issuer unless commenced within one (1) year after (x) the expiration date of the applicable Credit or (y) the alleged breach shall have purportedly occurred, whichever is earlier.

12. **Applicable Law; Severability.** This Agreement and the rights and obligations of the parties hereunder (including, without limitation, claims sounding in contract law, tort law arising out of the subject matter hereof and any determinations with respect to post-judgment interest) shall be governed by, and construed in accordance with, the laws of the State of New York, without regard to principles of conflict of laws that would result in the application of any law other than the law of the State of New York. Either ISP98 or UCP600, as selected in the Credit, is incorporated by reference into this Agreement and is evidence of Standard Letter of Credit Practice with respect to matters covered therein; provided, however, that to the extent permitted by applicable law, (i) this Agreement shall prevail in case of a conflict between this Agreement, the New York UCC, and/or Standard Letter of Credit Practice and (ii) ISP98 or UCP600, as applicable, shall prevail in case of a conflict between the ISP98 or UCP600 and the UCC and other Standard Letter of Credit Practice. Any provisions of this Agreement which may be determined by competent authority to be prohibited or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such prohibition or unenforceability without invalidating the remaining provisions hereof, and any such prohibition or unenforceability in any jurisdiction shall not invalidate or render unenforceable such provision in any other jurisdiction. To the extent permitted by applicable law, Applicant hereby waives any provision of law that prohibits or renders unenforceable any provision of this Agreement.

13. No Third Party Benefits; Successor; Assignment; Integration; Delivery by Facsimile; Notices. This Agreement shall be binding upon and inure to the benefit of Issuer and Applicant and any Account Party and their respective successors and permitted assigns; PROVIDED, HOWEVER THAT NEITHER Applicant nor any Account Party may assign its obligations hereunder without the prior written consent of Issuer. This Agreement shall not confer any right or benefit upon any Person other than the parties to this Agreement, the Indemnified Persons, their respective successors and permitted assigns, and, to the extent set forth in the next succeeding sentence, any entity to whom Issuer sells a participation (a **"Participant"**) (or to whom any Participant sells a subparticipation (a **"Subparticipant"**)). Issuer may assign or sell participations in all or any part of any Credit or this Agreement to another entity and Issuer may disseminate credit information relating to Applicant and any Account Party in connection with any proposed participation and each Participant and Subparticipant shall have the benefit of Sections 2(a)(v), 2(b) and 2(c) hereof as though references therein to "Issuer" included references to each Participant and Subparticipant and as though references to "issuing and maintaining" any Credit included reference to "acquiring participation or subparticipation interests in" such Credit. Any Credit Document may be signed and delivered in counterparts, it being understood and agreed that the words "execution," "signed," "signature," and words of similar import in, or with respect to, any Credit Document shall be deemed to include electronic signatures or the keeping of records in electronic form (including, without limitation, the execution by means of "DocuSign", or other similar platform or service approved by Issuer), each of which shall be of the same effect, validity and enforceability as manually executed signatures or a paper-based recordkeeping system, as the case may be, to the extent and as provided for under applicable law, including the Electronic Signatures in Global and National Commerce Act of 2000 (15 USC § 7001 et seq.), the Electronic Signatures and Records Act of 1999 (NY State Technology Law §§ 301-309), or any other similar state laws based on the Uniform Electronic Transactions Act; provided, that any electronic signature delivered by means of "DocuSign", or other similar third-party platform by one party shall be promptly followed by an email attestation by such party to the recipient party confirming that such electronic signature so delivered is the signature of such party; and provided, further, that upon the request of Issuer, any electronic signature on an Application delivered to Issuer shall be followed by a manually executed counterpart as promptly as reasonably practicable. Notices to Issuer of amendment, modification, assignment, cancellation, extension, transfer, waiver and/or objection to honor shall be sent to the address of Issuer as set forth on the Application and shall be delivered by hand, overnight courier or certified mail, return receipt requested, and shall be deemed to be made to Issuer when received by Issuer. Notices to Applicant shall be sent to the address set forth below the signature line hereto. Each party may change its address for notices hereunder by giving notice in writing of the change to the other party. **THIS AGREEMENT CONSTITUTE THE ENTIRE CONTRACT AND FINAL AGREEMENT AMONG THE PARTIES RELATING TO THE SUBJECT MATTER AND MAY NOT BE CONTRADICTED BY EVIDENCE OF PRIOR, CONTEMPORANEOUS, OR SUBSEQUENT ORAL AGREEMENTS OF THE PARTIES.**

14. Continuing Agreement; Termination.

This Agreement is a continuing agreement and may not be terminated by Applicant except upon (i) ten (10) days' prior written notice of such termination by Applicant to Issuer at the address of Issuer set forth on the most recent Credit issued hereunder, (ii) payment of all Obligations in full, and (iii) the expiration or cancellation of all Credits issued hereunder with no pending drawing remaining under any Credit previously issued hereunder. This Agreement shall terminate without any action from the parties hereto on the later of (a) December 31, 2025 (the **"Initial Expiration Date"**), and (b) the date on which the events described in clauses (ii) and (iii) of the immediately preceding sentence have occurred.

15. **Discretion in Issuing.** Acceptance of this Agreement shall not obligate Issuer to issue any Credit until such time, if any, as it has agreed to do so. This Application is to be used solely for standby letters of credit and shall not be used for any commercial letters of credit. If Issuer has otherwise agreed to issue a Credit, Issuer shall not be under any obligation to issue such Credit if (i) any Regulatory Change or any order, judgment or decree of any governmental authority or arbitrator shall by its terms purport to enjoin or restrain Issuer from issuing such Credit, (ii) any law, rule, regulation or order of any governmental authority applicable to Issuer or any request or directive (whether or not having the force of law) from any governmental authority with jurisdiction over Issuer shall prohibit, or request that Issuer refrain from, the issuance of letters of credit generally or such Credit in particular, or (iii) the issuance thereof would violate one or more policies of Issuer (from time to time in effect) applicable to letters of credit generally.

[SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement for Irrevocable Standby Letters of Credit to be duly executed by their respective authorized officers as of the day and year first above written.

PEABODY ENERGY CORPORATION,
as Applicant

By: /s/Brian R. Cropper
Name: Brian Cropper
Title: Vice President & Treasurer

[AGREEMENT FOR IRREVOCABLE STANDBY LETTERS OF CREDIT - SIGNATURE PAGE]

**GOLDMAN SACHS BANK USA,
as Issuer**

By: /s/William Briggs
Name: William Briggs
Title: Authorized Signatory

[AGREEMENT FOR IRREVOCABLE STANDBY LETTERS OF CREDIT - SIGNATURE PAGE]

SCHEDULE A
TO
AGREEMENT FOR IRREVOCABLE STANDBY LETTERS OF CREDIT
Collateral Accounts at Goldman Sachs Bank USA

[OMITTED]

EXHIBIT I
TO
AGREEMENT FOR IRREVOCABLE STANDBY LETTERS OF CREDIT

[OMITTED]

**PEABODY ENERGY CORPORATION
LIST OF SUBSIDIARIES**

Name of Subsidiary	Jurisdiction of Formation
9 East Shipping Australia Pty Ltd	Australia
9 East Shipping Limited	United Kingdom
9 East Shipping US, LLC	Delaware
American Land Development, LLC	Delaware
American Land Holdings of Colorado, LLC	Delaware
American Land Holdings of Illinois, LLC	Delaware
American Land Holdings of Indiana, LLC	Delaware
American Land Holdings of Kentucky, LLC	Delaware
Big Ridge, Inc.	Illinois
Big Sky Coal Company	Delaware
Bowen Basin Coal Joint Venture*	Australia
BTU International B.V.	Netherlands
BTU Western Resources, Inc.	Delaware
Burton Coal Pty Ltd	Australia
Carbones Peabody de Venezuela, S.A.	Venezuela
Cardinal Gasification Center, LLC	Illinois
Complejo Siderurgico Del Lago, C.A.	Venezuela
Conservancy Resources, LLC	Delaware
Coppabella and Moorvale Joint Venture*	Australia
Desarrollos Venshelf IV, CA	Venezuela
El Segundo Coal Company, LLC	Delaware
Excel Equities International Pty Ltd	Australia
Excelven Pty Ltd	British Virgin Islands
Hayden Gulch Terminal, LLC	Delaware
Helensburgh Coal Pty Ltd	Australia
Hillside Recreational Lands, LLC	Delaware
Kayenta Mobile Home Park, Inc.	Delaware
Kentucky United Coal, LLC	Indiana
Metropolitan Collieries Pty Ltd	Australia
Middlemount Coal Pty Ltd	Australia
Middlemount Mine Management Pty Ltd	Australia
Millennium Coal Pty Ltd	Australia
Moffat County Mining, LLC	Delaware
Moorvale West Joint Venture*	Australia
New Mexico Coal Resources, LLC	Delaware
Newhall Funding Company (MBT)	Massachusetts
NGS Acquisition Corp., LLC	Delaware
North Goonyella Coal Mines Pty Ltd	Australia
North Wambo Pty Ltd	Australia
P&L Receivables Company, LLC	Delaware
Peabody (Bowen) Pty Ltd	Australia

Peabody (Burton Coal) Pty Ltd	Australia
Peabody (Kogan Creek) Pty Ltd	Australia
Peabody America, LLC	Delaware
Peabody Arclar Mining, LLC	Indiana
Peabody Asset Holdings, LLC	Delaware
Peabody Australia Holdco Pty Ltd	Australia
Peabody Australia Mining Pty Ltd	Australia
Peabody BB Interests Pty Ltd	Australia
Peabody Bear Run Mining, LLC	Delaware
Peabody Bear Run Services, LLC	Delaware
Peabody Bistrotel Pty Ltd	Australia
Peabody Caballo Mining, LLC	Delaware
Peabody Cardinal Gasification, LLC	Delaware
Peabody China, LLC	Delaware
Peabody CHPP Pty Ltd	Australia
Peabody Coal Venezuela Ltd.	Bermuda
Peabody COALSALES Pacific Pty Ltd	Australia
Peabody COALSALES, LLC	Delaware
Peabody COALTRADE Asia Private Ltd.	Singapore
Peabody COALTRADE GmbH	Germany
Peabody COALTRADE India Private Limited	India
Peabody COALTRADE International Ltd	United Kingdom
Peabody COALTRADE, LLC	Delaware
Peabody Colorado Operations, LLC	Delaware
Peabody Colorado Services, LLC	Delaware
Peabody Coppabella Pty Ltd	Australia
Peabody Coulterville Mining, LLC	Delaware
Peabody Custom Mining Pty Ltd	Australia
Peabody Development Company, LLC	Delaware
Peabody Electricity, LLC	Delaware
Peabody Employment Services, LLC	Delaware
Peabody Energy (Gibraltar) Limited	Gibraltar
Peabody Energy Australia Coal Pty Limited	Australia
Peabody Energy Australia PCI (C&M Equipment) Pty Ltd	Australia
Peabody Energy Australia PCI (C&M Management) Pty Ltd	Australia
Peabody Energy Australia PCI Equipment Pty Ltd	Australia
Peabody Energy Australia PCI Financing Pty Ltd	Australia
Peabody Energy Australia PCI Mine Management Pty Ltd	Australia
Peabody Energy Australia PCI Pty Ltd	Australia
Peabody Energy Australia PCI Rush Pty Ltd	Australia
Peabody Energy Australia Pty Ltd	Australia
Peabody Energy Finance Pty Ltd	Australia
Peabody Gateway North Mining, LLC	Delaware
Peabody Gateway Services, LLC	Delaware
Peabody Global Funding, LLC	Delaware
Peabody Global Holdings, LLC	Delaware
Peabody Global Services Pte. Ltd.	Singapore

Peabody Holding Company, LLC	Delaware
Peabody IC Funding Corp.	Delaware
Peabody Illinois Services, LLC	Delaware
Peabody Indiana Services, LLC	Delaware
Peabody International (Gibraltar) Limited	Gibraltar
Peabody International Holdings, LLC	Delaware
Peabody International Investments, Inc.	Delaware
Peabody International Services, Inc.	Delaware
Peabody Investment & Development Business Services Beijing Co. Ltd	China
Peabody Investments (Gibraltar) Limited	Gibraltar
Peabody Investments Corp.	Delaware
Peabody MCC (Gibraltar) Limited	Gibraltar
Peabody Midwest Management Services, LLC	Delaware
Peabody Midwest Mining, LLC	Indiana
Peabody Midwest Operations, LLC	Delaware
Peabody Midwest Services, LLC	Delaware
Peabody Mongolia, LLC	Delaware
Peabody Monto Coal Pty Ltd	Australia
Peabody Moorvale Pty Ltd	Australia
Peabody Moorvale West Pty Ltd	Australia
Peabody Natural Gas, LLC	Delaware
Peabody Natural Resources Company	Delaware
Peabody New Mexico Services, LLC	Delaware
Peabody Olive Downs Pty Ltd	Australia
Peabody Operations Holding, LLC	Delaware
Peabody Pastoral Holdings Pty Ltd	Australia
Peabody Powder River Mining, LLC	Delaware
Peabody Powder River Operations, LLC	Delaware
Peabody Powder River Services, LLC	Delaware
Peabody Rocky Mountain Management Services, LLC	Delaware
Peabody Rocky Mountain Services, LLC	Delaware
Peabody Sage Creek Mining, LLC	Delaware
Peabody School Creek Mining, LLC	Delaware
Peabody Services Holding, LLC	Delaware
Peabody Southeast Mining, LLC	Delaware
Peabody Twentymile Mining, LLC	Delaware
Peabody Venezuela Coal Corp.	Delaware
Peabody Venture Fund, LLC	Delaware
Peabody West Burton Pty Ltd	Australia
Peabody West Rolleston Pty Ltd	Australia
Peabody West Walker Pty Ltd	Australia
Peabody Western Coal Company	Delaware
Peabody Wild Boar Mining, LLC	Delaware
Peabody Wild Boar Services, LLC	Delaware
Peabody Williams Fork Mining, LLC	Delaware
Peabody Wyoming Services, LLC	Delaware
Peabody-Waterside Development, LLC	Delaware

PEC Equipment Company, LLC	Delaware
PIC Acquisition Corp.	Delaware
PIC AU Holdings Corporation	Delaware
PIC AU Holdings, LLC	Delaware
PT Peabody Coaltrade Indonesia	Indonesia
PT Peabody Mining Services	Indonesia
Ribfield Pty Ltd	Australia
Sage Creek Holdings, LLC	Delaware
Sage Creek Land & Reserves, LLC	Delaware
Seneca Coal Company, LLC	Delaware
Seneca Property, LLC	Delaware
Shoshone Coal Corporation	Delaware
Sterling Centennial Missouri Insurance Corporation	Missouri
Transportes Coal Sea de Venezuela, CA	Venezuela
Twentymile Coal, LLC	Delaware
United Minerals Company, LLC	Indiana
Wambo Coal Pty Ltd	Australia
Wambo Coal Terminal Pty Ltd	Australia
West Rolleston Joint Venture*	Australia
West Walker Joint Venture*	Australia
West/North Burton Joint Venture*	Australia
Wilpinjong Coal Pty Ltd	Australia

*Unincorporated joint venture.

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

1. Registration Statement (Form S-8 No. 333-217107) pertaining to the Peabody Energy Corporation 2017 Incentive Plan
2. Registration Statement (Form S-3 No. 333-254765) of Peabody Energy Corporation

of our reports dated February 18, 2022, with respect to the consolidated financial statements and schedule of Peabody Energy Corporation and the effectiveness of internal control over financial reporting of Peabody Energy Corporation included in this Annual Report (Form 10-K) of Peabody Energy Corporation for the year ended December 31, 2021.

/s/ Ernst & Young, LLP

St. Louis, Missouri
February 18, 2022

CONSENT of QUALIFIED PERSON

Re: Form 10-K of Peabody Energy (the "Company")

I, Karen Lohkamp, Senior Geologist of Peabody Energy, in connection with the Company's Form 10-K for the year ended December 31, 2021 (together with any amendment or supplement thereto, the "Form 10-K"), consent to:

- the public filing by the Company and use of the Technical Report Summary titled, "TECHNICAL REPORT SUMMARY NORTH ANTELOPE ROCHELLE MINE", with an effective date of "December 31, 2021", and that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission, as an exhibit to and referenced in the Company's Form 10-K;
- the use of and references to my name, including my status as an expert or "qualified person" (as defined in Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission), in connection with the Form 10-K and any such Technical Report Summary; and
- any extracts from or a summary of the Technical Report Summary in the Form 10-K and the use of any information derived, summarized, quoted or referenced from the Technical Report Summary, or portions thereof, that was prepared by me, that I supervised the preparation of, and/or that was reviewed and approved by me, that is included or incorporated by reference in the Form 10-K.

I am an employee of the Company and a co-author of the Technical Report Summary to be filed as an exhibit to the Form 10-K. This consent pertains to the following Sections of the Technical Report Summary. I certify that I have read the Technical Report Summary to be filed as an exhibit to as well as the references to the Technical Report Summary within the Form 10-K and that it fairly and accurately represents the information in the Technical Report Summary sections for which I am responsible.

- Section 2 Introduction
- Section 3 Property Description
- Section 4 Accessibility, Climate, Local Resources
- Section 5 History
- Section 6 Geological and Hydrological Setting, Mineralization, and Deposit
- Section 7 Exploration
- Section 8 Sample Preparation, Analyses, and Security
- Section 9 Data Verification
- Section 10 Mineral Processing and Metallurgical Testing
- Section 11 Mineral Resource Estimates
- Section 21 Other Relevant Data and Information
- Section 24 References
- Section 25 Reliance on Information Provided by the Registrant
- Corresponding Subsections of Section 1: Executive Summary
- Corresponding Subsections of Section 22: Interpretation and Conclusions
- Corresponding Subsections of Section 23: Recommendations

Signature: /s/ Karen Lohkamp

Date: February 18, 2022

Karen Lohkamp
Sr. Geologist

CONSENT of QUALIFIED PERSON

Re: Form 10-K of Peabody Energy (the "Company")

I, Clayton Kyle, Sr. Manager Technical Services of Peabody Energy, in connection with the Company's Form 10-K for the year ended December 31, 2021 (together with any amendment or supplement thereto, the "Form 10-K"), consent to:

- the public filing by the Company and use of the Technical Report Summary titled, "TECHNICAL REPORT SUMMARY NORTH ANTELOPE ROCHELLE MINE" with an effective date of "December 31, 2021", and that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission, as an exhibit to and referenced in the Company's Form 10-K;
- the use of and references to my name, including my status as an expert or "qualified person" (as defined in Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission), in connection with the Form 10-K and any such Technical Report Summary; and
- any extracts from or a summary of the Technical Report Summary in the Form 10-K and the use of any information derived, summarized, quoted or referenced from the Technical Report Summary, or portions thereof, that was prepared by me, that I supervised the preparation of, and/or that was reviewed and approved by me, that is included or incorporated by reference in the Form 10-K.

I am an employee of the Company and a co-author of the Technical Report Summary to be filed as an exhibit to the Form 10-K. This consent pertains to the following Sections of the Technical Report Summary. I certify that I have read the Technical Report Summary to be filed as an exhibit to as well as the references to the Technical Report Summary within the Form 10-K and that it fairly and accurately represents the information in the Technical Report Summary sections for which I am responsible.

- Section 2 Introduction
- Section 3 Property Description
- Section 4 Accessibility, Climate, Local Resources
- Section 5 History
- Section 12 Mineral Reserve Estimates
- Section 13 Mining Methods
- Section 14 Processing and Recovery Methods
- Section 15 Infrastructure
- Section 16 Market Studies and Material Contracts
- Section 17 Environmental Studies, Permitting, and Plans, Negotiations, or Agreements with Local Individuals or Groups
- Section 18 Capital and Operating Costs
- Section 19 Economic Analysis
- Section 20 Adjacent Properties
- Section 21 Other Relevant Data and Information
- Section 24 References
- Section 25 Reliance on Information Provided by the Registrant
- Corresponding Subsections of Section 1: Executive Summary
- Corresponding Subsections of Section 22: Interpretation and Conclusions
- Corresponding Subsections of Section 23: Recommendations

Signature: /s/ Clayton Kyle

Date: February 18, 2022

Clayton Kyle
Sr. Manager Technical Services

CONSENT of QUALIFIED PERSON

Re: Form 10-K of Peabody Energy (the "Company")

I, Mike Shetley, Senior Geologist of Peabody Energy, in connection with the Company's Form 10-K for the year ended December 31, 2021 (together with any amendment or supplement thereto, the "Form 10-K"), consent to:

- the public filing by the Company and use of the Technical Report Summary titled, "TECHNICAL REPORT SUMMARY SHOAL CREEK MINE", with an effective date of "December 31, 2021", and that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission, as an exhibit to and referenced in the Company's Form 10-K;
- the use of and references to my name, including my status as an expert or "qualified person" (as defined in Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission), in connection with the Form 10-K and any such Technical Report Summary; and
- any extracts from or a summary of the Technical Report Summary in the Form 10-K and the use of any information derived, summarized, quoted or referenced from the Technical Report Summary, or portions thereof, that was prepared by me, that I supervised the preparation of, and/or that was reviewed and approved by me, that is included or incorporated by reference in the Form 10-K.

I am an employee of the Company and a co-author of the Technical Report Summary to be filed as an exhibit to the Form 10-K. This consent pertains to the following Sections of the Technical Report Summary. I certify that I have read the Technical Report Summary to be filed as an exhibit to as well as the references to the Technical Report Summary within the Form 10-K and that it fairly and accurately represents the information in the Technical Report Summary sections for which I am responsible.

- Section 2 Introduction
- Section 3 Property Description
- Section 4 Accessibility, Climate, Local Resources
- Section 5 History
- Section 6 Geological and Hydrological Setting, Mineralization, and Deposit
- Section 7 Exploration
- Section 8 Sample Preparation, Analyses, and Security
- Section 9 Data Verification
- Section 10 Mineral Processing and Metallurgical Testing
- Section 11 Mineral Resource Estimates
- Section 21 Other Relevant Data and Information
- Section 24 References
- Section 25 Reliance on Information Provided by the Registrant
- Corresponding Subsections of Section 1: Executive Summary
- Corresponding Subsections of Section 22: Interpretation and Conclusions
- Corresponding Subsections of Section 23: Recommendations

Signature: /s/ Mike Shetley

Date: February 18, 2022

Mike Shetley
Sr. Geologist

CONSENT of QUALIFIED PERSON

Re: Form 10-K of Peabody Energy (the "Company")

I, Hui Hu, Director Geology and Engineering Support of Peabody Energy, in connection with the Company's Form 10-K for the year ended December 31, 2021 (together with any amendment or supplement thereto, the "Form 10-K"), consent to:

- the public filing by the Company and use of the Technical Report Summary titled, "TECHNICAL REPORT SUMMARY SHOAL CREEK MINE", with an effective date of "December 31, 2021", and that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission, as an exhibit to and referenced in the Company's Form 10-K;
- the use of and references to my name, including my status as an expert or "qualified person" (as defined in Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission), in connection with the Form 10-K and any such Technical Report Summary; and
- any extracts from or a summary of the Technical Report Summary in the Form 10-K and the use of any information derived, summarized, quoted or referenced from the Technical Report Summary, or portions thereof, that was prepared by me, that I supervised the preparation of, and/or that was reviewed and approved by me, that is included or incorporated by reference in the Form 10-K.

I am an employee of the Company and a co-author of the Technical Report Summary to be filed as an exhibit to the Form 10-K. This consent pertains to the following Sections of the Technical Report Summary. I certify that I have read the Technical Report Summary to be filed as an exhibit to as well as the references to the Technical Report Summary within the Form 10-K and that it fairly and accurately represents the information in the Technical Report Summary sections for which I am responsible.

- Section 2 Introduction
- Section 3 Property Description
- Section 4 Accessibility, Climate, Local Resources
- Section 5 History
- Section 12 Mineral Reserve Estimates
- Section 13 Mining Methods
- Section 14 Processing and Recovery Methods
- Section 15 Infrastructure
- Section 16 Market Studies and Material Contracts
- Section 17 Environmental Studies, Permitting, and Plans, Negotiations, or Agreements with Local Individuals or Groups
- Section 18 Capital and Operating Costs
- Section 19 Economic Analysis
- Section 20 Adjacent Properties
- Section 21 Other Relevant Data and Information
- Section 24 References
- Section 25 Reliance on Information Provided by the Registrant
- Corresponding Subsections of Section 1: Executive Summary
- Corresponding Subsections of Section 22: Interpretation and Conclusions
- Corresponding Subsections of Section 23: Recommendations

Signature: /s/ Hui Hu

Date: February 18, 2022

Hui Hu
Director Geology and Engineering Support

CONSENT of QUALIFIED PERSON

Re: Form 10-K of Peabody Energy (the "Company")

I, Emma Ewart, Senior Geologist of Peabody Energy, in connection with the Company's Form 10-K for the year ended December 31, 2021 (together with any amendment or supplement thereto, the "Form 10-K"), consent to:

- the public filing by the Company and use of the Technical Report Summary titled, "WILPINJONG MINE TECHNICAL REPORT SUMMARY", with an effective date of "December 31, 2021", and that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission, as an exhibit to and referenced in the Company's Form 10-K;
- the use of and references to my name, including my status as an expert or "qualified person" (as defined in Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission), in connection with the Form 10-K and any such Technical Report Summary; and
- any extracts from or a summary of the Technical Report Summary in the Form 10-K and the use of any information derived, summarized, quoted or referenced from the Technical Report Summary, or portions thereof, that was prepared by me, that I supervised the preparation of, and/or that was reviewed and approved by me, that is included or incorporated by reference in the Form 10-K.

I am an employee of the Company and a co-author of the Technical Report Summary to be filed as an exhibit to the Form 10-K. This consent pertains to the following Sections of the Technical Report Summary. I certify that I have read the Technical Report Summary to be filed as an exhibit to as well as the references to the Technical Report Summary within the Form 10-K and that it fairly and accurately represents the information in the Technical Report Summary sections for which I am responsible.

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- Section 7 Exploration
- Section 8 Sample Preparation, Analyses, and Security
- Section 9 Data Verification
- Section 10 Mineral Processing and Metallurgical Testing
- Section 11 Mineral Resource Estimates
- Section 21 Other Relevant Data and Information
- Section 24 References
- Section 25 Reliance on Information Provided by the Registrant
- Corresponding Subsections of Section 1: Executive Summary
- Corresponding Subsections of Section 22: Interpretation and Conclusions
- Corresponding Subsections of Section 23: Recommendations

Signature: /s/ Emma Ewart

Date: February 18, 2022

Emma Ewart
Sr. Geologist

CONSENT of QUALIFIED PERSON

Re: Form 10-K of Peabody Energy (the "Company")

I, Brian Neilsen, Director Engineering of Peabody Energy, in connection with the Company's Form 10-K for the year ended December 31, 2021 (together with any amendment or supplement thereto, the "Form 10-K"), consent to:

- the public filing by the Company and use of the Technical Report Summary titled, "WILPINJONG MINE TECHNICAL REPORT SUMMARY" with an effective date of "December 31, 2021", and that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission, as an exhibit to and referenced in the Company's Form 10-K;
- the use of and references to my name, including my status as an expert or "qualified person" (as defined in Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission), in connection with the Form 10-K and any such Technical Report Summary; and
- any extracts from or a summary of the Technical Report Summary in the Form 10-K and the use of any information derived, summarized, quoted or referenced from the Technical Report Summary, or portions thereof, that was prepared by me, that I supervised the preparation of, and/or that was reviewed and approved by me, that is included or incorporated by reference in the Form 10-K.

I am an employee of the Company and a co-author of the Technical Report Summary to be filed as an exhibit to the Form 10-K. This consent pertains to the following Sections of the Technical Report Summary. I certify that I have read the Technical Report Summary to be filed as an exhibit to as well as the references to the Technical Report Summary within the Form 10-K and that it fairly and accurately represents the information in the Technical Report Summary sections for which I am responsible.

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- Corresponding Subsections of Section 1: Executive Summary
- Corresponding Subsections of Section 22: Interpretation and Conclusions
- Corresponding Subsections of Section 23: Recommendations

Signature: /s/ Brian Neilsen

Date: February 18, 2022

Brian Neilsen
Director Engineering

CONSENT of QUALIFIED PERSON

Re: Form 10-K of Peabody Energy (the "Company")

I, James Lawell, Senior Geologist of Peabody Energy, in connection with the Company's Form 10-K for the year ended December 31, 2021 (together with any amendment or supplement thereto, the "Form 10-K"), consent to:

- the public filing by the Company and use of the Technical Report Summary titled, "TECHNICAL REPORT SUMMARY COPPABELLA-MOORVALE JOINT VENTURE (CMJV)", with an effective date of "December 31, 2021", and that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission, as an exhibit to and referenced in the Company's Form 10-K;
- the use of and references to my name, including my status as an expert or "qualified person" (as defined in Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission), in connection with the Form 10-K and any such Technical Report Summary; and
- any extracts from or a summary of the Technical Report Summary in the Form 10-K and the use of any information derived, summarized, quoted or referenced from the Technical Report Summary, or portions thereof, that was prepared by me, that I supervised the preparation of, and/or that was reviewed and approved by me, that is included or incorporated by reference in the Form 10-K.

I am an employee of the Company and a co-author of the Technical Report Summary to be filed as an exhibit to the Form 10-K. This consent pertains to the following Sections of the Technical Report Summary. I certify that I have read the Technical Report Summary to be filed as an exhibit to as well as the references to the Technical Report Summary within the Form 10-K and that it fairly and accurately represents the information in the Technical Report Summary sections for which I am responsible.

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- Corresponding Subsections of Section 1: Executive Summary
- Corresponding Subsections of Section 22: Interpretation and Conclusions
- Corresponding Subsections of Section 23: Recommendations

Signature: /s/ James Lawell

Date: February 18, 2022

James Lawell
Sr. Geologist

CONSENT of QUALIFIED PERSON

Re: Form 10-K of Peabody Energy (the "Company")

I, Duwayne Rossouw, Mine Geologist of Peabody Energy, in connection with the Company's Form 10-K for the year ended December 31, 2021 (together with any amendment or supplement thereto, the "Form 10-K"), consent to:

- the public filing by the Company and use of the Technical Report Summary titled, "TECHNICAL REPORT SUMMARY COPPABELLA-MOORVALE JOINT VENTURE (CMJV)", with an effective date of "December 31, 2021", and that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission, as an exhibit to and referenced in the Company's Form 10-K;
- the use of and references to my name, including my status as an expert or "qualified person" (as defined in Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission), in connection with the Form 10-K and any such Technical Report Summary; and
- any extracts from or a summary of the Technical Report Summary in the Form 10-K and the use of any information derived, summarized, quoted or referenced from the Technical Report Summary, or portions thereof, that was prepared by me, that I supervised the preparation of, and/or that was reviewed and approved by me, that is included or incorporated by reference in the Form 10-K.

I am an employee of the Company and a co-author of the Technical Report Summary to be filed as an exhibit to the Form 10-K. This consent pertains to the following Sections of the Technical Report Summary. I certify that I have read the Technical Report Summary to be filed as an exhibit to as well as the references to the Technical Report Summary within the Form 10-K and that it fairly and accurately represents the information in the Technical Report Summary sections for which I am responsible.

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- Section 6 Geological Setting, Mineralization, and Deposit
- Section 7 Exploration
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- Section 9 Data Verification
- Section 10 Mineral Processing and Metallurgical Testing
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- Section 24 References
- Section 25 Reliance on Information Provided by the Registrant
- Corresponding Subsections of Section 1: Executive Summary
- Corresponding Subsections of Section 22: Interpretation and Conclusions
- Corresponding Subsections of Section 23: Recommendations

Signature: /s/ Duwayne Rossouw _____

Date: February 18, 2022 _____

Duwayne Rossouw
Mine Geologist

CONSENT of QUALIFIED PERSON

Re: Form 10-K of Peabody Energy (the "Company")

I, Brian Neilsen, Director Engineering of Peabody Energy, in connection with the Company's Form 10-K for the year ended December 31, 2021 (together with any amendment or supplement thereto, the "Form 10-K"), consent to:

- the public filing by the Company and use of the Technical Report Summary titled, "TECHNICAL REPORT SUMMARY COPPABELLA-MOORVALE JOINT VENTURE (CMJV)" with an effective date of "December 31, 2021", and that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission, as an exhibit to and referenced in the Company's Form 10-K;
- the use of and references to my name, including my status as an expert or "qualified person" (as defined in Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission), in connection with the Form 10-K and any such Technical Report Summary; and
- any extracts from or a summary of the Technical Report Summary in the Form 10-K and the use of any information derived, summarized, quoted or referenced from the Technical Report Summary, or portions thereof, that was prepared by me, that I supervised the preparation of, and/or that was reviewed and approved by me, that is included or incorporated by reference in the Form 10-K.

I am an employee of the Company and a co-author of the Technical Report Summary to be filed as an exhibit to the Form 10-K. This consent pertains to the following Sections of the Technical Report Summary. I certify that I have read the Technical Report Summary to be filed as an exhibit to as well as the references to the Technical Report Summary within the Form 10-K and that it fairly and accurately represents the information in the Technical Report Summary sections for which I am responsible.

- Section 2 Introduction
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- Section 25 Reliance on Information Provided by the Registrant
- Corresponding Subsections of Section 1: Executive Summary
- Corresponding Subsections of Section 22: Interpretation and Conclusions
- Corresponding Subsections of Section 23: Recommendations

Signature: /s/ Brian Neilsen

Date: February 18, 2022

Brian Neilsen
Director Engineering

CERTIFICATION

I, James C. Grech, certify that:

1. I have reviewed this Annual Report on Form 10-K of Peabody Energy Corporation ("the registrant");
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an Annual Report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 18, 2022

/s/ James C. Grech

James C. Grech

President and Chief Executive Officer

CERTIFICATION

I, Mark A. Spurbeck, certify that:

1. I have reviewed this Annual Report on Form 10-K of Peabody Energy Corporation ("the registrant");
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an Annual Report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 18, 2022

/s/ Mark A. Spurbeck

Mark A. Spurbeck

Executive Vice President and Chief Financial Officer

**CERTIFICATION PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002
(18 U.S.C. SECTION 1350)**

I, James C. Grech, President and Chief Executive Officer of Peabody Energy Corporation, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) the Annual Report on Form 10-K for the annual period ended December 31, 2021 (the "Annual Report") which this statement accompanies fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) information contained in the Annual Report fairly presents, in all material respects, the financial condition and results of operations of Peabody Energy Corporation.

Dated: February 18, 2022

/s/ James C. Grech

James C. Grech
President and Chief Executive Officer

**CERTIFICATION PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002
(18 U.S.C. SECTION 1350)**

I, Mark A. Spurbeck, Executive Vice President and Chief Financial Officer of Peabody Energy Corporation, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) the Annual Report on Form 10-K for the annual period ended December 31, 2021 (the "Annual Report") which this statement accompanies fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) information contained in the Annual Report fairly presents, in all material respects, the financial condition and results of operations of Peabody Energy Corporation.

Dated: February 18, 2022

/s/ Mark A. Spurbeck

Mark A. Spurbeck

Executive Vice President and Chief Financial Officer

Mine Safety Disclosures

The following disclosures are provided pursuant to Securities and Exchange Commission (SEC) regulations, which require certain disclosures by companies required to file periodic reports under the Securities Exchange Act of 1934, as amended, that operate coal mines regulated under the Federal Mine Safety and Health Act of 1977 (the Mine Act). The disclosures reflect United States (U.S.) mining operations only, as these requirements do not apply to our mines operated outside the U.S.

Mine Safety Information. Whenever the Mine Safety and Health Administration (MSHA) believes that a violation of the Mine Act, any health or safety standard, or any regulation has occurred, it may issue a violation which describes the associated condition or practice and designates a timeframe within which the operator must abate the violation. In some situations, such as when MSHA believes that conditions pose a hazard to miners, MSHA may issue an order removing miners from the area of the mine affected by the condition until hazards are corrected. Whenever MSHA issues a citation or order, it generally proposes a civil penalty, or fine, as a result of the violation that the operator is ordered to pay. Citations and orders can be contested and appealed and, as part of that process, are often reduced in severity and amount, and are sometimes vacated. The number of citations, orders and proposed assessments vary depending on the size and type (underground or surface) of the company and mine. Since MSHA is a branch of the U.S. Department of Labor, its jurisdiction applies only to our U.S. mines. As such, the mine safety disclosures that follow contain no information for our Australian mines.

The table that follows reflects citations and orders issued to us by MSHA during the year ended December 31, 2021, as reflected in our systems. The table includes only those mines that were issued orders or citations during the period presented and, commensurate with SEC regulations, does not reflect orders or citations issued to independent contractors working at our mines. Due to timing and other factors, our data may not agree with the mine data retrieval system maintained by MSHA. The proposed assessments for the year ended December 31, 2021 were taken from the MSHA system as of February 11, 2022.

Additional information about MSHA references used in the table is as follows:

- *Section 104 S&S Violations:* The total number of violations received from MSHA under section 104(a) of the Mine Act that could significantly and substantially contribute to a serious injury if left unabated.
- *Section 104(b)Orders:* The total number of orders issued by MSHA under section 104(b) of the Mine Act, which represents a failure to abate a citation under section 104(a) within the period of time prescribed by MSHA. This results in an order of immediate withdrawal from the area of the mine affected by the condition until MSHA determines that the violation has been abated.
- *Section 104(d) Citations and Orders:* The total number of citations and orders issued by MSHA under section 104(d) of the Mine Act for unwarrantable failure to comply with mandatory health or safety standards.
- *Section 104(e) Notices:* The total number of notices issued by MSHA under section 104(e) of the Mine Act for a pattern of violations that could contribute to mine health or safety hazards.
- *Section 110(b)(2)Violations:* The total number of flagrant violations issued by MSHA under section 110(b)(2) of the Mine Act.
- *Section 107(a) Orders:* The total number of orders issued by MSHA under section 107(a) of the Mine Act for situations in which MSHA determined an imminent danger existed.
- *Proposed MSHA Assessments:* The total dollar value of proposed assessments from MSHA.
- *Fatalities:* The total number of mining-related fatalities.

Year Ended December 31, 2021

Mine ⁽¹⁾	Section 104 S&S Violations	Section 104(b) Orders	Section 104(d) Citations and Orders	Section 104(e) Pattern of Violations	Section 110(b)(2) Violations	Section 107(a) Orders	(S) Proposed MSHA Assessments (In thousands)	Fatalities
Seaborne Metallurgical Mining								
Shoal Creek Mine	70	—	12	—	15	—	224.2	—
Powder River Basin Mining								
Caballo	1	—	—	—	—	—	7.1	—
North Antelope Rochelle	6	—	—	—	4	—	17.5	—
Rawhide	—	—	—	—	—	—	2.6	—
Other U.S. Thermal Mining								
Bear Run	6	—	—	—	—	1	7.9	—
El Segundo	2	—	—	—	—	—	4.3	—
Francisco Preparation Plant (Francisco Mine)	—	—	—	—	—	—	0.3	—
Francisco Underground	30	—	2	—	6	—	62.6	—
Gateway North	22	—	—	—	—	—	60.0	—
Gateway Preparation Plant	2	—	—	—	—	—	1.8	—
Twentymile (Foidel Creek Mine)	2	—	—	—	4	—	27.2	—
Wild Boar	2	—	—	—	—	—	5.0	—

⁽¹⁾ The definition of "mine" under section 3 of the Mine Act includes the mine, as well as other items used in, or to be used in, or resulting from, the work of extracting coal, such as land, structures, facilities, equipment, machines, tools and coal preparation facilities. Also, there are instances where the mine name per the MSHA system differs from the mine name utilized by us. Where applicable, we have parenthetically listed the name of the mine per the MSHA system. Also, all U.S. mines are listed alphabetically within each of our mining segments.

Pending Legal Actions. The Federal Mine Safety and Health Review Commission (the Commission) is an independent adjudicative agency that provides administrative trial and appellate review of legal disputes arising under the Mine Act. These cases may involve, among other questions, challenges by operators to citations, orders and penalties they have received from MSHA, or complaints of discrimination by miners under section 105 of the Mine Act. The following is a brief description of the types of legal actions that may be brought before the Commission.

- *Contests of Citations and Orders:* A contest proceeding may be filed with the Commission by operators, miners or miners' representatives to challenge the issuance of a citation or order issued by MSHA, including citations related to disputed provisions of operators' emergency response plans.
- *Contests of Proposed Penalties (Petitions for Assessment of Penalties):* A contest of a proposed penalty is an administrative proceeding before the Commission challenging a civil penalty that MSHA has proposed for the violation. Such proceedings may also involve appeals of judges' decisions or orders to the Commission on proposed penalties, including petitions for discretionary review and review by the Commission on its own motion.
- *Complaints for Compensation:* A complaint for compensation may be filed with the Commission by miners entitled to compensation when a mine is closed by certain withdrawal orders issued by MSHA. The purpose of the proceeding is to determine the amount of compensation, if any, due miners idled by the orders.
- *Complaints of Discharge, Discrimination or Interference:* A discrimination proceeding is a case that involves a miner's allegation that he or she has suffered a wrong by the operator because he or she engaged in some type of activity protected under the Mine Act, such as making a safety complaint. This category includes temporary reinstatement proceedings, which involve cases in which a miner has filed a complaint with MSHA stating he or she has suffered discrimination and the miner has lost his or her position.
- *Applications for Temporary Relief:* An application for temporary relief from any modification or termination of any order or from any order issued under certain subparts of section 104 of the Mine Act may be filed with the Commission at any time before such order becomes final.

The table that follows presents information by mine regarding pending legal actions before the Commission at December 31, 2021. Each legal action is assigned a docket number by the Commission and may have as its subject matter one or more citations, orders, penalties or complaints.

Pending Legal Actions								
Mine ⁽¹⁾	Number of Pending Legal Actions as of December 31, 2021	Pre-Penalty Contests of Citations/Orders	Contests of Penalty Assessment ⁽²⁾	Complaints for Compensation	Complaints of Discharge, Discrimination or Interference	Applications for Temporary Relief	Legal Actions Initiated During the Year Ended December 31, 2021	Legal Actions Resolved During the Year Ended December 31, 2021
Seaborne Metallurgical Mining								
Shoal Creek Mine	5	—	5	—	—	—	11	11
Other U.S. Thermal Mining								
Francisco Underground	4	—	4	—	—	—	4	4
Twentymile (Foidel Creek)	1	—	1	—	—	—	1	—

⁽¹⁾ The definition of "mine" under section 3 of the Mine Act includes the mine, as well as other items used in, or to be used in, or resulting from, the work of extracting coal, such as land, structures, facilities, equipment, machines, tools and coal preparation facilities. Also, there are instances where the mine name per the MSHA system differs from the mine name utilized by us. Where applicable, we have parenthetically listed the name of the mine per the MSHA system. Also, all U.S. mines are listed alphabetically within each of our mining segments.

⁽²⁾ Contests included a total of 2 appeals of judge's decisions or orders to the Commission as of December 31, 2021.



TECHNICAL REPORT SUMMARY NORTH ANTELOPE ROCHELLE MINE

In accordance with the requirements of SEC Regulation S-K (subpart 1300)

EFFECTIVE DATE: DECEMBER 31, 2021

REPORT DATE: FEBRUARY 18, 2022

**PEABODY ENERGY CORPORATION
701 Market Street, Saint Louis, Missouri 63101**

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Title: Technical Report Summary - North Antelope Rochelle Mine, SK-1300
Peabody Energy Corporation (BTU)

Effective Date of Report:

December 31, 2021

Project Location:

The North Antelope Rochelle Mine (NARM) is a surface coal mine and is located ten miles east of Wyoming Highway 59, approximately halfway between Gillette and Douglas, Wyoming in the U.S. Peabody Powder River Mining, LLC is the operator for the North Antelope Rochelle Mine which is a subsidiary of Peabody Energy Corporation. NARM is situated in the Gillette Coal Field on the east flank of the Powder River Basin.

Qualified Person(s):

Peabody Energy Corporation

/s/ Karen Lohkamp

Geology (Prepared Sections: 1,2,3,4,5,6,7,8,9,10,11,21,22,23,24,25)

/s/ Clayton Kyle

Mining Engineering (Prepared Sections: 1,2,3,4,5,12,13,14,15,16, 17,18,19,20,21,22,23,24,25)

Signature Date:

February 18, 2022

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1. EXECUTIVE SUMMARY

1.1. Disclaimer

This Technical Report Summary for the North Antelope Rochelle Mine (NARM) has been prepared by a team of qualified persons (QP) and engineers on staff at Peabody Energy. The purpose of this statement is to provide a summary of technical studies which support the coal reserves in accordance with SK-1300. All information within this report has been prepared based on present knowledge and assumptions.

1.2. Property Description

NARM is an open cut, or surface coal mining operation located ten miles east of Wyoming Highway 59, approximately halfway between Gillette and Douglas, Wyoming in Campbell and Converse counties in the U.S. The general location of NARM is shown in Figure 1-1. The coal control is comprised of Federal and State leases. The existing surface control has been established to support future operations.

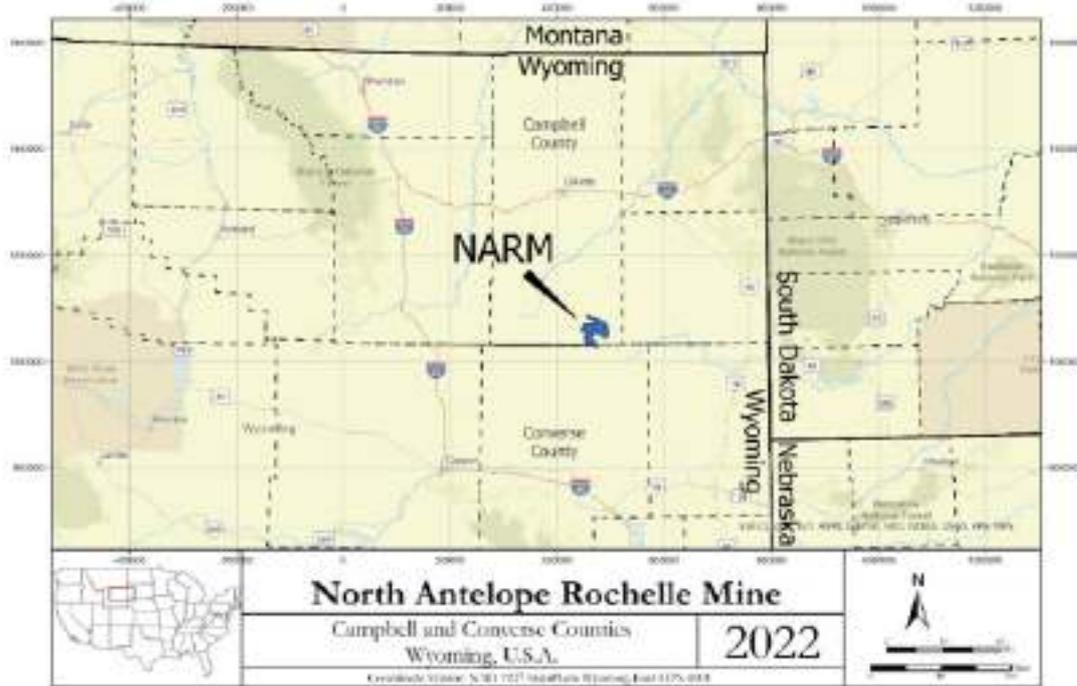


Figure 1-1. General Location Map

1.3. Geology and Mineralization

The North Antelope Rochelle Mine is situated on the east flank of the Powder River Basin, which is a large structural and sedimentary basin of northeastern Wyoming and southeastern Montana.

The Wasatch Formation and local Quaternary age deposits comprise all of the overburden strata at the mine site. The Wasatch consists of alternating, lenticular deposits of sandstones, siltstones, claystones, coal, and carbonaceous shales. The coal mined at NARM is the Wyodak-Anderson Seam, which is in the uppermost section of the Paleocene Fort Union Formation.

The inclination of the beds is gentle with a dip of less than three degrees toward the west. However, because of the undulating character of the coal beds, there are localized dips toward the east. Many of the coal beds in the Fort Union and Wasatch formations have been burned or oxidized along their outcrops producing clinker beds (locally referred to as scoria). Clinker is comprised of the baked and thermally altered shales and sandstones above the burned coal seam.

The mine is physiographically part of the unglaciated Missouri Plateau section of the Great Plains Province. This part of the Great Plains Province is characterized by broad plateaus, which are dissected by incised stream valleys. In the western portion, the plateaus merge with the Powder River Basin and other broad regional downfolds, which are separated by major mountainous uplifts.

The landscape of the Powder River Basin consists of broad plains, low hills, and tablelands. Incised stream valleys create most of the topographic relief. Generally, the topography changes from open hills with 500 to 1000 feet of relief in the northern part of the basin to plains and tablelands with 300 to 500 feet of relief in the southern part. The Powder River Basin is bounded by the Platte River drainage basin to the south, the Yellowstone River in Montana to the north, the Big Horn Mountains on the west, and the Black Hills on the east.

1.4. Exploration

Exploration within the area began in the late 1960s. Since that time a substantial geological data has been collected. This data resides within a proprietary database system called GeoCORE. As of 12/31/2021, there are 4,778 total drill holes within the coal leased area. This includes exploration holes and oil and gas wells.

Exploration drilling programs within the leased area are completed yearly. The number of holes drilled annually varies and is dependent upon mine plan changes, structural/quality variability, and existing drill hole spacing. Over the prior five years, there have been 15 to 45 cores drilled annually averaging 25 cores per year.

Coal quality is analyzed for the cored coal samples. Testing includes short proximate (Total Moisture, Ash, Sulfur, and BTU) and mineral analysis of ash on a raw basis. These tests are completed at the onsite commercial laboratory, which is accredited by the American Society for Testing and Materials (ASTM). Composite samples are analyzed for trace elements and extended analysis, including ash fusion temperatures, sulfur forms, ultimate analysis, and water-soluble alkalis.

1.5. Development and Operations

NARM has been in open-cut operation since 1983. The Wyodak-Anderson seam is the only coal seam to be extracted at the operation. At any one time, multiple pits can be active for quality blending capabilities. Overburden is removed by dragline, truck/shovel, dozer and cast/blast methods. Coal removal is performed by truck/shovel fleets and shipped as Run-of-Mine (ROM) thermal products for power generation.

1.6. Coal Resource and Reserve Estimates

The classification of coal resources and the role it plays in coal reserve estimation is discussed in Section 11. NARM does not report any coal resources exclusive of the coal reserves. The estimated proven and probable coal reserves are 1,484 Mt as shown in Table 1-1.

Table 1-1. Coal Reserves

Reserves (in million tons)		
Measured	Indicated	Total
1,378	106	1,484

1.7. Economic Analysis

The coal reserve estimates are supported by a Life of Mine (LOM) plan. Within the 26 years of LOM, the operation is projected to produce an average of 57 million tons of product annually with an average annual total cost of \$892 million and a capital expenditure of \$34 million. The LOM plan will produce an average of \$18 million in annual cash flow and \$285 million Net Present Value (NPV).

1.8. Conclusion

NARM has a long operating history with all required permits, infrastructures, and major equipment in place. There is a significant amount of historic exploration and survey data for coal reserve estimates. This data has been determined by the Qualified Persons to be adequate in quantity and reliability to support the coal reserve estimates within this Technical Report Summary. All required properties including surface and coal have been obtained to support the operation. The coal reserve estimates and supporting Life of Mine (LOM) plan conclude that there are 1,484 million tons of coal reserves at NARM. The reserves are economically mineable based on the historical mining, production projections, historical and projected coal sales prices, historical and projected operating costs and capital expenditure projections in the LOM Plan.

1.9. Recommendations

1.9.1. Geology and Resources

The routine exploration work will continue to provide further geological confidence. This, along with ongoing pit surveys and sampling programs, will provide adequate support to the operation for the short-term and mid-term planning, production, and coal quality blending purposes.

1.9.2. Mining, Processing, and Reserves

Coal bed methane (CBM) and/or conventional oil & gas may be produced in the area. All historic disputes have been settled, and it is recommended to continue to monitor and assess CBM and Oil & Gas activities within the area. The mine plan and reserve estimates should be re-evaluated for any material changes.

To improve stability in advance of mining, dewatering has been done to limit the amount of groundwater in the overburden, coal, and the Fort Union Formation below the coal in the vicinity of Porcupine Creek and Bobcat pit. It is recommended to continue these programs and assess other mitigation procedures, such as blasting pit floor and varying high wall/spoil slopes.

1.9.3. Environmental, Permitting, and Social Considerations

It is recommended to maintain current reclamation practice and ensure the appropriate balance of disturbance and reclamation activities. Any significant mine plan change should be considered for the ARO (asset retirement obligation) update.

1.9.4. Economic Analysis

The ability of Peabody, or any coal company, to achieve production and financial projections is dependent on numerous factors. These factors may include site-specific geological and geotechnical conditions, skilled workforce availability, obstacle mitigation, coal sales prices, market conditions, environmental legislation changes, as well as securing permit renewals and bonds. Unforeseen changes in legislation and new industry developments could substantially alter the performance of any mining company. It is recommended that those factors should be assessed regularly according to the Company's internal control and material changes are to be reflected in the future reserve estimates.

2. INTRODUCTION

2.1. Introduction

This Technical Report Summary has been prepared for the North Antelope Rochelle Mine (NARM), which is operated by Peabody Energy Corporation's wholly-owned subsidiary, Peabody Powder River Mining LLC.

This Technical Report Summary for NARM is in accordance with the United States' Securities and Exchange Commission (SEC) S-K 1300. The S-K 1300 sets the standards for the reporting of scientific and technical information on mineral projects and specifies that the Technical Report Summary must be prepared by or under the supervision of a Qualified Person(s).

This report is the first time filing for the registrant. NARM doesn't have coal resources exclusive of reserves for reporting and this report summarizes information on the operation and coal reserve estimates.

2.2. Terms of Reference

Coal reserve estimates are reported according to the definition of S-K 1300 on a 100% controlled basis. The point of reference for coal reserves estimates is thermal coal as the saleable product for an ongoing mining operation.

Unless otherwise stated, units used in this report are expressed in the English system. Currencies are expressed in USA dollars. A list of abbreviations used in this report is shown below in Table 2-1.

Table 2-1. List of Units and Abbreviations

\$	United States Dollar	MER	Mining Economic Recovery
ARO	Asset Retirement Obligation	MLS	Mean Sea Level
ASTM	American Society of the International Association for Testing and Materials	MSHA	Mine Safety and Health Administration
BLM	Bureau of Land Management	NAD	North American Datum
BTU	British Thermal Unit	NARM	North Antelope/Rochelle Mine
CAPEX	Capital Expenditure	NPDES	National Pollution Discharge Elimination System
CBM	Coal Bed Methane	NPV	Net Present Value
DEQ	Department of Environmental Quality	NUC	Not Under Control
DHSA	Drill Hole Spacing Analysis	OG	Oil and Gas
EIS	Environmental Impact Statement	PRB	Powder River Basin
F	Degree Fahrenheit	QP	Qualified Person
FT	Foot	R2P2	Resource Recovery and Protection Plan
GCS	Geo Core System	ROM	Run Of Mine
GPM	Gallons Per Minute	SEC	Securities and Exchange Commission
GPS	Global Positioning System	SOP	Standard Operating Procedure
kWh	Kilowatt Hour	TPH	Tons Per Hour
LBS	Pounds	UCS	Uniaxial Compressive Strength
LLC	Limited Liability Company	WA	Wyodak Anderson Seam
LOM	Life of Mine	WYE	Wyoming State Plane East (NAD27)
LMS	Land Management System		

2.3. Sources of Information and References

The information and references listed here and in Section 24 of this report were used to support the preparation of the report.

GeoCore System (GCS): Company's internal geological database of the drill hole and coal quality information.

- Land Management System (LMS): Company's internal system which includes all mineral and land contracts.
- Peabody Map Viewer (PMV): Company's internal Geographical Information System (GIS) for mapping.
- Life of Mine (LOM): Company's internal process for mine planning and economic analysis.
- Integrated Planning (IP): Company's internal system for LOM financial model.
- All government permits and approval documents.

2.4. Involvement of Qualified Persons

The following Peabody employees serve as Qualified Persons (QPs) for this report as defined in S-K 1300.

- Mining Engineering: Clayton Kyle (Professional Engineer, Wyoming)
- Geology: Karen Lohkamp (Registered Geologist in Missouri and Registered Member, Society of Mining, Metallurgy & Exploration (SME))

Mr. Kyle is employed as Senior Manager for Technical Services at NARM. He oversees all environmental planning, continuous improvement, mine plan work and technical issues at the mine location on daily basis. He has been employed at NARM for 12 years.

Mrs. Lohkamp is employed as Senior Geologist at Peabody's Corporate Office in St. Louis, MO, USA and has worked for Peabody for 26 years. She does all of the geological work for the Powder River Basin (PRB) Wyoming and Colorado active operations. The majority of her work includes exploration, geologic modelling, and operational support. She spends 25 to 40% of her time in the PRB region every year with periodic visits to the NARM site throughout the year.

3. PROPERTY DESCRIPTION

3.1. Location

The North Antelope Rochelle Mine (NARM) is located ten miles east of Wyoming Highway 59, approximately halfway between Gillette and Douglas, Wyoming and straddles the border of Campbell and Converse counties. The Mine is situated on the east flank of the Powder River Basin, which is a large structural and sedimentary basin of northeastern Wyoming and southeastern Montana. The location for NARM is shown



in Figure 3-1.

Figure 3-1. General Location

Coordinates for the two train loadout facilities and coal control area of extent are shown in Table 3-1.

Table 3-1. Mine Facility and Mine Area Coordinates (Wyoming East State Plane NAD 27, WYE)

Facility	Easting	Northing
NARM Train Loadout	472,530	1,042,380
NARM North Train Loadout	471,414	1,080,227
Area of Extent	Easting	Northing
Minimum	442,810	1,027,840
Maximum	497,950	1,087,195

3.2. Property Rights

All coal is federally owned except State Section 16, T42N, R70W; State Section 36, T42N, R70W; and State Section 36, SW1/4SW1/4 Section 25, and S1/2SE1/4 Section 26, all in T42N, R71W. The sections with coal leases are listed in Table 3-2.

NARM has two Logical Mining Units (LMUs). There are 11 Federal and 4 State leases with remaining coal reserves.

The NARM Logical Mining Unit WYW185379 was approved with an effective date of April 18, 2016. This unit includes the Federal Leases WYW150210, WYW154001, WYW173408, WYW176095, WYW179011, and WYW180754; and State leases O-26930 and O-26931.

The School Creek Logical Mining Unit (LMU) WYW173409 as presently constituted was approved effective April 30, 2013. The LMU includes the Federal Leases WYW0321779, WYW151134, WYW172413, WYW172414, and WYW172692 (sublease of portion to WRR from Ark Land), and State Leases O-26749 and O-26749A.

NARM is under permit 569-T8 which was approved on August 23, 2018 by the Wyoming Department of Environmental Quality (WDEQ). It combined the previous NARM and School Creek permits.

Table 3-2. Legal Description for Coal Control

Township	Range	Section *
41N	69W	5-7, 18
41N	70W	1-9, 11-12, 17-21, 27-30, 33-34
42N	69W	18-19, 29-32
42N	70W	4-11, 13-16, 19-36
42N	71W	1, 22-27, 34-36
41N	71W	1, 12-14, 23-25

*Sections with full or partial coal control

NARM operates with mineral control primarily through Federal and State lease agreements. The typical royalty rates for Federal and State coal leases are both 12.5% of realization. Federal leases must be obtained through the federal leasing program. State leases have separate acquisition rules. This process has been completed for all reserves included in this assessment. Leases can be combined into logical mining units (LMU). There is a minimum annual production requirement of 1% of recoverable tons per year per LMU. This is a federal minimum requirement for an active operation. There are two LMU's at NARM.

A list of controlled acres by the lease is shown in Table 3-3 below. The outline of the controlled coal leases is shown in Figure 3-2.

Table 3-3. Coal Leases

LEASE	TYPE	LMU	ACRES	Expiration Date	Retention Condition
O-26930	STATE	WYW185379	122	4/1/2025	With Annual Payment
O-26931	STATE	WYW185379	648	4/1/2025	With Annual Payment
WYW150210	FEDERAL	WYW185379	2,369	3/1/2025	Indefinite with Lease Production
WYW154001	FEDERAL	WYW185379	3,774	9/1/2024	Indefinite with Lease Production
WYW173408	FEDERAL	WYW185379	6,364	10/1/2032	Indefinite with Lease Production
WYW176095	FEDERAL	WYW185379	3,243	8/1/2032	Indefinite with Lease Production
WYW179011	FEDERAL	WYW185379	4,043	9/1/2028	Indefinite with Lease Production
WYW180754	FEDERAL	WYW185379	41	12/1/2031	Indefinite with Lease Production
O-26749	STATE	WYW173409	662	2/1/2025	With Annual Payment
O-26749A	STATE	WYW173409	655	2/1/2025	With Annual Payment
WYW0321779	FEDERAL	WYW173409	741	12/1/2026	Indefinite with Lease Production
WYW151134	FEDERAL	WYW173409	2,146	5/1/2025	Indefinite with Lease Production
WYW172413	FEDERAL	WYW173409	4,295	12/1/2026	Indefinite with Lease Production
WYW172414	FEDERAL	WYW173409	997	12/1/2026	Indefinite with Lease Production
Leaseback WYW172692	FEDERAL	WYW173409	59	5/1/2025	Indefinite with Lease Production
Total			30,159		

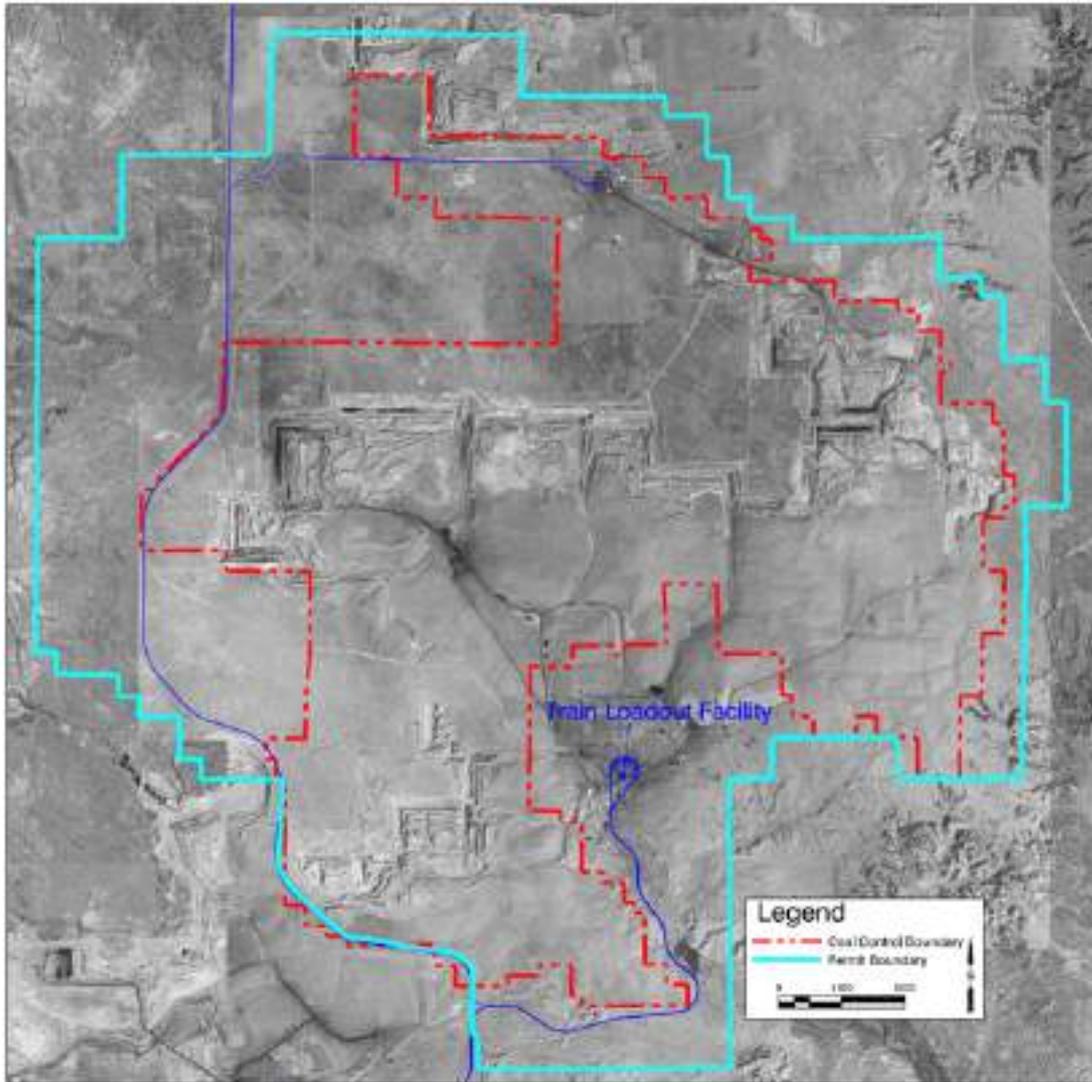


Figure 3-2. Coal Control Property Map

3.3. Comments from Qualified Person(s)

To the extent known to the QP, there are no other significant factors or risks that may affect access, the title of the rights, or the ability to perform work on the property.

4. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES

4.1. Physiography

NARM is physiographically part of the unglaciated Missouri Plateau section of the Great Plains Province. This part of the Great Plains Province is characterized by broad plateaus, which are dissected by incised stream valleys. In the western portion, the plateaus merge with the Powder River Basin and other broad regional downfolds, which are separated by major mountainous uplifts.

Surface elevations over the lease area range from 4,530 feet above Mean Sea Level (MSL) in the southern lease area to just over 5,000 feet in the eastern lease area.

The area consists entirely of native grasslands.

4.2. Access

NARM is located approximately 64 miles south of Gillette, Wyoming, 26 miles southeast of Wright, Wyoming and 69 miles north of Douglas, Wyoming.

From Gillette, Wyoming, take Highway 59 south for 45 miles passing the town of Wright, WY. Turn left onto Edwards Road for 6.7 miles and then turn right on Antelope Road for 7.8 miles until reaching the NARM access road where you will turn left to get to the mine. A map illustrating directions is shown in Figure 4-1.

The area is currently served by the BNSF or BNSF/UP Joint Railroad. NARM accesses the domestic market through BNSF/UP joint line which is a 103-mile long subdivision of double, triple, and quadruple track segments.

There are two regional airports nearby. The Northeast Wyoming Regional Airport (GCC) in Gillette, Wyoming, which is 70 miles to the north/northwest of NARM, and the Casper/Natrona County International Airport (CPR) in Casper, Wyoming, which is 115 miles to the southwest of NARM. The airports provide both commercial airline service as well as general aviation needs for the northwest and central portions of the state.

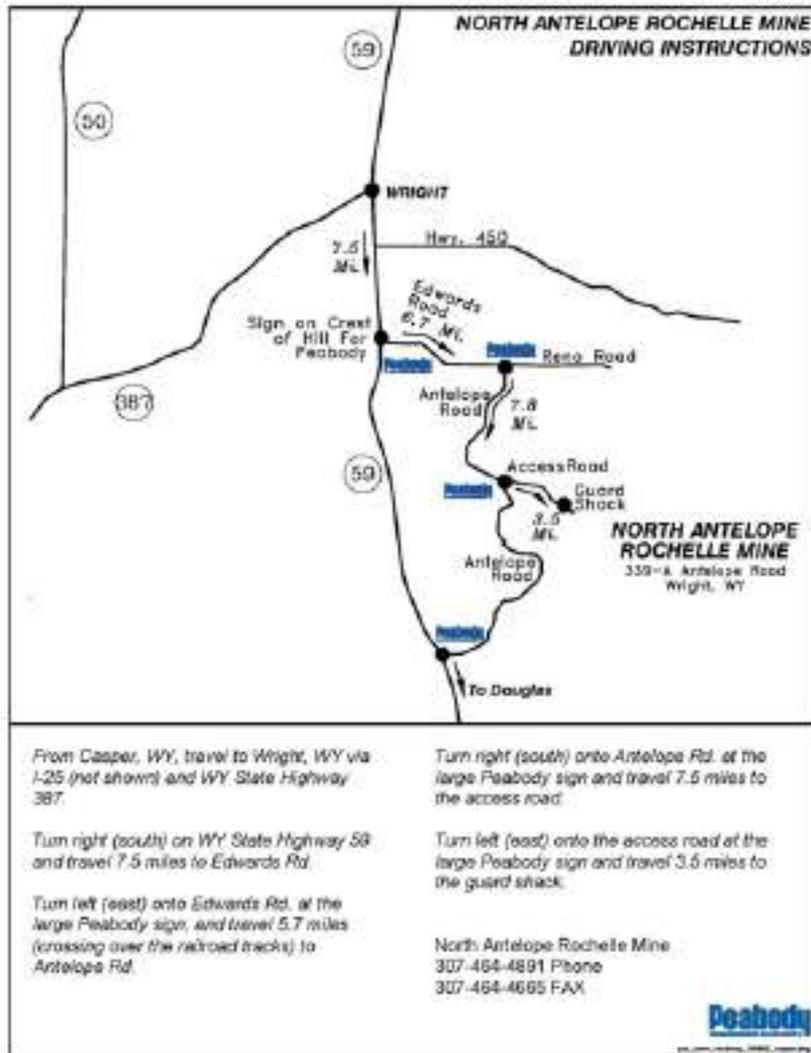


Figure 4-1. Access Map

4.3. Climate

The climate is semi-arid and can have large annual temperature fluctuations. The average monthly low temperature is 14 degrees in December and January while the average monthly high is 87 degrees in July. All temperatures are in Fahrenheit. The average rainfall is 17 inches per year, with 59 inches occurring as snow. Monthly average temperature and precipitation data are listed in Tables 4-1 and 4-2. The climatic conditions of the region generally allow for all-season operation of the mines with allowances for time lost due to impacts of typical seasonal precipitation events.

Table 4-1. Monthly Temperature (Source: US Climate Data)

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Max (degF)	37	39	48	57	67	77	87	86	74	60	45	35	59
Daily Min (degF)	14	16	23	31	40	49	56	55	44	33	22	14	33

Table 4-2. Monthly Precipitation (source: US Climate Data)

Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Rainfall (inch)	0.5	0.6	1.1	1.9	3.2	2.6	1.8	1.3	1.4	1.5	0.7	0.6	17
Snowfall (inch)	7	8	11	10	2	0	0	0	1	4	7	9	59

4.4. Available Infrastructure, Water, Electricity, and Personnel

The town of Gillette is 64 miles to the north/northwest of NARM with a population of approximately 30,000. Gillette has many amenities such as parks, recreation, and stores. The standard of living is above average. The town of Douglas is 69 miles to the south of Gillette and has a population of 6,000. The vast majority of the labor force works in the mineral extraction industry: oil, gas, uranium, and coal.

Coal mining operations have been established in this area for many decades and the infrastructure including roads, railroads, powerlines, is well developed. The Gillette area is home to the largest surface coal mines in the United States, so there is a large pool of highly trained personnel available to work. All major equipment and material suppliers have established warehouse and maintenance facilities in the area to support these mining operations.

Transmission lines and Teckla substation are located in NENE of Section 3, T41NR71W. The substation supplies power to NARM. There are adequate water resources in the area to supply the mine. Details are further described in section 13.2.2.

4.5. Comments from Qualified Person(s)

It is the QP’s opinion that the local resources and infrastructures are well developed from historic coal mining activity and developments in the region. These are sufficient to support the operation and the reserve estimates.

5. HISTORY

5.1. Prior Ownership

The North Antelope Rochelle Mine (NARM) began as two separate mines: North Antelope Mine (1983) and Rochelle Mine (1985). Originally the North Antelope mine was a joint venture between Powder River Coal Company (PRCC), a subsidiary of Peabody Holding Company Inc., and a subsidiary of Arkansas Power & Light. The Rochelle mine originated as a joint venture with Panhandle Eastern and was being considered for a coal gasification project site, but ultimately became independently owned and operated by PRCC. Rochelle, located on the east, and North Antelope, located on the west, were operated separately until 1998. At which time Peabody acquired full rights to the North Antelope mine and merged the two mines into NARM.

5.2. Exploration, Development, and Production History

Nearly all exploration and development work has been done by Peabody. Non-Peabody data sources include oil and gas wells taken from the Wyoming Oil and Gas Commission website. Data taken off of geophysical logs is used to in-fill structural data in areas where existing drilling is wider spaced (generally >2000 ft). In addition, there are approximately 50 drill holes acquired from the West Roundup lease acquisition (WYW151134). The drilling was done under an exploration license nominated by Arch Resources before this lease was awarded to Peabody as the highest bidder. All drilling has been validated using the geophysical logs, driller’s logs, and coal quality lab reports.

Coal production started in 1985 and the annual production from NARM is as follows in Table 5-1.

Table 5-1. Historic Coal Production (Source: MSHA or Peabody)

Production Year	Coal Production (tons)	Production Year	Coal Production (tons)
1985	211,041	2004	82,471,922
1986	1,230,868	2005	82,688,918
1987	5,331,577	2006	88,527,969
1988	8,694,125	2007	91,523,280
1989	10,903,264	2008	97,578,499
1990	12,021,227	2009	98,279,377
1991	12,703,655	2010	105,755,685
1992	17,050,965	2011	109,064,323
1993	21,184,217	2012	107,639,188
1994	22,677,048	2013	111,005,549
1995	26,035,555	2014	117,965,515
1996	26,248,242	2015	109,343,913
1997	24,940,362	2016	92,863,811
1998	55,773,888	2017	101,595,323
1999	68,865,690	2018	98,315,794
2000	70,769,071	2019	85,340,711
2001	74,777,460	2020	66,111,840
2002	74,792,642	2021	62,886,477
2003	80,083,444		

6. GEOLOGICAL AND HYDROLOGICAL SETTING, MINERALIZATION, AND DEPOSIT

6.1. Geological Setting

6.1.1. Regional Geology

Powder River Basin is a major coal-bearing geologic structure underlying south-east Montana and north-east Wyoming, accounting for more than 40% of the country's coal reserves.

The Powder River Basin (PRB) was formed during Late Cretaceous to early Tertiary during tectonic uplift. In the Paleozoic and Mesozoic, the area began as a stable interior platform and was flooded by epicontinental seas. The coal beds in this basin formed 60 million years ago. Structurally, the basin is an asymmetrical syncline with steeply dipping to overturned beds on the western limb and gradual dipping beds of 3-5 degrees on the eastern flank. The basin occupies an area of 20,000 square miles that is 230 miles long and 100 miles wide running from southeastern Montana into northeastern Wyoming. It is bounded by mountains/hills on three sides: Big Horn Mountains on the west, the Black Hills on the east, and the Laramie Mountains on the south.

The landscape of the Powder River Basin consists of broad plains, low hills, and tablelands. Incised stream valleys create most of the topographic relief. The topography generally changes from open hills with 500 to 1000 feet of relief in the northern part of the basin to plains and tablelands with 300 to 500 feet of relief in the southern part. The Powder River Basin is bounded by the Platte River drainage basin to the south, the Yellowstone River in Montana to the north, the Big Horn Mountains on the west, and the Black Hills to the east. Vegetation is generally sage brush and grasses. Few trees exist due to the low rainfall and poor, undeveloped soils.

North Antelope Rochelle Mine (NARM) is located in the Gillette coalfield of the Powder River Basin. Wyodak-Anderson is the coal seam mined and is part of the Tongue River Member of the Paleocene Fort Union Formation.

A regional geologic stratigraphic column and geologic map are shown in Figure 6-1 (R.M. Flores and L.R. Bader, 1999) and Figure 6-2.

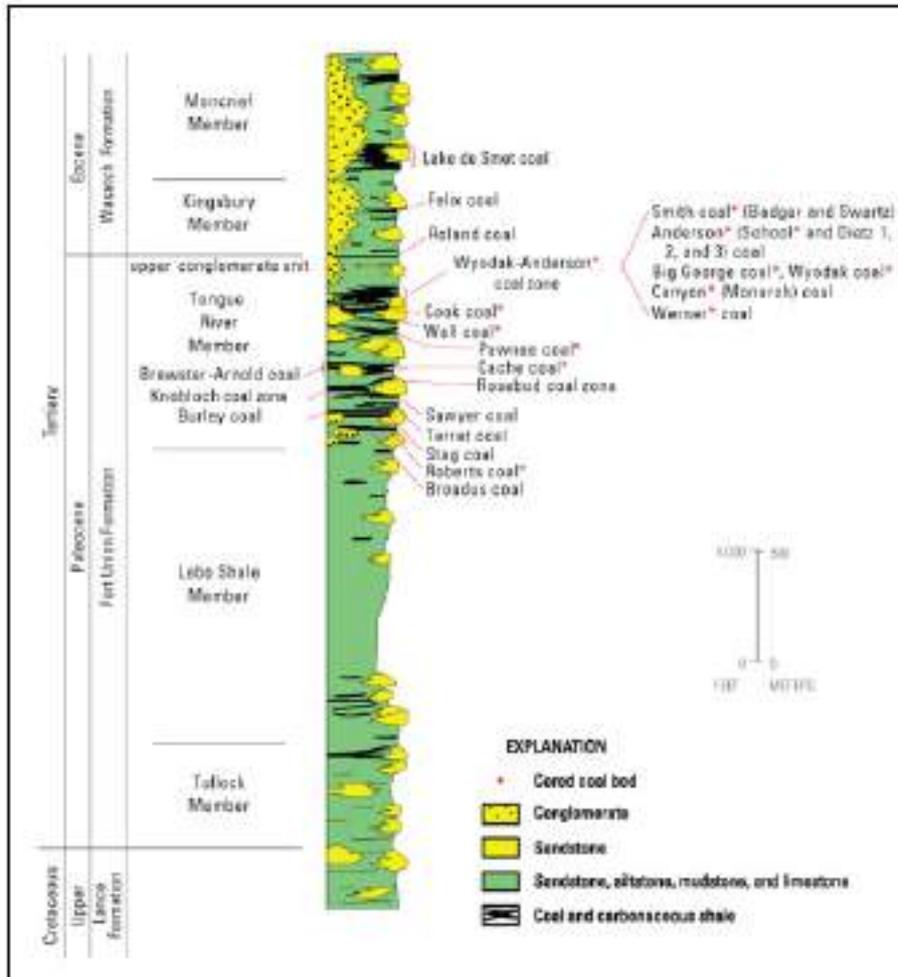


Figure 6-1. Geologic Stratigraphic Column

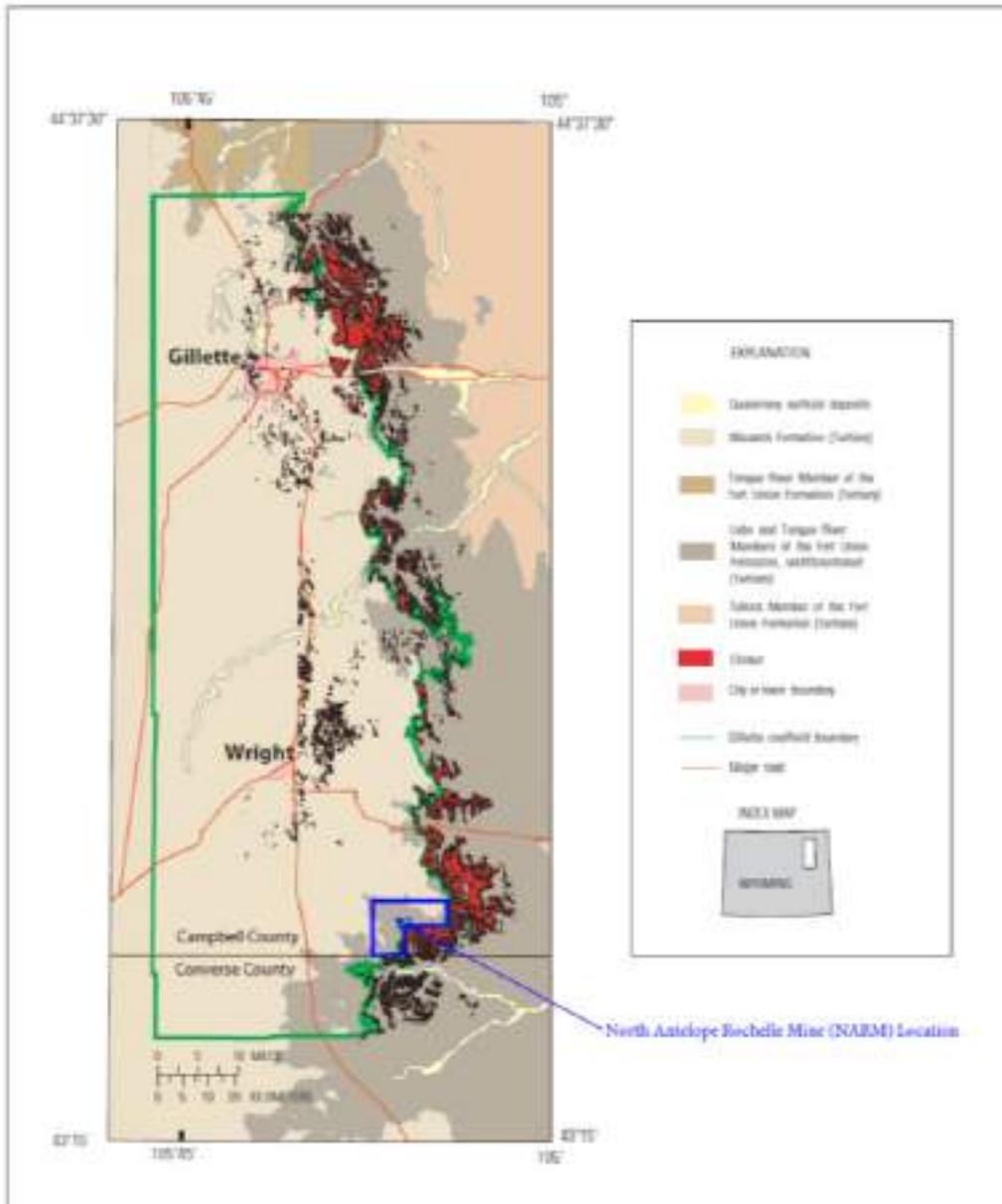


Figure 6-2. Regional Geologic Map

6.1.2. Local Geology

The Wasatch Formation and local Quaternary age deposits comprise all of the overburden lithologies at the mine site. The Wasatch consists of alternating, lenticular deposits of sandstones, siltstones, claystones, coal, and carbonaceous shales. Coal has been mined exclusively from the Wyodak-Anderson (WA) Seam. The remaining coal is 50-87 ft thick and 180 to 460 ft deep within the leased area. The WA seam is in the uppermost section of the Paleocene Fort Union Formation. The coal is thickest on the northwest side of the lease. There are two main geologic features at NARM. The first is a monocline that exists in a northwest to southeast trend over the middle portion of the mine. The lower 12-14 feet of the WA seam splits off as a hanger seam (Lower Wyodak-Anderson, or LWA) and has a steeply dipping gradient after it splits. The LWA seam is not mined because of poor quality and an increasingly high strip ratio. The mineable WA coal thickness averages 80 feet in the west and 60 feet east of the monocline. The second geologic feature is a ribbon split occurring in the southwest portion of the lease and trending northwest to the southeast. The WA splits into two nearly equally thick (30-35 ft) mineable seams: WA1 (upper split) and WA2 (lower split). The midburden between the WA1 and WA2 increases to a maximum of 120 ft thick. Structurally, the WA2 seam remains relatively flat, whereas the WA1 rides up over the parting and has a dipping structure. In conclusion, several thin rider seams (1-4 feet in thickness) occur within the overburden. They are quite consistent throughout the eastern portions of the lease but become more sporadic west of the splitline. The rider seams are not mined due to poor quality. The WA in the northern half and the WA1/WA2 in the southwest are the only seams mined at NARM. There are no known faults within the controlled coal area.

NARM is on the eastern flank of a regional syncline. The bedding inclination is gentle with dips less than three degrees toward the west. Because of the undulating character of the coal beds, there can be localized dips toward the east. Many of the coal beds in the Fort Union and Wasatch formations have been oxidized and burned along their outcrops producing clinker (locally referred to as the scoria). The clinker is the baked or thermally altered shale and sandstone in the strata overlying the burned-out coal bed.

Three representative drill hole geologic cross-sections within the remaining reserve areas at NARM are shown in Figures 6-3, 6-4, and 6-5. The locations of these cross-sections are shown on the Exploration Drill Hole Location Map (Figure 7-1).

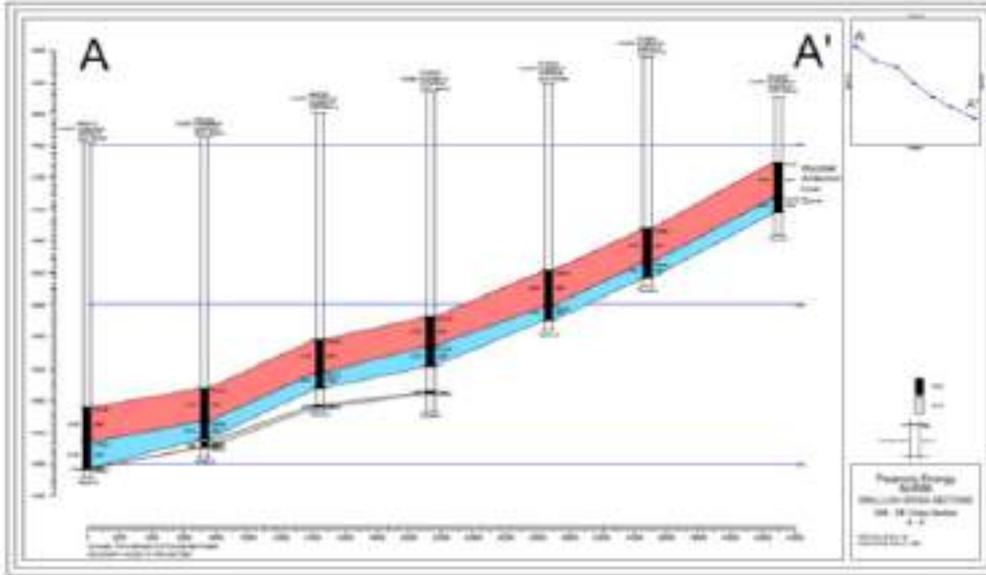


Figure 6-3. Northwest-Southeast Geologic Cross-Section

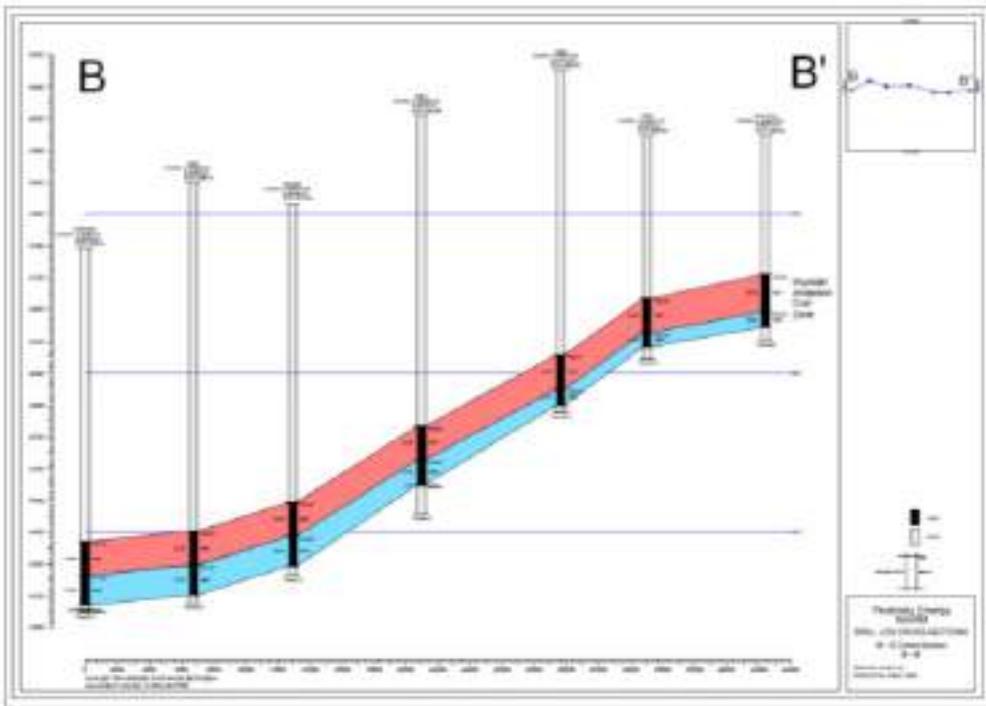


Figure 6-4. West-East Geologic Cross-Section

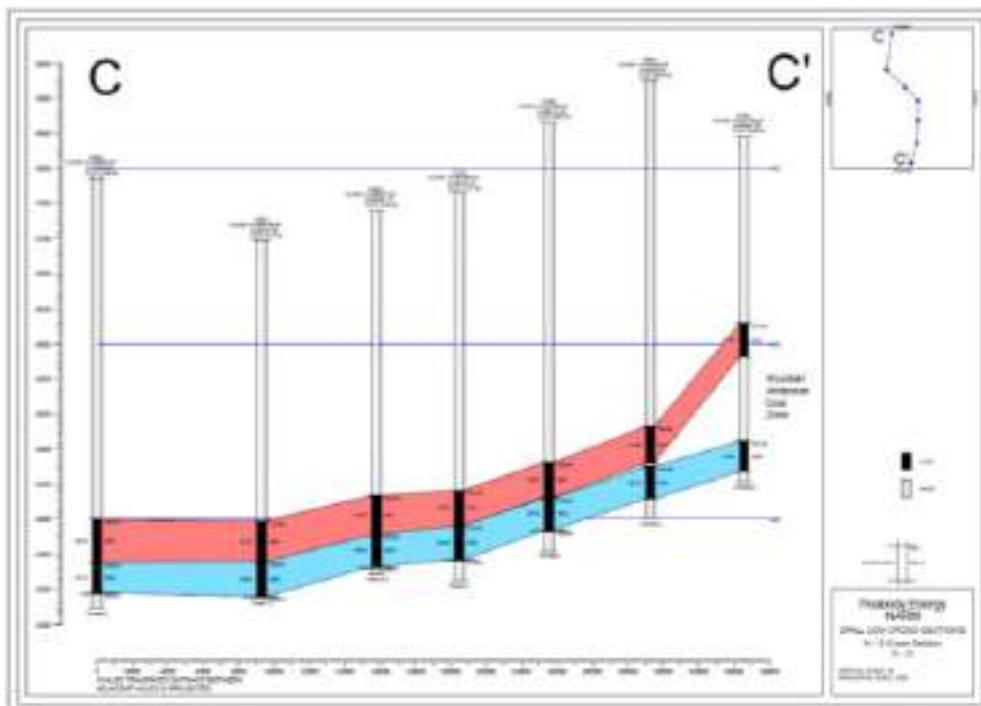


Figure 6-5. North-South Geologic Cross-Section

6.2. Hydrology Setting

6.2.1. Regional Hydrology

Regional aquifers of interest can be divided into three categories: deep aquifers (greater than approximately 3,000 feet), intermediate aquifers (approximately 300 to 3,000 feet deep), and shallow aquifers (less than about 300 feet deep, Commonwealth, 1978). The WA coal seam is the lowermost stratigraphic unit that will be disturbed at the mine. The WA coal in the west and northwest portions of the mine area is a confined aquifer underlain by relatively impermeable shales and siltstones (Deutsch et al. 1979). Aquifer tests performed for the mine on the Fort Union Formation sediments to about 100 feet beneath the Wyodak-Anderson coal indicate transmissivities on the order of 1.0 square foot per day. Therefore, intermediate and lower aquifers lying more than approximately 100 feet below the Wyodak-Anderson coal are isolated from mining by relatively impermeable rocks.

- Intermediate Aquifers

The intermediate aquifers unaffected by mining are the Fox Hills, Lance, and the lower Fort Union formations.

Fox Hills Sandstone. The Fox Hills Sandstone consists of fine-grained sandstones containing thin shale beds. In the Eastern Power River Basin, yields of up to 200 Gallon per Minute (GPM) have been reported possible in properly constructed wells (Commonwealth, 1978).

Lance Formation. The lance Formation consists of sandstone with interbedded shale. The Lance is 500 to 3,000 feet thick and yields can be as high as 1,000 GPM for fully penetrating wells. Reported specific capacities range from 0.4 to 1.7 GPM per foot drawdown (Commonwealth, 1978).

Lower Fort Union Formation. The lower Fort Union Formation is a very lenticular and low yield aquifer consisting of fine-grained sandstones interbedded with shales and coal. Well yields average from 2 to 5 GPM, although yields of up to 600 GPM are reported possible in wells completed in the Tullock member. Specific capacities near Gillette, Wyoming, range from 0.7 to 0.9 GPM per foot drawdown for this formation (Commonwealth, 1978).

- Shallow Aquifers

The shallow aquifers are the upper Fort Union Formation (including the Wyodak-Anderson coal) and the Wasatch Formation.

Wyodak-Anderson Coal. The main aquifer of the upper Fort Union is the Wyodak-Anderson coal seam, also locally referred to as the Roland coal seam. Ethridge et al. (1981) postulate that this extensive and thick coal seam originated in a paludal subsystem of the Powder River intermountain basinal fluvial system. The Wyodak-Anderson coal seam is itself a low yield unit. Typically, the primary permeability for coal is low and secondary permeability controls the flow of groundwater. Secondary permeability is dependent on fracturing and jointing in the coal, and the degree of fracturing and resulting permeability can vary greatly. Well yields in coal aquifers can range from zero in unfractured areas to greater than 100 GPM in highly fractured areas (Hodson, et al., 1973). The Porcupine Creek lineament (Denson, et al., 1978) is inferred to be a fracture system along Porcupine Creek Valley. Coal seam hydraulic conductivity is higher in the area north of Porcupine Creek and Knapp Draw. In the fracture zone, the coal is classified as an aquifer. However, there are no stock or domestic wells completed in the coal in and adjacent to the permit area. Outside the fracture zone, the coal often does not yield enough water to be classified as an aquifer.

The coal seam is relatively dry and unfractured throughout the middle and eastern portion of the permit area due to the relatively high elevation of the unit. Hydraulic conductivities are usually less than 0.1 ft./day and saturated thickness averages 18 feet for the east pit area. The coal seam is highly fractured north and west of the permit area. Hydraulic conductivities in the fractured coal average 7.2 ft/day. The saturated thickness increases to the west as the coal seam dips below the regional water level. Artesian conditions exist within a few miles of the outcrop.

Wasatch Formation. The Wasatch Formation is laterally and vertically varied, with sequences of sandstone, siltstone, and claystone, with minor riders of coal and carbonaceous clay. The strata immediately above the coal seams are especially fine grained and are effective aquitards. This aquitard sequence above the coal causes the Wasatch to be perched in some zones. The formation varies in thickness within the mine plan area, ranging from zero thickness at the outcrop to 300 feet at the western and northern edge of the area.

The overburden is considered to be low yielding. Measured hydraulic conductivity values for the overburden range from 0.001 to 0.46 ft/day. A value of 0.1 ft/day was used in the groundwater model. Water in the overburden is usually perched and of limited regional extent. There are few water supply wells in the Wasatch Formation within or adjacent to the mine plan area.

In some areas near the coal outcrops, the Wasatch Formation and the underlying Fort Union Formation have been baked and fused into porcelainite or "clinker". The geologic maps in the Figure 6-2. show the extent of this material. In most areas of the mine, the clinker is dry. Along the eastern outcrop, the clinker may contain 10 to 15 feet of water. Hydraulic conductivities range from 55 to 130 ft/day for scoria along this eastern outcrop. In this area, clinker is an aquifer.

Upper Fort Union Formation. The Fort Union Formation is very similar to the overlying Wasatch Formation. The Fort Union consists of lenticular sandstones with interbedded units of claystones and siltstones. Vertical permeabilities in the sequence are very low and hydrologic communication between the lenticular sands is minimal. The Fort Union is considered to be a low-yielding unit (Breckenridge, et al. 1974), similar to the Wasatch formation. An underburden hydraulic conductivity value of 0.1 ft/day was used in the groundwater model. Median hydraulic conductivity of the underburden is 0.06 ft/day.

6.2.2. Local Hydrology

NARM lies principally at the divide between the Antelope Creek and Little Thunder Creek drainages. To the west is the Porcupine Creek drainage and to the east is Beckwith Creek with both streams' tributary to Antelope Creek. The northern portion of the area is drained by School and Trussler Creeks, which are tributary to Little Thunder Creek. The permit area is wholly within the Cheyenne River basin.

Differential erosion of rocks of varying hardness and resistance is the main process active in forming the present landscape. The sediments of the Wasatch and Fort Union Formations tend to be easily eroded while the clinker tends to be extremely resistant. Many reaches of streams within and adjacent to the permit area are too incised to support a high groundwater table. Gully formation is active in many stream reaches. Sheet and rill erosion are active geomorphic processes in the upper drainage basins. Mass wasting is not a major geomorphic agent in the area.

Overlying the Wasatch Formation at the mine site are Quaternary deposits consisting of relatively thin alluvium along valley bottoms. The alluvium thickens to over 40 feet in Antelope Creek, as much as 40 feet in reaches of Porcupine Creek (North Antelope Coal Company, 1979), and over 25 feet in School and Beckwith Creeks. Elsewhere, tributaries to these larger streams have thinner accumulations of alluvium, usually 5 to 10 feet.

In summary, the overburden, coal, and clinker are relatively dry throughout much of the central and eastern parts of the permit area. The initial Rochelle pit opened in a dry area. North Antelope's pit was relatively wet. The coal reaches artesian conditions (e.g. the aquifer is saturated to the top of the seam) to the west within two miles of the original pit. To the east, the coal and the overburden stay relatively dry with several dry zones in the coal caused by ridges in the coal seam. Away from these ridges in the coal, the average saturated thickness in the coal is less than five feet. The saturated thickness in the coal seam is thicker near the coal outcrop.

To the west, water yield from the coal seam is controlled primarily by the amount of fracturing in the coal, and the degree of fracturing and resulting increased permeability can vary greatly. Fracturing in the coal parallels Porcupine Creek, starting at Payne Draw and proceeding northwest to the edge of the permit area. In zones of highly fractured coal, water yields are high and there is enough water to allow the coal to be classified as an aquifer. Outside the fracture zone, the coal often does not yield enough water to be classified as an aquifer.

The underburden tends to be under artesian conditions for most of the area. The only exceptions are in the northeast area and some other parts of the eastern portion of the mine (e.g. Section 2, 11, and 12 of T41N, 70W) where the potentiometric surface of the underburden may be well below the bottom of coal.

6.3. Mineralization and Deposit Type

The mined coal at NARM is high volatile sub-bituminous C as defined by ASTM coal rank. The coal seam has very low sulfur content and is marketable as thermal coal for power generation. The heating value of the coal seams ranges from 8400 to 9250 BTU per pound over the remaining project area and the heating content generally increases with increasing depth.

The area is categorized as having low geologic complexity based on the following factors:

The Wyodak-Anderson (WA) seam is laterally continuous and can be correlated using geophysical logs across large distances with high confidence.

The seam is generally flat-lying and gently dipping towards the west with minor undulations. The depth of cover to the WA seam is generally shallow from the outcrop along the east to a maximum of 450 ft and averaging 320 ft for the remainder of the reserve.

There are no major geologic anomalies across the area except for two well-defined seam split areas: a ribbon split in the southwest and a monocline with a hanger seam toward the east.

The WA seam is currently mined across most of Campbell County and the northern portion of Converse County.

Local quality variations are small and regional quality trends have been established from a long mining history.

6.4. Comments from Qualified Person(s)

In the opinion of the QP, for both regional and local geology, the structural controls on mineralization are well studied and understood from decades of exploration and mining activities over the area. It is sufficient to support the estimation of coal reserves.

7. EXPLORATION

7.1. Coordinate System

The coordinate system is based on the North American Datum 1927 (NAD27), Wyoming East Zone (WYE), Transverse Mercator Projection. Base stations are set up and Trimble GPS system is used for surveying.

7.2. Geological Structure Mapping and Quality Sampling

The mine surveys the coal roof and floor elevations routinely throughout the coal mining process. The surveyed coal roof elevations are used as additional structural control in the geological model. The surveyed coal floor elevations are not used to model the structure floor because of the difficulty in measuring the true coal seam floor, which includes filling in areas after mining the coal to prevent soft/soggy areas and smoothing the surface for equipment to operate.

Areas within the East Pit can have a 2-3 feet high ash (>30%) gradational bottom coal contact that is extremely difficult to see in the pit. To meet quality specifications, the bottom coal contact is not mined and not included in the mineable coal model. Historically the blast holes have been geophysically logged with density and gamma curves used to determine the depth and thickness of the lower contact. Structural data from these logs has been added to the drilling database. Geophysically logged blast holes are done whenever there is a structural fluctuation, such as in the southwest WA1/WA2 split seam area, or where there are gradational bottom contacts. Currently, there are 1,431 in-pit geophysical logging locations. While these are being used in the structural model, the mine is progressing away from the gradational contacts in the east and there continues to be less influence.

Coal cuttings may be sampled from the in-pit blast holes and analyzed to obtain additional quality data in areas with localized quality variability. Because the blast hole rigs drill with air, moisture and heating value are affected and cannot be used. The qualities that can be used are any of the mineral analysis of ash and sulfur. Sodium is one of the main parameters tested since it can be elevated and have higher variability on the eastern side of the reserve. These results are not used in the geological model, but do provide better fine tuning in between existing cores for quality blending purposes. There are a total of 322 sample locations.

Aerial topographic surveys, including Lidar mapping and Orthoimagery, are conducted each month. The survey covers all active mining areas. A larger extent aerial survey was conducted in June 2016, which can be merged with the monthly aerial surveys to cover the entire lease area.

7.3. Drilling

Exploration at NARM began in the late 1960s. The on lease exploration programs are completed annually. The amount and type of holes drilled varies and is dependent upon mine plan changes, structural/quality variability, and drillhole spacing. On average over the prior five years, 15 to 45 cores have been drilled annually, which averages to 25 cores per year. The cores are standard 3 inches in diameter and are spaced 800 to 1500 feet apart. This spacing allows the mine to meet short-term mine planning as well as quality blending requirements.

An expansive exploration database has been maintained to include all of the explorations since the start. As of 12/31/2021, there are 4,778 total drill holes within the coal controlled area. This includes exploration holes as well as oil and gas wells. The total drilling depth for all holes is 1,245,206 feet, averaging 261 feet per drill hole. There are three main types of exploration drill holes: bore holes

(rotary) holes, coal cored drill holes, and geotechnical (overburden and coal cored) drill holes. The drill hole summary and locations are shown in Tables 7-1, 7-2 and Figure 7-1 respectively.

Bore holes are used for areas where additional structural delineation is needed such as burn-lines, split-lines, or sand channels. The rotary holes are drilled using a 5 ¾ inch bit with air or water as a circulation medium. No samples are collected for quality analysis. Cuttings are analyzed at 5 foot intervals and may be collected for overburden suitability analysis. They are geophysically logged for caliper, density, natural gamma, and resistivity with final surveyed location and elevation. The database contains 2,672 rotary drill holes as of 12/31/2021.

Core holes are drilled for coal quality and also provide structure information. They are rotary drilled through the overburden to a designated core depth just above coal. The coal is extracted using a 15 ft split tube core barrel and are 3-inch diameter. The cores are described, logged, bagged, and labeled at each interval and delivered to the coal quality lab on site for analytical testing. Analytical, or quality testing is explained in more detail in section 8. The core holes are geophysically logged, similar to the bore holes with a final survey for location and elevation. The database contains 1,974 core drill holes as of 12/31/2021.

Geotechnical holes are cored for overburden and coal. They are drilled similar to the core holes mentioned above, but also include a designated amount of overburden cored above the coal seam. The overburden core is analyzed for rock strength properties and provides information for highwall stability analysis. The overburden rock mechanic testing is described in more detail in section 8. All geotechnical holes are geophysically logged and have final survey for location and elevation. The database contains 59 geotechnical drill holes as of 12/31/2021.

Additional structure data has been taken from historic oil and gas well logs which are publicly available from the Wyoming Oil and Gas Conservation Commission. Only locations with geophysical logs are used. They provide additional structure control in areas further out and where drilling has wider spacing. There are currently 73 locations used within the leased area.

The data collected for each exploration hole is linked in the GeoCore system, and can include the geologist's log, and/or driller's log, geophysical log and las files, core photos, lab instructions (quality, overburden, and/or rock mechanics), lab certificates, and final surveyed coordinates.

Table 7-1. Summary of Drill Hole Types within Coal Controlled Area

Hole Type	Purpose:		Number of Holes
	Structure	Quality	
Bore (Rotary Drilled)	X		2,672
Bore (Oil and Gas Wells)	X		73
Coal Cored	X	X	1,974
Geotech (Overburden and Coal Cored)	X	X	59
			4,778

Table 7-2. Summary of Drill Holes by Depth and Thickness within Coal Controlled Area

Seam	Number of Holes	Depth to Seam Top (feet)			Seam Thickness (feet)		
		Min	Max	Average	Min	Max	Average
WA*	4,778	10	460	167	0.5	86.7	62.0

*Includes WA1 + WA2

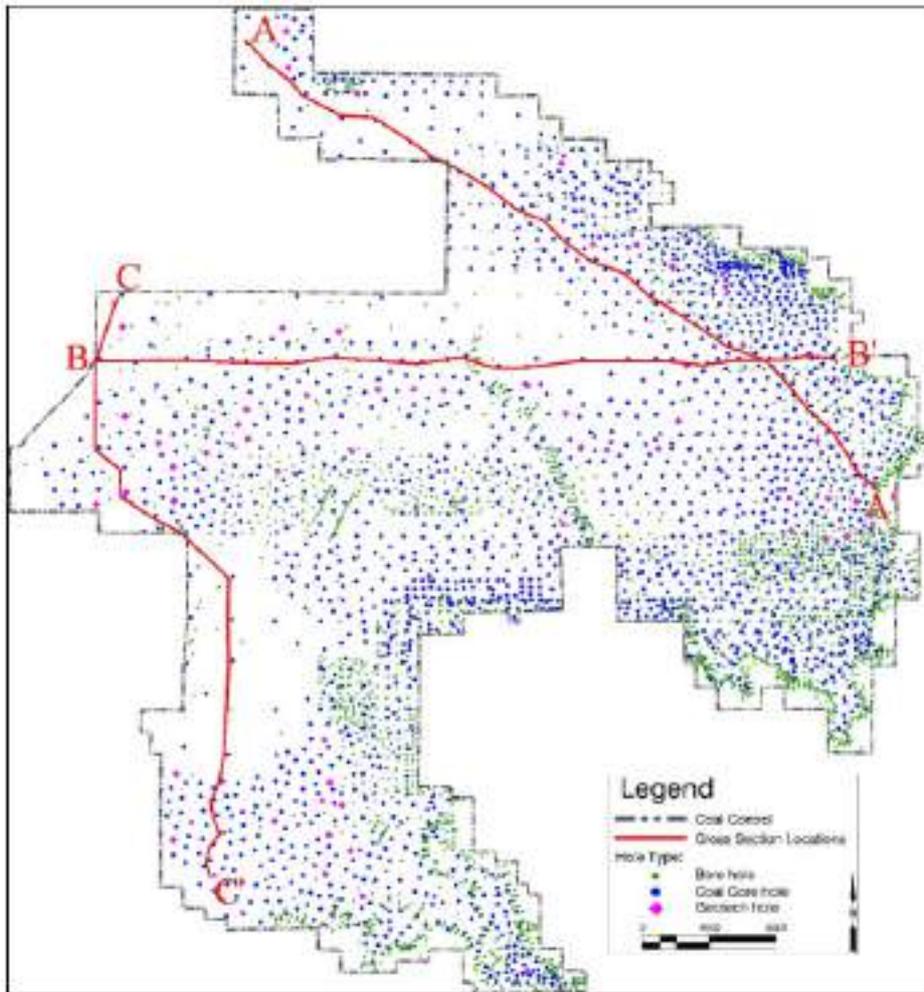


Figure 7-1. Exploration Drill Hole Location Map

7.3.1. Recovery

The coal core recovery will almost always be 90% or more. If recovery is less than than 80%, the location will be offset and redrilled. A hole can be moved a maximum of two hundred feet from it's

permitted location. Some localized areas in the northwest portion of the lease are highly fractured from coal bed methane wells. Coal recovery can be difficult or even impossible. If coal recovery is less than 75%, the hole may be used only for structure when it has a full depth geophysical log.

Final drill hole elevations are surveyed using GPS equipment and a coordinate system as described in 7.1. Due to the shallowness of drilling depth, the down hole deviation surveys are not necessary.

7.4. Geotechnical Data

A comprehensive rock mechanics testing program has been established at NARM. There are currently 59 geotechnical overburden cored locations completed as of December 31, 2021. These holes are spaced across the property to provide a comprehensive representation over the entire area. The rock testing program is designed to obtain the rock strength parameters for all major rock types encountered at NARM and the results are used for highwall stability analysis. The results from this testing program show that lithology at NARM can be grouped into two broad classes from a strength standpoint: clays and sands. The clays include such rocks as lean clay, clayey-sandstone, clayey-siltstone and claystone, whereas the sands include siltstone, silty-claystone, sandy siltstone, and sandstone. The most important rock mechanic properties obtained from these two lithology groups for stability analysis are summarized in Table 7-3 below. Further explanation of the sampling and testing procedures is included in Section 8.2.2.

Table 7-3. Summary of Average Rock Properties

Rock Properties	Clay/Mudstone		Sand	
	No. of samples	Average Value	No. of samples	Average Value
Uniaxial compressive strength, psi	283	510	122	1616
Peak cohesion, psi	143	120.2	51	141.9
Residual cohesion, psi	127	30.8	48	33
Peak friction angle, degrees	143	24.76	51	27.24
Residual friction angle, degrees	125	27.66	48	31
Wet unit weight, lb/ft ³	276	121.2	120	126.4
Young's modulus, psi	256	24015	121	66922

7.5. Hydrogeology

All hydrology samples were collected by experienced personnel using standard practices. Groundwater and surface water samples are collected using techniques described in the U.S. Geological Surveys National Field Manual for the Collection of Water Quality Data and Techniques of Water-Resources Investigation Reports. Sample analysis is completed by certified laboratories utilizing methods that conform to the test procedures required under 40CFR Part 136.

NARM has implemented and maintained an extensive groundwater monitoring network within and around the permit area. The monitoring network and sampling program was established in accordance with the requirements of the Department of Environmental Quality Land Quality Division regulations. The network consists of monitor wells, piezometers, springs, and flowing livestock water wells. Locations are described using state plane coordinates as well as the U.S. Geological survey designation. All monitoring wells were constructed using poly-vinyl chloride (PVC) or steel pipe.

Monitoring wells were installed using an air-rotary drill rig. A gravel/sand pack was used. The perforation zone was isolated by placing a layer of bentonite above and below this zone, and the top of the casing was cemented in place to keep water from going down the outside of the casing. Water quantity and depths are recorded and mapped from the exploration drill holes. The GPM (gallons per minute) is measured using a standard bucket test at the bottom of the water-bearing zone. Sand bodies are mapped to determine potential areas with higher water-bearing capacities.

Hydrologic properties of the strata have been measured at monitoring wells within and adjacent to the permit area. Measurements were conducted using insitu pump and slug test methods instead of laboratory tests which can be strongly influenced by the representativeness of the core sample and the small sample scale. Several hundred measurements of hydraulic conductivity have been made at wells within and adjacent to the permit area. Additional discussion of the hydrologic properties of the strata are provided in Section 6.2 Hydrologic Setting.

7.6. Comments from Qualified Person(s)

The existing exploration program has been validated through historic production and extensive aerial extent of the basin. It is the opinion of the Qualified Person that the existing exploration program is adequate to support future operation and the estimates of coal resource and reserve.

8. SAMPLE PREPARATION, ANALYSES, AND SECURITY

8.1. Sampling Method

8.1.1. Sampling for Coal Quality

Coal quality sampling follows a standard operating procedure (SOP), also known as: 'Coring Guidelines and Procedures' established internally for NARM. The details are as follows:

- Pick core point approximately 1 to 5 feet above the targeted coal seam and core approximately 2 to 4 feet below the coal seam. (Holes should be reamed at a minimum of 8-10 feet below the lowest coal seam to allow for complete geophysical logging).
- For each coal seam to be cored, the following general specifications are to be followed.
- Hard, clean coal is benched separately from portions that may contain carbonaceous clay stringers, which are generally on the top or bottom, called gradational contacts. In general, the top and bottom 2 feet are benched separately from the main seam, however, if clay stringers, etc. are present, they will determine the top and bottom bench breakouts.
 - i. In-seam partings (non-coal) of 0.5 feet or less in thickness are to be included with the lower coal sample if: the coal bench above the parting is at least twice the thickness of the parting, and the coal bench below the parting is at least twice the thickness of the parting.
 - ii. Partings greater than 0.5 feet but less than 3 feet in thickness are benched separately (if analyzed). Never combine coal above and below a separable parting into a single sample.
 - iii. Whenever core loss is greater than 4 feet, the hole must be re-drilled at the driller's expense. Only when the in-place coal is so highly fractured that recovery is impossible will any additional core loss be permissible. Additionally, if core loss occurs at a critical point, such as parting or top/bottom of the seam, re-drilling the hole will be required.
 - iv. The company may require exceptions to the specifications stated above. In any event, if core thickness measurements are questionable due to core loss, or if there is uncertainty as to what should be included in a sample, follow the rule, "When in doubt bag each bench and/or parting separately".
- All coring procedures will be conducted to minimize contamination of coal, parting, and bottom contact material. Samples are double bagged, boxed, labeled, and stored in a controlled temperature area out of direct sunlight. Cores are prepped as soon as possible to maintain sample integrity. All pertinent information will be clearly marked on both the sample bag as well as the core box.
- Documentation of estimated depth and thickness of core loss is to be included with any sample that may be analyzed.
- The lab must crush, prepare and sample all cores according to ASTM D2013 within 30 days to prevent moisture loss and BTU degradation.

8.1.2. Sampling from Production

NARM collects samples from train loadout and conveyance system daily to support blending and shipment decisions. Samples are delivered to the on-site ASTM lab contracted out to Standard Laboratories.

8.1.3. Sampling for Rock Mechanics

A continuous overburden core sample over the entire depth of the dragline bench is taken. The core is logged, photographed, and boxed in 2 ft increments (or at natural breaks within the 2 ft interval). Samples to test must be twice the diameter of the core (or 6 inches minimum) to perform geotechnical analysis. A detailed list of which samples and tests to run is provided to the lab for analysis.

8.2. Laboratory Analyses

8.2.1. Coal Quality Analysis

All coal samples collected at NARM are tested on a raw basis. No washability or float/sink analysis is required because everything is sold on a ROM basis. The test parameters, considered most important for the customers, are included in the short proximate analysis and the details are included in Table 8-1. The mineral analysis of the ash in coal is useful for customers to understand the ash and slag in the combustion process. The summary is included in Table 8-2.

Table 8-1. Summary of Short Proximate Analysis

Proximate Analysis	ASTM Standard	Average	# of Samples
Total Moisture, %	D3302/D3173	28.4	1890
Dry Ash, %	D3174	5.8	1970
Dry Sulfur, %	D4239	0.29	1956
Gross Calorific Value, BTU/lb	D5865	12114	1948
Dry Fixed Carbon, %	D3172	50.6	1810
Dry Volatile Matter, %	D7582	43.6	1810

Approximately 20-30% of exploration cores are selected and composited into one sample for additional quality analysis. These have full suite of trace, ultimate analysis, ash fusion, and mineral analysis of ash analyzed. The results of the trace elements are summarized in Tables 8.2 and 8-3.

Table 8-2. Summary of Mineral Ash Analysis on Composited Seam

Mineral Analysis of Ash (%)	ASTM Standard	Average	# of Samples
Aluminum Oxide, Al ₂ O ₃	D6349	16.1	763
Barium Oxide, BaO	D6349	0.7	754
Calcium Oxide, CaO	D6349	25.1	835
Ferric Oxide, Fe ₂ O ₃	D6349	5.8	761
Potassium Oxide, K ₂ O	D6349	0.25	850
Magnesium Oxide, MgO	D6349	6.1	770
Manganese Dioxide, MnO ₂	D6349	0.02	713
Sodium Oxide, Na ₂ O	D6349	1.9	854
Phosphate Pentoxide, P ₂ O ₅	D6349	1.2	770
Silicon Dioxide, SiO ₂	D6349	30.6	762
Sulfur Trioxide, SO ₃	D6349	9.7	854
Strontium Oxide, SrO	D6349	0.3	755
Titanium Dioxide, TiO ₂	D6349	1.4	729

Table 8-3. Summary of Trace Element Analysis on Composited Seam

Trace Element Analysis, Dry Basis	ASTM Standard	Average (ppm)	# of Samples
Antimony (Sb)	D6357	0.1	143
Arsenic (As)	D6357	0.9	566
Barium (Ba)	D6357/D6349	310	457
Beryllium (Be)	D6357	0.2	612
Boron (B)	D3684 mod ICP	34	609
Bromine (Br)	D5987	1.1	78
Cadmium (Cd)	D6357	0.16	611
Chlorine (Cl)	D6721	13	266
Chromium (Cr)	D6357	3.2	613
Cobalt (Co)	D6357	1.9	447
Copper (Cu)	D6357	10	611
Fluorine (F)	D5987/D3761	67	612
Germanium (Ge)	D6357	<1	80
Lead (Pb)	D6357	2.4	613
Lithium (Li)	D6357	2.3	612
Manganese (Mn)	D6357/D6349	6.8	565
Mercury (Hg)	D6722	0.06	631
Molybdenum (Mo)	D6357	1.5	457
Nickel (Ni)	D6357	2.6	613
Selenium (Se)	D4606	0.5	165
Silver (Ag)	D6357	0.17	611
Strontium (Sr)	D6357	165	457
Thallium (Tl)	D6357	0.03	78
Tin (Sn)	D6357	0.8	322
Uranium (U)	D6357	0.4	181
Vanadium (V)	D6357	11.3	613
Zinc (Zn)	D6357	5.7	611
Zirconium (Zr)	D6357	12	327

8.2.2. Rock Mechanics Test

Overburden cores are completed within the dragline bench for strength and competency of the overburden material. A minimum core length of two times the diameter is necessary for testing. A full list of depths, thicknesses and rock types is created. From this, a representative final list is selected for testing which includes two to three samples from each general rock type. For NARM, there are generally three main rock types: Sandstone, Shale, Coal/Carb Shale. Tests ran include

- Uniaxial compressive strength (UCS) with Youngs modulus and Density,

- Direct Shear test,
- Multi-stage tri-axial strength test (with confining pressure of 250, 500, 1000, and 2000 psi),
- Axial and Diametrical point load test,
- Water content (moisture content)
- Atterberg Test

Rock Mechanic testing is done at American Engineering, Inc. in Gillette, WY.

8.2.3. Overburden Material Test

Overburden sample spacing is required at 1 per 160-acre section. Sampling is done at 5 feet increments for the top 100 feet and at 10 feet increments after 100 feet in depth to the top of the coal. The chemical analysis for overburden suitability includes: pH, Electrical Conductivity, Selenium (ppm), Nitrate (ppm), Total Carbon %, Total Organic Carbon %, Total Sulfur %, Acid/Base, Neutral Potential, and Acid/Base Potential.

Overburden samples are analyzed at Pace Analytical Lab in Sheridan, WY

8.2.4. Density Determination

Historically, NARM has done bulk density testing on random coal cores across the mine. These tests have confirmed an in-situ coal density of 1742 Tons per Acre Foot (TPAF). This density is accepted and used by the Bureau of Land Management (BLM) for the Resource Recovery and Protection Plan (R2P2) tonnage and recovery calculations.

8.2.5. Analytical Laboratories

Standard Laboratories Inc. conducts all coal quality analytical services and follows standards approved by the American Society for Testing and Material (ASTM 05.06).

NARM has one ASTM-certified laboratory located behind the loadout facility. This lab runs short proximate analysis and mineral analysis of ash on production samples and coal cores. All extended and trace analysis are sent to the offsite, commercial Standard Lab located in Casper, WY, which includes the monthly production samples and selected coal cores. Both labs follow quality control procedures and quality assurance programs established by ASTM standards. Additionally, Peabody periodically conducts internal lab audits.

8.3. Sample Security

Prepped coal core samples are retained at the lab for a period of time before disposal. Generally, this is six months to a year, or when all of the data has been validated by modeling and review and a list of composites has been completed. Since coal is a relatively low-value commodity in small amounts, there is no need for special security procedures in the shipping, handling, and storage of coal samples.

8.4. Comments from Qualified Person(s)

It is the opinion of the qualified person(s) responsible for this section that there are sound standards and procedures in place that are adequate for sample preparation, security, and analytical testing.

9. DATA VERIFICATION

9.1. Data Verification Procedures

Peabody's geological database allows users to validate data across all available sources. These include drill hole location and elevation, geophysical log interpretations, stratigraphic correlations, and laboratory analysis. The data validation tools are used as a robust process to verify historical and newly acquired data in both a systematic and efficient manner. The validation procedures include:

A final post drill survey is done for every hole. The collar elevation is validated against the existing topography grid and legal description is confirmed. Cross-sections with surrounding drill locations provide a visual confirmation of elevation.

Driller and geologist logs are reconciled with geophysical logs. If cored, depths are adjusted up or down to reconcile to the geophysical logs. Generally, the depth adjustment is small in the range from -2 feet to +2 feet.

Coal quality from the lab is compared to a synthetic quality report generated from the existing coal quality model. If the results look out of range the sample is retested by the lab for confirmation.

The data is visually inspected and reviewed by geologists and engineers in the form of lithological cross-sections and color contoured maps generated from the geological model and drilling database. This confirms the stratigraphic correlations and lab results.

9.2. Limitations

There are no limitations to note.

9.3. Comments from Qualified Person(s)

It is the opinion of the Qualified Person that the data represented in this report is sufficient and in good standing. There have been several checks and balances with comparisons from year to year and a justification of all changes from one year to the next.

10. COAL PROCESSING AND METALLURGICAL TESTING

NARM sells a ROM product. The ROM coal is crushed to certain sizes to meet customers' requirements.

10.1. Coal Processing and Analytical Procedures

There are no other processing and analytical procedures other than the ones described in section 8.

10.2. Analytical Laboratories

There are no other laboratories other than the ones described in section 8.2.5.

10.3. Recovery Estimates

Historically NARM sells all products as a Run of Mine (ROM) product. The reserves and mine plan assume no washing or processing losses.

10.4. Comments from Qualified Person(s)

It is the opinion of the Qualified Person that the data is adequate for the coal processing and the estimates of coal recovery are the general practice in the coal industry, especially in this coal basin. It is recommended to continue the current reconciliation.

11. COAL RESOURCE ESTIMATES

11.1. Introduction

The Qualified Persons, who are employees of Peabody Energy, performed and/ or supervised the data collection, validation, geological interpretation, production of the geological model, and resource estimation. All coal resource estimates in this section are converted to the coal reserves as stated in Section 12. There are no coal resources to be reported as exclusive of the coal reserves.

11.2. Geologic Model and Interpretation

The NARM geologic model consists of both a stratigraphic and coal quality model based on verified data from Peabody's geological database. It utilizes the Vulcan software in generating a gridded model. The mineable coal seam structural model is derived from both drill hole data and historic surveyed roof data.

NARM's mineable coal seam is the Wyodak-Anderson (WA) with a typical thickness from 60 to 80 feet. It is modeled using a benching method that matches the sampling procedures described in Section 8.1 and reflects historic mining practices. The modeled benching scheme is shown in Figure 11-1. The WA seam splits into WA1 and WA2 seams and is defined by a parting material with a thickness from zero to 120 feet.

NARM QUALITY BENCHING SCHEME by Area			
60-80 ft Seam			
Thickness	Quality Bench	Modelled Seam	Composited Seam
2 ft	WA1T	WA1	WA
15 ft	WA1		
15 ft			
15 ft			
15 ft	WA2	WA2	
15 ft			
15 ft			
2 ft	WA2B		
2 ft	WA21/WA3		

Figure 11-1. Quality Benching Scheme

The gridded model is generated with the following methods.

Table 11-1. Interpretation Method

Model Parameter	Interpretation method
Structure Roof and Floor Elevations	Triangulation
Structure Thickness	Inverse Distance
Coal Quality	Inverse Distance

The topo grid includes the virgin topo, generated from the pre-mining topography before mining as well as the collar elevations from the drilling.

A current topography is updated periodically using the latest flight digital elevation model (DEM) data.

The updated model is always verified before it can be used. The coal and burden quantities along with coal qualities are compared to the prior model. Only after all differences between the new and old models are justified and verified, can the model be used.

11.3. Resource Classification

The resource classification used for NARM encompasses the qualified person's confidence in the deposit. There were multiple factors used for the final analysis, including data quality, historic local and regional observations, operational history, as well as quantitative analysis.

Measured resource has the highest level of confidence for the estimated quantity and quality based on the geological evidence and sampling. A set of criteria (Table 11-3) on the degree of uncertainty is assessed and the low degree of uncertainty normally corresponds to the category of Measured resource.

Indicated resource has a lower level of confidence than the Measured resource, but a higher level of confidence than the Inferred resource. A set of criteria (Table 11-3) on the degree of uncertainty is assessed and the medium degree of uncertainty normally corresponds to the category of Indicated resource.

Inferred resource has the lowest level of confidence. A set of criteria (Table 11-3) on the degree of uncertainty is assessed and the high degree of uncertainty normally corresponds to the category of Inferred resource.

NARM has a long mining history with operations spanning many decades. Geology is well understood because of extensive exploration and mining activities. The understanding of seam splits, coal thickness and quality variations have been well established from the 19 miles of open mining faces, 33 square miles of mined-out areas, as well as extensive exploration data including oil and gas well information across the basin. This geologic knowledge, along with current active operations to the north and south substantiates geologic confidence within the current reserve area. Densely spaced boreholes have been drilled along burn-lines and geological complex seam split areas to define the areas of higher structural complexity. The uncertainty of unknown geologic features is well confined with a minimum area of impact to the overall deposit. Infill exploration drilling programs are completed each year to attain a tighter drill hole spacing averaging 1,000 to 1,500 feet. These exploration programs typically consist of 15 to 40 drill holes within three to five years ahead of projected mining areas and provide operations with a finer detail for short-term coal quality blending optimization. This has minimal if any effect on the deposit over the medium and long-term ranges.

Drill Hole Spacing Analysis (DHSA) is a quantitative analysis assessing the estimation precision from known points of observation. It intends to understand geologic uncertainty across the deposit. The generalized steps in the process are exploratory data analysis, domaining when necessary, variography, and deriving classification radii from global estimation precision. The precision tolerances of the estimation are evaluated for parameters of coal thickness and raw ash normally for an area equivalent to five to ten years of production. These precision tolerances, developed by Bertoli et al (2013), are 10%, 20%, 50% at a 95% confidence for Measured, Indicated, and Inferred respectively. Considering the long operating history and relatively simple geology, the classification radii from the DHSA are used as one of the main considerations for resource classification.

The highest variability derived from Drill Hole Spacing Analysis is 3370, 6390, and 15485 ft radii for the degree of uncertainty. Based on the QP's experience, the radii derived from DHSA may not be sufficient to delineate the split-line and monocline areas which are the important structures and can affect the resource estimates. It is recommended to use 1600 ft for measured, 3200 ft for indicated, and 6400 ft for inferred based on the observations from these geologic features. The drillhole radii used for the degree of uncertainty is shown in Table 11-2 and Figure 11-2 with the overall result used for the resource classification.

Table 11-2. Resource Classification Radii in feet from DHSA

Domain	Seam	Parameter	Measured	Indicated	Inferred
East	WA	Thickness	8,325	16,165	39,680
	WA	Raw Ash	4,830	9,175	22,195
West	WA	Thickness	4,305	8,290	20,300
	WA	Raw Ash	3,370	6,390	15,485
Overall	WA	Structural Features	1,600	3,200	6,400

Table 11-3. Degree of Uncertainty

Source	Degree of Uncertainty		
	Low	Medium	High
Exploration	No significant issues. Protocols consistent with industry standards.	Chip samples from blast holes used in the past, but none recently added to model. Minor impact on resource estimation due to being mined through and excluded from resource and reserve estimates.	
Sampling method	Standard operating procedure done companywide.	Northwest area can have highly fractured coal from CBM wells with lower coal core recovery compared to other areas. If <80%, data not used. Quality is extremely consistent over this area.	
Sample Prep/Analysis	On site, ASTM accredited and independent contracted lab - consistent with industry standards.	Increased uncertainty for older cores done at offsite lab based on length of time. Only affects BTU and moisture. Infilled with newer cores for comparison checks.	
Quality Assurance/Quality Control	Sample prep and analysis procedures follow ASTM and meet current industry standards. Monthly lab Round-Robbin data for checks and balances. Quality is retested to confirm anything that looks abnormal.		
Data Verification	Collar and survey are checked and corrected for minor inconsistencies. Holes with unresolved inconsistencies removed. Surveyed top of coal points used to confirm drillhole structure and further define currently mined areas with minor structural variations.		
Database	Location, geological and analytical data in the database verified to the QP's satisfaction. Unverified or questionable data inactivated and not used.		
Geologic Modeling	Model is reconciled to production for quantity and quality on an annual basis.		
Density	Random holes tested for bulk density across site. BLM approved. Additional confirmation from extensive geophysics. Minimal variation in density across site with low ash variability.		
Quantitative analysis (Drillhole Spacing Analysis)	Separate West and East domains due to monocline changes thickness. Ash is the main constraint from the Drillhole Spacing Analysis. Drillhole radii: East <4,830 ft West < 3,370 ft	Other quality has higher variability such as sodium and moisture. They are managed through blending. They are not limiting factors for the resources. Drillhole radii: East <9,175 ft West < 6,390 ft	Drillhole radii East <22,195 ft West < 15,485 ft
Other Classification Criteria	Based on the QP's experience, the radii derived from DHSA might not be sufficient to delineate the split-line and monocline areas which are the important structures that can affect the resource estimates. The drill hole spacing which confines those structure is: < 1,600 ft drillhole radii	< 3,200 ft drillhole radii	drillhole radii < 6,400 ft
Cut Off Criteria (Cut-off grade and metallurgic recovery)	The cutoff grade is not practical for this deposit since quality and thickness very consistent. Quality is managed through blending. Strip ratio increases gradually, but the existing pit lengths allows average mineable strip ratio.		
Mining Methods	Mature mining technology at existing operation.		
Costs	Long operating history with low cost variation.		
Prices	Well established market with large number of longtime customers.		

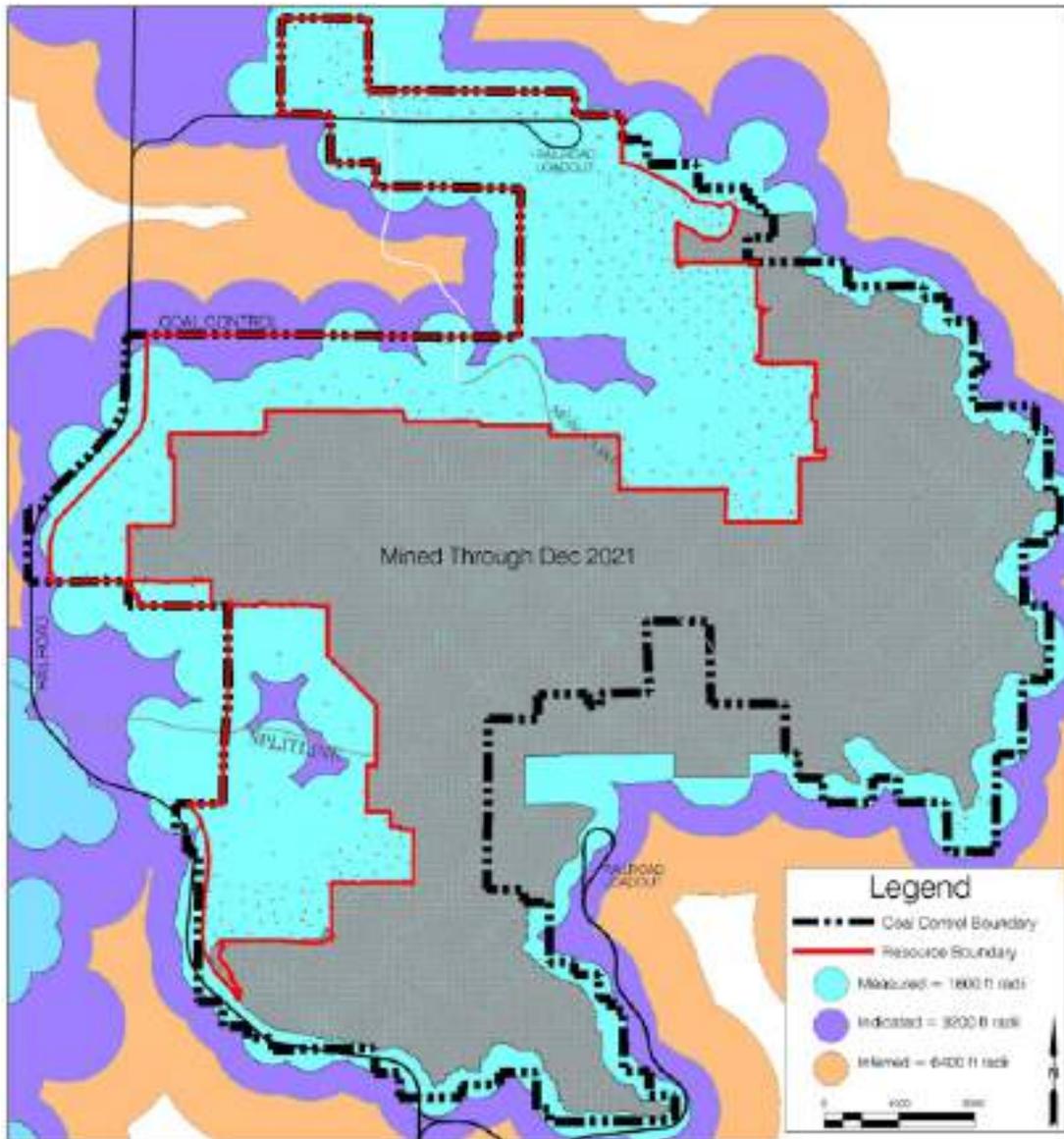


Figure 11-2. Resource Classification Polygons

11.4. Coal Resource Estimates

NARM reports zero coal resources exclusive of the coal reserves and all coal resources are converted to the coal reserves. Besides the coal lease boundary, the main limits are the burn-lines that occur along the WA seam outcrops along the east edge.

The geological and mining conditions from historic mining are similar to the criteria used to develop the resource areas. Since the resource area is inclusive of the reserve area, the resource estimates are fully supported by the LOM and economic analysis in the following sections, the same as the reserve estimates.

The information of the coal resources and all supporting documents are stored and kept as a record internally. The processes are followed every year to review, update, validate and document the resource estimates.

11.5. Coal Resource Statement

The coal resources are determined as part of the overall process and form the basis for the coal reserves estimates. Estimation of the coal resources is mainly determined by geologic criteria and property control boundaries along with the potential of current or future economic viability utilizing available mining technologies. There are no coal resources exclusive of reserves at NARM. Coal resource estimates list in Table 11-4 are on an in-situ basis for the Wyodak Anderson Coal Zone and they are all been converted to coal reserves.

Table 11-4. Coal Reserves Table

Seam	Classification	Coal Area (Acres)	Coal Resources (In Situ tons in millions, inclusive of reserves)	Thickness (feet)	Depth (feet)	Density (Tons per Acre-Foot)
WA	Measured	12,347	1,497	70	321	1,742
	Indicated	900	116	75	382	1,742
	TOTAL	13,247	1,613	70	325	1,742

11.6. Comments from Qualified Person(s)

It is the opinion of the Qualified Person that there are no material issues to influence the reasonable prospect for economic extraction. All resources are converted to reserves and they are further addressed in the reserve statement.

NARM has adequate exploration data to determine coal resources and reserves. Future exploration work will be undertaken to continue the support to the current and ongoing operations. This includes continuing to maintain adequate core spacing at a minimum of five years ahead of mining. It is the opinion of the QP that there are no current geologic or technical factors that are likely to influence the prospect of economic extraction.

12. COAL RESERVE ESTIMATES

12.1. Introduction

The Life of Mine Plan (LOM) is the key process to support reserve reporting. The mine plan considers the mining loss, coal shipment qualities, strip ratio, equipment capacities and production rates and schedules as well as necessary capital purchases or replacements. Besides the pit design and mining sequence which are discussed in section 13, the primary limit boundaries for NARM's coal reserves are the coal lease, the mined-out area, and the burn-lines. The mining methods historically adopted by NARM and the projected economic results demonstrate that the coal in the mine plan is economically mineable based on current market assumptions. The details regarding the marketing and pricing assumptions are included in sections 16 and 19. The entire mine plan, which supports the coal reserves, is inside of the boundary where Peabody has the coal lease. NARM is a current mining operation with all required permits, approvals, and infrastructures to carry out continued production. The key assumptions in the mine plan and economic analysis are supported by historic performance. Unless otherwise specified, the quantity for coal reserves is reported as the saleable product and the qualities are on the shipped basis.

12.2. Coal Reserve Estimates

12.2.1. Reserve Classification

The geologic model described in section 11.2 is used for the LOM plan. All coal within the mine plan area is considered to be either Measured or Indicated resources as discussed in section 11. The Measured resources are reported as the Proven reserves and the Indicated resources as Probable reserves. There are no other modifying factors that are significant enough to prompt excluding reserve tonnage from the LOM plan or downgrade the reserve classification from proven to probable classification.

12.2.2. Mining Loss and Dilution

The overall projected recovery factor from the Wyodak Anderson seam as the in situ coal defined in the coal resource is approximately 92 percent. The main coal losses include approximately twelve inches from the top and bottom of the seam, and coal barriers left at each cut for spoil stability. These losses are considered normal mining losses. This recovery percentage is based on historic reconciliation by pit, which is approved in the latest R2P2 by the Bureau of Land Management under the US Department of the Interior.

Other coal not included in the mine plan is the coal barrier left along the lease boundaries, at box cuts, and between mining blocks for safety purposes (up to approximately 50 feet in width).

NARM does not have a coal washing plant and therefore the coal mining process requires dilution to be minimized to meet customer quality specifications. The coal top is cleaned to hard coal and the floor stays above the higher ash gradational contact at the base.

12.2.3. Coal Product Quality

The sales contracts are normally based on the qualities as shipped on the train. One main uncertainty is moisture in coal which consists of the inherent moisture and surface moisture. The inherent moisture in the Powder River Basin is relatively high (around 30%), but inconsistent across the large area at NARM. In general, moisture is highest in the east and lowest in the west. This is because the scoria in the east acts as a conduit for surface water to flow. The water travels to the areas of least resistance and therefore the coal acts as an aquifer transferring the water to lower elevations toward the west. The

moisture is prone to the variation in weather (rain, snow, sun) and the exposure to air once it is uncovered.

Equilibrium (EQ) moisture is not a good representation for shipped moisture in Powder River Basin coals. The younger, more immature sub-bituminous coals have larger pore space. The EQ moisture is almost always lower (>1%) than shipped moisture. Therefore, total core moisture is a better representation of shipped moisture and is used for the final moisture adjustment. Ash, BTU and sulfur, are analyzed and reported on a dry basis and calculated as the product or “as shipped” qualities based on estimated shipment moisture.

Besides the conversion to an as-received basis using the total moisture, additional adjustments are used to adjust the quality parameters for short-term blending and shipment requirements. These adjustments are relatively small and only reflect the variance from the annual reconciliation. Adjustments are made for individual areas. They follow planned pit areas or boundaries with significant geological changes, such as the split lines. The adjustment areas are re-evaluated and updated at every quality model revision to closely reflect current production quality. The most recent adjustments are in Table 12-1.

Table 12-1. Quality Adjustment Factors

Parameter	Average Adjustment	Minimum Adjustment	Maximum Adjustment
Core Moisture (%)	-0.7	-0.25	-1.05
MAFBTU (Moisture and Ash Free BTU)	+45	+5	+65
Ash (%), as received (with core moisture)	+0.5	+0.15	+0.7
Sulfur (%), as received (with core moisture)	0.00	-0.01	+0.01
Sodium Oxide (%) (Mineral Analysis of Ash)	-0.1	-0.4	+0.1

*BTU is recalculated from adjusted MAFBTU, Ash, and Moisture

12.2.4. Reporting

The assumptions for reserve estimates are verified periodically against actual production. Coal tonnage and quality reconciliation are carried out by comparing the actual production and shipped quality to the predictions of the geologic and mining model monthly. The actual monthly mining block areas are computed against the models. The output is compared to the actual production and shipment quality. Conversions from lab test results to projected shipment quality are fine-tuned according to annual reconciliation results to better project short-term blending and shipment requirements. The main quality parameters for blending consideration include BTU and Sodium. Coal recovery percentages are calculated monthly. Quarterly reports are provided to the Bureau of Land Management to ensure the compliance of R2P2.

The information for the coal reserves and all supporting documents are stored and kept as a record internally. The processes are followed every year to review, update, validate and document the reserve estimates.

12.3. Coal Reserves Statement

The LOM planning in section 13.3 was completed in July of 2021. The coal reserves are re-estimated using true-up face position as of December 31, 2021. The difference is not material to trigger an

updated LOM plan. The main factors for the differences between the LOM plan and the estimated reserves at the end of the year include:

- Projected coal production for 2021 was 65 million tons in the LOM plan. The actual coal production for 2021 was 62.8 million tons.
- Improved actual recovery for 2021 was 92.5% vs 92% planned.
- The mined-out boundary in the northeast area has been updated from the original estimated boundary in the LOM plan.
- An updated geologic model since the LOM plan.

Table 12-2 lists all coal reserve estimates as a shipped product with the key coal quality parameters on an as-shipped moisture basis. The reserve statement has an effective date of December 31, 2021. The total reserve is estimated to be 1,484 million tons of coal reserves. The corresponding reserve boundary is shown in Figure 12-1.

Table 12-2. Coal Reserves Statement

Seam	Classification	Coal Area (Acres)	Coal Reserves (Recoverable in millions)	Thickness (feet)	Depth (feet)	Density (Tons per Acre-Foot)	Moisture % (As Shipped)	Ash % (As Shipped)	BTU (As Shipped)	Sulfur % (As Shipped)
WA	Proven	12,347	1,378	70	321	1,742	27.1	4.4	8,889	0.19
	Probable	900	106	75	382	1,742	26.5	4.4	8,965	0.18
	TOTAL	13,247	1,484	70	325	1,742	27.0	4.4	8,895	0.19

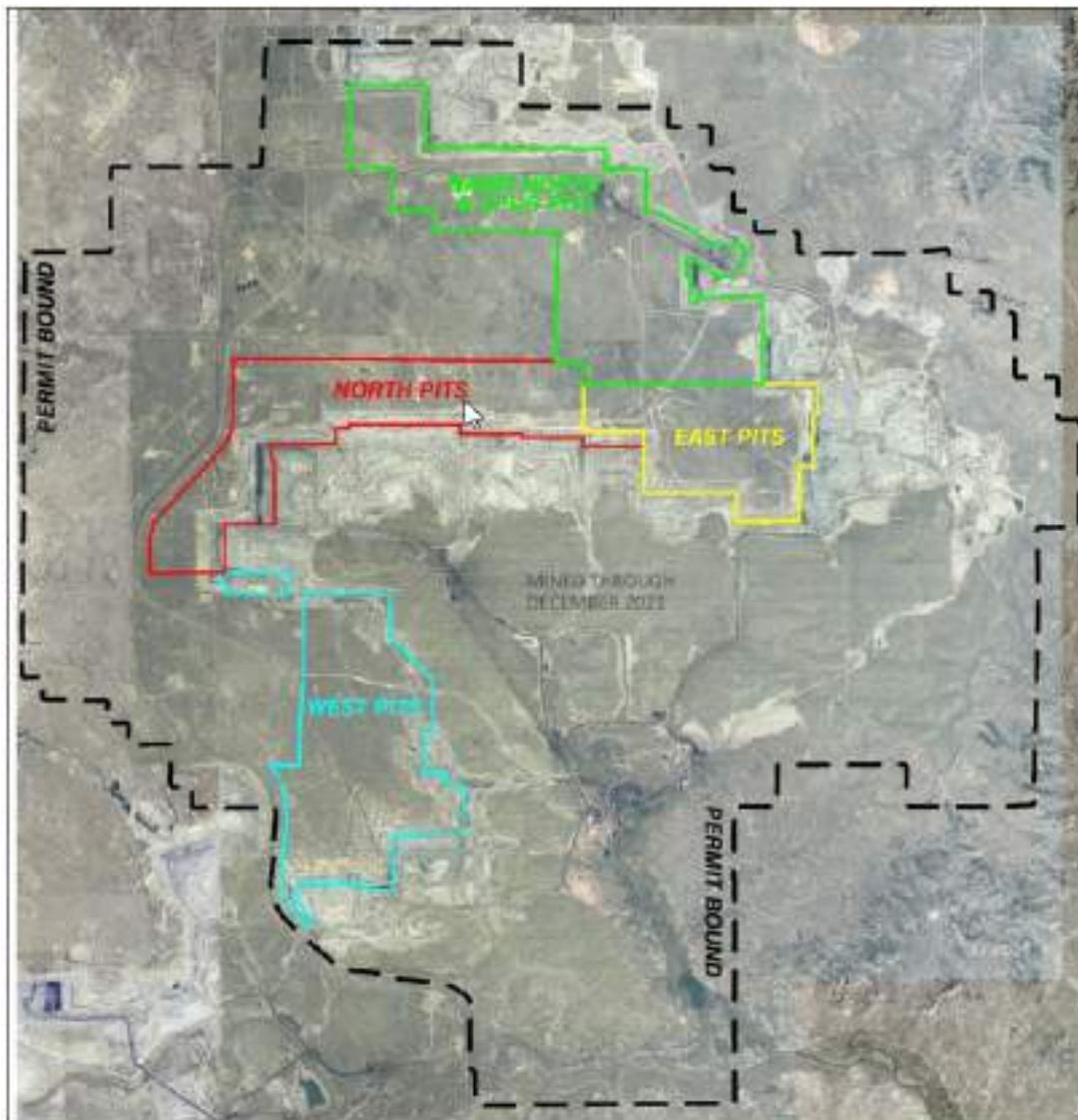


Figure 12-1. Reserve Boundaries (by Pit areas)

12.4. Comments from Qualified Person(s)

It is the opinion of the Qualified Person that the geological features around the reserve area have been adequately defined and other modifying factors which could materially affect the reserve are all addressed. The long operational history further demonstrates that the reserve is economically mineable. The coal reserve estimate could be affected by the data accuracy, uncertainty from geological interpretation, as well as mine planning assumptions. Those factors normally don't pose any material risks for the overall reserve estimates at NARM. However, other external risks, including

unexpected geologic/geotechnical hazards, infrastructure or facility failures caused by natural disasters, changes in laws and regulations, and domestic coal demand and supply, are not controllable by the company and could affect the Life of Mine Plan.

13. MINING METHODS

13.1. Introduction

The relatively shallow and very thick coal seam at this deposit determines that the most efficient mining method is the surface striping method which utilizes a combination of processes, including truck and shovel, cast blasting and dozing, dragline, etc. As a result of the high volume of sales with a wide range of quality requirements, the mining operation consists of multiple open pits mainly in four mining areas: West, North, East, and NARM North.

13.2. Mine Design

13.2.1. Geotechnical Considerations

Prudent engineering designs and practices are used in the ground control designs for highwall and spoil bank stability to ensure safe working conditions. Detailed geotechnical analyses have been performed by qualified third-party and in-house geotechnical experts and professional engineers on the principal pit areas at NARM. These historical analyses, along with any updated drilling data and real time spoil and highwall observation help to define the parameters for the current mine plan and design. Experience and repetition is important as well as the proper utilization of the theories of soil and rock mechanics, structural geology and hydrology. With experience from similar and/or like conditions, highwall and spoil heights and face and spoil angles are regularly varied to match existing overburden and spoil characteristics and hydrology to maintain stable conditions. Highwalls are cut to stable angles with backhoes, dozers, shovels and draglines, as required.

A comprehensive rock testing program at NARM has established reliable inputs for highwall stability analysis. The analysis indicates that irrespective of the rock type and their thickness in the overburden, the global minimum safety factor is more than 1.6 in the absence of any water table. The safety factor decreases as the water level rises above the coal seam. For the typical highwall layout used at NARM, the minimum global safety factor of the wall is well over 1.2 for water tables up to 150ft above the coal seam (to be precise the safety factor falls to about 1.2 when the water table is at 160ft above the coal seam). Given that a minimum of 1.15 to 1.2 threshold safety factors have been used historically in the Powder River Basin, the analysis in this note indicates that the current highwall design at NARM meets or exceeds this design criterion.

Conventional and cast blasting methods are generally used to fracture and fragment overburden and coal. After the cast blast and before the dragline operation, the backhoes are utilized to remove the shot material in the highwall and scale the highwall back to competent material down to a dragline bench operating level. Dozers are used to push more blasted material into the previous pit where the coal has been removed and at the same time prepare the working bench for the dragline. The dragline typically mines cuts that are 220 feet wide and with a bench height of 140-220 feet. The dragline is typically positioned on the spoil side of the pit when removing this remaining overburden. This allows for much of the dragline's spoil material to be stacked further from the low wall crest to reduce the overall spoil bank slope angle (internal angle of friction) to approximately the natural angle of repose of the shot material and thus minimize the risk of spoil slope failures or loose material rolling into the pit area. Other equipment, including shovel and trucks, backhoe and trucks, front end loader and trucks or dozers, may be used to move the overburden above the coal instead of and/or in conjunction with the dragline system. The truck/shovel benches will generally be 55 feet high. Dragline deadheading setback is limited to a minimum of 20' from the crest of the low wall spoil bench. Dragline bench height and spoil bank angle are varied based on site-specific conditions. A typical pit dimension is shown in Figure 13-1.

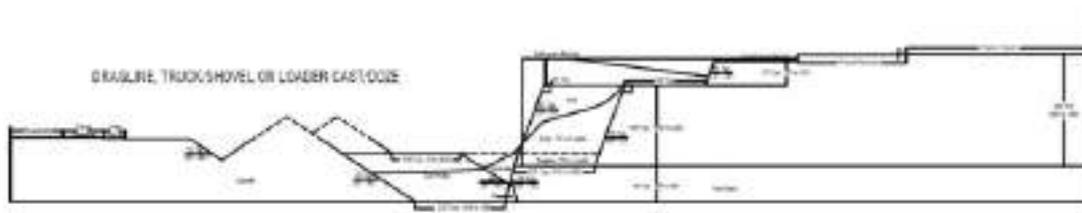


Figure 13-1. Typical Pit Dimension

13.2.2. Hydrological Considerations

Ahead of the mine, NARM maintains an extensive flood control system consisting of reservoirs, contour ditches, pumps, and pipelines. Most are capable of capturing the 100-year 24-hour runoff event. Water is pumped from flood control reservoirs to water supply reservoirs within the mine from where it is utilized for dust suppression or moved through sediment traps and later discharged to downstream waters. The water is of high quality and is suitable for discharge to native streams. Behind the pits, water is captured in sumps constructed in the backfill and these are pumped to the same water supply reservoirs when water is captured.

Water captured in the pits consists of periodic flood water and groundwater. This water is also pumped to water supply reservoirs for use or discharge. The drainage area of the pits is kept as small as possible to limit runoff to the pits. In the event of large storms, plans are put in place to utilize additional pumping capacity to pump out the pits and keep normal production in progress.

To improve stability in advance of mining, dewatering may be done to limit the amount of groundwater in the overburden, coal, and the Fort Union Formation below the coal. For the overburden, dewatering wells have been drilled with the main focus area being in the vicinity of Porcupine Creek. Dewatering of the coal and Fort Union Formation below the pits pit floors is conducted by blasting of the floor immediately below the pits. Shallow sumps have also been drilled for dewatering of alluvium in streams ahead of the pits.

A water management plan is utilized at the mine to document the many reservoirs, water supplies, pipelines, and uses at the mine. The largest source of water at the mine is currently the dewatering field near Porcupine Creek, but this is a recent development and it is not expected to remain so in the future. The other main water supply is nine deepwater production wells in the Fort Union or Fox Hills Formation, which are supplemented by a few shallow production wells located in the scoria. Water captured in flood control reservoirs and pumped to water supply reservoirs also may provide a significant water supply in some years. Most water supply reservoirs are connected to other water supply reservoirs by permanently installed or temporary pipelines in order that water may be moved to parts of the mine where it is needed.

The major uses of water at the mine are haul road dust suppression, coal plant dust suppression, and treatment of loaded rail cars with chemical topser. Potable water and livestock use are relatively minor uses of water at NARM. Most coal plant dust suppression water is recaptured and recycled for further use in the plant or for haul road dust suppression.

Water at NARM is discharged to native streams downstream of the mine through numerous sedimentation reservoirs as permitted through the mine's Wyoming Pollution Discharge Elimination System (WYPDES) permit. Effluent monitoring is required under the permit. Sediment is the main pollutant being treated for at the mine and there have been very few exceedances in the history of the mine. Non-point source discharge is allowed under the mine's WYPDES stormwater permit. All reservoirs at the mine are permitted by both the Wyoming Department of Environmental Quality, Land Quality Division (WDEQ/LQD) and the Wyoming State Engineers Office (WSEO). All water supply and dewatering wells are permitted by the WSEO and water production is reported annually to the agency.

The NARM WDEQ/LQD permit requires documentation of the cumulative hydrologic impacts and protection of the hydrologic balance. Annual reporting to the agency is conducted for the large groundwater and surface water monitoring network at the mine.

13.3. Mine Plan

13.3.1. Mining Process

The mine employs conventional truck/shovel methods, utilizing multiple P&H 4100 shovels and end-dump trucks, and dragline methods utilizing two Bucyrus-Erie 2570 draglines, a Marion 8200 dragline, and a Bucyrus-Erie 1570 dragline with cast/doze and truck/shovel pre-benching operations to remove overburden material where necessary. The methods for controlling highwall and spoil bank stability described here are general and may be modified as conditions warrant. The attached exhibit, Figure 13-2, illustrates typical mining methods. The methods shown may be modified based on localized geological conditions encountered.

Generally, Truck/shovel system is utilized to strip overburden down to a consistent cast bench height and then a cast blasting, dozer push and dragline stripping system is utilized to uncover the coal. Truck/shovel may assist with dragline system burden as necessity requires. There may also be times during the life of the mine that traditional truck/shovel overburden stripping may be utilized in pits that have an insufficient length for a dragline system.

In general, after the topsoil has been removed from the surface of the uppermost bench, the overburden is mined by dragline and/or truck/shovel fleets in a series of lifts, with the bench heights varying in relation to the total overburden thickness. Blasting is usually required to fragment the overburden.

Cast blasting will be employed in almost all pits to optimize cost and operational effectiveness. As overburden gets thicker and geologic, hydrologic, and geotechnical conditions warrant, cast blasting or a cast blasting/dozer push system is often employed to enhance the system's efficiency. This mining method will result in a small coal wedge that is left partially un-recovered for spoil stability.

Overburden removal and backfilling is generally one continuous operation with spoil material being transported to mined-out areas in a series of stair-step lifts. The backfill area is shaped to conform to approved post-mining topography. Pre-mining and pre-topsoil replacement sampling programs ensure that backfill material is placed appropriately to meet sub-soil quality parameters. Top soiling typically occurs within a year of final backfilling. Revegetation begins in the first suitable season following topsoil replacement.

Coal will generally be mined in one bench in the North, East, and NARM North areas whereas two benches are presently used in the southern portion of the West mining area where there is a parting

layer of varying thickness, located approximately midway in the coal seam, separating the coal into Upper (WA1) and Lower (WA2) coal benches/seams. Although this layer also exists in the northern portion of the West Pit, it is too thin to be significant, and operational constraints generally determine the height of the two coal benches. This major interburden waste layer (found primarily on leases WYW154001, WYW180753, WYW180754, and WYW176095) will be removed by either a truck/shovel fleet or a dragline though dozers, scrapers and front-end loaders may also be used. It should be noted, however, that two benches may also be used in any pit because of the presence of parting, equipment digging height constraints, and/or adverse conditions. The operation doesn't have coal washing facility and the coal mining process cleans the coal top and bottom very thoroughly in order to control the product quality. More discussion regarding the dilution and recovery is included in section 12.2.2.

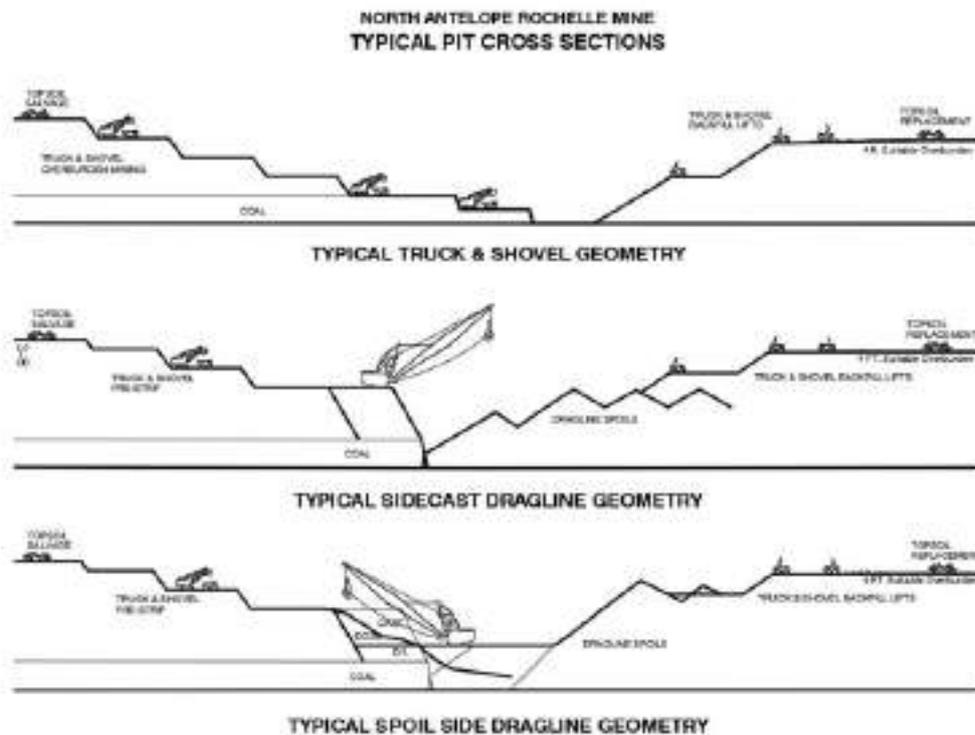


Figure 13-2. Mining Methods

13.3.2. **Production Schedule**

The North Antelope Rochelle Mine presently operates 24 hours per day.

Coal and overburden removal is performed 12 hours/shift, 2 shifts/day, 7 days/week (weather permitting).

The LOM projected the last year of production for NARM is 2047 based on an average of 57 million tons of ROM coal and 324 million cubic yards of waste moved per annum, and a total of 1,479 million tons of coal to be mined and 8,417 million cubic yards of waste movement for the LOM. The effective

strip ratio for the LOM is projected to be 5.7. The detailed annual production statistics are projected in Table 13-1. The mining sequence is illustrated in Figures 13-3 through 13-7.

Table 13-1. LOM Production Projection

Production Projection	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
ROM Coal (Tons in millions)	67	67	67	67	67	65	65	65	65	65	65	60	60
Waste (Virgin Yards in millions)	297	311	307	301	298	310	316	339	335	321	334	314	308
Waste (Rehandle Yards in millions)	57	56	56	58	57	58	58	58	56	57	57	53	52

Production Projection	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
ROM Coal (Tons in millions)	60	60	60	60	60	60	50	50	50	38	32	32	23
Waste (Virgin Yards in millions)	295	288	298	302	305	291	245	251	231	188	144	131	65
Waste (Rehandle Yards in millions)	49	49	52	53	54	53	41	46	46	34	27	26	28

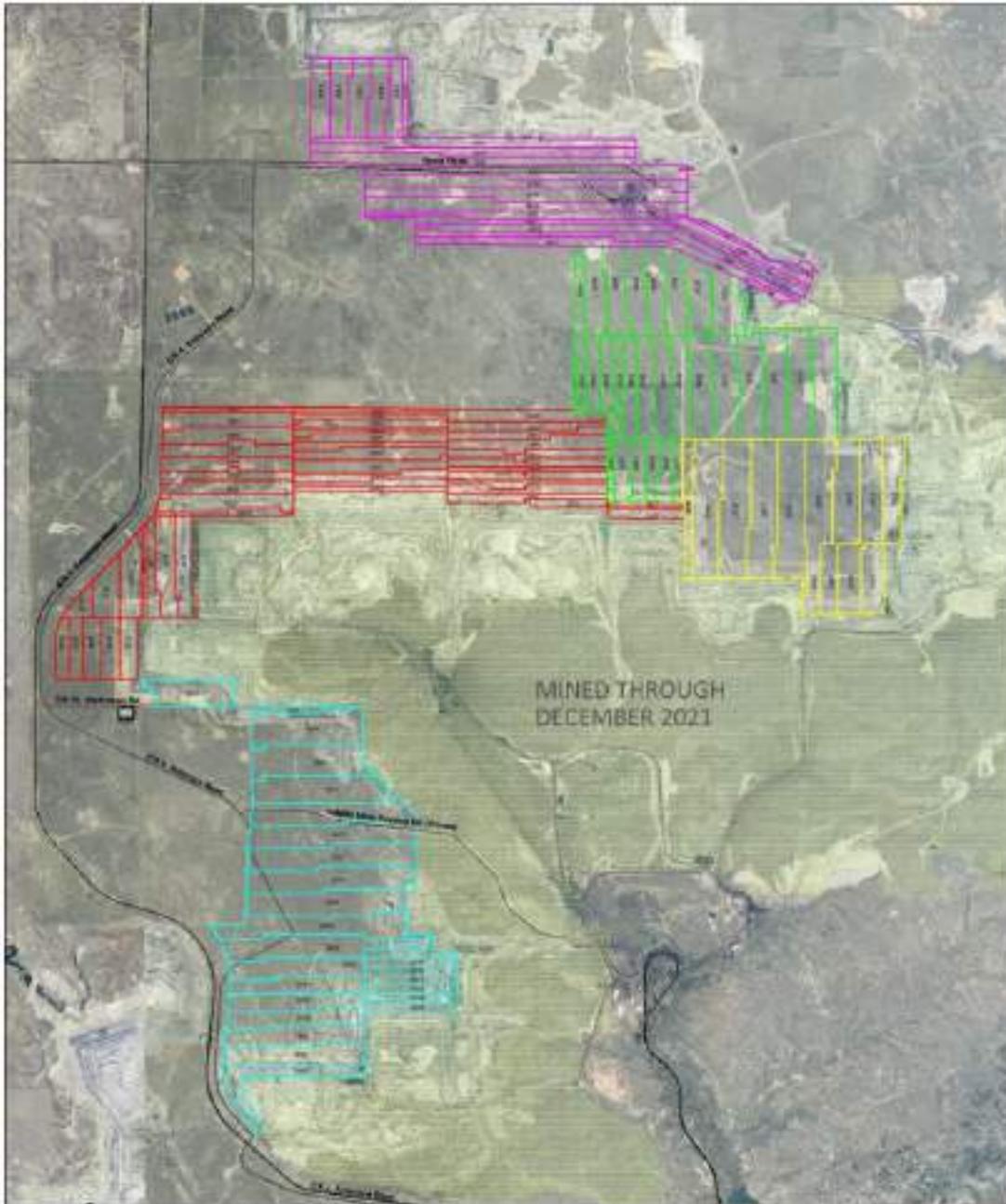


Figure 13-3. LOM Mining Sequence



Figure 13-5. North Pits LOM Mining Sequence



Figure 13-6. East Pits LOM Mining Sequence



Figure 13-7. NARM North Pits LOM Mining Sequence

13.4. Mining Equipment and Personnel

The type of mining equipment utilized by Peabody is suitable for the mining conditions experienced and expected at NARM, with a long history of successful operation. The mine is utilizing the following mining equipment at NARM (Table 13-2).

Total LOM plan staffing increases from 1,085 employees (hourly, salaried, & temps) to approximately 1155 peak over the next eight years of the projected mine life.

Table 13-2. Major Mining Equipment

Equipment Description	# of Units	Annual Capacity (in million cubic yards)
BE 2570 Dragline Excavator (100 yd3)	1	26.5
BE 2570-W Dragline Excavator (135 yd3)	1	36.0
BE 1570-W Dragline Excavator (82 yd3)	1	21.0
Marion 8200 Dragline Excavator (72 yd3)	1	25.0
P&H 4100 Overburden Shovels (55-82 yd3)	7	22.0-30.0
P&H 4100 Coal Shovels (80 yd3)	4	21.5
P&H 2800 Coal Shovels (70 yd3)	1	13.0
Hitachi EX 3500 Front Shovel Excavator	1	
LeTourneau 1800/1850 Front-Loaders (55-64 yd3)	1	
LeTourneau 2350 Front-Loaders (70 yd3)	2	5.0
CAT 992 Rubber-Tired Front-End Loaders	2	
Ingersoll-Rand DM Overburden/Coal Drills	11	

Equipment Description	# of Units
CAT 250-Ton End-Dump Coal/Overburden Trucks	16
Liebherr 400-Ton End-Dump Coal/Overburden Trucks	33
Komatsu 320-Ton End-Dump Coal/Overburden Trucks	10
Komatsu 360-Ton End-Dump Coal/Overburden Trucks	16
CAT D-11 Tractor Dozers	20
CAT 834/854 Rubber-Tired Dozers	14
CAT 637/627 Wheel Tractor-Scrapers	9
CAT 24H Motor Graders	14
CAT 16G Motor Graders	4
High-Volume Water Trucks	10
Hitachi EX 2500 Trackhoe Excavators	5
Hitachi EX 1900 Trackhoe Excavators	1

14. PROCESSING AND RECOVERY METHODS

14.1. Introduction

The coal seam at NARM has very low inherent ash and it is extracted from the pits with minimum dilutions. The washing plant is not needed and all final products shipped to customers are ROM coal. The coal processing at NARM mainly includes sizing, conveyance, storage, and train loading.

14.2. Process Selection and Design

The processing plants at NARM include five sites with truck dumps and crushers. They were constructed through different periods of this operation. The most recent major upgrades include an in-pit truck dump, crusher and overland conveyor system along with a central blending/loading facility along the loadout loop. These were completely operational in 2008. The current processing plants have sufficient capacity to meet the requirements in the mine plan. There are no major additions or upgrades planned in the future other than routine maintenance or periodic relocation.

14.3. Coal Handling and Processing Plant

After the overburden has been removed, the top of the coal is cleaned by dozers, loaders or scrapers, which deposit this carbonaceous waste material in the backfill more than five feet above the post-mining water table and a minimum of four feet below the regraded backfill surface (10 feet under the 100-year floodplain channel bottom of reclaimed drainages). The coal is then drilled and blasted and loaded by electric cable shovels or large front-end loaders into 250-400-ton end-dump trucks which transport the coal from the pits to one of the five truck dump locations.

On the south side of NARM (Circuits 1-4), feeders transfer the coal to one of eight Gundlach or McLanahan feeder breaker/roll crushers where it is crushed to approximately two and one-half inches in diameter at a crushing rate of 2,500-4,000 tons/hour per crusher. Conveyor belts then transport the coal at approximately 900-1200 feet per minute to 45,000-ton slot storage or to one of five 15,000-ton silos for storage and blending. The coal is then transferred from the silos via 84-inch loadout belts to two loadout towers over the concentric loop tracks where it is loaded onto unit trains at the rate of 10,000 tons per hour per loadout.

On the north side of NARM (Circuit 5), the coal is conveyed to a secondary crushing system comprised of a Jeffrey feeder breaker and a Gundlach crusher that size it to two and one-half inches in diameter. The crushed coal is then conveyed at a nominal rate of 4,000 TPH to the top of the 50,000-ton capacity covered slot storage facility where a belt tripper system deposits the coal in selected locations in the slot. Coal is removed from the bottom of the slot using vibratory feeders. Coal is conveyed at 6,000 TPH to the top of the batch weigh system, where it is sampled and then loaded into rail cars in unit trains as they pass under the loadout bin.

The detailed coal processing plant flowsheets are shown in Figure 14-1 and Figure 14-2.

14.4. Plant Yield

All final products shipped to customers are ROM coal. The coal loss during conveyance and crushing is negligible.

14.5. Energy, Water, Process Material, Personnel Requirements

The main consumables for the coal processing at NARM are electricity for crushing and conveyance, and water for dust control. The typical annual water usage is 450,000,000 gallons. This water comes from on-site deep wells and water reclaim systems. Electricity for the processing plants is not specifically metered. Total site power usage data is provided in Section 15.

A total of 86 persons are needed to operate and maintain the processing plants at NARM.

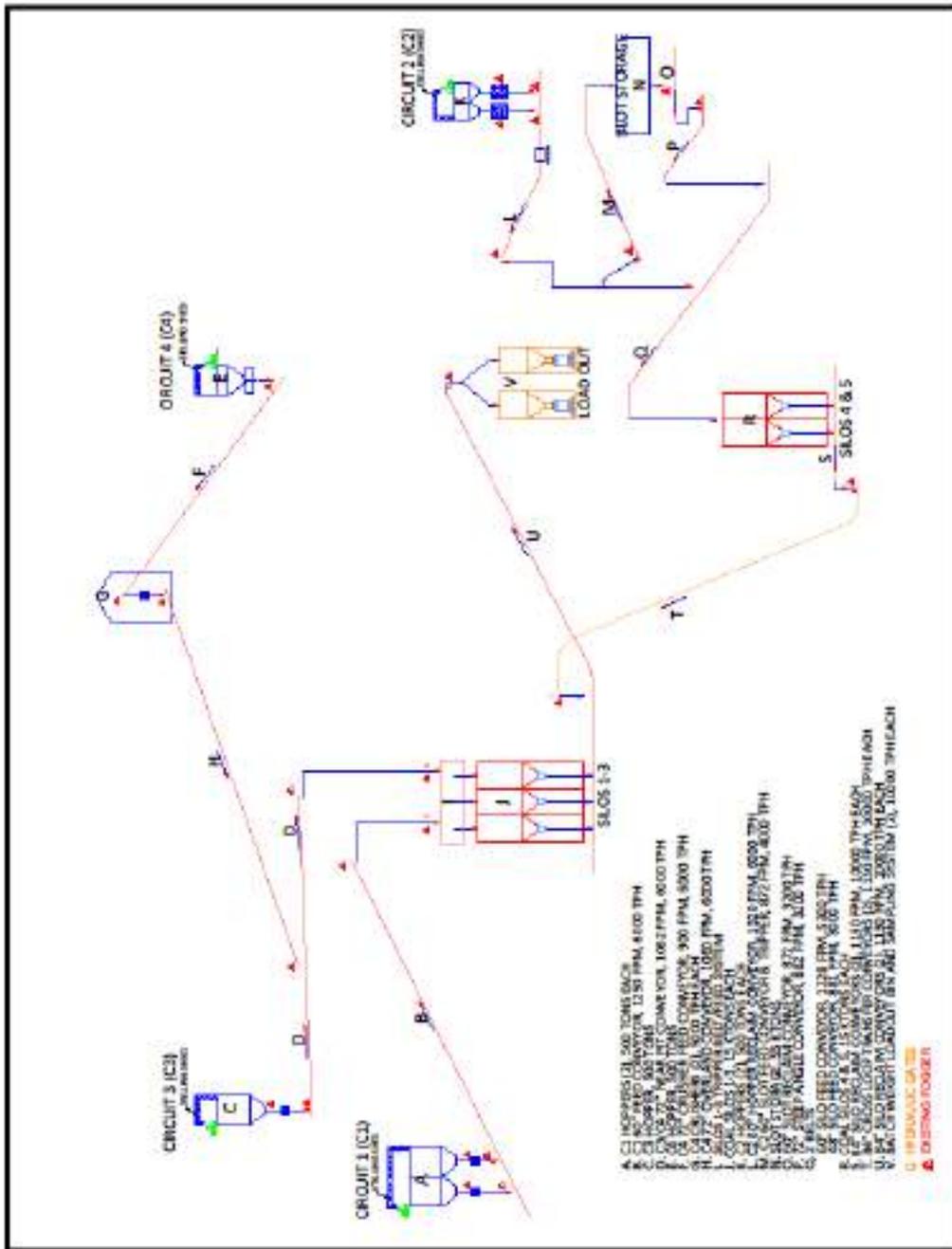


Figure 14-1. Processing Circuits 1-4

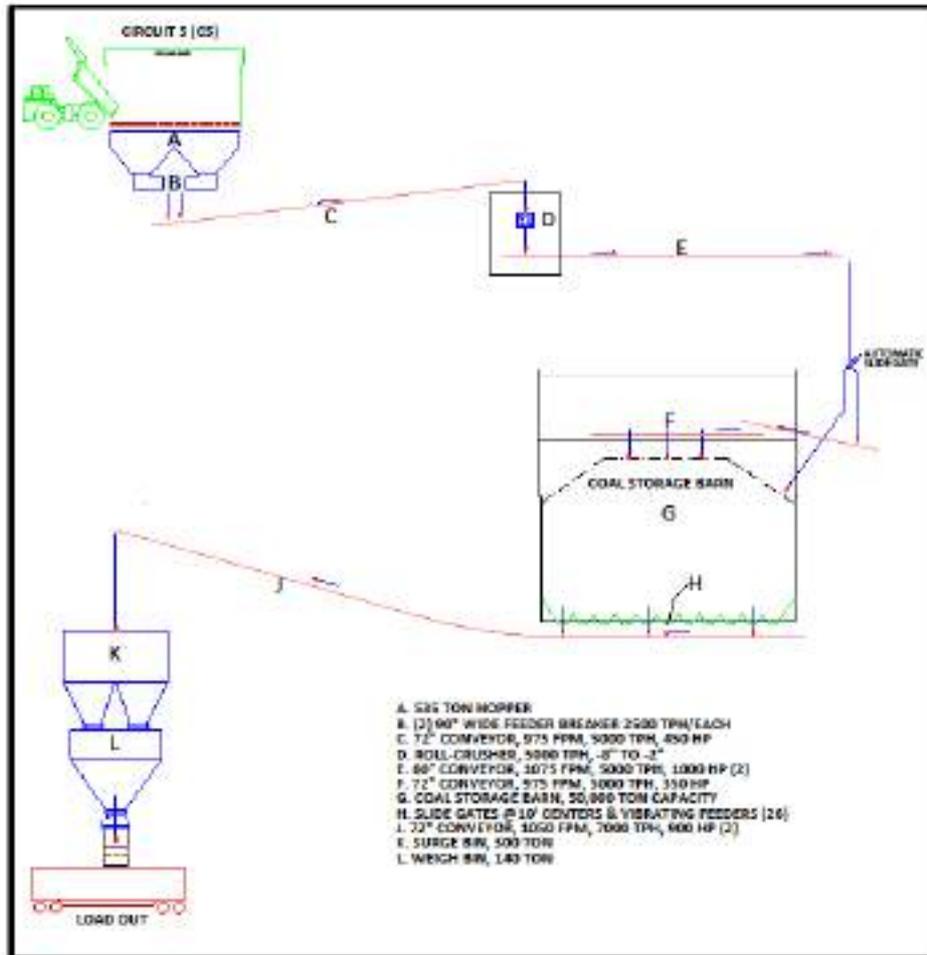


Figure 14-2. Processing Circuit 5

15. INFRASTRUCTURE

NARM has built extensive infrastructures to support the operations and the existing infrastructure is sufficient to support the current mine plan. The main infrastructures are centralized on the north and south sides of active pits as in Figure 15-1. All infrastructures will require routine maintenance, and some might require periodic relocation. There is no on-site accommodation or camp. All personnel is from nearby towns and they drive in or out to the operations.

NARM has numerous administration buildings, shops, and warehouses located on the south and north sides of active pits. Those buildings and facilities supported a maximum of 1400 employees (salaried and hourly) and 118 million tons production through history. They are sufficient to support all activities projected in the current mine plan.

NARM's fuel storage consists of 19 locations using above-ground steel tanks. Storage capacity of the various sites ranges from 2,000 to 677,000 gallons. Permanent storage locations all have secondary containment structures - a facility pond for the large diesel "Mega" tank (677,000 gallon capacity) and steel or concrete tubs for the others. For the semi-permanent locations without secondary containment structures, double-wall tanks are used.

Four types of fuel are stored on site (with storage capacities in gallons):

- o Diesel (14 locations) 900,000
- o Gasoline (3 locations) 30,000
- o #1 Diesel (1 location) 10,000
- o On-Road Diesel (1 location) 8,000

NARM's on-site storage of explosives, blasting agents, and oxidizers is fully compliant with state and federal rules and regulations for such facilities. Based on present usage, NARM has enough storage capacity for 3 to 4 days of use for these materials.

NARM has established all required roads for off-highway trucks and light vehicles to support daily operations. There is sufficient equipment, such as dozers, graders, water trucks, to continue to maintain and relocate those roads as needed for the current mine plan.

Coal mined from active pits at the mine site is hauled to the storages located near either south or north loadouts before processing and transported by trains. The south loading facility is connected with Burlington Northern Santa Fe and Union Pacific railroads' joint trackage through two concentric loop tracks, each capable of handling 150 cars per unit train. This loading facility comprises two loadouts, each capable of handling 10,000 tons of coal an hour. The north loading facility is connected to the joint trackage with one loop track which can handle 150 cars per unit train and loads 10,000 tons of coal per hour.

The operation doesn't have open coal stockpiles and it keeps uncovered coal in the pits. On the south side of NARM, the coal is stored in the 45,000-ton slot storage or one of the five 15,000-ton silos near the train loadouts. On the north side of NARM, the coal is stored in the 50,000-ton slot storage facility.

NARM has placed numerous Overburden stockpiles as well as Topsoil stockpiles around the mine site. The main purpose of the stockpiles is for the development of a new pit. Most all of the Overburden piles on the site would have been placed at the original excavation site of the first pits at North Antelope and

Rochelle mines. The majority of these piles were placed strategically such that they do not have to be moved again, except in the cases where they are needed for final reclamation. Topsoil piles may be placed strategically ahead of the pit or behind the pit in the backfill. These piles will be later excavated and placed on the final graded ground.

Power is supplied by the Powder River Energy Corporation through the Teckla Substation which is about 30 miles south of Wright and adjacent to the west boundary of the operation. The substation has the primary voltage and secondary voltage of 230kv and 69kv respectively. The main power consumption is for draglines, electric shovels, crushers, conveyors, etc. The typical projected consumption is approximately 260,000,000 kWh/year.

The infrastructure for water supply and management is discussed in Section 13.2.2.

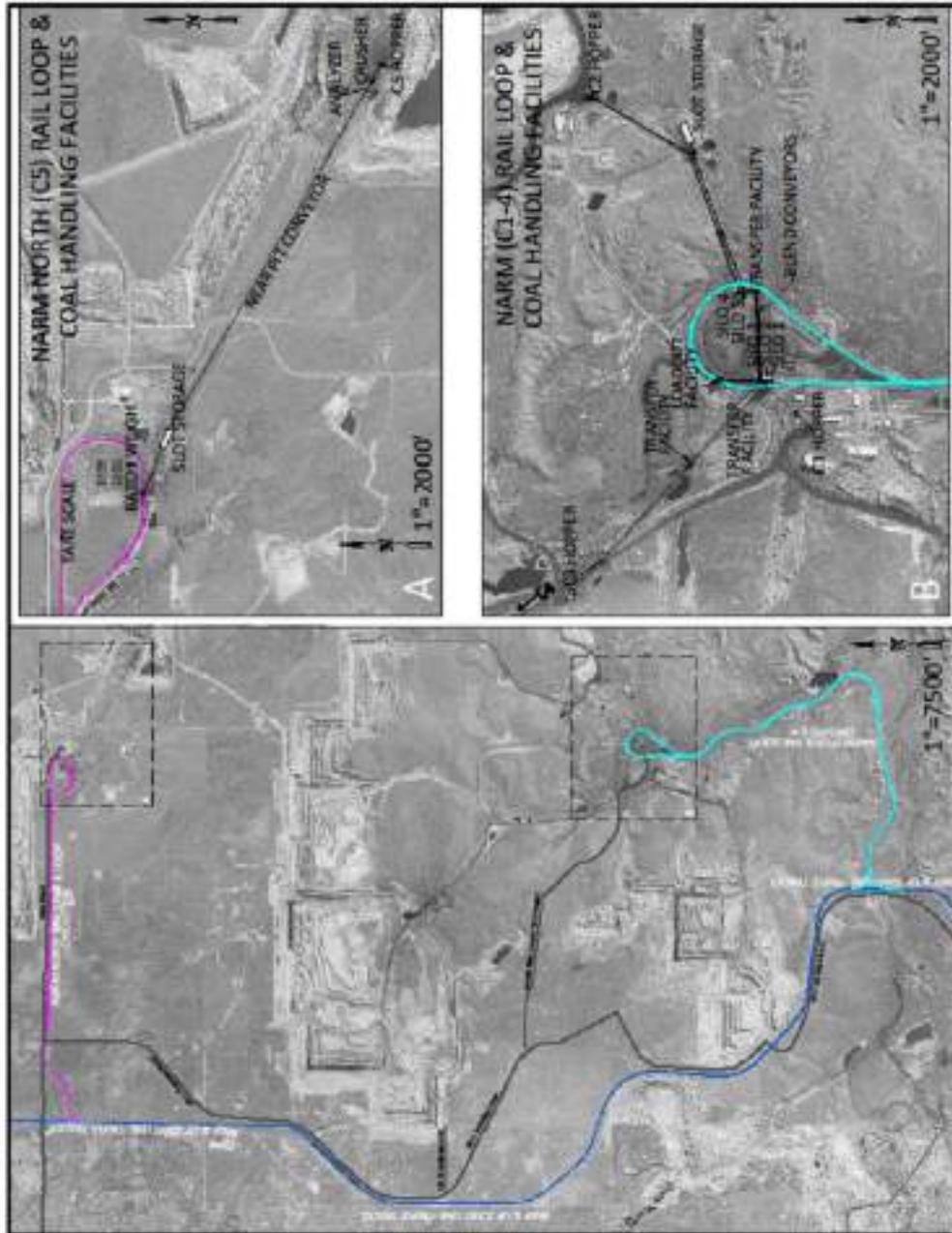


Figure 15-1. Train Loadout and Rail

16. MARKET STUDIES AND MATERIAL CONTRACTS

16.1. Introduction

NARM is an active operation with a well-established customer basis in the United States and the market has been very well defined for the domestic thermal power generation. The pricing used to establish coal reserves were established and provided by the Company. The Company provided more information regarding to its internal processes of pricing forecast in its 10K filing.

16.2. Product and Market

NARM supplies coal to domestic power generation plants as a thermal product with various heating values along with other quality parameters. The main products supplied by NARM are summarized in Table 16-1. In 2021, NARM shipped coal products to over 70 power plants in the U.S.

NARM expects to continue selling a significant portion of coal production under long-term supply agreements with initial terms of one year or longer, and customers of those segments generally favor long-term sales agreements in recognition of the importance of reliability, service and predictable coal prices to their operations. The terms of coal supply agreements result from competitive bidding and extensive negotiations with customers. Consequently, the terms of those agreements may vary in many respects, including price adjustment features, price reopener terms, coal quality requirements, quantity parameters, permitted sources of supply, treatment of environmental constraints, extension options, force majeure and termination and assignment provisions. The Company’s approach is to selectively renew, or enter into new, long-term supply agreements when it can do so at prices and terms and conditions we believe are favorable.

Table 16-1. Product Types and Qualities

Product	BTU/lb
Product #1	8600
Product #2	8700
Product #3	8800

16.3. Market Outlook

Besides other coal mines as competitors for NARM, natural gas is the most significant substitute for thermal coal for electricity generation and can be one of the largest drivers of shifts in supply and demand and pricing. The build-out of renewable generation and subsidized power can also be a key driver of power market pricing and hence coal prices.

Coal is expected to remain an important piece of the U.S. electric generation mix, albeit declining from current levels. The Company expects coal-fueled plant retirements to continue to negatively impact future coal demand. The combination of fluctuations in natural gas prices, growth in renewable generation and other competing fuels, and policy and regulations, among other things, are expected to continue to be a key determinant of future U.S. coal demand.

16.4. Material Contracts

Based on current customer nominations, NARM has majority of the coal priced for delivery in 2022. The company continues to closely monitor market conditions and to negotiate sales contracts for future

years. The future sales will be dependent on general economic conditions, weather, natural gas prices and other factors. Price forecasts, supply and demand models and other key assumptions and analyses used to establish the reserves are developed internally and stress-tested against independent third-party research not commissioned by us to confirm the conclusions reached through our analytical processes, and our price forecasts fall within the ranges of the projections included in this third-party research. The development of the analyses, price forecasts, supply and demand models and related assumptions are subject to multiple levels of management review.

NARM has all supply and service contracts in place to provide necessary materials and services for the current and future operation. Table 16-2 includes the key contracts for the operation.

Table 16-2. Material and Service Contracts

Material Type	Supplier	Comments
Explosives	Dyno Nobel	Existing 'Requirements' supply contract with option for renewal
Fuel	Wyoming Refining	Existing 'Requirements' supply contract
Electric Power	Powder River Energy Corporation	Existing 'Requirements' supply with evergreen term.
Tires	Michelin/Bridgestone	Existing supply contracts with various terms.

17. ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

17.1. Environment Studies

There have been numerous environmental studies conducted for the North Antelope Rochelle Mine (NARM). These studies supported permitting and leasing actions at the state and federal levels.

At the federal level, studies have been conducted under the National Environmental Policy Act (NEPA) and included Environmental Impact Statements (EIS), Environmental Assessments (EA) and Categorical Exclusions (CE). Specifically, these supported coal leasing by the Bureau of Land Management (BLM), Mine Plan Approvals by the Office of Surface Mining Reclamation and Enforcement (OSMRE) and Special Use Permits and scoria leasing by the US Forest Service (USFS).

At the state level, the above-listed studies are relied upon and additional baseline studies have been conducted to support Wyoming Department of Environmental Quality Land Quality Division (LQD) surface coal mine permitting. These studies covered the topics of land use, archaeology, paleontology, climatology, geology, hydrology, soil, vegetation, wildlife, wetlands, and alluvial valley floors, which are presented in the LQD surface mining permit. For the Wyoming Department of Environmental Quality Air Quality Division (AQD), numerous air dispersion modeling studies have been conducted to support air permit applications.

Results of these studies supported agency findings and authorizations for coal leasing and mining. The resultant agency decisions allowed mining and reclamation activities to proceed in compliance with state and federal requirements.

There are no current requirements for additional work or studies on the above-mentioned studies.

17.2. Permitting

As of December 31, 2021, all required licenses and permits are in place for all activities at the operation of NARM. Table 17-1 lists major permits at NARM.

Surface coal mining operations in Wyoming are required to obtain other permits and leases to conduct support activities. Other permits held by NARM include but are not limited to special use permits; permits for the appropriation of groundwater and surface water; permits for sewage, water supply, and waste; state and federal wildlife permits; and federal permit to mine and mine plan approvals. Many of these permits require regular monitoring, reporting and renewals.

Based on historical permitting efforts and the anticipated reserve life, no obstacles to permitting are anticipated.

Table 17-1. Permit List

Permit No.	Regulatory Agency	Issue Date	Renewal/ Expiration Date	Description
569	Wyoming Department of Environmental Quality Land Quality Division	Originally issued December 6, 1984 (most recently renewed June 27, 2019)	Renewal - June 26, 2024	Wyoming Permit to Mine (Also referred to as the SMCRA Surface Mine Permit)
	Wyoming has primacy for the Surface Mining Control and Reclamation Act (SMCRA). This permit authorizes surface coal mining and reclamation activities. The premining land use consists of primarily grazingland. The approved postmining land use is grazingland which includes domestic livestock grazing and use by wildlife. The reclamation plan describes the required activities to meet state reclamation standards for the approved postmining land use. The plan addresses: construction of post mining topography (including streams, reservoirs, playas), topsoil salvage and replacement, revegetation, wildlife habitat establishment, and wetlands construction. Annual reporting and associated monitoring, renewals, and revisions (as needed) are required to maintain the permit.			
P0025594*	Wyoming Department of Environmental Quality Air Quality Division	October 22, 2019	Expiration - 2034	Wyoming Air Quality Permit to Construct and Operate
	This permit authorizes coal production and all associated material movement, haulage and coal processing. Appropriate control measures, monitoring, reporting and periodic notifications are required to maintain the permit.			
WY-0028177*	Wyoming Department of Environmental Quality Water Quality Division	July 1, 2018	Renewal - June 30, 2023	Wyoming Pollutant Discharge Elimination System Permit
	This permit authorizes the discharge of water from mine-related point sources into waters of the state. Regular monitoring, reporting, revisions and treatment (as needed) are required to maintain the permit			
WYR000349*	Wyoming Department of Environmental Quality Water Quality Division	March 1, 2018	Renewal – August 31, 2022	Authorization to Discharge Stormwater Associated with Industrial Activities Under the Wyoming Pollutant Discharge Elimination System
	This permit authorizes the discharge of water from mine-related non-point sources into waters of the state. Regular monitoring and maintenance of the best management practice devices used for treatment are required to maintain the permit			
Authorization Letter*	US Army Corps of Engineers	May 22, 2017	Renewal - May 22, 2022	Jurisdictional determination for waters of the US
	This decision confirms that US Army Corps of Engineers authorization is not required for coal mining activities due to mine plans that avoid potential jurisdictional wetlands through May of 2022. No work is required to maintain this authorization.			
* These represent the current permit and associated issue date. Since 1984, all permits/authorizations have been maintained.				

17.3. Social and Community Impact

NARM's primary contribution to the community is through employment opportunities and at the end of 2021 NARM employed 1,085 people including 93 temporary employees. Direct and indirect economic benefits to local communities were provided through wages, taxes, capital investments, and vendor contracts. At the state and local level, the taxes paid by NARM included ad valorem, severance, real estate property, personal property, sales, and unemployment. At the federal level, NARM paid reclamation fees (Abandoned Mine Land Program), black lung tax and royalties on coal sales.

NARM is located in a rural setting and is required to conduct environmental monitoring to determine compliance with regulatory requirements that protect people and the environment. Routine monitoring includes particulate matter, surface water discharges; groundwater for level and quality; wildlife species and use; and revegetation species and amounts. Results are reported to the appropriate regulatory agencies.

NARM also employs numerous operational controls to ensure mining activities occur according to regulatory requirements. The following are examples of controls that protect the surrounding community.

- Blasting activity is performed according to the requirements of the LQD. The risk to local landowners and the surrounding community is minimized through the use of blasting controls. These controls include road guards, appropriately designed shots, pre-blast notifications, warning sirens, seismographs, proper handling of explosives, post-blast monitoring, and training and certification of personnel.
- Dust control follows the requirements of the AQD. Roads are treated with water and chemicals on a regular basis. Reclamation occurs in a contemporaneous fashion to ensure bare soil is stabilized. Specific areas of disturbance are ripped to stabilize the surface against wind erosion. Various dust control technologies are utilized for coal handling processes such as stilling sheds, transfer point enclosures and covered conveyors.
- All surface water runoff from disturbed areas is required to pass through sediment control, as required by LQD. NARM uses diversion ditches and berms to direct runoff through designed sediment control structures. These structures include sedimentation ponds, alternative sediment control measures (check dams, silt fences, etc.), and in-pit sumps.

As part of the regulatory process with several agencies, NARM provides notices to the public and interested parties about various activities. This includes notices of certain permitting, blasting, bond release, or other actions. These notices provide the opportunity to participate in the respective actions.

In 2020-2021, engagement with local communities was greatly limited due to COVID-19 pandemic. In past years, NARM has participated in Wyoming State Fair, job fairs, classroom presentations, tours, etc.

17.4. Mine Reclamation and Closure

Land reclamation is a vital part of the mining life cycle that is integrated with the mining process. Reclamation occurs on an ongoing contemporary basis as soon as land becomes available to create a safe, stable and sustainable landform that benefits generations to follow. Reclamation is undertaken on a progressive basis with consultation between the environmental, technical services and production teams. In any given year, land reclamation activities can vary due to production needs, mine development, weather conditions, or other unforeseen factors.

Besides the contemporaneous reclamation activities consisting primarily of grading, topsoil replacement and re-vegetation of backfilled pit areas, the operation also estimates its liabilities for final reclamation and mine closure based upon detailed engineering calculations of the amount and timing of the future cash spending for a third party to perform the required work. Spending estimates are escalated for inflation and then discounted at the credit-adjusted, risk-free rate. It is recorded as an Asset Retirement Obligation (ARO) asset associated with the discounted liability for final reclamation and mine closure. The obligation and corresponding asset are recognized in the period in which the liability is incurred. The ARO asset is amortized on the units-of-production method over its expected life and the ARO liability is accreted to the projected spending date. As changes in estimates occur (such as mine plan revisions, changes in estimated costs or changes in the timing of the performance of reclamation activities), the revisions to the obligation and asset are recognized at the appropriate credit-adjusted, risk-free rate. ARO estimates are reviewed and updated annually at a minimum. The estimated ARO for the LOM is shown in Table 17-2.

Table 17-2. Discounted Asset Retirement Obligation Estimates

Category	ARO as End of Projected Mine Life <i>(US\$ in millions)</i>
Current ARO	9
Ongoing	12
Support Areas	98
Mine Closing	3
Total Liability	122

Water Management at NARM will continue through bond release and removal of the permitted NPDES outfalls. Through the use of pumps, diversion ditches, and berms, water is directed to approved sediment control/discharge structures at which time the discharge is periodically tested for quality as required by the appropriate regulatory agencies. Dewatering occurs to facilitate stability during active mining and will continue through reclamation. Coal waste at NARM is minimal as the primary methods for preparation include utilizing dozers to clean the top layer of coal and crushing to a desired size. The waste produced during through the dozing of the uppermost layer of the coal seam is deposited in the backfill more than five feet above the post-mining water table and a minimum of four feet below the regraded backfill surface (10 feet under the 100-year floodplain channel bottom of reclaimed drainages). Site monitoring will occur through bond release as outlined in the applicable bond release programs and included various success standards such as vegetation-sampling.

17.5. Comments from Qualified Person(s)

NARM historically demonstrated a strong dedication to compliance at a federal, state, and local level. Through compliance with the regulatory agency's permitting programs, all potential pollutant sources are addressed and mitigated if needed. In addition, NARM's permitting efforts have continued to provide a smooth path forward to continued operations through advanced planning and the renewal or revision of permits.

18. CAPITAL AND OPERATING COSTS

18.1. Introduction

NARM is an active operation with a long operating history. The LOM plan and financial model have been developed periodically. The coal volumes and product quality are developed from the detailed mine plan with production reflecting historic performance. The manpower requirement, operating cost, and capital are estimated from the historic data and future mine plan requirements on annual basis.

18.2. Operating Costs

The cost estimates used to establish coal reserves are generally estimated according to internal processes that project future costs based on historical costs and expected future trends. The estimated costs include mining, processing, transportation, royalty, add-on tax, and other mining-related costs. Peabody's estimated mining costs reflect projected changes in prices of consumable commodities (mainly diesel fuel, and explosives), labor costs, geological and mining conditions, targeted product qualities, and other mining-related costs. Estimates for other sales-related costs (mainly transportation, royalty, and add-on tax) are based on contractual prices or fixed rates. All reserves in the LOM plan are leased from the federal government or private parties. The Sales Related Costs include royalty and miscellaneous add-on taxes based on projected revenue and contractual rates.

Table 18-1. LOM Operating Cost Projection (in millions of US\$ as nominal value)

Operating Cost	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Labor Cost	145	154	160	164	169	182	191	202	206	213	220	218	219
Materials & Supplies	244	255	247	246	247	253	269	286	287	282	304	282	278
Power	20	21	21	21	22	23	23	25	26	26	27	26	26
Outside Services	52	56	54	53	53	57	59	65	67	65	71	68	65
Joint Facilities	9	9	10	10	10	10	11	11	11	12	12	11	12
Other Costs	20	24	24	24	24	27	28	29	30	30	31	30	29
Sales Related Costs	257	264	244	245	253	250	256	260	266	272	273	256	255
Non-Cash Costs	25	26	29	29	33	28	31	37	44	54	63	71	79
Total Costs	773	809	789	793	812	831	868	915	937	953	1,001	963	964

Operating Cost	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
Labor Cost	222	228	237	245	254	261	227	233	227	193	160	155	97
Materials & Supplies	276	285	303	315	324	319	287	290	273	214	183	172	103
Power	26	26	27	28	29	29	25	26	26	21	17	16	10
Outside Services	65	64	69	72	75	72	69	74	74	68	65	65	40
Joint Facilities	12	13	13	13	14	14	12	12	13	10	9	9	-
Other Costs	30	30	31	32	33	33	31	31	30	27	25	24	19
Sales Related Costs	261	270	271	276	283	287	242	249	252	193	169	177	129
Non-Cash Costs	83	86	90	92	89	81	72	68	65	61	58	51	39
Total Costs	975	1,003	1,041	1,074	1,100	1,097	965	984	960	786	685	671	438

Operating costs are projected based on historical operating costs and adjusted based on projected changes in staffing, hours worked, production, and productivity for mining areas in the LOM plan. The

LOM Plan operating cost projections are shown in detail in Table 18-1. The projected total operating cost is \$892 million on an annual average. These operating cost estimates are based on a substantial operating history and are in the accuracy range of +/- 15%. No contingency is included.

18.3. Capital Expenditures

NARM will require capital expenditures each year for infrastructure additions/extensions, as well as for mining equipment rebuilds/replacements to continue producing coal. The capital expenditures have been projected based on mining equipment and infrastructure requirements as scheduled in the LOM or annual average on US\$ per ton basis. The capital expenditures are estimated to cover safety, equipment major rebuilds and replacement, conveyance system, infrastructure, etc. The capital expenditures, from 2022 through 2047, are shown in Table 18-2.

The total estimated capital expenditure is \$892 million from 2022 to 2047 with an annual average of \$34 million. All capital expenditure is considered as needed to maintain current operations. There is no expansion capital required for the current LOM plan. These capital cost estimates are based on a substantial operating history and are in the accuracy range of +/- 15%. No contingency is included.

Table 18-2. Capital Expenditure Projection (in millions of US\$ as nominal value)

Capital Expenditure	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Facility and Development	-	-	-	-	-	-	-	-	-	0.1	6.4	-	-
Equipment	31.5	18.3	18.7	19.0	12.8	19.4	26.2	21.9	46.3	53.1	65.3	66.8	61.6
Total Capex	31.5	18.3	18.7	19.0	12.8	19.4	26.2	21.9	46.3	53.1	71.7	66.8	61.6

Capital Expenditure	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
Facility and Development	-	-	-	-	-	-	-	-	-	-	-	-	-
Equipment	56.8	60.4	53.4	42.0	41.9	36.8	24.4	25.6	24.4	18.0	15.1	14.9	10.6
Total Capex	56.8	60.4	53.4	42.0	41.9	36.8	24.4	25.6	24.4	18.0	15.1	14.9	10.6

19. ECONOMIC ANALYSIS

19.1. Macro Economic Assumptions

The Peabody Markets & Pricing Committee is responsible to provide the macro economic assumptions according to internal processes which rely on internal proprietary forecasts, existing contract economics and other third-party researches. The sales price for NARM coal is projected based on coal quality, historic sales price, existing contracts, and Company's view on future market demand and supply. The details for the pricing assumption are shown in Table 19-1. The cost and capital in the economic analysis assume from -4.1% to 5.0% annual inflation for each category as Table 19-2. The tax rate and discount rate used for the cash flow analysis are assumed to be 25% and 15% respectively.

Table 19-1. Sales Price Assumption

Average Price Adjusted for Quality	2022	2023	2024	2025	2026	2027 Thru LOM
Sale Price (US\$/Short Ton)	\$13.61	\$13.97	\$12.72	\$12.62	\$12.97	2.5% Annual Inflation

Table 19-2. Inflation Assumptions

Cost Category	2022	2023	2024	2025	2026	2027 - LOM
General	3.5%	2.5%	2%	2%	2%	2.5%
Wage & Salary	3%	3%	3%	3%	3%	3.0%
Health Care	4%	4%	4%	5%	4%	5.0%
Explosives	1.4%	1.8%	2.6%	2.8%	2.5%	2.5%
Fuel	12.4%	-1.8%	-0.9%	-1.4%	2.5%	2.5%
Capital	2.5%	2.5%	2%	2%	2%	2.5%

19.2. Cash Flow Model

The cash flow is calculated in detail as in Table 19-3. The annual cash flow fluctuates between -\$25 million to \$100 million with an average of \$18 million from the year 2022 to 2047. There are some years with negative cash flow projection due to capital expenditure or final mine closure cost. The coal reserves are projected to be mined out after 2047. The cash flow after 2047 includes mainly salvage value, income tax, working capital, and Asset Retirement Obligation (ARO). The Net Present Value (NPV) at 15% annual discount rate is computed as \$285 million which reflects the mid-year value of 2022. Since NARM is an existing operation with no requirements for major capital investment, the Internal Rate of Rate (IRR) and payback period are not applicable. The positive annual cash flow and NPV demonstrate the positive economic value for reserves in the LOM plan.

Table 19-3. Cash Flow Analysis (in millions of US\$ as nominal value)

Economic Analysis	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Revenue	912	936	852	846	869	868	892	914	941	969
Cash Generated (EBITDA)	165	154	92	82	91	66	55	36	48	70
Salvage Value	-	-	-	-	-	-	-	-	-	-
Income Tax	37	34	18	14	14	9	5	(1)	(0)	3
Working Capital	-	(1)	6	0	(2)	1	(0)	0	(2)	(3)
ARO/Mine Closure Expense	9	1	-	4	-	0	- 1	1	-	-
CapEX	31	18	19	19	13	19	26	22	46	53
Cash Flow	88	100	62	45	62	38	23	14	(1)	11
Cash Flow (Cumulative)	88	187	249	294	357	395	418	432	431	442

Economic Analysis	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
Revenue	976	919	914	940	977	988	1,012	1,044	1,063	899
Cash Generated (EBITDA)	38	28	30	48	61	37	30	33	47	6
Salvage Value	-	-	-	-	-	-	-	-	-	-
Income Tax	(7)	(12)	(14)	(10)	(8)	(15)	(17)	(16)	(10)	(18)
Working Capital	2	3	(0)	(2)	(2)	1	(1)	(2)	(2)	10
ARO/Mine Closure Expense	-	-	6	13	11	11	11	12	10	11
CapEX	72	67	62	57	60	53	42	42	37	24
Cash Flow	(24)	(24)	(25)	(13)	(5)	(11)	(6)	(7)	8	(1)
Cash Flow (Cumulative)	417	393	368	355	350	340	333	327	334	333

Economic Analysis	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051
Revenue	931	947	725	640	679	499	-	-	-	-
Cash Generated (EBITDA)	14	52	(0)	13	59	101	-	-	-	-
Salvage Value	-	-	-	-	-	-	-	-	-	-
Income Tax	(15)	(4)	(16)	(12)	1	15	(1)	(1)	(0)	(0)
Working Capital	(2)	(3)	13	4	(4)	7	29	-	-	-
ARO/Mine Closure Expense	10	-	-	-	20	14	57	22	22	22
CapEX	26	24	18	15	15	11	-	-	-	-
Cash Flow	(9)	29	11	14	19	68	(27)	(21)	(22)	(22)
Cash Flow (Cumulative)	324	353	364	378	397	466	439	417	396	374

19.3. Sensitivity Analysis

The sensitivity analysis is conducted on sales price, cost, productivity and capital with the detailed results in Table 19-4. The product quality is fairly consistent and it is not included in the sensitivity study. The NPV is calculated for 10%, 15%, and 20% annual discount rates. The minimum NPV is - \$478 million at a 10% discount rate and - \$1.50 per ton for price variance.

Table 19-4. Sensitivity Analysis (in millions of US\$ as nominal value)

SALE PRICE	Changes	1.50	1.00	0.50	0.00	-0.50	-1.00	-1.50
	NPV @ 10%	905	675	444	311	(17)	(247)	(478)
	NPV @ 15%	728	558	388	285	49	(121)	(291)
	NPV @ 20%	616	483	349	262	81	(53)	(186)
COST	Changes	-0.38	-0.26	-0.13	0.00	0.13	0.26	0.38
	NPV @ 10%	336	295	255	311	173	132	91
	NPV @ 15%	308	278	248	285	189	159	130
	NPV @ 20%	285	261	238	262	192	169	145
PRODUCTIVITY	Changes	7.5%	5.0%	2.5%	0.0%	-2.5%	-5.0%	-7.5%
	NPV @ 10%	709	544	379	311	49	(116)	(281)
	NPV @ 15%	575	456	337	285	100	(19)	(138)
	NPV @ 20%	492	399	307	262	123	30	(62)
CAPITAL	Changes	-7.5%	-5.0%	-2.5%	0.0%	2.5%	5.0%	7.5%
	NPV @ 10%	231	225	219	311	208	202	196
	NPV @ 15%	231	227	223	285	215	211	207
	NPV @ 20%	224	221	218	262	212	209	206

20. ADJACENT PROPERTIES

Adjacent properties to NARM, of competing coal companies are Black Thunder Mine of Arch Coal to the north and Antelope Mine of Cloud Peak Energy Resources to the southwest.

To the west, additional federal leases might be available for future extension. The coal in those leases are generally deeper and separated from NARM's active pits by the north-south rail lines. The available drilling information from Oil and Gas wells and the joint drilling program in adjacent properties are included in the geological model, but they are only used to extend the model beyond the NARM area. They don't have an impact on the coal resource and reserve estimates in this report.

21. OTHER RELEVANT DATA AND INFORMATION

All data relevant to the associated mineral reserves and mineral resources have been included in the sections of this Technical Report Summary.

22. INTERPRETATION AND CONCLUSIONS

22.1. Geology and Resources

The regional and local geology at NARM is understood well by the Qualified Person through the working experience and historic mining in the area. The exploration data at NARM has been collected with high-quality standards and the geological models have been further enhanced by incorporating pit survey and sampling programs. The points of observation, including the structure and coal quality, are sufficient for the determination of resource classification criteria which is developed from DHSA method which is widely used in the coal mining industry. All resources at NARM are converted to reserves and there are no resources to be reported in this report.

22.2. Mining and Reserves

The North Antelope Mine has a long operating history with all required infrastructure to support future production. All required property including surface and coal has been obtained to support the operation. NARM is a surface mine using multiple methods to move materials. All mining methods have been adapted and practiced at NARM and related mining industry for many decades. All major equipment is at the operation and they will be adequate to support future production. The LOM plan shows the projected economic viability for the estimated reserves of 1,475 million tons.

22.3. Environmental, Permitting and Social Considerations

As of December 31, 2021, all required licenses and permits are in place for all activities at the operation of NARM. There are no current requirements for additional work or studies on the above-mentioned studies. Many of these permits require regular monitoring, reporting, and renewals.

Land reclamation is a vital part of the mining life cycle that is integrated with the mining process. NARM is committed to being compliant with the Company's Environmental policy and taking responsibility for the environment, benefiting our communities, and restoring the land for generations that follow. The historic performance on the reclamation activities and the projected future ARO are supportive of the reserve estimates at NARM.

22.4. Economic Analysis

The LOM plan and financial model have been developed periodically. The coal volumes and product quality are developed from the detailed mine plan with production reflecting historic performance. The manpower requirement, operating cost, and capital are estimated from the historic data and future mine plan requirements on annual basis, and they are considered accurate to support the reserve estimates.

23. RECOMMENDATIONS

23.1. Geology and Resources

Routine exploration work should be continued to provide additional geological confidence. Along with the existing pit survey and sampling program, this will provide adequate support to the operation for short-term and mid-term planning, production, and coal quality blending purposes.

23.2. Mining, Processing and Reserves

Coal bed methane (CBM) and/or conventional oil & gas may be produced in the area. All historic disputes were settled, and it is recommended to continue monitoring and assessing CBM and Oil&Gas activities in the areas. The mine plan and reserve estimates should be re-evaluated for any material changes

To improve stability in advance of mining, dewatering has been done to limit the amount of groundwater in the overburden, coal, and the Fort Union Formation below the coal in the vicinity of Porcupine Creek and Bobcat pit. It is recommended to continue those programs and assess other alternatives, such as blasting pit floor and different high wall and spoil slopes.

23.3. Environmental, Permitting and Social Considerations

It is recommended to maintain current reclamation practice and ensure the appropriate balance of disturbance and reclamation activities. Any significant mine plan change should be considered for the ARO update.

23.4. Economic Analysis

The ability of Peabody, or any coal company, to achieve production and financial projections is dependent on numerous factors. These factors may include site-specific geological and geotechnical conditions, skilled workforce availability, obstacle mitigation, coal sales prices, market conditions, environmental legislation changes, as well as securing permit renewals and bonds. Unforeseen changes in legislation and new industry developments could substantially alter the performance of any mining company. It is recommended that those factors should be assessed regularly according to the Company's internal control and material changes are to be reflected in the future reserve estimates.

24. REFERENCES

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25. RELIANCE ON INFORMATION PROVIDED BY THE REGISTRANT

This technical report summary has been prepared by Qualified Persons who are employees of the registrant. In their specific areas of expertise, these Qualified persons have contributed to the appropriate sections of this report. These Qualified Persons have also relied on the information provided by the Company for property control, marketing, material contracts, environmental studies, permitting and macro-economic assumptions as stated in Section 3.2, Section 16, Section 17, and Section 19. As the operation has been in production for many years, the Company has considerable experience in those areas. The Qualified Persons have taken all appropriate steps, in their professional opinion, to ensure that the above information from the Company is sound.



TECHNICAL REPORT SUMMARY SHOAL CREEK MINE

In accordance with the requirements of SEC Regulation S-K (subpart 1300)

EFFECTIVE DATE: DECEMBER 31, 2021
REPORT DATE: FEBRUARY 18, 2022

PEABODY ENERGY CORPORATION
701 Market Street, Saint Louis, Missouri 63101

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Title: Technical Report Summary - Shoal Creek Mine, SK-1300

Peabody Energy Corporation (BTU)

Effective Date of Report:

December 31, 2021

Project Location:

The Shoal Creek Mine is an underground coal mine and is located approximately thirty-five (35) miles west of the city of Birmingham. The mine is also halfway between the towns of Jasper to the north, and Tuscaloosa to the south, in Jefferson, Tuscaloosa, and Walker Counties in the state of Alabama. Peabody Southeast Mining, LLC., which is a subsidiary of Peabody Energy Corporation, is the operator for the Shoal Creek Mine. Shoal Creek is situated in the Southern Appalachia Coal Producing Region.

Qualified Person(s):

Peabody Energy Corporation

/s/ Mike Shetley_____

Geology (Prepared Sections:1,2,3,4,5,6,7,8,9,10,11,21,22,23,24,25)

/s/ Hui Hu_____

Mining Engineering (Prepared Sections: 1,2,3,4,5,12,13,14,15,16,17,18,19,20,21,22,23,24,25)

Signature Date:

February 18, 2022

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1. EXECUTIVE SUMMARY

1.1. Disclaimer

This Technical Report Summary for the Shoal Creek Mine has been prepared by a team of qualified persons (QP) on staff at Peabody Energy. The purpose of this statement is to provide a summary of technical studies which support the coal resources and reserves in accordance with the United States Securities and Exchange Commission's (SEC) new mining rules under the SK-1300 regulation. All information within this report has been prepared based on present knowledge and assumptions.

1.2. Property Description

Shoal Creek is an underground coal mining operation located near and under the Black Warrior River, halfway between the towns of Jasper and Tuscaloosa, in Jefferson, Tuscaloosa, and Walker counties. The general location of Shoal Creek is shown in Figure 1-1. Shoal Creek controls the majority of the coal within the boundary through coal leases from a variety of private leaseholders and government entities. The existing surface control has been established to support future operations.



Figure 1-1. General Location Map

1.3. Geology and Mineralization

Northern Alabama lies within the southern portion of the Appalachian coal region which contains three primary coal fields in this portion of the state: Warrior, Cahaba, and Coosa. The Shoal Creek property lies within the east-central area of the Warrior Coal Field. The Warrior Coal Field is within the Pennsylvanian aged Pottsville Formation and is divided into two separate basins: The Warrior Coal Basin, (which contains the Shoal Creek property), and the Plateau Coal Basin.

The Warrior Coal Basin lies within the Cumberland Plateau section of the Appalachian Highlands and is bound on the eastern side by the Opossum Valley thrust fault. The Mary Lee Group outcrops along the northern and eastern edges of the Warrior Coal Basin. The southern portion of the basin is bound by the East Gulf Coastal Plain sediments. The Warrior Coal Basin dips one to two degrees to the southwest and the coalbeds plunge into the basin dipping as much as nine degrees.

The peat deposition of the Mary Lee and Blue Creek coal seams are representative of deposition on an ancient low-lying fluvial system. The thickest coal is in a northwest to southeast direction, in areas that probably represent locations of ancient low-lying inland valleys that were associated with major stream courses in the upper delta plain. Thinner coal zones are present in smaller valleys off the main ancient channel. These zones likely represent smaller tributaries and valleys of the ancient fluvial system. Shoal Creek currently mines both Mary Lee and Blue Creek seams.

1.4. Exploration

Exploration of the Shoal Creek property dates back to the 1910's which was sponsored by the Tennessee Coal, Iron and Railroad Company, under the United States Steel Corporation (USX). This program continued intermittently through the 1980's. The Drummond Company performed drilling in the Shoal Creek area from 1992 through the middle of 2017 with most of the holes completely cored. Since 2020 Peabody has conducted ongoing exploration programs that comprises a total of 18 drill holes, and one underground horizontal drill hole. In addition, a large amount of in-mine survey measurements of coal thickness, floor elevations, and channel samples have been recorded and collected at Shoal Creek which provide additional understanding of the geology and coal quality. Most of the coal quality analysis was performed by SAI (Sampling Associates International) Gulf at their Jasper, Alabama lab in compliance with the American Society for Testing and Materials (ASTM) Standards. Additional exploration programs will be conducted as needed in the future. For Shoal Creek, there are currently 1,220 total holes within the entire project area, which is adequate to support the resources and reserves in this report.

1.5. Development and Operations

Shoal Creek is an underground operation that extracts the Mary Lee and Blue Creek seams, along with the parting interval between the seams utilizing continuous miners to develop longwall panels, which are then mined using two longwall systems. The mined seams are subsequently washed at the onsite preparation plant before shipping. The Drummond Company developed the operation in 1994 and operated it until 2018 when Peabody Energy acquired the asset. The mine was idled in the fourth quarter of 2020 due to market conditions and its elevated cost structure. During the idle period the mine undertook activities to upgrade its profit margin. This included a preparation plant upgrade project to increase productivity, lower costs, and improve yields from the operation in the future. The mine restarted production in the second half of the fourth quarter of 2021. The mine is operated under a collective bargaining agreement with the United Mine Workers of America (UMWA) on behalf of the hourly workforce. The operation has an adequate number of employees, equipment, and infrastructure in place to continue mining activities. All required approvals and permits are granted to carry out the production and some of approvals and permits will require periodic renewals in the future.

1.6. Coal Resource and Reserve Estimates

Coal resource and reserve estimates are summarized in Table 1-1. The total resources for Shoal Creek are estimated as 82 million tons, this includes 75 million tons classified as measured or indicated, and 7 million tons as inferred. The total reserves are estimated to be 18 million tons with 16 million tons of proven reserves and 2 million tons of probable reserves.

Table 1-1. Coal Resources and Reserves

Resources (in million tons)				Reserves (in million tons)		
Measured	Indicated	Inferred	Total	Proven	Probable	Total
40	35	7	82	16	2	18

1.7. Economic Analysis

The coal resource as stated in this report is in the same coal field as the areas that have been mined out by Shoal Creek. The geological features and coal qualities appear to be consistent. To convert those resources to reserves, it will require additional exploration, mine design planning, and financial analysis.

The 18 million tons of coal reserves are supported by the Life of Mine (LOM) plan. Within the ten years of the LOM, the operation is projected to produce 1.8 million tons of product annually, with an average annual total cost of \$224 million and a capital expenditure of \$7.2 million. The LOM plan will produce \$36 million in annual cash flow and \$179 million Net Present Value (NPV).

1.8. Conclusion

Shoal Creek has a long operating history with all required permits, infrastructure, and major equipment in place. All required property control, including coal and surface, for the reserve area has been obtained to support the operation. Most of the coal within the resource areas is under control by leases. There is a significant amount of historic exploration and survey data for coal reserve estimates. The data has been determined by the Qualified Persons to be adequate in quantity and reliability to support the coal resource and reserve estimates in this Technical Report Summary. The resources are estimated to be 82 million tons. The coal reserve estimates and supporting Life of Mine (LOM) plan conclude that there are 18 million tons of reserves at Shoal Creek. The reserves are economically mineable based on the historical mining, production projections, historical and projected coal sales prices, historical and projected operating costs and capital expenditure projections for the LOM Plan.

1.9. Recommendations

1.9.1. Geology and Resources

Further exploration work should be evaluated to provide additional geological confidence. This, along with the existing mine survey and sampling program, will provide adequate support to the operation for short-term and mid-term planning, production, and coal quality control purposes.

It is recommended to further define the faults near the L4 panels in the current LOM. Horizontal drilling should be evaluated and possibly conducted from nearby gate roads once they are developed.

It is recommended to have an experienced geologist log core holes, measure core recovery, and conduct sampling. Core holes should be geophysically logged to verify thickness and core recovery. All activities should be conducted according to Peabody drilling exploration standards. Any future rotary holes should be geophysically logged to verify the strata and coal thickness.

1.9.2. Mining, Processing and Reserves

It is recommended that the Company conduct reconciliation to further validate the assumptions for loss and dilution during mining and processing. The yield gain from the plant upgrade should be verified with the actual plant performance once the adequate operational data is available.

The operation should continue to follow the approved roof control and ventilation plan to conduct mining. Any material changes on the plans or from the plans should be assessed and related impacts on resource and/or reserve estimates should be incorporated in the future update.

1.9.3. **Environmental, Permitting and Social Considerations**

It is recommended that the operation continue current reclamation practices and ensure the appropriate balance of disturbance and reclamation activities. Any significant mine plan change should be considered for the Asset Retirement Obligation (ARO) update.

1.9.4. **Economic Analysis**

The ability of Peabody, or any coal company, to achieve production and financial projections is dependent on numerous factors. These factors primarily include site-specific geological conditions, the capabilities of management and mine personnel, level of success in acquiring coal leases and surface properties, coal sales prices and market conditions, environmental issues, securing permit renewals and bonds, and developing and operating mines in a safe and efficient manner. Unforeseen changes in legislation and new industry developments could substantially alter the performance of any mining company. It is recommended that those factors should be assessed regularly according to the Company's internal control. Material changes are to be reflected in the future resource and/or reserve estimates.

2. INTRODUCTION

2.1. Introduction

This Technical Report Summary was prepared for the Shoal Creek Mine, which is operated by Peabody Energy Corporation's wholly owned subsidiary, Peabody Southeast Mining, LLC.

This Technical Report Summary for the Shoal Creek Mine is prepared in accordance with the United States' Securities and Exchange Commission (SEC) S-K 1300. The S-K 1300 sets the standards for the reporting of scientific and technical information on mineral projects and specifies that the Technical Report Summary must be prepared by or under the supervision of a Qualified Person(s).

The report is the first time filing for the registrant. The report summarizes information to support the resource and reserve results.

2.2. Terms of Reference

Coal resource and coal reserve estimates are reported according to the definition of S-K 1300 on a 100% controlled basis. The point of reference for coal resources and coal reserves estimates are in situ and saleable product respectively. Coal resource estimates, exclusive of coal reserves, are provided in this report as part of the technical evaluation process.

2.2.1. Units and Abbreviations

Unless otherwise stated, units used in this report are expressed in the English system. Currencies are expressed in US dollars. A list of abbreviations used in this report is shown below in Table 2-1.

2.3. Sources of Information and References

The information and references listed here and in Section 23 and Section 24 of this report were used to support the preparation of the report.

- GeoCore: Company's internal geological database of drill hole and coal quality information.
- LMS: Company's internal Land Management System which includes all mineral and land contracts.
- Peabody Map View: Company's internal Geographical Information System (GIS) for mapping.
- Life of Mine (LOM): Company's internal process for mine planning and economic analysis.
- IP system: Company's internal Integrated Planning (IP) system for LOM financial model.
- All government permits and approval documents.

Table 2-1. List of Units and Abbreviations

\$	United States Dollar
ADEM	Alabama Department of Environmental Management
ALS	Australian Laboratory Services
AMLPL	Abandoned Mine Land Program
ARO	Asset Retirement Obligation
ASMC	Alabama Surface Mining Commission
ASTM	American Society of the International Association for Testing and Materials
C°	Degree Celsius
CAPEX	Capital Expenditure
CBM	Coal Bed Methane
CSR	Coke Strength after Reaction
DHSA	Drill Hole Spacing Analysis
F °	Degree Fahrenheit
FT	Foot
GPM	Gallons Per Minute
HV	High Volatile
IRR	Internal Rate of Return
kWh	Kilowatt Hour
HMV	Heavy Medium Vessel
LBS	Pounds

LLC	Limited Liability Company
LOM	Life of Mine
LMS	Land Management System
MLS	Mean Sea Level
MPL	Measurement Point Locations
MSHA	Mine Safety and Health Administration
NAD	North American Datum
NGVD	National Geodetic Vertical Datum
NPDES	National Pollution Discharge Elimination System
NPV	Net Present Value
NUC	Not Under Control
QP	Qualified Persons
ROM	Run of Mine
SAI	Sampling Associates International
SEC	Securities and Exchange Commission
TPH	Tons Per Hour
UCS	Uniaxial Compressive Strength
USX	United States Steel Corporation
UMWA	United Mine Workers of America
VM	Volatile Matter

2.4. Involvement of Qualified Persons

The following Peabody employees serve as Qualified Persons (QPs) for this report as defined in S-K 1300.

- Mining Engineering: Hui Hu (Professional Engineer, Missouri)
- Geology: Mike Shetley (Certified Professional Geologist with the American Institute of Professional Geologists)

Mr. Hu is employed as Director of Geology and Engineering Support at Peabody's Corporate Office in St. Louis, Missouri USA. He has responsibilities for managing global geological services and supporting engineering activities. He has over 16 years of coal industry experience in underground and open cut coal mines in the US and Australia. He regularly travels to Shoal Creek for geology and engineering support. He provided engineering support for the recent plant upgrades, Life of Mine Planning and budget mine planning at Shoal Creek.

Mr. Shetley is employed as Senior Geologist at Peabody's Corporate Office in St. Louis, Missouri USA. He has responsibilities for managing exploration and geological modeling for multiple mines in the USA. His relevant experience includes 29 years working as a geologist, 15 of which were in exploration activities at multiple Peabody operations (Arizona, New Mexico, Colorado, Illinois, and Alabama), and geologic model development for projects throughout the Illinois Basin and the American Southwest. He travels to Shoal Creek frequently for exploration drilling projects and underground geological mapping. His most recent visit to Shoal Creek Underground was December 2021.

3. PROPERTY DESCRIPTION

3.1. Location

The Shoal Creek mine is located approximately thirty-five (35) miles west of Birmingham, and thirty-five (35) miles between the town of Jasper to the north and Tuscaloosa to the south, within the counties of Jefferson, Tuscaloosa, and Walker in the state of Alabama. The mine is within the east-central portion of the Warrior Coal Field which is part of the Southern Appalachian Coal Producing region. Access to the mine is by slope and shafts, with the depth of cover ranging from 800 feet in the eastern area of the property to 1,700 feet in the western area. The location of the Shoal Creek mine within Alabama is shown in Figure 3-1.



Figure 3-1. General Location

Shoal Creek’s current portal facility and bathhouse, called Camp Creek, is in Walker County, near the junction of Jefferson, Tuscaloosa and Walker Counties, Alabama. Other surface facilities of the Shoal Creek Portal are in Jefferson County near the Black Warrior River and the village of Adger, Alabama. These consist of the original portal facility and bathhouse, preparation plant, coal stockpiles, refuse disposal facilities, and barge loadout. The location of the Camp Creek Portal and the Shoal Creek Preparation Plant is shown as follows in Table 3-1.

Table 3-1. Mine Facility Coordinates (NAD 1927, Alabama State Plane, West Zone)

Facility	Easting	Northing
Camp Creek Portal	559,782	1,280,288
Shoal Creek Preparation Plant	568,467	1,266,548

3.2. Property Rights

The Shoal Creek mineral property boundary encompasses a total of 32,666 acres. Shoal Creek has a total of 14 private mineral leases, 1 federal mineral lease, 2 state mineral leases, and 2 surface rights agreements. The majority of this mineral control acreage is primarily through lease agreements from RGGGS Land and Minerals Ltd, L.P. The sum of the RGGGS leases contains 28,517 total mineral acres. The remainder of the mineral lease control is with the United States of America (1,618 acres leased from the Bureau of Land Management), the Alabama State Department of Conservation and Natural Resources (362 acres under the Black Warrior River), and private property leases (1,250 acres from individuals, families, and/or trusts). The remaining 919 acres designated as Not Under Control (NUC) are all located outside of the projected reserve area. The estimated resource areas have three perimeter tracts that are NUC, however based on the previous history with owners, leases to these NUC acres should be obtainable. All the leases within the property boundary are located within the following Townships, Ranges, and Sections as shown in Table 3-2.

Table 3-2. Surface and Coal Control

Surface and Coal Control		
Township	Range	Sections
17S	7W	18 - 21, 29 - 32, 35, 36
17S	8W	13, 14, 22 - 27, 34 - 36
18S	6W	7, 18,19
18S	7W	1 - 24, 26 - 30, 32, 33
18S	8W	1 - 3, 10 - 14, 24

A list of controlled acres by lease is shown in Table 3-3 below. Figure 3-2. shows the Shoal Creek Mineral Control.

Table 3-3. Mineral & Surface Leases

Number	Contract Type	Rights	Payments		Expiration date	Retention Condition	Size	
			Rental	Production			Surface Acres	Net Coal Acres
2004-000001-00	Lease	Mineral/Surface	Letter of Credit Service	% of Realization Per Ton ¹	5/29/2001	Options to Negotiate Extension		20,517
2004-000002-00	Lease	Surface	Field-Up	None	11/1/2004	Options to Purchase at Expiration	449	
2004-000003-00	Lease	Mineral	None	% of Real w/Min per Ton ²	8/24/2006	Rights to Extend to 2011		103
2004-000004-00	Federal Lease	Mineral	Non-Renton, Rental	% of Realization per Ton	8/1/2004	Indefinite with Lease Production		1,618
2004-000005-00	Lease	Mineral	Field-Up	% of Realization per Ton	10/17/2003	None		400
2004-000006-00	Lease	Mineral	Annual Recoup, Royalty	% of Real w/Min per Ton	4/18/2008	Rights to Extend to 2018		133
2004-000007-00	Lease	Mineral	Annual Recoup, Royalty	% of Real w/Min per Ton	11/4/2009	Rights to Extend to 2019		93
2004-000008-00	Lease	Mineral	None	% of Real w/Min per Ton	10/17/2003	Rights to Extend to 2041		42
2004-000009-00	Lease	Mineral	None	% of Real w/Min per Ton	1/20/2001	Rights to Extend to 2041		50
2004-000010-00	Lease	Mineral	None	% of Real w/Min per Ton	1/22/2001	Rights to Extend to 2041		54
2004-000011-00	Lease	Mineral	None	% of Real w/Min per Ton	4/27/2003	Rights to Extend to 2042		24
2004-000012-00	Lease	Mineral	Annual Recoup, Royalty	% of Real w/Min per Ton	10/1/2004	Rights to Extend to 2004		142
2004-000015-00	Lease	Mineral	Annual Recoup, Royalty	% of Real w/Min per Ton	10/7/2003	None		32
2004-000016-00	State Lease	Mineral	Non-Renton, Rental	% of Real w/Min per Ton	7/1/2005	With Annual Payment		44
2004-000016-00	State Lease	Mineral	Non-Renton, Rental	% of Real w/Min per Ton	6/1/2005	With Annual Payment		918
2004-000020-00	Deed	Surface					1,361	20
2004-000021-01	Option	Surface			Indefinite		883	
2004-000024-00	Lease	Mineral	Annual Recoup, Royalty	% of Real w/Min per Ton	8/1/2004	Rights to Extend to 2009		27
2004-000024-01	Lease	Mineral	Annual Recoup, Royalty	% of Real w/Min per Ton	8/6/2004	Rights to Extend to 2009		13
Totals							3,490	21,747

1. % of Realization Per Ton is defined as a Royalty that is a percentage of Sales price multiplied by Tons Sold.

2. % of Realization with Min per Ton is defined as a Royalty that is the greater of a percentage of Sales price, or a minimum amount multiplied by Tons Sold.

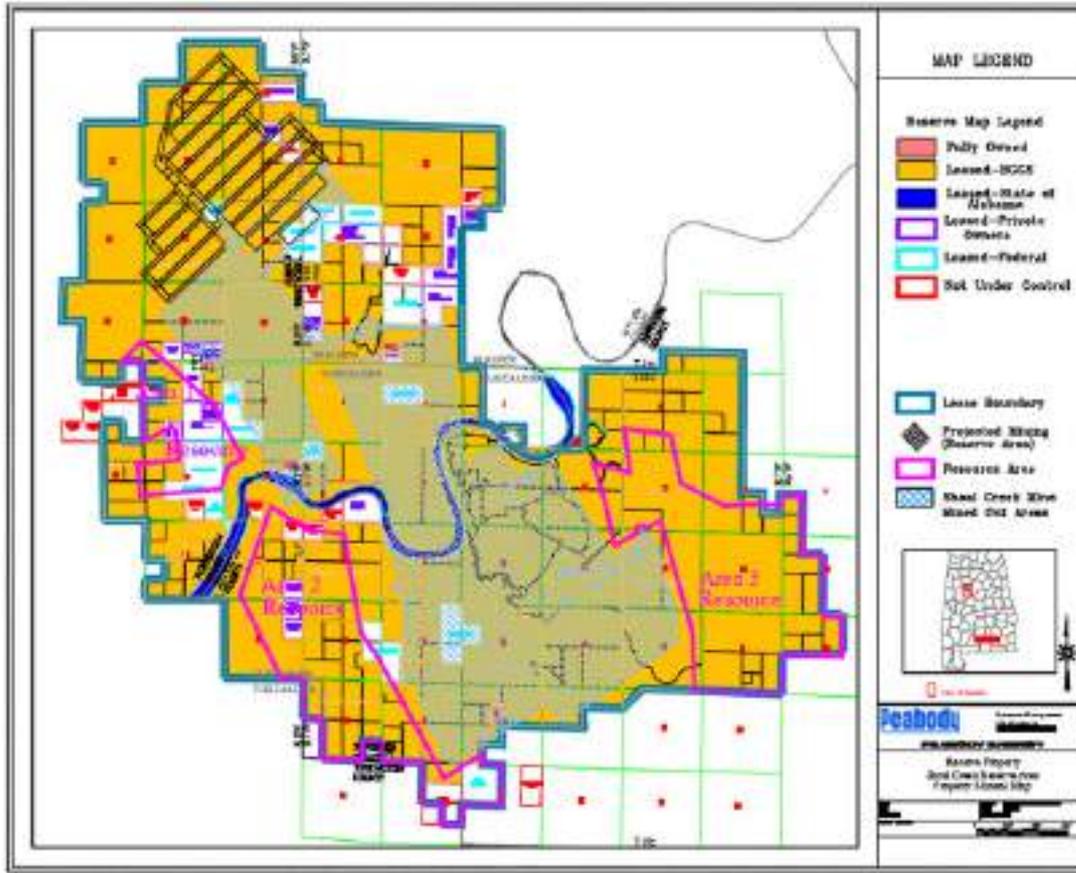


Figure 3-2. Mineral Property Map

Peabody owns 2,161 acres of the surface at Shoal Creek and leases 449 surface acres, with an option on an additional 880 surface acres. The Surface Rights not controlled by Peabody are primarily owned by Molpus Woodlands Group, LLC (MOLPUS), and Valley Creek Land and Timber Company (VCLT), which are both timber investment groups. These two entities acquired the surface rights from RGGS, who originally acquired them from USX. Subsidence rights have been obtained through various coal lease agreements. The current mine infrastructure is on controlled property. Any future rights for infrastructure should be able to be obtained as needed. Figure 3-3 shows the Shoal Creek Surface Control.

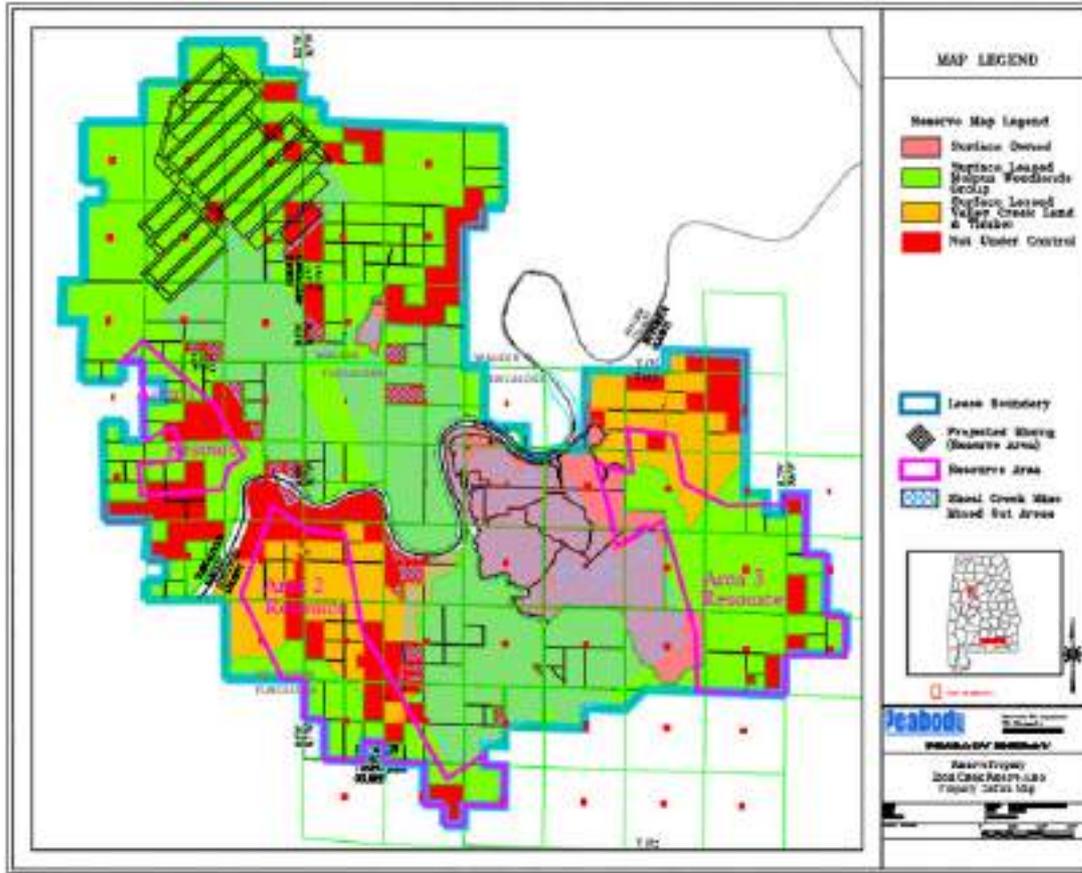


Figure 3-3. Surface Property Map

3.3. Comments from Qualified Person(s)

To the extent known to the QP, there are no other significant factors and risks that may affect access, the title of the right, or ability to perform work on the property.

4. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES

4.1. Physiography

Shoal Creek is physiographically part of the Warrior Basin of the Cumberland plateau section of the southern part of the Appalachian Plateau province, which is within the greater Appalachian Highlands region. This part of the Appalachian Plateau Province is characterized by flat topped forested high elevation plateaus separated by steep sided forested valleys. The plateaus slope gently from the northeast to the southwest. The Black Warrior River flows in a southwest direction across the central part of the property.

Surface elevations over the lease area range from approximately 260 feet above Mean Sea Level (MSL) where the Black Warrior river intersects the property line in the southwest portion of the property, to approximately 720 feet above Mean Sea level (MSL) near the southwest central area of Shoal Creek.

The Cumberland Plateau in this area has a great diversity of vegetation but is primarily dominated by mixed hardwood forests of oak, hickory, maple, ash, and pine. A primary industry in the region is logging which therefore results in numerous broad swaths of planned pine tree farms.

4.2. Access

The Shoal Creek mine is located approximately 35 miles west of Birmingham, Alabama, and approximately 35 miles south of the town of Jasper, Alabama and 35 miles north of the city of Tuscaloosa, Alabama.

To reach the Shoal Creek mine from the city of Birmingham, take Interstate 22 west, which serves as the main highway out of the city, then take the west exit for the Cordova-Parrish Road (highway 20). Drive west until the road changes to Parrish Oakman highway 20, then continue west to the town of Oakman. Drive south through the town of Oakman and continue south on highway 69 for approximately 10 more miles until you reach mile marker 179 and turn left onto Wallace Ferry road. Drive east on Wallace Ferry road staying to the right at a fork, whereupon the road becomes Blackburn road. Drive on Blackburn road about 10 miles until you reach the portal security gate on the right. The Shoal Creek mine office and portal is about one mile past the security gate.

To reach the Shoal Creek mine from the town of Jasper, take Interstate 22 west, until you reach the Oakman exit for highway 69. Drive south through the town of Oakman and continue south for approximately 10 more miles until you reach mile marker 179 and turn left onto Wallace Ferry road. Drive east on Wallace Ferry road staying to the right at a fork, whereupon the road becomes Blackburn road. Drive on Blackburn road about 10 miles until you reach the portal security gate on the right. The Shoal Creek mine office and portal is about one mile past the security gate.

To reach the Shoal Creek mine from the city of Tuscaloosa, take highway 43 north from the center of town, this road becomes highway 69 when it crosses highway 82. Drive north on highway 69 for approximately 15 miles until you reach the right turn onto Wallace Ferry road, just before mile marker 179. Drive east on Wallace Ferry road staying to the right at a fork, whereupon the road becomes Blackburn road. Drive on Blackburn road about 10 miles until you reach the portal security gate on the right. The Shoal Creek mine office and portal are about one mile past the security gate.

Figures 4-1. and 4-2. show the access roads from Birmingham, Tuscaloosa, and Jasper to the Shoal Creek mine.

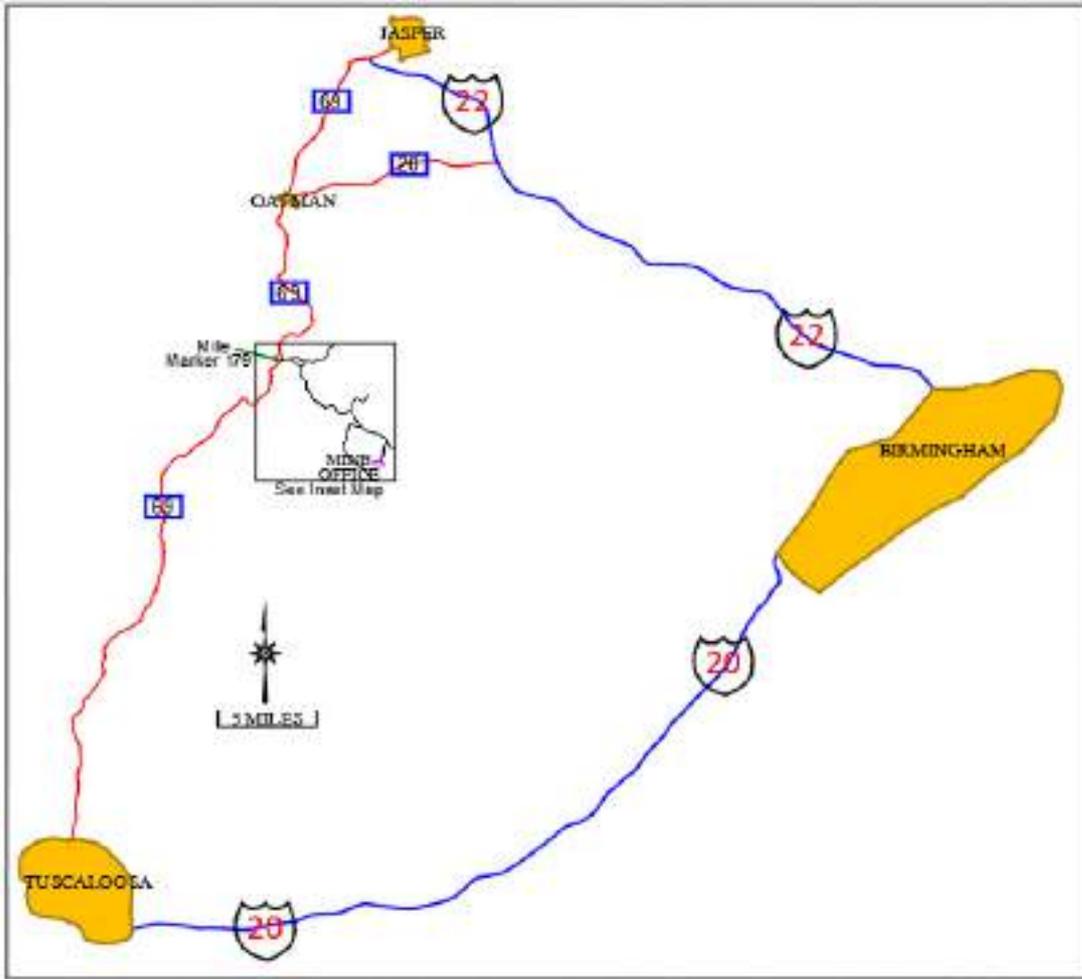


Figure 4-1. Access Map

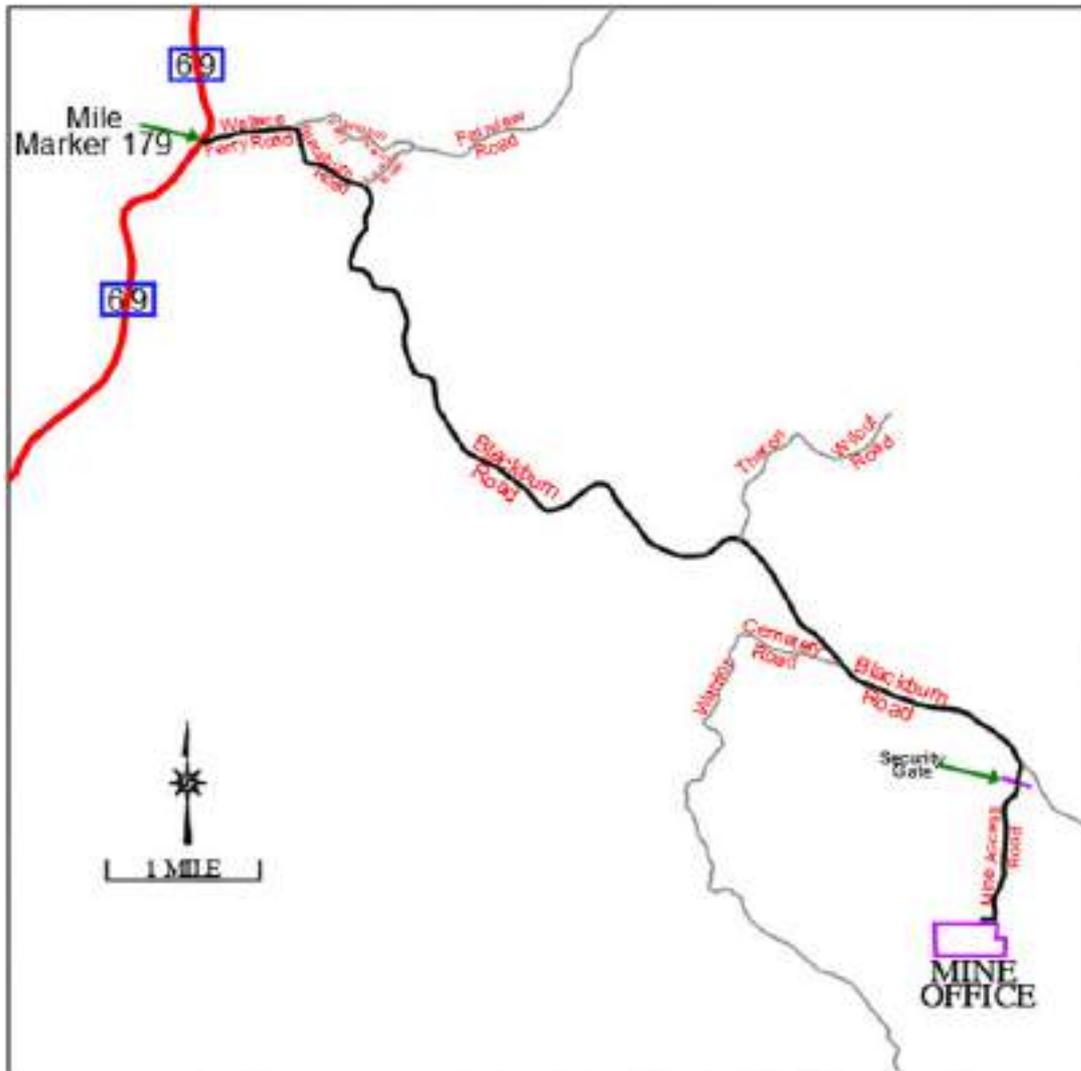


Figure 4-2. Access Map Inset

There are two airports in the vicinity of the Shoal Creek mine. The largest is Birmingham-Shuttlesworth International Airport located in the city of Birmingham, Alabama which is 35 miles east of the Shoal Creek mine. The other airport is Tuscaloosa National Airport located in Tuscaloosa, Alabama about 35 miles south of the Shoal Creek mine. Both airports serve the commercial and general aviation service needs for north-central Alabama.

4.3. Climate

This area of north-central Alabama is characterized by a humid subtropical climate, which generally allows the mining operations to take place all year. The Jasper and Shoal Creek region of Alabama expects annual precipitation of approximately 60 inches, with only approximately two inches of precipitation being snowfall. The wettest month is normally March, while the driest month is normally October. The average annual high temperature is 73 degrees Fahrenheit, with an average annual low temperature of 48 degrees Fahrenheit. The average annual mean temperature is 60.5 degrees Fahrenheit. Tables 4-1. and 4-2. break down the monthly Temperature and Precipitation averages.

Table 4-1. Jasper Monthly Temperature (Source: www.usclimatedata.com)

Temperature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average High (deg F)	52	57	66	74	81	87	90	91	85	75	65	55	73
Average Low (deg F)	29	32	39	46	56	64	68	67	60	47	38	32	48

Table 4-2. Jasper Monthly Precipitation (Source: www.usclimatedata.com)

Precipitation	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Rainfall (inch)	5.5	5.7	5.4	5.0	5.4	4.9	5.2	3.3	4.3	4.0	5.4	5.7	59.7
Snowfall (inch)	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0

4.4. Available Infrastructure, Water, Electricity, and Personnel

The city of Birmingham, Alabama 35 miles to the east of the Shoal Creek mine has a city, urban, and metro population of approximately 212,000, 749,000, and 1,152,000 respectively. The city of Tuscaloosa, Alabama is 35 miles to the south of the mine with a city, urban, and metro population of 90,000, 140,000, and 235,000 respectively. The town of Jasper is 35 miles to the north of the mine and has a population of about 15,000.

The city of Birmingham has a varied workforce with notable industries being steel processing, banking, construction, and biotechnology. Tuscaloosa's workforce is dominated by higher education at the University of Alabama, along with government agencies and manufacturing. The smaller town of Jasper has a long history of supporting the mining industry. The workforce for Shoal Creek and adjacent mines is supplied from a large area surrounding those operations.

Coal mining operations have been established in this area for many decades and the infrastructure including roads, railroads, powerlines, and waterways is well developed. The warehouse and maintenance facilities from major equipment and material suppliers are accessible for the mining operations in the region. Alabama Power Company is the main power supplier to the region. Shoal Creek's main source of water is from the nearby Black Warrior River and recycled underground water.

4.5. Comments from Qualified Person(s)

The local resources and infrastructure are well developed due to the long history of coal mining activities in the region. It is the QP's opinion that there are no deficiencies in local infrastructure or resources to support the reserves and resources.

5. HISTORY

5.1. Prior Ownership

Most of the surface and mineral control at the Shoal Creek property was acquired by Tennessee Land Company, as part of the United States Steel Corporation (later named USX) in the early to mid-1900's. RGGG (another land holding company), acquired USX's mineral interests in April 2003. The Drummond Company signed a lease with USX in May 1991, acquired the necessary permits, and began producing coal at the Shoal Creek Mine in 1994. The operation has been in production since 1994. Peabody acquired the operations in December 2018.

5.2. Exploration, Development, and Production History

Drilling exploration has a long history in the region that has primarily been conducted by the United States Steel Corporation and subsequently the Drummond Company when they developed the mine. Most exploration information conducted by previous owners included drillers logs, detailed geologist core logs, geophysical logs, and quality reports. Since 2019 Peabody has conducted all exploration work. More detail is included in Section 7.3.

The operation was developed by the Drummond Company in the early 1990s. More detail regarding infrastructure development is described in Section 15.1. Coal production started in 1994 which is shown in Table 5-1.

Table 5-1. Historic Coal Production (Source: MSHA and Peabody)

Year	Coal Production (Tons)
1994	928,679
1995	1,945,331
1996	3,589,098
1997	3,905,331
1998	4,180,152
1999	4,080,582
2000	4,194,104
2001	4,115,795
2002	3,961,280
2003	3,840,165
2004	3,813,383
2005	2,218,195
2006	818,287
2007	1,326,291

Year	Coal Production (Tons)
2008	2,105,589
2009	1,615,116
2010	1,680,463
2011	1,760,870
2012	1,286,573
2013	1,453,024
2014	1,803,117
2015	2,043,184
2016	2,324,188
2017	2,078,760
2018	2,659,074
2019	1,248,356
2020	714,831
2021	119,000

6. GEOLOGICAL AND HYDROLOGICAL SETTING, MINERALIZATION, AND DEPOSIT

6.1. Geological Setting

6.1.1. Regional Geology

Northern Alabama lies within the southern portion of the Appalachian coal region and contains three primary coal fields in the northern half of the state. These are the Warrior, Cahaba, and Coosa. The Shoal Creek property lies within the east-central portion of the Warrior Coal Field. The Warrior Coal Field is within the Pennsylvanian aged Pottsville Formation and is divided into two separate regions: The Plateau Coal Basin, and the Warrior Coal Basin which contains the Shoal Creek property.

The Warrior Coal Basin lies within the Cumberland Plateau section of the Appalachian Highlands and is bound on the eastern side by the Opossum Valley thrust fault. The Mary Lee Group outcrops along the northern and eastern edges of the Warrior Coal Basin. The southern portion of the basin is bound by the East Gulf Coastal Plain sediments. The Warrior Coal Basin dips one to two degrees to the southwest and the coalbeds plunge into the basin dipping as much as nine degrees.

The overlying strata of the Pottsville Formation are Cretaceous (145-66 million years ago) and Tertiary (66-2.6 million years ago) deposits of the Mississippi Embayment and Gulf Coastal Plain. The depositional environment associated with the Pottsville Formation of the Warrior Basin is interpreted as a barrier/back barrier setting with lithologic sequences that indicate marine-nonmarine nearshore sedimentation. The lithology of the Pottsville Formation includes; interbedded sandstone, siltstone, claystone, shale, and bituminous coal. The thickness of the Pottsville Formation varies, with some local measurements exceeding 8,000 feet. The depositional sequences that are found within the Pottsville Formations usually follow this succession: a ravinement surface that is overlain by an interval of marine fossil assemblages, a thick gray mudstone that ranges in thickness from 30 to 300 feet, which then coarsens into sandstone and conglomerate. The sandstone is then succeeded by a heterogeneous coal zone that consists of mudstone, sandstone, conglomerate, underclay, and coal.

The Pottsville Formation is divided into two units: upper and lower. The Upper Pottsville Formation contains the majority of the thick coal beds of economic interest. These beds have been divided into six groups, which include the Mary Lee Member Coal Group. The Lower Pottsville Formation is predominately a barren interval that contains sandstone and thin coal seams.

The landscape of the Warrior Coal Basin is characterized by flat topped forested high elevation plateaus separated by steep sided forested valleys. The plateaus slope gently from the northeast to the southwest. The Warrior Coal Basin which is part of the Cumberland Plateau, is bounded by the Highland Rim to the north, the East Gulf Coastal Plain to the west and south, and the Alabama Valley and Ridge to the southeast. The Cumberland Plateau also extends northeast into Kentucky where it is bounded by the Allegheny Plateau.

The vegetation of the Warrior Coal Basin is dominated by a mixed hardwood forest of oak, hickory, maple, ash, and pine. Due to the moderate precipitation and numerous valleys, there are scattered creeks and small rivers throughout the basin with the Black Warrior River being the most prominent.

The Shoal Creek Mine is located within the Warrior Coal Basin. The coalbed mined is the Mary Lee and Blue Creek seams that are part of the Mary Lee Member Coal Group of the Pottsville Formation, which formed during the Pennsylvania age.

A regional geologic stratigraphic column and regional geologic map are shown in Figures 6-1. and 6-2.

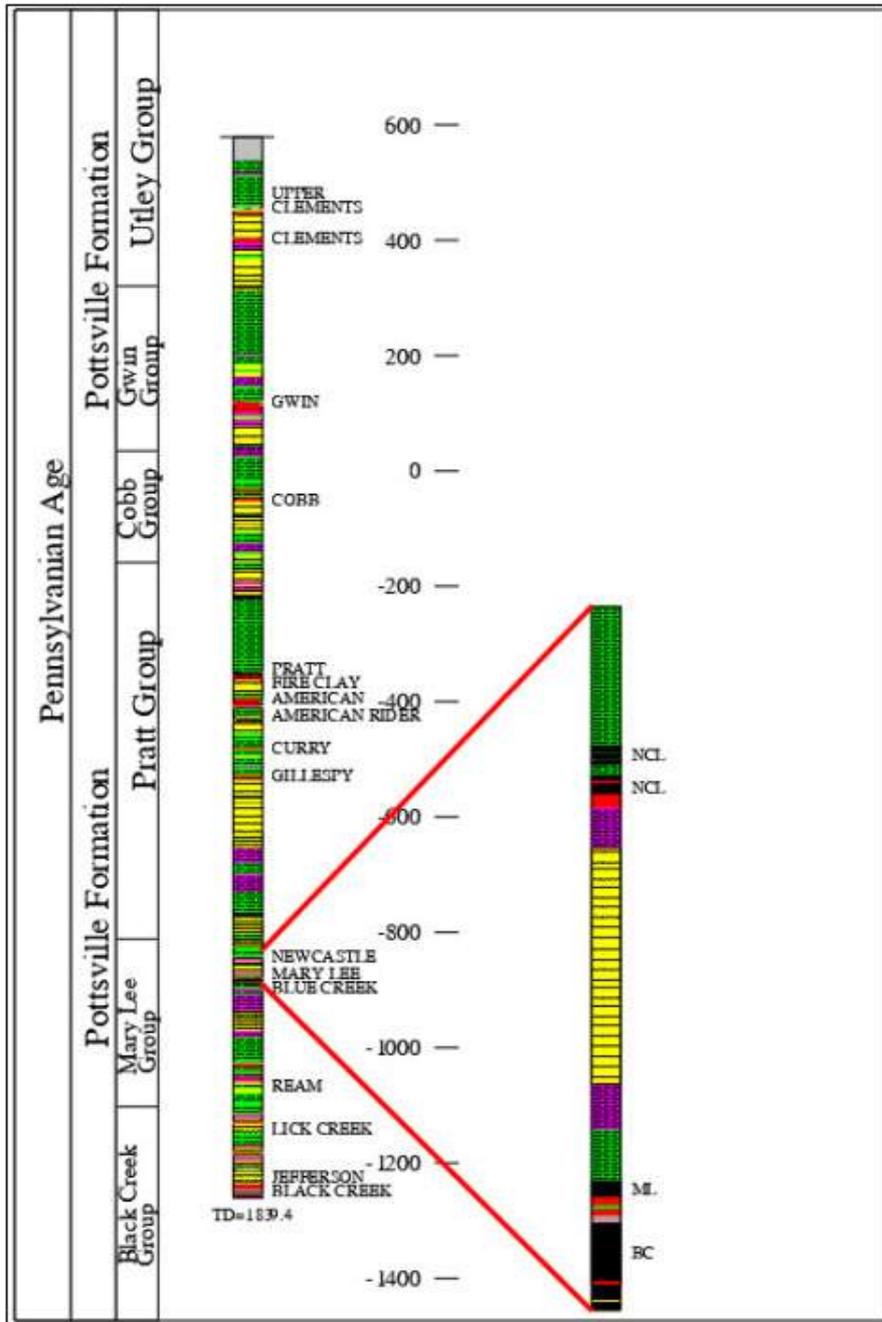


Figure 6-1. Geologic Stratigraphic Column

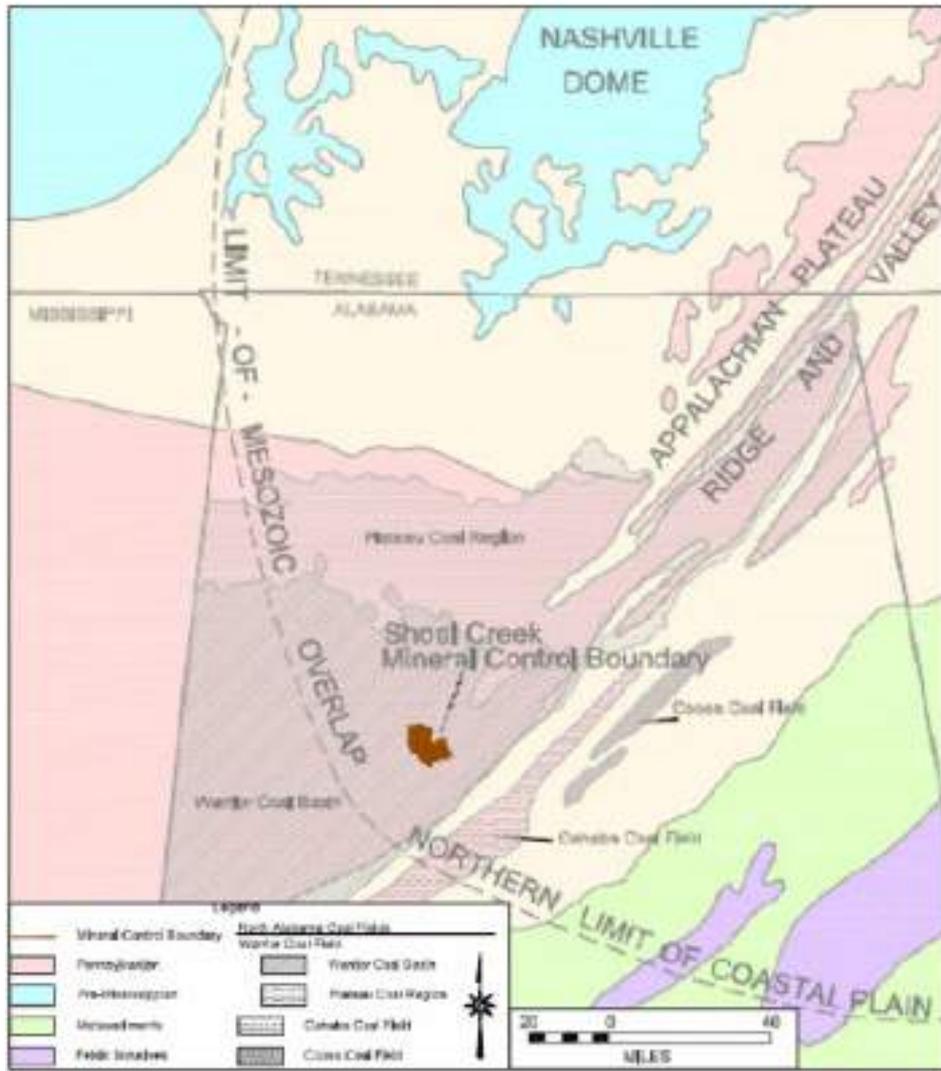


Figure 6-2. Regional Geologic Map

6.1.2. Local Geology

The Sequatchie Anticline and the Warrior Syncline are the two most prominent features influencing the structural attitude of the strata within the Shoal Creek property. The Coalburg Syncline is located in the region to the southeast of the Shoal Creek property. Faults tend to cluster within the two synclines, with one of the highest concentrations of faults located near the axis of the Warrior Syncline. The majority of the faults trend from the southeast to the northwest. The faults nearest to, and just west of the Warrior Syncline tend to be high angle (60 degrees) normal faults, as much as four miles in length, and with offsets ranging from 10 feet to over 240 feet.

Regional and local lineaments are present throughout the Shoal Creek property. The regional lineaments are orientated northeast to southwest and east to west. Local lineaments are generally perpendicular to the regional lineaments but can also be parallel. The coal cleat direction at Shoal Creek is usually N 60 E and joint direction is usually N 90 E, which follow the regional lineaments and fold axis orientations.

Three major coal groups are intersected in the drilling within the Shoal Creek property; Cobb, Pratt, and Mary Lee. Each coal group contains consistent coal marker beds, these are the Cobb, Pratt, American, and New Castle. The overburden down to the Cobb seam within the Cobb Group has an average thickness of approximately 475 feet. The interburden between the Cobb seam within the Cobb Group and the American seam of the Pratt Group has an average thickness of approximately 325 feet. The interburden between the American Seam of the Pratt Group and the New Castle Seam of the Mary Lee Group has an average thickness of approximately 450 feet. The Mary Lee Group is comprised of five coal seams, which in descending order are the New Castle, Mary Lee, Blue Creek, Jagger, and Ream. The interburden between the New Castle Seam of the Mary Lee Group and the Mary Lee Seam of the Mary Lee Group has an average thickness of approximately 40 feet but can range between 20 and 55 feet.

The interburden between the coal seams is primarily shales and sandstones, with thin fireclays underlying the coal seams in many areas. The sandstones are dark gray containing mica, clay and carbonaceous material. They are well cemented, of medium hardness and very fine grained. They range in thickness from less than 10 feet to approximately 40 feet.

The coal to be mined is the Mary Lee and Blue Creek seams which are in the Pottsville Formation. The Mary Lee and Blue Creek seams typically occur at depths ranging between 800 to 1,700 feet. The Mary Lee seam has a fairly uniform thickness ranging between 1 feet and 1.5 feet throughout the mine plan area. The Blue Creek seam ranges from 2.5 feet to 6.0 feet thick. This thickness is largely determined by interburden thickness below the Newcastle seam. A greater interburden thickness correlates with an increase in coal thickness. The typical seam correlation is shown as the cross sections in Figures 6-3, 6-4, 6-5, and 6-6. The locations of these cross sections are shown on Figure 7-1.

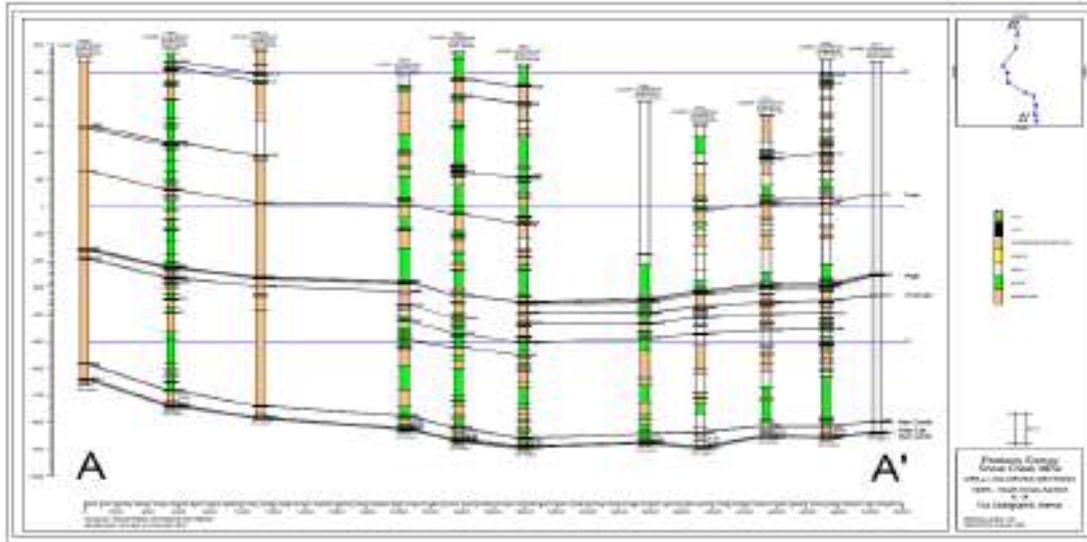


Figure 6-3. North-South Full Geologic Cross Section

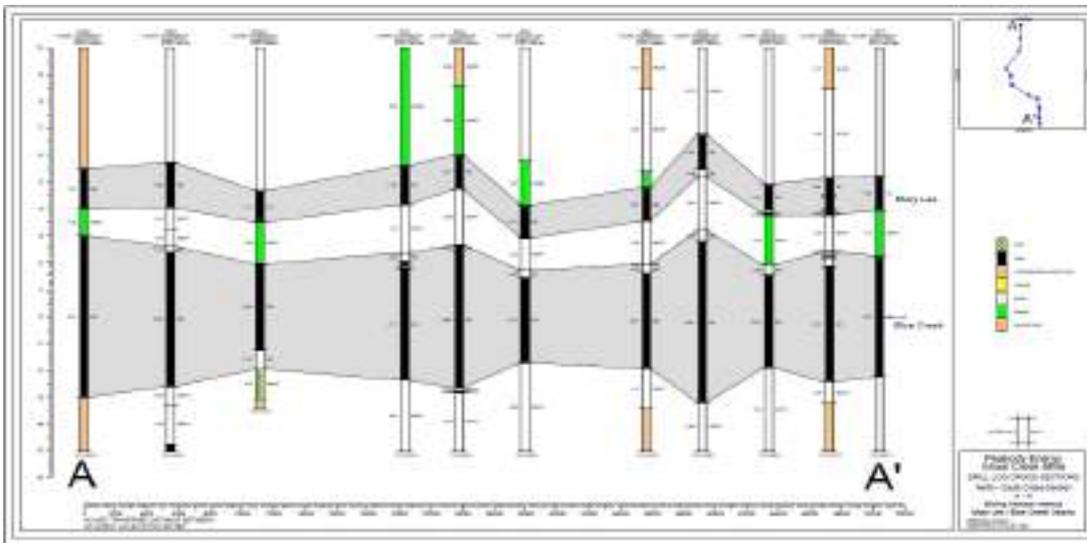


Figure 6-4. North - South Geologic Cross Section

6.2. Hydrology Setting

6.2.1. Regional Hydrology

The Shoal Creek property lies within the east-central portion of the Warrior Coal Basin, situated within the Cumberland Plateau physiographic province of the Appalachian Highlands. The landscape of the Warrior Coal Basin is characterized by flat topped forested high elevation plateaus separated by steep sided, forested valleys. The plateaus slope gently from the northeast to the southwest. The upper Black Warrior River and its large tributaries comprise the dominant drainage features in this section of the Cumberland Plateau. The Black Warrior River drains approximately 6,274 square miles, or about 12 percent of Alabama's land area (GSA, 2018). The river is impounded by a series of locks and dams which provide a path for river transport, flood control, and hydroelectric power. The mine is located upstream of the John Hollis Bankhead Lock and Dam, which is the northernmost lock and dam on the river and forms the narrow 9,200-acre Bankhead Lake. The Black Warrior River generally flows south, southwest, before joining with the Tombigbee River. Flows in the larger streams of this area are typically sustained during the summer months, but many headwater tributaries go dry (GSA, 2018).

The lithology of the Pottsville Formation includes; interbedded sandstone, siltstone, claystone, shale, and bituminous coal. The shales and sandstones of the Pottsville Formation are generally very fine grained and well cemented, and the sandstones are often limited in aerial extent. Groundwater yields from the poorly productive, complexly interbedded, sandstones and shales of the Pottsville Formation are typically small, with wells in the Warrior Basin often yielding less than 5 to 10 gpm (gallons per minute) (USGS 1982). The many faults and folds within the Pottsville Formation make it hydrologically complex, and groundwater movement is generally limited to fracture zones, joints and bedding planes (GSA, 2018, Hunter and Moser, 1990). Due to the poor productivity of the Pottsville Formation most municipalities obtain water from surface water sources (USGS 1980). Recharge to the Pottsville is primarily from seasonal rainfall along outcrop exposures in the northeast (GSA, 2018). Groundwater within the Pottsville formation generally flows southwest from the recharge areas with high hydraulic head, while in the northeast, flows travel towards the streams and valleys with low hydraulic head. Within the northern section of the Warrior Basin groundwater flows southeast toward the Black Warrior River. Within the central section of the basin, groundwater moves towards small rivers and streams as well as the Black Warrior River (GSA, 2018).

6.2.2 Local Hydrology

The mines surface facilities are intersected by the Black Warrior River and Bankhead Lake. Surface facilities along the southern bank are drained by small ephemeral tributaries that report to Shoal Creek, Little Shoal Creek, Cold Branch, and directly to the Black Warrior River. Surface facilities on the northern bank drain to small ephemeral tributaries that report to Camp Creek, Big Creek, and Steep Creek. All receiving streams ultimately report to the Black Warrior River which flows to the southwest. All water discharged from the mine site, is routed through National Pollution Discharge Elimination System (NPDES) outfalls that are subject to discharge requirements.

Groundwater within the Pottsville Formation flows along fractures, bedding planes, within cleats of the coal seams, or within discontinuous lenses of sandstone. Shales, siltstone, claystone, and underclay act as confining layers limiting migration of water between units. Monitoring of shallow groundwater within the Pottsville Formation, indicates the groundwater is contained in poorly connected fracture systems or perched water tables with limited aerial extent. Most monitoring wells could only be pumped for a few minutes with water levels not returning for hours to days. Due to the low permeability

and limited yields, groundwater is used sparingly for domestic supply in this area. Groundwater is also present within the Mary Lee and Blue Creek coal horizon. This water bearing unit is located at approximately -700 ft. msl (mean sea level) and is confined by overlying shale and underlying fireclay. Groundwater within the coal seam cleats moves in the direction of structural dip, approximately 2% to the southwest. Groundwater encountered during mining is pumped to the surface and discharged through NPDES outfalls.

6.3. Mineralization and Deposit Type

The targeted coal seams for Shoal Creek are typically mid to high volatile bituminous coals, which can be sold as metallurgical coal due to high fluidity and coking properties. The coal seams of interest, Mary Lee and Blue Creek, are of Pennsylvanian Age and are part of the Mary Lee Coal Group of the Pottsville Formation within the Warrior Coal Basin of the Southern Appalachia Coal Producing Region. The thickness of the Mary Lee and Blue Creek seams is heavily dependent upon the location of the ancient fluvial system that scoured the topography with valleys. Areas where the ancient fluvial system scoured deep valleys allowed for thick peat accumulation and therefore thicker coal deposits for the Mary Lee and Blue Creek seams. The major ancient fluvial valley trends northwest/southeast across the Shoal Creek property. High angle normal faults are common across the property and often display horst and graben structures. The general strike of the coal seams is northwest/southeast, with a dip of one degree to the southwest.

The Mary Lee and Blue Creek seams are currently mined as one mining section at Shoal Creek utilizing underground mining methods. The depth of cover over the Mary Lee and Blue Creek seams at Shoal Creek ranges from approximately 800 feet in the eastern area of the property, to 1,700 feet in the west.

The coal deposit type of the Shoal Creek mine is considered to have a medium geologic complexity based on the following factors:

- The Mary Lee and Blue Creek seams are laterally continuous and can be correlated across the property with the use of geophysical logs, interburden thicknesses and seam thicknesses.
- The seams are gently dipping with numerous undulations due to the existence of the ancient fluvial system. This has added variability to the seam thickness of the Blue Creek seam.
- There are multiple high angle normal faults across the property, However, the faults do not prohibit the correlation of the Mary Lee and Blue Creek seams.
- The Mary Lee and Blue Creek seams are currently mined throughout the property across several counties.
- The local quality variations found throughout the property are not extreme enough to prevent a saleable product once the coal has been cleaned at the Preparation Plant.

6.4. Comments from Qualified Person(s)

In the opinion of the QP, for both regional and local geology, the structural controls on mineralization are well studied and understood through decades of exploration and mining activities in the area. This is considered sufficient to support the estimation of coal resources and reserves.

7. EXPLORATION

7.1. Coordinate System

The coordinate system is based on a North American Datum 1927 (NAD27), Alabama West Zone (AL-W), Transverse Mercator Projection. The original survey control was established based on USX monuments which are shown in Table 7-1. When the Drummond Company acquired the operation, it was discovered that the survey datum (i.e. mine survey control stations) were 1.2 feet below the National Geodetic Vertical Datum (NGVD) of 1929. This means the Shoal Creek Mine survey datum is a "User Defined Datum". All elevations for exploration drill holes surveyed by Drummond were corrected to the NGVD of 1929, with 1.2 feet added to the collar elevations. This practice continues on all new drill holes surveyed by Peabody.

Table 7-1. Original Control Points

Point Name	USX Original Control Points			Site Comment
	Northing	Easting	Elevation	
USX Water Tower	1,268,655	569,738	617	Base surface setup point
Providence Light Tower	1,258,554	559,132	689	Back sight surface setup point
92-08	1,267,548	567,848	404	Slope control monument point
92G-77	1,268,117	567,619	389	Slope control monument point

7.2. Geological Structure Mapping and Quality Sampling

The mine surveys the coal seam elevation floors of the Blue Creek seam on a consistent basis during the coal mining process. There have been over 23,000 in-mine measurements of the Blue Creek Seam floor elevations taken as of December 2021. The mine also surveys the in-mine seam thickness of the Mary Lee and Blue Creek coal seams, along with the interburden between the two mined seams. There have been over 22,000 of these in-mine measurements of the Mary Lee and Blue Creek coal thickness taken as of December 2021. These survey points are normally taken in predefined intervals in gate roads, mains and longwall face in the mine. The vast majority of these mine survey thickness and elevations were taken by the previous mine owners. By all indications this data appears to have been collected in a consistent and accurate method.

The mine takes in-mine channel samples on a consistent basis for the Mary Lee and Blue Creek coal seams. There have been over 700 in-mine channel samples taken as of December 2021. These Channel samples are typically analyzed for the Mary Lee and Blue Creek seams separately.

The underground structure surveys and channel samples provide more understanding on the local geological features and quality variation. The channel samples are shown within Figure 7-1, however due to the large number of floor elevation survey points, they are not included in the map since the density of the points would obscure the other drilling data. Table 7-2. below summarizes the survey data that has been collected.

7.3. Drilling

Exploration of the Shoal Creek property dates to the 1910's, however the majority of the drilling was conducted in several main time sequences. The first commenced between 1950 to 1960, further drilling was then conducted from 1975 to 1978. After a pause, drilling restarted in 1987 and has continued in a consistent manner to the present day. Different entities have conducted drilling programs during these time periods. The LD named series of drill holes were sponsored by the Tennessee Coal, Iron and Railroad Company under the United States Steel Corporation during the 1920's. The M series of holes were funded by the United States Steel Corporation from the 1910's

through the 1980's. The SC and RH drilling programs were conducted by the Drummond Company from the 1990's until the 2010's. The SC20 and SC21 series of holes have been drilled by Peabody Energy since acquiring the mine in 2019. As of 2021 there are 694 of these drill holes used in the geological model.

In addition, there were also gas well programs which took place on the Shoal Creek property from the 1960's to 2010. These programs were mainly conducted by the Amoco Production Company in different phases using different sets of hole name prefixes. Gas wells were also drilled by Sonat Exploration Company and three other unknown gas well sponsors. As of 2021 there are 485 of these gas well holes used in the geological model. Table 7-3. shows these various exploration programs.

Table 7-2. Summary of Survey Points

Survey Summary		
Seam	Number of Survey Points	Thickness values
		Average
Top Rock	27811	0.7
ML	27811	1.3
BCPT	27811	1.7
BC	27810	5.1
Floor Rock	27811	0.4

Survey Summary				
Seam	Number of Survey Points	Elevation Values		
		Min	Max	Average
BC	15323	-669	-919	-800

Table 7-3. Summary of Drill Holes

Drilling Program	Program Dates	# of Drill Holes
<u>Exploration</u>		
M - United States Steel Corporation	1916-1987	141
LD - Tennessee Coal, Iron and Railroad Company	1925-1927	9
SC (Shoal Creek) - Drummond Company Inc.	1900-2005	75
RH (Rotary Hole) - Drummond Company Inc.	1998-2017	439
SC20 & SC21 - Peabody Energy	2020-2021	18
Miscellaneous	<u>Unknown</u>	<u>11</u>
	Total	693
<u>Gas Wells</u>		
GW - Amoco Production Company	1968-1998	32
A - Amoco Production Company	1988-1990	32
GM - Sonat Exploration Company	1988-2007	299
Q - Unknown	1990-2006	15
EG (Energen) - Amoco Production Company	2002-2008	58
BW (Black Warrior) - Unknown	2007-2010	11
RG (River Gas) - Unknown	<u>Unknown</u>	<u>38</u>
	Total	485

As of March 2021, there are 1,248 holes that are in the Peabody GeoCore drilling database for the Shoal Creek area, of which 1,178 holes are being used within the Shoal Creek geologic model. The total drilling depth for these 1,178 holes is 1,673,552 feet, which equates to an average depth of 1,421 feet. The two main types of exploration drill holes are rotary drill holes and core drill holes. The drill hole locations are shown in Figure 7-1.

Rotary holes are used for areas where additional structural delineation is needed to further determine coal thickness, coal elevations, and locations of fault lines. The rotary holes are drilled using a 5 3/4 inch bit and drilled with air or water as a circulation medium. No samples are collected for quality analysis. The cuttings from these bore holes are normally logged by the driller and then surveyed and geo-physically logged running caliper, density, gamma and resistivity curves. There have been 917 rotary drill holes conducted at Shoal Creek as of December 2021 that are used in the geologic model.

Core holes are drilled for coal quality but provide structure and thickness information as well. They are rotary drilled through overburden to a designated core depth just above coal. The coal is extracted using a 15- foot split tube core barrel which is 5 5/8 inches in diameter with a 5-inch drill bit that cuts a 3-inch core. The cores are described, logged, photographed, bagged, and labelled at each interval and delivered to the SAI Gulf coal quality lab in Jasper, Alabama for further testing. Quality testing is explained in more detail in section 8. The core holes are then geo-physically logged similar to the rotary hole. The database contains 261 cored drill holes as of December 2021 that are used in the geologic model.

Geotechnical cores are analyzed for rock strength properties, coal quality, and structural information. They are drilled similar to the core holes but include a designated amount of overburden (usually 50-100 feet) cored above the coal seam. This overburden is tested for rock mechanic properties, which is described in more detail under section 8. The coal is cored and analyzed for quality. All geotechnical holes are geophysically logged. The database contains one geotechnical drill hole as of December 2021. A summary of the depth and thickness for the minimum, maximum, and average of the mined strata broken down by core holes and bore holes is shown in Table 7-4.

Table 7-4. Summary of Drill Holes by Seam, Depth, and Thickness

Drillhole Summary							
Seam	Number of Bore Samples	Top Depth			Seam Thickness		
		Min	Max	Average	Min	Max	Average
ML	913	595	1794	1270	0.3	3.5	1.5
BCPT	914	596	1795	1271	0.1	4.2	1.8
BC	914	599	1797	1274	0.1	10.4	4.6

Seam	Number of Core Samples	Top Depth			Seam Thickness		
		Min	Max	Average	Min	Max	Average
ML	260	564	1742	1171	0.1	3.3	1.4
BCPT	260	565	1744	1186	0.1	4.5	1.8
BC	261	569	1746	1193	0.1	9.5	4.4

The source of the survey coordinates for the older (pre-1990) M and LD series holes is largely unknown. However, the Drummond Company has located and surveyed several of these older M and LD series hole locations, which were then compared to the historical survey locations. The results showed that the original survey locations were accurate, and it was determined that these drill holes could be used in the geologic model. Since 1991 all drill holes have been surveyed by certified surveyors that were employees of the Drummond Company. Since acquiring the operation, Peabody continues to survey all drill hole location using the same surveyors from Drummond. Table 7-5. shows the number of holes by type, and Figure 7-1. shows the location of drill holes and channel samples.

Table 7-5. Summary of Drill Holes by Type

Hole Type	Number of Holes
Structure	917
Quality	260
Geotech	1

Peabody upon acquisition of Shoal Creek operation was able to obtain the maintained records of paper logs for all of the driller's and geologist's logs, the geophysical logs, and the quality certificates in various formats. There are also some electronic drill logs and core photographs obtained from the historical drilling.

For each Peabody drilling program, a set of data is normally collected and stored as the final records in the database. This data includes a geologist's log, driller's log, geophysical log, core photos, lab instructions (quality, overburden, and/or rock mechanics), lab certificates, and final surveyed coordinates.

7.3.1. Recovery

All core holes are required to have 90% of core footage recovery, however historical drilling could sometimes have a lesser recovery percentage. This can be due to inexperienced drillers, highly fractured lithology, and the general depth of the coal seam. As a case in point, there are several historic core holes (two located in the mine plan, and three within the resource polygons) which are currently included in the resource and reserve estimates that have more than 10% of coal loss. Peabody normally requires a core hole to have 90% of recovery in order to have a complete representation of the coal seam for quality analysis purposes. However, after examining the cored thicknesses of these holes, it was determined that their inclusion would make no material difference and would not alter the classification polygons to either resource or reserve estimates. The inclusion of these holes will also provide additional structure control for the geologic model.

7.3.2. Drill Hole Surveys

The drill hole collars are surveyed by survey contractors affiliated with the drilling contractor using the coordinate system as described in 7.1. Down hole surveys have historically been conducted on the previous drilling.

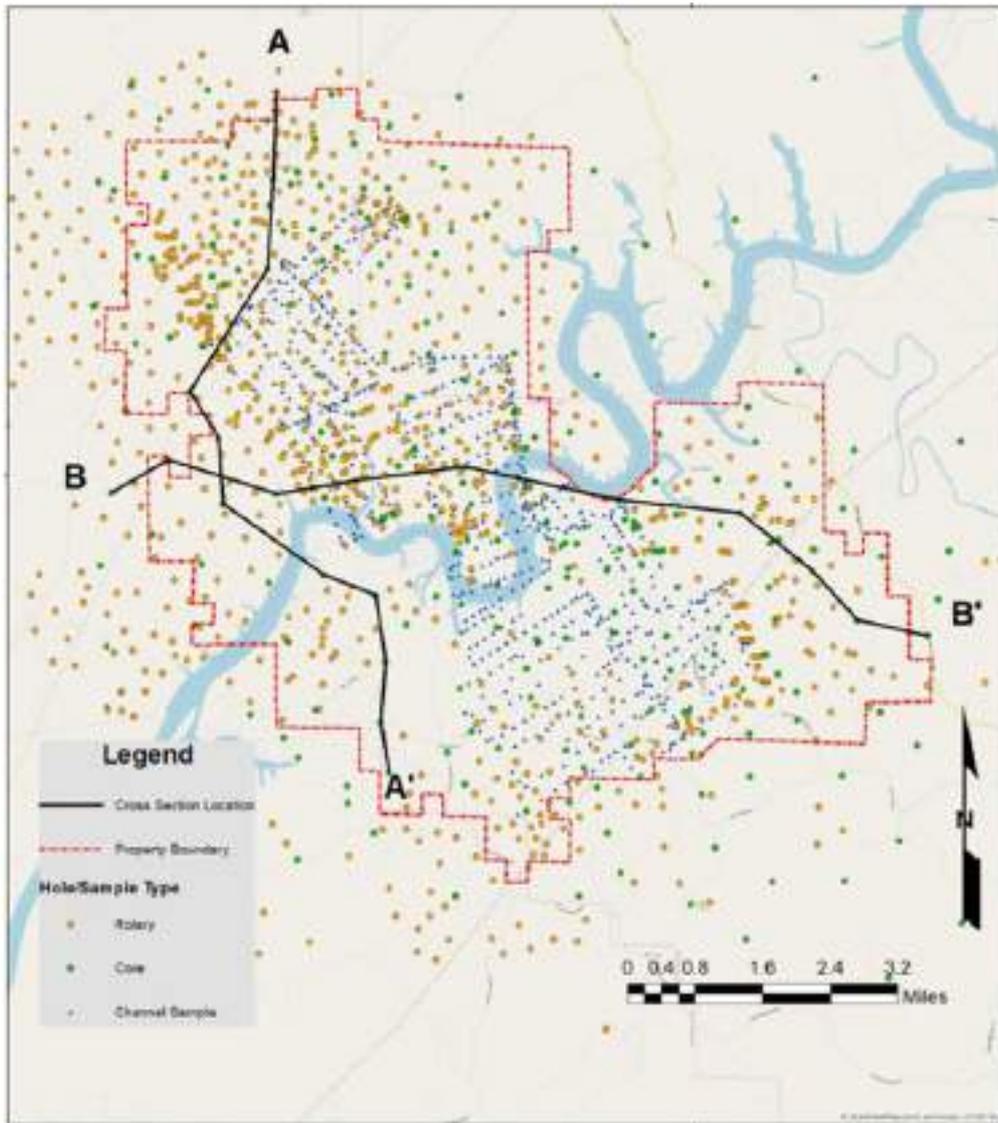


Figure 7-1. Exploration Drill Hole Location Map

7.4. Geotechnical Data

The previous owner of Shoal Creek didn't have a proper rock testing program and no rock strength data was available. Since Peabody acquired Shoal Creek, a program of rock mechanics testing has been implemented for core drilling projects. The rock testing program includes various types of testing to get the required rock strength parameters needed to understand the rock characteristics and its behavior for mine design. A few of the major rock strength tests conducted include: Uniaxial Compressive Strength (UCS), Tensile Strength, Direct Shear Strength, Young's Modulus, Multi-stage Triaxial Testing, Density etc. As of December 2021, one geotechnical core hole (SC-2020-4C) has been drilled. A

sufficient amount of burden was cored above and below the mined coal seam (Mary Lee and Blue Creek) to obtain the desired rock strength data. The laboratory tested strength data for various rock types and coal for hole SC-2020-4C is provided in Tables 7-6. and 7-7.

Table 7-6. Summary of Average Rock Properties

Rock Properties	Rock Type	No. of samples	Average Value
Young's Modulus, million psi	COAL	2	0.16
Tensile Strength, psi	COAL	1	20
Uniaxial Compressive Strength, psi	COAL	2	1,090
Density lbs/ft ³	COAL	2	78
Young's Modulus, million psi	FIRECLAY	1	0.45
Tensile Strength, psi	FIRECLAY	-	
Uniaxial Compressive Strength, psi	FIRECLAY	1	3,451
Density, lbs/ft ³	FIRECLAY	1	161
Young's Modulus, million psi	SHALE	15	1.49
Tensile Strength, psi	SHALE	13	920
Uniaxial Compressive Strength, psi	SHALE	15	10,974
Direct Shear Strength, psi (Normal Load = 350 psi)	SHALE	5	660
Density, lbs/ft ³	SHALE	15	165
Young's Modulus, million psi	SANDSTONE	19	1.85
Tensile Strength, psi	SANDSTONE	10	1,193
Uniaxial Compressive Strength, psi	SANDSTONE	19	13,272
Direct Shear Strength, psi (Normal Load = 350 psi)	SANDSTONE	4	897
Density, lbs/ft ³	SANDSTONE	19	162

Table 7-7. Typical Multi-Stage Triaxial Strength Test from Geotech Hole SC-2020-4C

Depth from Surface, feet	Rock Type	Strength (sig 1), psi,	Confining Pressure (sig3), psi
1264.10	SHALE	8,842	100
		9,884	250
		10,758	500
		12,740	1,000
		15,588	2,000
1280.50	SANDSTONE	18,180	100
		18,136	250
		18,348	500
		21,147	1,000
		24,576	2,000
1292.70	SANDSTONE	17,035	100
		17,908	250
		19,525	500
		22,424	1,000
		27,682	2,000
1307.80	COAL	3532	100
		4,306	250
		4,891	500

In recent scientific studies, it is shown that rock strength has a good correlation with the sonic characteristic of rock. Hence sonic geophysical logging is done on a regular basis in exploration holes at certain intervals to cover the mining area which can provide a reasonable idea about the rock strength and its characteristics. Although Shoal Creek mine's previous owner (Drummond) did not conduct any rock mechanics testing on any core samples, they did perform sonic geophysical logging on numerous drill holes as a way of determining indirectly the rock characteristics for the overburden material above the Mary Lee and Blue Creek coal seams. Currently, there are 35 drill holes within the 10-year LOM which have Sonic log information that can be used to confirm the stability and competency of the overlying roof material at the Shoal Creek mine. Among these 35 sonic logged holes, 11 have been logged by Peabody since 2020. The location of these Sonic logs (red) and the single hole with rock mechanics (green) are shown in Figure 7-2. A typical sonic log conducted in Geotech hole SC-2020-4C is shown in Figure 7-3.

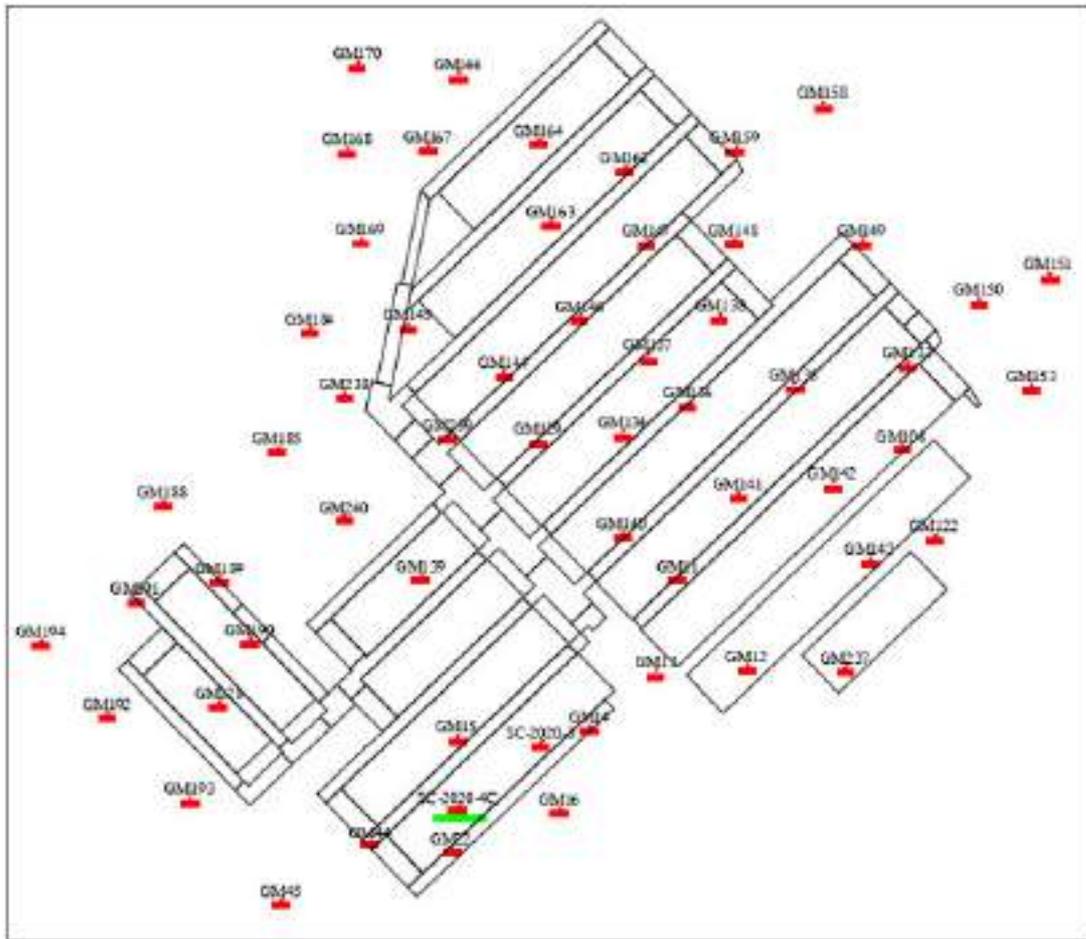


Figure 7-2. Sonic hole locations

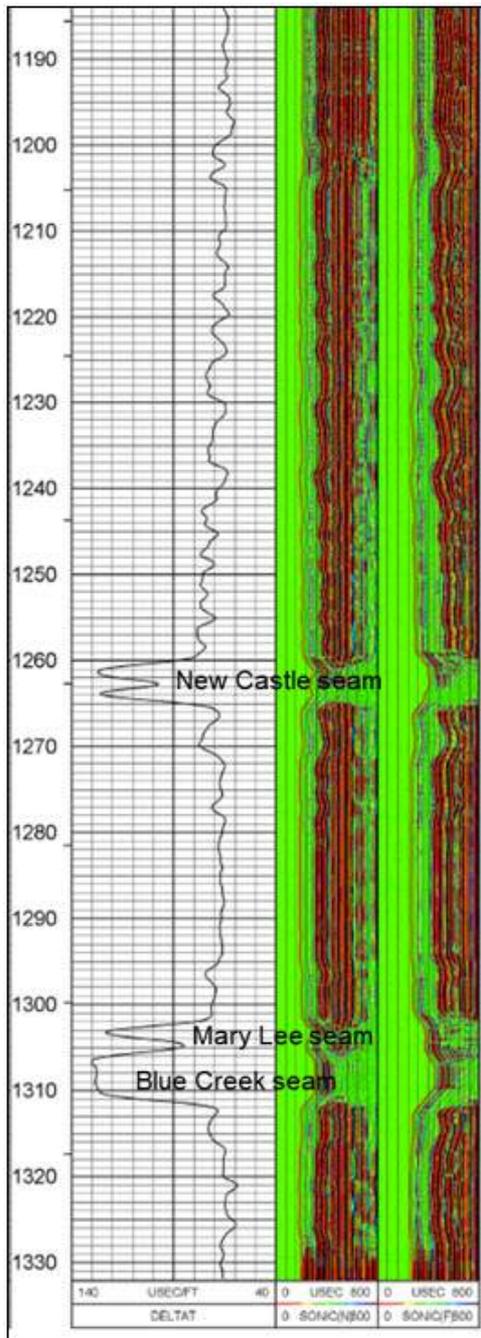


Figure 7-3. Typical Sonic Log SC-2020-4C conducted by Peabody.

(Lower value of Delta T signifies stronger rock and vice-versa)

7.5. Gas Data

Gas data primarily for Coal Bed Methane desorption testing has been collected at Shoal Creek since the 1970's. This data was collected by following the procedure first outlined as the Direct Method test by the U.S. Bureau of Mines, (William P. Diamond and J.R. Levine). CBM testing was conducted on approximately three dozen holes at the Shoal Creek Mine from the 1970's through the 1980's. Since Peabody has acquired the mine, CBM testing has been conducted on three more core holes using the same general equipment and procedures. A summary of this CBM testing is shown below in Table 7-8.

Table 7-8. Coal Bed Methane Values

Company	Seam	# of Drill Holes	Cubic Feet/Ton		
			Min	Max	Ave.
U. S. Steel Corporation Holes 1970-1990	ML	42	1	509	218
	BC	45	9	481	223
Peabody Holes 2021	ML	3	6	148	65
	BC	3	13	131	54

7.6. Hydrogeology

All hydrology samples were collected by experienced personnel using standard practices. Groundwater samples are collected using techniques described in the U.S Geological Surveys National Field Manual for the Collection of Water Quality Data. Surface water quality samples are collected using grab sample techniques. Flow rate measurements are made in accordance with ASTM Method D3858 (Standard Practice for Open Channel Flow Measurement of Water by Velocity – Area Method). Sample analysis is completed by certified laboratories utilizing methods that conform to the test procedures required under 40CFR Part 136.

Prior to mining, Drummond Company Inc. completed a water user survey, and installed several monitoring wells to establish baseline groundwater characteristics for shallow groundwater in accordance with Alabama Surface Mining Commission (ASMC) regulations. Limited groundwater use was identified in the vicinity of the mine with most residents connected to a municipal system. Typically, within the Pottsville Formation, most groundwater is contained in poorly connected fracture systems or perched water tables with little aerial extent. This is reflected at the mines monitoring wells, where most of the wells only produce water for a few minutes and recharge takes hours to days. Although laboratory analysis of the permeability of the Pottsville Formation in this area is unavailable, with the low water production at the monitoring wells, along with the limited use of shallow groundwater for domestic supply purposes, led to the conclusion that the mine is located in an area of low permeability and does not intercept any significant shallow groundwater aquifers.

7.7. Comments from Qualified Person(s)

The existing exploration program has been validated through historic production. It is the opinion of the Qualified Person that the existing exploration program is adequate to support future operations and the estimates of coal resources and reserves.

8. SAMPLE PREPARATION, ANALYSIS, AND SECURITY

Historical drilling that was conducted before Peabody acquired the operations followed acceptable preparation, quality analysis, and security procedures.

8.1. Sampling Method

8.1.1. Sampling for Coal Quality

The current sampling for coal quality analysis as established internally for Shoal Creek is as follows:

Pick the core point approximately one to five feet above the Mary Lee coal seam and core approximately one to four feet below the Blue Creek coal seam. Holes should be reamed at a minimum of 10 feet below the lowest coal seam to allow for complete geophysical logging.

For each coal seam to be cored, the following general specifications are to be followed:

The Mary Lee and Blue Creek coal seams are to be bagged and boxed on an individual basis and then sent to the lab for analysis. Normally no roof, interburden, or floor material is needed to be included as an analysis sample for the lab.

Shoal Creek may require exceptions to the above stated specifications. In any event, if core thickness measurements are questionable due to core loss, or if there is uncertainty as to what should be included in a sample, follow the rule, "When in doubt bag each bench and/or parting separately".

All coring procedures will be conducted to minimize contamination of coal from parting and bottom contact material. Samples are bagged, boxed, labelled, and stored in a controlled temperature area out of direct sunlight. Cores are prepped as soon as possible to maintain sample integrity. All pertinent information will be clearly marked on both the sample bag as well as the core box.

Documentation of estimated depth and thickness of core loss is to be included with any sample that may be analyzed.

The lab must crush, prepare and sample all cores within 30 days to avoid certain quality degradation.

8.1.2. Sampling from Production (Barge, Stockpile, Preparation Plant)

Shoal Creek samples the coal at different stages of processing after the coal is mined. These include barge sampling, stockpile sampling, plant feed, and ROM washability.

Barge Sampling: Barge samples are collected using a John B Long (JBL) rotary sweep sampling system with hammer mill crushers and a secondary rotary sweep that is located on the loadout conveyor. Samples are collected in sample bags that are sealed and marked with an identification of the date and barge number. The bags are transported to the SAI Gulf Lab at the end of each day by the courier.

Stockpile Sampling: Coal Stockpile samples are collected from static stockpiles according to ASTM D6883/17/D2234M-20 standards for sampling stockpiles. The use of heavy equipment is utilized to expose the middle of the stockpiles on occasion. When possible, stockpiles are also sampled as the stockpile is being built to provide a representative sample. Samples are collected in sample bags that are sealed and marked with identification of the location, origin, type, and date. The bags are transported to the SAI Gulf Lab at the end of each collection day by the courier. The stockpiles are sampled only when it is determined to be necessary or requested by Peabody personnel.

Preparation Plant Sampling: Plant samples are collected from the feed, product, and refuse streams of each circuit in the plant. Sampling devices used throughout the plant meet ASTM D2234/D2234M-20 standards for collecting samples. Samples are collected throughout the plant every 1 to 1.5 hours and are then compiled at the end of the day. The samples are collected in either five-gallon buckets with lids or in sample bags. The plant final clean product is collected along the clean coal product conveyor, utilizing a PSI sampling system with hammer mill crushers and secondary rotary sweep. Samples are collected throughout the shift in sample bags that are sealed and marked with an identification of the date and shift the sample was collected. An On-site lab was installed near the preparation plant in November 2019. Quick Ash analysis can now be performed on both product and shipment samples throughout the day. This allows additional flexibility to make plant adjustments when needed. A list of samples collected throughout the plant is as follows:

- Thickener Underflow
- Side 1 and Side 2 (Samples separately)
- Heavy Media Vessel
- Heavy Media Cyclone Feed
- Heavy Media Cyclone Overflow
- Heavy Media Cyclone Underflow
- Spiral Feed
- Spiral Product
- Spiral Middling
- Spiral Refuse
- Flotation Feed
- Flotation Froth
- Flotation Tailings
- Screen Bowl Dryer

The samples are transported to the SAI Gulf Coal Lab at the end of each day by courier. The sample and analysis results are tracked through the Lab System database and reported the following day.

The analysis completed on the plant samples include:

- Total Moisture, As Received, Weight Percent
- Percent of Solids
- Ash, Dry, Weight Percent

- Total Sulfur, Dry Weight Percent, (Sulfur is not analyzed on plant circuit samples when the plant is idled)
- 1.60 Float Percent Recovery
- Float Ash, Dry, Weight Percent
- Float Total Sulfur, Dry, Weight Percent, (Sulfur is not analyzed on plant circuit samples when the plant is idled)

Plant Feed Sampling: The ROM plant feed (3"x 0) is sampled every day and composited for each month. The samples are transported to the SAI Gulf Coal Lab at the end of each shift. The sample and analysis results are tracked through the Lab System database and reported the following day.

The analysis completed on the monthly plant feed samples include:

- Detailed Sizing
- Yield, Weight Percent
- Ash, Dry, Weight Percent
- Total Sulfur, Dry, Weight Percent

ROM Washability Sampling: The Plant Feed (3"x 0) is sampled in bulk every three to four years. The average sample size is approximately 2,000-3,000 pounds.

The analysis completed on the ROM washability sampling includes:

- Detailed Sizing
- Detailed Float Sink
- Yield, Weight Percent
- Ash, Dry, Weight Percent
- Total Sulfur, Dry, Weight Percent
- Calorific Value, Dry, Btu/lb.

8.1.3. Sampling for Rock Mechanics

A continuous overburden core is retrieved which is 15 to 20 times the length of the total mining height, along with a continuous underburden sample which is 15 to 20 feet below the Blue Creek seam. This amount of core should provide an adequate number of rock samples for conducting of strength testing in the laboratory. The core is logged, photographed, and boxed in two-foot increments (or at natural breaks within the two-foot interval). The number of sample tests performed is dependent on the type and thickness of different lithologies in the overburden and underburden of the mined seam.

8.1.4. Sampling for Gas Test

Gas sampling is conducted by first obtaining a continuous core sample of either the Mary Lee or Blue Creek coal seam by following similar procedures as coal quality sampling.

8.2. Laboratory Analysis

8.2.1. Coal Quality Analysis

All samples are prepared according to ASTM standard D2013-D2013M regarding reduction and division of gross samples up to and including individual portions for laboratory analysis.

All coal testing is conducted according to ASTM 05.06. Historically all coal testing since the Shoal Creek mine started production was conducted at Drummond's Jasper Coal Lab. Since Peabody took ownership of the operations, coal testing is conducted at the same facility that is now owned by SAI Gulf LLC. This laboratory is equipped to conduct all the coal testing according to the ASTM standards.

Washability testing was conducted on either multiple specific gravities ranging from 1.30 to 1.60 or on a single gravity of 1.60. Testing results are presented in Tables 8-1. through 8-3. as shown below.

Table 8-1. Summary of Short Proximate Analysis

Quality from Channel Samples						
Test	ASTM	# of Samples	Value Basis	Min Value	Max Value	Average value
ASH	D3174	18	0X1.3	3.79	6.25	4.49
YIELD	C138	18	0X1.3	3.25	64.98	19.7

Quality from Exploration Drill holes						
Test	ASTM	# of Samples	Value Basis	Min Value	Max Value	Average value
ASH	D3174	22	0X1.3	3.59	6.4	4.71
YIELD	C138	22	0X1.3	3.35	49.54	21.34

ASH	D3174	8	0x1.4	6.12	10.78	8.91
YIELD	C138	8	0x1.4	40	92.49	71.8

ASH	D3174	4	0X1.5	8.6	10.8	9.7
SULFUR	D4239	4	0X1.5	0.66	0.83	0.72
BTU	D5865	4	0X1.5	13763	14174	13973
YIELD	C138	4	0X1.5	71.95	78.11	75.41
VOLATILE MATTER	D7582	4	0X1.5	8.98	26.75	21.9
FIXED CARBON	D3172	4	0X1.5	62.43	65.66	64.13

ASH	D3174	29	0x1.5	6.57	12	9.77
SULFUR	D4239	28	0x1.5	0.51	0.96	0.7
BTU	D5865	25	0x1.5	12806	14566	13921
YIELD	C138	27	0x1.5	46.25	96.36	53.65
VOLATILE MATTER	D7582	29	0x1.5	8.9	34.56	26.65
FIXED CARBON	D3172	21	0x1.5	26.83	66.08	61.83

ASH	D3174	1455	0x1.6	5.04	20.48	10.7
SULFUR	D4239	1439	0x1.6	0.39	3.07	0.75
BTU	D5865	1191	0x1.6	12168	14903	13842
YIELD	C138	1455	0x1.6	1.75	99.83	87.52
VOLATILE MATTER	D7582	609	0X1.6	23.3	31.7	29

ASH	D3174	327	0x1.6	6.53	16.5	10.3
SULFUR	D4239	327	0x1.6	0.4	2.33	0.748
BTU	D5865	226	0x1.6	11474	14637	13785
YIELD	C138	332	0x1.6	40.95	99.54	84.75
VOLATILE MATTER	D7582	260	0X1.6	18.77	32.05	27.46

Table 8-2. Summary of Mineral Ash Analysis

Quality from Exploration Drill holes (Mineral Ash Analysis)						
Test	ASTM	# of Samples	Value Basis	Min Value	Max Value	Average value
P2O5	D6349	14	0x1.6	0.06	1.72	0.687
SiO2	D6349	14	0x1.6	39.36	58.56	49.99
Fe2O3	D6349	14	0x1.6	4.26	11.9	7.05
Al2O3	D6349	14	0x1.6	23.65	33.4	28.7
TiO2	D6349	13	0x1.6	1.18	2	1.44
Mn3O4	D6349	2	0x1.6	0.02	0.03	0.025
CaO	D6349	14	0x1.6	0.5	6.54	2.59
MgO	D6349	14	0x1.6	0.87	1.68	1.32
K2O	D6349	14	0x1.6	1.6	3.7	2.43
Na2O	D6349	14	0x1.6	0.23	1.04	0.56
SO3	D6349	12	0x1.6	0.63	5.02	2.18
BaO	D6349	12	0x1.6	0.12	0.44	0.269
SrO	D6349	12	0x1.6	0.03	0.3	0.15

Table 8-3. Summary of Trace Element Analysis

Quality from Exploration Drill holes (Trace Elements)					
Test	ASTM	# of Samples	Min Value	Max Value	Average value
Antimony	D6722	10	0.38	3.91	1.64
Arsenic	D6357	10	2.7	25	8.09
Beryllium	D6357	10	0.09	2.4	1.33
Boron	D6213	10	16	36	24.4
Cadmium	D6357	10	0.04	0.6	0.048
Chromium	D6357	8	14	27	19.125
Cobalt	D6357	10	4.6	15.3	8.14
Copper	D6357	10	10	29	15.4
Lead	D6357	10	4	7.2	5.44
Manganese	D6357	10	10	52	25.9
Mercury	D6357	10	0.03	0.2	0.078
Nickel	D6357	10	8	19	12.6
Selenium	D6357	10	0.8	2.5	1.55
Vanadium	D4606	10	23	51	33.6
Zinc	D6357	10	3	20	10.1

8.2.2. Rock Mechanics Test

Historically Drummond never conducted rock mechanics testing of the overburden at Shoal Creek. Since Peabody acquired the operations, a program of rock mechanics testing has been implemented for all coring projects. When a core hole is to have rock mechanics testing performed on it, the following guidelines are followed regarding this testing: A minimum core length of two times the diameter is necessary for testing. A full list of depths, thicknesses and rock types is created. From this, a representative final list is selected for testing which includes two to three samples from each general rock type. Tests ran include:

- Direct Shear Strength
- Indirect Tensile Strength
- Unconfined Uniaxial Compressive Strength (UCS) with Youngs Modulus
- Multi-Stage Triaxial Strength
- Axial and Diameter Point Load Strength

8.2.3. Gas Test

To properly measure gas desorption several times are recorded while coring, this includes when the coalbed is encountered, the start of core retrieval, and when the coal sample has arrived at the surface. The coal sample is then placed in a canister and sealed, with this time also recorded. Rubber tubing connects the canister with a graduated cylinder filled with water. At selected times a valve is released on the canister to bleed off the gas in the canister and displace the water in the graduated

cylinder. This displaced amount is recorded, and future readings are taken at intervals of 5 to 20 minutes for a minimum of at least 4 to 5 hours to measure how much gas was desorbed. These values are then compiled into a spreadsheet and the results are evaluated.

8.2.4. Density Determination

The in-situ density of coal at Shoal Creek has been determined by performing multi gravity sink float testing on numerous core samples over multiple years. This testing normally involves sink floating different segments of coal cores, (both Mary Lee and Blue Creek individually) and determining the correct sink float result for each portion of core material. This core material can be coal, bone coal, bone, or shale. After the sink float testing is performed on the unique individual core segments, a weight average core density is calculated for the chosen coal material. This density number is then assigned to the individual coal seam for that drill hole. Density grids for the Mary Lee and Blue Creek coal seams are then created from these density data points. The density grids are then used when compiling both resource and reserve tonnages for reporting purposes.

8.2.5. Analytical Laboratories

SAI Gulf, LLC. provides test services for coal samples from drilling or production. This includes short proximate, extended analysis, trace elements and washability tests. The coal tests on shipments for customers are sampled and tested by SGS laboratory located at Port Mobile in Alabama. Both laboratories follow test standards and quality control procedures from ASTM 05.06.

Rock mechanics testing was done at Standard Lab in Freeburg, Illinois until 2021. This lab followed the ASTM quality control procedures required to remain a certified coal testing laboratory.

Peabody periodically conducts internal audits of these labs to ensure proper compliance

8.3. Sample Security

The coal sampled is normally kept by the laboratories for a minimum of one year. Coal is a relatively low-value commodity and there is no need for special security procedures for the shipping, handling and storage of coal samples.

8.4. Comments from Qualified Person(s)

It is the opinion of the qualified person(s) responsible for this section that there are sound standards and procedures in place that are adequate for sample preparation, security and analytical testing.

9. DATA VERIFICATION

9.1. Data Verification Procedures

Peabody's Geological database has built-in functions to allow the user to validate data across all available sources, including drill hole location and elevation, geophysical log interpretations, stratigraphic correlations, sample depth, sample thickness, and laboratory analysis. These data validation tools are used in a robust manner to verify historical and newly acquired data in both a systematic and efficient manner. The validation procedures include:

- Driller and geologist logs are reconciled to geophysical logs. If cored, depths are adjusted up or down as necessary to reconcile to the geophysical logs. Generally, the depth adjustment is small, and ranges from -2 feet to +2 feet.
- Coal quality results from laboratories are reviewed, if values appear to be out of range compared to surrounding quality values the sample is analyzed again at the lab.
- The collar for every drill hole location is surveyed. The final surveyed elevation is validated against the surveyed topography grid.
- The data is visually inspected and reviewed using lithological cross-sections or contour maps generated from the geological model by geologists and engineers.

9.2. Limitations

It should be noted, that only holes which had either a geophysical log or had been cored, were used in the drill hole spacing analysis. This methodology excluded 293 historical holes of the 1183 total holes used in the geologic model, because these holes were not cored, and had neither a detailed core log or a geophysical log. Therefore only 890 holes were used for the determination of the drill hole spacing analysis.

9.3. Comments from Qualified Person(s)

It is the opinion of the Qualified Person that the data represented in this report is sufficient and in good standing. There have been several checks and balances with comparisons from year to year, and a justification of all changes from one year to the next.

10. COAL PROCESSING AND METALLURGICAL TESTING

Besides the coal sampling and tests discussed in section 8, the operation carries out additional coal sampling and tests for coal washability study and coking coal properties. The typical washability study includes size fraction determination and float/sink tests. The results are used for the plant process simulation to predict the performance of main circuits in the plant. The coal product from the Shoal Creek mine has been sold as coking coal in the seaborne market to Europe, South America and Asia. The relevant coking properties are assessed periodically to ensure the coking coal characteristics. The processing plant is efficient at separating rock from coal. The coal recovery is mainly estimated from the float and sink test at a single gravity of 1.60 from drilling and channel samples. Table 16 shows the results from such tests and the assumptions for coal recovery estimates are included in sections 12.2.2 and 12.2.3.

10.1. Coal Processing and Analytical Procedures

10.1.1. Washability

Due to the difficulty to resemble the size reduction from mining, crushing, conveyance, stockpile handling, etc., the samples collected from exploration and underground channel sampling have been used for the full washability studies in only limited cases. The plant feed samples collected daily are tested and they provide better information for the washability study. The samples are collected from the belt which feeds the plant. The samples are screened by different size fractions for passing percentage. The samples from each size fraction are tested by multiple float/sink gravities for ash content, volatile matter (VM), and recovery. Table 10-1. below shows the float and sink results for different size fractions, while Table 10-2. shows the Typical Float/Sink tests.

Table 10-1. Typical Size Fraction

Size Fraction	ASH %	% Retained	Cumulative %
+3"		0.00	0.00
3" X 2"	90.75	2.96	2.96
2" X 3/4"	92.52	17.39	20.35
3/4" X 1/4"	47.57	27.08	47.43
1/4" X 4mm	29.20	6.26	53.69
4mm X 1.4mm	28.57	21.80	75.49
1.4mm X 1mm	30.81	4.22	79.71
1mm X 60M	26.39	11.42	91.13
60M X 100M	27.72	2.83	93.96
100M X 325M	32.27	4.58	98.54
325M X 0	44.34	1.46	100.00

Table 10-2. Typical Float and Sink Tests

3" X 3/4"	ASH %	VM %	RECOVERY %
F 1.35	8.11	30.12	6.75
F 1.45	16.99	26.96	2.22
F 1.55	24.56	23.70	0.13
F 1.62	N/A	N/A	N/A
S 1.62	89.12		90.90

3/4" X 1mm	ASH %	VM %	RECOVERY %
F 1.35	7.05	30.11	41.26
F 1.45	14.00	27.24	11.82
F 1.55	24.25	23.55	2.75
F 1.62	32.24	21.94	0.67
S 1.62	87.08		43.50

1mm X 60m	ASH %	VM %	RECOVERY %
F 1.35	6.30	29.84	48.33
F 1.45	15.06	27.45	21.16
F 1.55	23.59	24.22	5.09
F 1.62	32.18	22.36	1.67
S 1.62	77.21		23.75

60m X 0	ASH %	VM %	RECOVERY %
FROTH	10.68	28.88	72.84
TAILINGS	85.07		27.16

The results from the tests are interpreted with additional extrapolations and simulated to reflect the plant configuration for each main processing flow. The simulation is mainly used to assess plant performance and potential improvement opportunities. Figure 10-1. illustrates the simulation results from the above samples. The resulting ash and yield relationship are plotted for different potential plant configurations. In this example, the study demonstrates the different performance in one of the many configurations between the Heavy Medium Vessel (HMV) and the Baum Jig.

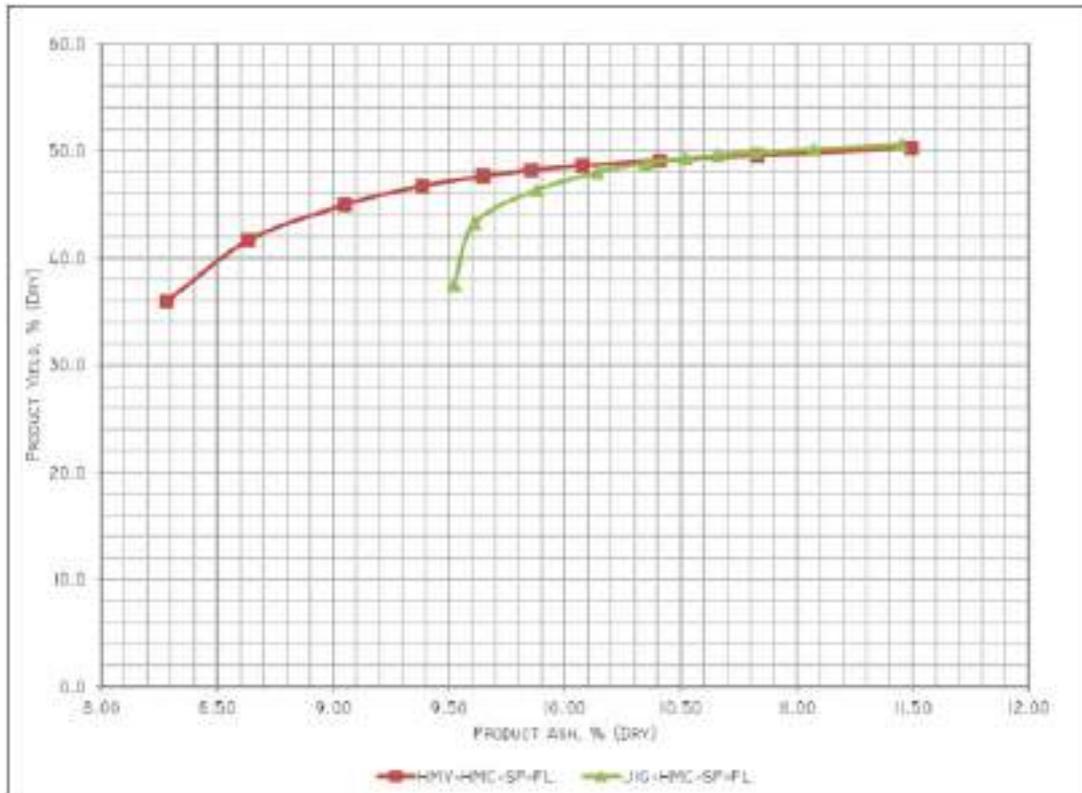


Figure 10-1. Typical Curve for Product Yield vs. Ash

10.1.2. Coking Coal Properties

A coking coal product must have the capability of passing through a plastic phase upon heating which results in a carbon residue as the coke product for steel making. The plastic phase is measured by fluidity and other coking coal properties. The coke producers typically make a product by blending multiple coals with different coking properties. The key properties for coking coal include ash, sulfur, phosphorus, volatile matter, coke strength, reflectance, fluidity, etc. The Shoal Creek operation routinely tests those parameters from different samples. The parameters of ash, sulfur, VM, and fluidity are tested more often using exploration samples, channel samples, and production and shipment samples. Trace elements, such as phosphorus, and petrographic analysis, including reflectance, are tested less frequently since they have less variability and are not requested by customers frequently. Certain coke strength tests, including Coke Strength after Reaction (CSR), require 450 kilograms of sampled coal for the pilot-scale coking-making process. Due to the requirement for a large sample size, this test is normally done on selected samples from either production or shipment on an as-needed basis.

Coking coal rank is measured by reflectance and the typical range is from 0.65% to 1.65%. The reflectance is not only a main driver for determining coke strength, along with the fluidity test, but the reflectance also provides information if the coal is capable of passing through a plastic phase so that carbonization can produce a coke structure. The VM in coal is inversely correlated to the coal rank.

The higher the VM and lower the rank, the coke yield becomes lower as well. When the coal is too high in rank, it might create high pressure and damage coke oven walls during the coke making process. The volatile matter is preferred to be between 18% to 35%. The ash is merely waste material for coke, and the lower the ash content the better the product. The content of sulfur and phosphorus in coal has deleterious effects on steel quality. The coke strength is measured by various tumbler tests to indicate how resistant coke will be to breakage and abrasion within the blast furnace. The hot coke strength test, CSR, simulates the blast furnace temperature and gas composition to determine how reactive the coke is to carbon dissolution, and how well coke strength is maintained following a reaction. Table 10-3. lists the typical values for Shoal Creek coal within the current reserve areas.

Table 10-3. Typical Coking Coal Properties

Coking Coal Properties		Typical Value
Ash	%, dry basis	9.5-10.5
Sulfur	%, dry basis	0.6-0.7
Volatile Matter	%, dry basis	30.0 – 31.0
Phosphorus in Coal	%, dry basis	0.06
Reflectance	%, Rv max	1.03
Maximum Fluidity	DDPM	28500
CSR	Pilot Scale	60

10.2. Analytical Laboratories

Jasper Lab owned by SAI Gulf, LLC. and other coal labs which have a partnership with SAI Gulf, LLC. provide test services for washability and some coking coke tests at Shoal Creek. Shoal Creek also uses labs operated by the Australian Laboratory Service (ALS) in Australia for coking coal property tests. ALS is a leading testing, inspection, certification, and verification company headquartered in Brisbane, Australia.

The Jasper Lab or SAI Gulf, LLC, and ALS are all independent commercial entities that have no affiliates to either the Shoal Creek operation or Peabody, other than providing professional test services.

10.3. Recovery Estimates

The ROM coal is fed to the washing plant, which utilizes heavy medium or centrifugal forces to classify or separate coal from waste. The size and density of the feed material are the main factors determining the recovery. Due to the physical limitation of the different circuits, some coal is lost into the refuse and some refuse material is misplaced in the coal product. Heavy medium circuits are generally more efficient compared to other equipment using water as a medium such as a Baum jig, spiral, etc.

The unique geologic and mining conditions at Shoal Creek require the operation to extract two coal seams along with a 1.5 feet thick parting material. The thickness of the upper seam, Mary Lee, and the parting is fairly consistent. However, the depositional environment causes the thickness of the main coal seam, Blue Creek, to be highly variable. The thickness variability further creates more uncertainty on the dilution from roof and floor due to the cut height constrained by mining equipment. Conversely, the float and sink tests from in-situ coal show much less variability in the coal ash and recovery. Due to the previously stated reasons, and the practicality of in-situ data acquisition, the coal thickness and in-

situ coal recovery at a 1.60 float/sink gravity are utilized as the basis to estimate recovery for the reserves. The in-situ recovery estimate includes an additional adjustment to reflect lower operating medium gravity at the plant as needed if the in-situ coal ash at 1.60 float gravity is higher than specifications. From the historic reconciliation, 20% of the in-situ coal is assumed to be lost either during mining or processing. In the LOM plan, additional adjustments are made on the assumed cut point gravity (e.g. 1.60 SG) for the washing plant, if the resultant ash is lower than the target ash in the final product. The assumption for the recovery is described in sections 12.2.2 and 12.2.3.

10.4. Comments from Qualified Person(s)

It is the opinion of the Qualified Person that the data represented in this report is sufficient and accurate. The use of the data for the estimates of coal recovery is the general practice within the coal industry. It is recommended to conduct additional reconciliation with the new plant upgrades once adequate production data is available.

11. COAL RESOURCE ESTIMATES

11.1. Introduction

The majority of the geological data used for the resource estimates was collected before Peabody acquired the operation. The Qualified Person, who is an employee of Peabody Energy, validated all data using historic driller's logs, geophysical logs, and coal quality reports. The Qualified Person also performed and/ or supervised recent data collection, validation, geological interpretation, creation of the geological model, and resource estimation. The resource estimates in this section are all exclusive of reserves in Section 12.

11.2. Geologic Model and Interpretation

The Shoal Creek geologic model consists of both a stratigraphic and coal quality model based on verified data from the geological database. The mineable coal seam structural model was derived from both drill hole and historic surveyed data. The geologic model was developed as a gridded model using Carlson Geologic software. The geologic model included bore holes without corresponding geophysical logs that due appear to have reasonable thickness and coal depth values. These holes had been historically used in geologic models by the previous mine owner. After reviewing these holes, it was determined that continuing to use these holes in the model would provide more thickness and structure values to further define the coal seam.

Shoal Creek's resource stratigraphy is the Mary Lee Coal Zone, which includes the Mary Lee seam, parting, and the Blue Creek seam. Table 11-1. and Figure 11-1. show the typical thickness for each seam from top to bottom and a typical cross-section.

Table 11-1. Resource Stratigraphy

Seam	Material	Typical Thickness (feet)
Mary Lee	Coal	1.5
Parting	Shale	1.8
Blue Creek	Coal	4.6



Figure 11-1. Typical Seam Cross Section.

The coal seams are modeled with structure elevation, thickness, and coal quality parameters. The modeled quality parameters include ash, sulfur, volatile matter, in situ coal yield, etc. The other modeled structures are parting thickness and depth. The interpreted fault location and displacements are incorporated in the structure elevation model. The topography grid was generated from the available public survey. The modeling methods used for Shoal Creek are summarized in Table 11-2.

Prior to usage of the models created from new data, the models are reviewed, and reasonable justifications are required to explain material differences between the new and old models.

Table 11-2. Interpretation Method

Model Parameter	Interpretation method
Structure Floor Elevation	Triangulation
Structure Thickness	Inverse Distance
Coal Quality	Inverse Distance
Fault Displacement	Vertical Displacement

11.3. Resource Classification

Shoal Creek has a long mining history with operations spanning several decades. While there is a competent understanding of the geology, the depositional nature of the mineable coal seams at Shoal Creek is unique in comparison to typical coal deposits. This is due to several factors, some of which include a correlation between the Blue Creek coal thickness and the Blue Creek coal floor elevation, the intricate and random nature of the Blue Creek deposition channel boundary, (which can rapidly affect coal thickness and elevation along this boundary), and the major northwest orientated graben faults which bisect the lease area. Because of these unusual coal depositional factors, the coal thickness is a more significant factor for the geological uncertainty compared to coal quality. Therefore, the quantitative analysis has been performed on composite coal thickness, rather than composite raw coal quality.

Drill Hole Spacing Analysis (DHSA) is a quantitative analysis that assesses the estimation precision from known points of observation. It was performed to understand geologic uncertainty across the deposit. The generalized steps in the process are exploratory data analysis, domainning when necessary, variography, and deriving classification radii from global estimation precision. The precision tolerances for this estimation have been evaluated solely for the parameter of coal thickness over an area equivalent to five to ten years of production. These precision tolerances, developed by Bertoli et al (2013), are 10%, 20%, and 50%, at a 95% confidence level for Measured, Indicated, and Inferred values respectively. Considering the long operating history and unique geology, the classification radii from the DHSA are used as one of the main considerations for the resource classification.

Due to the relative uniformity of the ash values across the reserve area, and the much greater variability of the thickness of the Blue Creek seam, it was decided to perform the Drill Hole Spacing Analysis (DHSA) on the composite thickness of the Mary Lee (ML) and Blue Creek (BC) coal seams. It was also decided to perform this (DHSA) on the composite thickness of both seams, since both seams are mined simultaneously and are therefore combined at the preparation plant and shipped as one product. It should also be noted, that only holes which had either a geophysical log or had been cored, were used in the drill hole spacing analysis. This excluded 288 holes of the 1178 holes used in the geologic model which only had a drillers log and were not cored, nor had a geophysical log. There were also two drill holes (GM373 and M123) which did not have the Mary Lee seam within the drill hole, which meant they could not be used to calculate a combined MLBC coal thickness. Therefore only 890 holes out of 1178 were used for the determination of the drill hole spacing analysis. The DHSA results for coal thickness as shown in table 11-3., have a radii of 855, 1,625, and 3,605 feet as the classification for measured, indicated, and inferred resources.

The geologic model includes almost three hundred historic bore holes which do not have geophysical logs. All of these holes have been reviewed, and the depth and thickness appear reasonable and were therefore included in the geologic model. However, these holes were excluded from the drill hole spacing analysis, which determined the classification polygons for measured, indicated, and inferred reserves. Since the DHSAs for this reserve was conducted on a thickness basis as opposed to quality, it was decided that a more conservative approach with regard to acceptable drill holes should be applied. Therefore, only cored holes or bore holes that have geophysical logs were included in the classification estimate.

Table 11-3. Resource Classification Radii in feet

Seam	Parameter	Measured	Indicated	Inferred
Mary Lee and Blue Creek	Thickness In feet	855	1,625	3,605

The resource classification polygons developed from the coal thickness points of observation is shown in Figure 11-2. The faults are another major uncertainty that can affect the resource estimates. The major faults have been identified and mapped from the historic drilling exploration. The targeted reserve and resource areas are properly offset from the faults which are not defined with high certainty.

The resource classification used for Shoal Creek encompasses the qualified person's confidence in the deposit. There were multiple factors used for the final analysis. This includes data quality, operational history, the QP's experience, as well as quantitative analysis.

- Measured resource has the highest level of confidence for the estimated quantity and quality based on the geological evidence and sampling. A set of criteria (Table 11-4.) on the degree of uncertainty is assessed and the low degree of uncertainty normally corresponds to the category of Measured resource.
- Indicated resource has a lower level of confidence than the Measured resource, but a higher level of confidence than the Inferred resource. A set of criteria (Table 11-4.) on the degree of uncertainty is assessed and the medium degree of uncertainty normally corresponds to the category of Indicated resource.
- Inferred resource has the lowest level of confidence. A set of criteria (Table 11-4.) on the degree of uncertainty is assessed and the high degree of uncertainty normally corresponds to the category of Inferred resource.

Table 11-4. Degree of Uncertainty

Source	Degree of Uncertainty		
	Low	Medium	High
Exploration	No significant issues. Protocols consistent with industry and Peabody standards.	Older bore holes without geophysical logs rely to a certain degree on the drillers accuracy of identifying coal thicknesses. Those holes are excluded from the classification.	
Sampling method	Standard operating procedure done companywide. Coal and rock material easily identified within core barrel. Current longtime drillers consistently achieve 90%+ core recovery. Drillers also survey drill collars and locations.	Several historic core holes have less than 90% core recovery. Inclusion in the model are found to not make a material difference to the reserve.	
Sample Prep/Analysis	Offsite Lab, -reputable and independently contracted – conducting analysis consistent with ASTM industry standards.	While no evidence of erroneous analysis has been discovered, Peabody will implement an audit process to reduce the possibility of undetected errors in reporting.	
Quality Assurance/Quality Control	Sample prep and analysis procedures follow ASTM rules and meet current industry standards. Quality is retested to confirm anything that looks abnormal. QAR round robins conducted for quality assurance		
Data Verification	Thickness and depths within Drillers logs have been checked against Geophysical logs for accuracy. Quality results have been reviewed. Holes with unresolved inconsistencies have been inactivated.	Source of survey coordinates for pre-1990 drill holes is unknown, various historic holes have been resurveyed to confirm location accuracy.	
Database	Geological, analytical, and location data in the model verified to the QP's satisfaction. Unverified or questionable data inactivated and not used.		
Geologic Modeling	Model is reconciled to production for quantity on a monthly basis since mine was restarted in Nov. 2021	The geologic model has a relatively higher variability in the thickness and structure of the Blue Creek coal seam in small distances between holes. The overall coal seam structure, including faults, are well identified. This has limited impact to the total estimates.	
Density	Numerous multi gravity sink float tests on core samples have been performed to determine density.		
Quantitative analysis (Drill hole Spacing Analysis)	Single domain analyzed. Thickness is the main constraint (due to Blue Creek seam variability) from the Drill hole Spacing Analysis. Only core holes or holes with Geophysical logs included in DHS. Drill hole radii: < 855 ft	Historic bore holes without geophysical logs were excluded from Drill hole Spacing Analysis. Drill hole radii: > 1625 ft	Drill hole radii < 3605 ft
Other Classification Criteria	Classification for Resource tons include they are within the lease boundary, not under the Black Warrior river, primarily between faults, and have a composite coal thickness greater than 6 feet, with relatively consistent in situ quality.		
Cut Off Criteria (Cut-off grade and metallurgic recovery)	The cutoff grade is not relevant for this deposit.		
Mining Methods	Mature longwall and room and pillar mining technology used at existing operation.		
Costs	Long operating history with medium cost variation due to volatile market pricing		
Prices	Well established market with select number of longtime customers.		

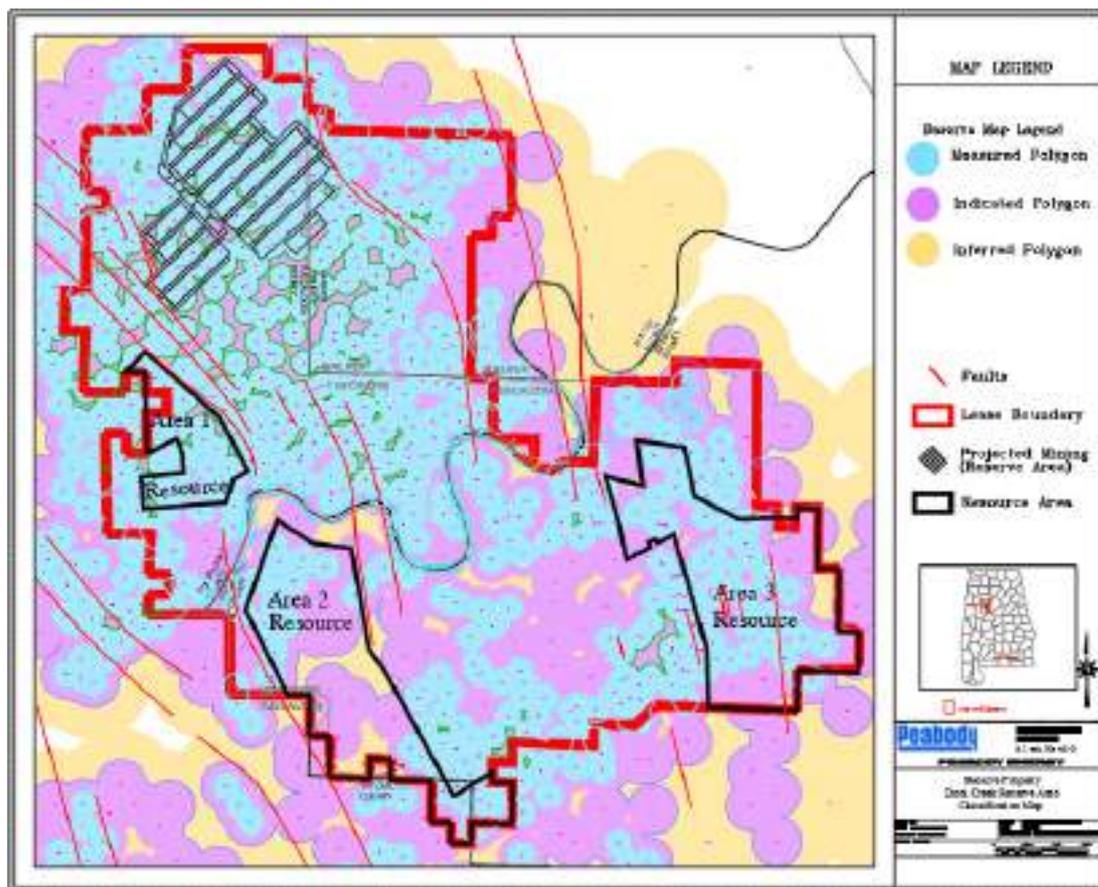


Figure 11-2. Resource Classification Map.

11.4. Coal Resource Estimates

Coal resources are determined as part of the overall process and form the basis for the coal reserves estimates. Estimation of the coal resources at Shoal Creek is mainly determined by geologic criteria such as coal thickness and faults. The geological conditions and coal quality from historic mining are similar to the criteria used to develop the resource and reserve areas. These criteria included that the resource polygons are within the lease boundary, and they do not occur under the Black Warrior River. The resource polygons also contain a total seam thickness and Blue Creek thickness that is mainly above six feet and three feet respectively. In the single resource polygon that contains known faults, the coal between the faults is still extractable by longwall mining methods which has been done previously in the Warrior Coal Basin. Other constraints include the coal control boundary and surface features such as rivers or surface housing developments. Coal resource estimates provided here are on an in-situ basis for the Mary Lee and Blue Creek coal seams, excluding parting.

The in-situ coal quality is fairly consistent through the deposit and it doesn't constrain the resource areas. The parting and dilution are separated from the coal during processing. Even though the in-situ

coal quality may vary slightly, the coal for the shipment is all viable product after blending in the stockpiles. The in-situ coal yield is slightly different between Mary Lee and Blue Creek seams, but it is consistent for each seam with a small variation. The in-situ coal yield at 1.60 float sink gravity ranges from 80% to 95% in most of the resource areas with some small areas trending with lower yield. It is similar to the area mined historically. After reviewing the targeted area for coal resources and reserves, the coal quality (cut-off grades) and coal yield (metallurgical recoveries) are not considered as primary drivers for the resource estimate.

The established mining method at Shoal Creek is longwall mining which requires relatively large blocks of coal for economic mining due to the initial development costs for mains and gate roads. The characteristics of this coal deposit show much more variation on coal thickness than in situ coal quality and yield. In order to develop a large mineable coal block, it is more practical to assess the coal thickness as the main driver for the coal resources and reserves. With the limitation of the minimum cut height for the longwall equipment, the seam height not only determines the amount of in situ coal to be recovered, but it also contributes to the out of seam dilution to be mined and the overall mine yield, which has a large impact on the mine's performance. As described above, the historically mined coal thickness has been used as the main criterion for the resource boundary, because this criterion has also been proved to be viable based on the mine's actual performance in the last two decades. Furthermore, the long-term coal price projection in Section 19.1 is consistent with the historic price and therefore it supports the prospects of economic extraction for the coal resources in the future.

The information of the coal resources and all supporting documents are stored and kept as a record internally. The processes are followed every year to review, update, validate and document the resource estimates.

11.5. Coal Resource Statement

Coal resources in Table 11-5. are exclusive of reserves and calculated on an in-situ basis for the Mary Lee and Blue Creek coal seams.

Table 11-5. Coal Resources

Seam	Resource Classification	Resource (In Place Tons in Millions)	Area (Acres)	Coal Thickness (Feet)	Density (lbs/ft ³)	Ash % (Dry Basis)	Sulfur % (Dry Basis)	Volatile Matter % (Dry Basis)
Mary Lee	Inferred	1.7	591	1.39	94	12.0	0.96	24.20
Mary Lee	Indicated	8.5	2,892	1.45	93	11.9	0.97	24.28
Mary Lee	Measured	9.7	3,244	1.49	92	11.8	0.97	25.10
Blue Creek	Inferred	5.1	593	4.45	89	9.7	0.66	23.95
Blue Creek	Indicated	26.7	2,894	4.77	89	9.3	0.59	24.02
Blue Creek	Measured	29.9	3,239	4.83	88	8.9	0.56	25.06
Total		82	13,453	3.12	89	9.8	0.67	24.56

11.6. Comments from Qualified Person(s)

Shoal Creek generally has adequate exploration data to determine coal resources. Future routine exploration work will be undertaken to continue supporting the current operation and any future development. This will include drilling for structure, coal thickness, and quality information, along with fault line delineation. Therefore, it is the opinion of the QP that there are no current geologic or technical factors that are likely to influence the prospect of economic extraction.

12. COAL RESERVE ESTIMATES

12.1. Introduction

The Life of Mine (LOM) Plan is the key process to support reserve reporting. The mine plan uses the longwall mining method with projected layouts for longwall panels and development for mains and gate roads. The mining methods historically adopted by Shoal Creek, and the projected economic results demonstrated that the coal in the mine plan is economically mineable based on current market assumptions. The details regarding the marketing and pricing assumptions are included in sections 16 and 19. The mine plan, which supports the coal reserves, is inside of the boundary where Peabody has control of the coal leases. The Shoal Creek mine is an existing operation with all required permits, approvals, and infrastructure to carry out ongoing production. The key assumptions in the mine plan and economic analysis are supported by the past performance. Unless specified otherwise, the quantity for coal reserves is reported as the saleable product, and the coal qualities are on a dry basis.

12.2. Coal Reserve Estimates

12.2.1. Reserve Classification

The geologic model described in section 11.2 is used for the LOM plan. All coal within the LOM plan area is considered to be either Measured or Indicated resources as discussed in section 11. The Measured resources are reported as the Proven reserves and the Indicated resources as Probable reserves. There are no other modifying factors that are significant enough to prompt excluding reserve tonnage from the LOM plan or downgrade the reserve classification from proven to probable classification.

12.2.2. Mining Loss and Dilution

The LOM area is laid out with detailed pillar design and barriers between the longwall recovery and mains. The coal pillars and barriers are excluded from reserves. The longwall equipment is limited to cut the coal seam between 8.5 to 11 feet thick. When the total thickness of Blue Creek, Parting and Mary Lee seams exceeds 11 feet, the longwall equipment will not be able to cut the full seam height. Even though some of the top coal will fall into the face conveyor, the assumption is that the portion of the seam exceeding 11 feet thick will be lost during the mining process. In the current LOM area, the total seam thickness is mostly less than 11 feet. When the total seam thickness is less than 8.5 feet, the mine plan assumes additional rock from the roof or floor will be cut by the longwall during the mining process. The mining height from 9 to 9.5 feet is assumed for the development unit, which is designed to maintain a certain geometry for ventilation control and accessibility of longwall equipment. The mine plan also assumes a minimum of three inches of out of seam dilution no matter what the total seam thickness is. The rock material from out of seam dilution and the parting between the Blue Creek and Mary Lee seams is included as the Run-of-Mine (ROM) coal, it is processed in the washing plant and disposed of as refuse. The recent reconciliation indicates an overall coal loss of 15% based on the 2019-2020 actual data. However, the reconciliation from the last six months in 2020 (from May to October) indicates a coal loss of 21%. The assumption for the overall coal loss from mining, conveyance, crusher and processing, is assumed to be a fixed total of 20% of the mined in-situ coal based on the high range of the historic reconciliation.

The coal density for the Blue Creek and Mary Lee seams are modeled from the lab test as discussed in Section 8.2.4 which results in a combined average density of 86 pounds per cubic foot. The mine plan assumes 160 pounds per cubic foot for rock density.

12.2.3. Coal Product Quality

Once the coal is fed to the washing plant, the different circuits in the plant separate coal and refuse material by adjusting the medium density to meet customers' quality requirements. The plant yield fluctuates with feed ash, and the coal product tons are estimated from the in-situ coal yield model at a theoretic 1.60 Specific Gravity (S.G.) of float/sink. These are based on lab test results from exploration and channel samples on an in-situ coal basis only. All parting and out of seam dilution are assumed to be disposed as refuse during washing processes. The ash estimated from the theoretic 1.60 S.G. is usually 10.5% or lower in the LOM plan. In cases where the ash estimation is higher than 10.5%, it is assumed that the washing plant will lower the S.G. to generate the product with lower ash. The assumption of the relationship between the change of theoretic S.G., product ash, and in situ coal yield, is assumed to be 0.10 S.G. for a 1.0% product ash and a 10% in situ coal yield. The plant replaced the coarse Baum jigs with Heavy Medium Vessels (HMV) along with some other improvements in 2021. The simulated results indicate an additional 2% yield improvement from the previous plant configuration.

The Blue Creek and Mary Lee seams are relatively clean, with a theoretical in situ coal yield of 92.3% and an ash value of 9.7% in the floated coal at a 1.60 S.G. according to the laboratory tests. Considering the coal loss, dilution, parting material, and the plant medium density adjustment, the overall plant yield is estimated to be 46% for a 10.1% ash product. The projection in the LOM plan indicates that the separating gravity of the washing plant is between 1.48 to 1.60 S.G. with the plant yield from 35% to 54%, while product ash ranges from 10.5% to 9.7%. The other quality parameters estimated in the mine plan include sulfur and volatile matter shown in Table 12-1.

12.2.4. Reporting

The assumptions for reserve estimates are verified periodically against actual production. Underground ROM production is measured by the belt scale installed on the slope belt. The clean coal product tons and plant yield are monitored and measured by the belt scales at the plant feed and output. The product coal quality is monitored by using the sampling processes and real-time ash analyzer at the processing plant. Additional reconciliation processes include underground channel sampling, coal section surveys, and stockpile surveys.

The information of the coal reserves and all supporting documents are stored and kept as a record internally. The processes are followed every year to review, update, validate and document the reserve estimates.

12.3. Coal Reserves Statement

The LOM plan in section 13.3 was carried out in August of 2021. The production for the remainder of 2021 was projected to be 340,000 tons in the LOM plan. However, due to the delay of the restart, the actual production for 2021 is 119,000 tons. The difference is not substantial enough to require a LOM plan update. Therefore, the coal reserves are re-estimated with the face position as of December 31, 2021. Table 12-1. includes coal reserve estimates and key coal quality parameters with an effective date of December 31, 2021.

The total ROM coal quantity and plant yield are 39 million tons and 46% respectively, which result in 18 million tons of coal product including 16 million tons of proven reserves and 2 million tons of probable reserves. The thickness for the Mary Lee seam and the parting is relatively consistent. Due to the highly variable nature of the thickness of the Blue Creek seam, the thickness of the Blue Creek seam is considered as one of the main constraints for the LOM plan. The corresponding LOM plan

(i.e., reserve boundary) and its relevant constraints, such as faults, mined-out areas, and thickness of the Blue Creek seam, etc. are shown in Figure 12-1.

Table 12-1. Coal Reserves Statement

Reserve	Quantity (tons in millions)	Thickness Mary Lee (feet)	Thickness Blue Creek (feet)	Density (pounds per cubic foot)	Saleable Product on Dry Basis		
					Ash (%)	Sulfur (%)	Volatile Matter (%)
Proven Reserve	16	1.4	5.1	85.0	10.2	0.7	30.4
Probable Reserve	2	1.5	5.0	85.4	10.2	0.7	30.3
Total	18	1.4	5.1	85.0	10.2	0.7	30.3

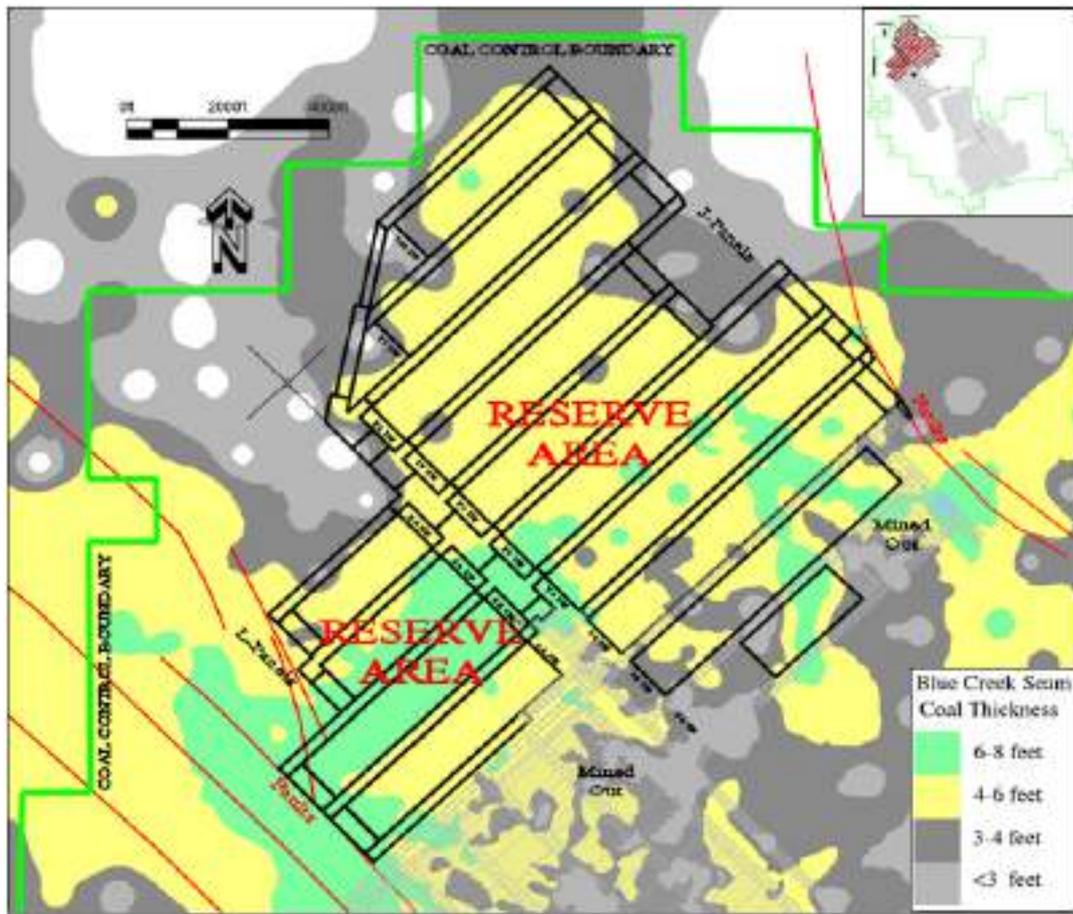


Figure 12-1. Reserve Boundary

12.4. Comments from Qualified Person(s)

The geological features around the reserve area are adequately defined, and other factors which could materially affect the reserve have all been addressed. The recent operational history in the nearby panels further demonstrates that the reserve is economically mineable. The coal reserve estimate could be affected by the data accuracy, uncertainty from geological interpretation, mine planning assumption. Those factors normally don't pose material risks for the overall reserve estimates. However, other external risks, including unexpected geologic hazards, infrastructure or facility failures caused by natural disasters, changes in laws and regulations, and seaborne coal demand and supply, are not controllable by the company and could severely affect the mine-ability of the reserve.

13. MINING METHODS

13.1. Introduction

The mining method best suited for this underground mine is the longwall mining method which has a relatively high recovery rate. The mains and gate roads are required to be developed with the continuous miner prior to the longwall mining. Since the beginning of production at Shoal Creek, this method appears to be relatively safer and more efficient compared to other available methods. Both the Mary Lee and Blue Creek coal seams are economic when they can be extracted together. Due to the parting between the two seams and the out of seam dilution, the operation utilizes a washing plant to process the ROM coal to meet coal quality specifications. For this underground operation, the key consideration includes roof control, subsidence, ventilation, dewatering, mine planning and production schedules, etc.

13.2. Mine Design

13.2.1. Geotechnical Considerations

The operation follows the approved Mine Safety and Health Administration (MSHA) roof control plan to address potential geotechnical issues encountered under current geological and mining conditions, such as mining depth, mining height, and entry widths, etc. The depth in the LOM plan area ranges from 1,000 to 1,300 feet. The typical roof controls are mainly described here for the development section (*i.e.*, mains and gate roads) and the longwall mining system.

For mains development with a six to seven entry system, the typical pillar sizes are 90 feet by 150 feet (center-to-center). The typical entry and crosscut width are 20 feet.

The typical longwall gate roads developed by the continuous miner sections consist of three entries with widths typically 100 to 120 feet (center-to-center). Crosscut centers are typically 150 feet. The typical entries and crosscuts are 20 feet wide. The approved MSHA roof control plan allows maximum entry and crosscut widths of 22 feet at planned intersections. The entries may be mined up to 25 feet wide with the installation of additional permanent supports. Figures 13-1. and 13-2. illustrate the dimensions for a typical gate road and mains development.

The roof control plan approved by MSHA includes the use of primary supports during mains and gate road development, as well as secondary supports at the longwall tailgate. The operation can use any type of roof bolts from the approved list. This includes the combination bolt, point anchor and tensioned rebar, full resin-grouted bolt, mechanically anchored tensioned bolt, and truss bolt for the primary roof support. Other supplemental roof support materials can be used as needed, such as timbers, pumpable cribs, prop-setter, etc. When mining both Mary Lee and Blue Creek seams with a height exceeding eight feet, rib bolts with a minimum of six feet in length is required to be installed through the middleman (parting strata).

Longwall panels are typically 1,000 feet wide and of various lengths based on panel geometries constrained by faults or coal thickness. The relevant roof control plan provides measures for normal mining encountered in the longwall area. The head gate entry will be cribbed with a minimum of 2 cribs across the crosscut between the belt and adjacent entry before the longwall advances through the break. The tailgate entries, including the first tailgate in a group of longwall panels previously roof bolted, will be supported with additional supplemental roof supports which will be maintained ahead of the longwall face at a minimum of 350 feet. The other specific roof controls are considered for start-up entries, face recovery, shield recovery, bleeder support, etc.



Figure 13-1. Typical Gate Road Development



Figure 13-2. Typical Mains Development

13.2.2. **Subsidence Considerations**

Shoal Creek has conducted numerous and extensive subsidence surveys over many of the longwall panels, especially those longwall panels mined from 1995 thru 2002. This includes the A-1, A-2, B-1, and G-1 panels as well as Lock 17 Bridge when the B-10 longwall panel was mining through. Historic studies provide detailed information and data collected from surface subsidence surveys conducted at the mine. Major subsidence characteristics, including the maximum surface subsidence factor and

angle of draw of subsidence, have been discussed based on analysis of measured surface subsidence data. As summarized below, several major subsidence features at Shoal Creek Mine have been characterized, and they are consistent with this specific geological and mining condition.

The maximum surface subsidence occurs in the area near the middle of each longwall panel. Maximum subsidence ranges from 3.5 to 5.3 feet with the variance caused by a variable total mining height and the width of the longwall panel. The maximum subsidence factor is 0.40–0.45 (of total extraction height) when the longwall panel is 750 feet wide and the overburden thickness is 1,100 feet. Conversely, the maximum subsidence factor increases to approximately 0.52 when the width of the panel is increased to 1,000 feet.

The angle of draw associated with subsidence is defined as the angle formed between the vertical projection of a line at the panel edge, and a second line that connects from the panel edge to the point of the last measurable surface deformation. The angle of draw as measured by the surveys varies from 10 to 25 degrees from vertical. The width of the surface subsidence influence zone ranges from 230 to 610 feet beyond the edge of the longwall mined area, when the overburden depth is approximately 1,300 feet. Further analysis of our surface subsidence data indicated that the areas with a high angle of draw (+20 degrees) are associated with localized underground instability, demonstrated by pillar yielding and/or floor heaving that occurred in an earlier mining operation at this mine.

Since subsidence will occur in the areas with potential damages to certain structures, features, or renewable resource lands, the subsidence surveys are normally conducted for the planned mining area. The permit with a subsidence control plan, including the planned subsidence and preventive measures, is administrated by the Alabama Surface Mining Commission (ASMC). The mine is required to submit an annual ASMC subsidence update and five-year renewal plans. Other activities for subsidence considerations, if necessary, include pre- and post-subsidence agreements, surveys, engineering controls to prevent or mitigate damage, monitoring, and necessary notification of undermining.

13.2.3. Ventilation Considerations

Methane is the main hazardous gas released during the mining process. The current mine planning area shows relatively low methane content from production due to historic Coal Bed Methane (CBM) production. The surface aerial image shows clearly a densely spaced pattern of sites for CBM wells on top of the projected mining area at Shoal Creek. The mine ventilates the underground mine works by utilizing fans installed on the surface in an exhaust system. The main ventilation facilities are listed in Table 13-1. Other underground ventilation controls used include stoppings, seals, tubes, curtains, regulators, auxiliary fans, etc. The operation follows the approved ventilation plan by MSHA to control hazardous gas and dust. The approved plan defines the minimum required air quantity for different mining sections and processes, minimum air velocities on the longwall face, location and frequency of methane tests, etc. The monitoring and tracking system, air courses and escape ways are updated routinely on the mine map. The air survey and ventilation model are used to assess any ventilation and mine plan changes.

The mine was granted necessary ventilation approval by MSHA on April 2021 to operate the J-1 and J-2 longwall panels concurrently under the condition that the two longwalls maintain a minimum 1,000 feet offset distance to ensure no abutment stress overlap and the mine establishes additional Measurement Point Locations (MPL's) in the area with methane monitors.

Table 13-1. Ventilation Facilities

Ventilation Facilities	Dimension (Feet)	Elevation (Feet)		Depth (Feet)
		Surface	Bottom	
Shoal Creek No. 1 Return Shaft (#1)	18.0	421.0	-716.9	1,138
Camp Creek Portal/Intake Shaft	26.0	430.0	-721.3	1,151
North Mains Intake Shaft (xc30)	16.5	290.0	-702.5	993
North Mains Intake Shaft (xc66)	16.5	322.0	-747.7	1,070
North Mains Return Shaft (#7)	16.5	345.4	-766.2	1,112
Shoal Creek Portal Hoist Shaft	20.0	398.3	-836.3	1,235
West Mains No. 1 Intake Shaft	16.5	393.5	-838.4	1,232
West Mains No. 3 Intake Shaft	16.5	413.2	-862.8	1,276
J Mains No. 1 Return Shaft (#9)	16.5	589.3	-804.8	1,394
J Mains No. 1 Intake Shaft	16.5	591.3	-790.4	1,382
J Bleeder Shaft (#11)	12.0	476.1	-735.3	1,211
Slope - Belt Compartment	15.0x8.5	416.9	-720.1	1,137
Slope - Travelway Compartment	15.0x8.0	(Track Length 4,127 feet)		

13.2.4. Hydrological Considerations

The underground mine water is collected by pumps and transported to the mine's main sump by 14-inch Drisco lines. Water is discharged to the surface and onto the impoundment by two banks of GIW pumps through the dewatering bore holes. Each bank of pumps has the capacity to pump approximately 2,000 – 3,000 GPM (Gallons per Minute). Typically, the mine operates one bank and keeps the other as a spare.

The water behind the seals at mined-out panels is pumped to the surface using electric submersible pumps through bore holes installed at different locations. The typical installation includes two multiple pumps operating continuously at 600 - 800 GPM each. The water, once it reaches the surface, is either treated for reuse or discharged to the designated discharging points under current permits.

13.3. Mine Plan

Shoal Creek uses the underground longwall mining method which requires certain geometry and size for economic extraction. The LOM plan is limited by the faults at the southwest and northeast, thin coal at the north, and old works at the south. The mine plan has a mine life of ten years (i.e., 2022 to 2031) with a projection of 39 million tons of ROM production and 18 million tons of saleable product. The average annual production is 3.9 million tons of ROM coal, and 1.8 million tons of saleable product with an average yield of 46%.

13.3.1. Mining Process

The typical longwall panel is 1000 feet wide equipped with a shearer, hydraulic shields, armored face conveyor, stage loader, crusher, etc. The shearer cuts a 36-inch thick web along the 1,000 foot longwall face for every pass it makes. The cutting height is constrained by equipment size and ranges from 8.5 feet to 11 feet. Shoal Creek mines the Mary Lee and Blue Creek seams and the parting interval between the coal seams. Due to the variation of the coal thickness, the longwall sometimes cuts the rock from the roof or floor in order to maintain the minimum height required by the longwall equipment. The mining process generates considerable dilution from the parting, roof rock, and floor

rock. The ROM coal, including coal and dilution, is crushed and conveyed to the washing plant for processing. Most of the dilution is separated in the washing plant from coal and then disposed of as refuse. More discussions for the dilution and recovery are included in sections 12.2.2. and 12.2.3.

Continuous miners are used to cut the entries for mains and gate roads. A typical cut sequence includes eight cuts (four cuts on each side of the entry) with a maximum depth of 10 feet for each cut. The coal is transported by shuttle cars to the feeder breaker which reduces mined coal to a consistent, easily handled size for conveyance. After a maximum 40 feet depth cut, the newly exposed roof is to be supported according to the approved roof control plan. The Shoal Creek mine is scheduled to employ two continuous miner systems for the current LOM plan.

13.3.2. Production Schedule

Shoal Creek develops longwall districts (sets of adjacent longwall panels) with alphabetic designations. To date, Shoal Creek has completed mining in the A, B, C, G, H, I and N longwall districts and will be mining longwall panels in the J and L districts. The J district includes 10 longwall panels with lengths from 4,000 feet to 7,500 feet. The L district includes 4 longwall panels with lengths from 2,900 feet to 5,000 feet.

Shoal Creek has two sets of longwall mining equipment which are normally installed at two separate panels. One set of the longwall was installed at the J-1 panel which has been extracted 1,800 feet. The other set of the longwall will be installed at the J-2 panel in early 2022. The J-1 and J-2 panels will be mined concurrently until the J-1 panel is mined out and moved to the L-1 panel. After 2026, the longwall at the L-4 panel will be moved to the J-5 panel and it is projected to mine concurrently with the longwall in the J-4 panel. It is assumed that similar MSHA ventilation approval at J-1 and J-2 panels will be required at that time. The detailed mining sequence is illustrated in Figure 13-3.

Shoal Creek operates five days per week excluding certain holidays and miner vacations. Each operating day is scheduled with three shifts that are eight hours per shift. The mine plan projection includes three production shifts per day for the two sets of longwalls. The other shifts will be utilized for maintenance and setup. The total retreat rate from two longwalls is assumed to be an average of 36 feet per day. Longwall moves between panels could take up to four months which depends on the requirements for equipment teardown, rebuild, and setup.

Continuous miners typically operate two, eight-hour production shifts per day, with maintenance on the third shift. The continuous miners are assumed to advance 80.5 feet per shift in gate road development and 70.5 feet per shift in mains development. Each continuous miner unit is projected to be idled for 15 calendar days for section setup when starting a new section, and 7 calendar days to move to a new section. The continuous miner units are not projected to be idled during longwall moves. The current LOM plan assumes two continuous miner units to develop gate roads and mains from 2022 to 2026. After 2026, only one development unit is scheduled for the remaining LOM plan.

The production projection from 2022 to 2031 in this LOM plan is included in Table 13-2. 34,000 tons of product coal was projected to be produced for the remainder of 2021, from October to December when the mine plan was developed in August 2021. This is also shown in Figure 13-3. below.

Table 13-2. LOM Plan Production Schedule

Production in thousands	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
ROM Tons	4,103	4,074	4,689	4,195	4,040	3,809	3,905	4,086	3,523	2,734	39,158
Yield	46%	44%	51%	49%	47%	44%	47%	45%	44%	44%	46%
Product Tons	1,870	1,773	2,393	2,037	1,879	1,670	1,844	1,834	1,558	1,203	18,061



Figure 13-3. LOM Mining Sequence

13.4. Mining Equipment and Personnel

The mine plan estimates 286 hourly and 100 salaried personnel for 2022. Total LOM plan staffing is projected to average 260 hourly and 93 salaried personnel from 2022 to 2031.

The type of mining equipment utilized is suitable for the geologic and mining conditions experienced and expected at Shoal Creek, based on a long history of successful operation. The major mining equipment required for this mine plan is listed in Table 13-3. The listed equipment along with other supporting equipment is all currently at the mine. The equipment is required to be routinely maintained, overhauled, or replaced based on the operating conditions.

Table 13-3. Major Mining Equipment

Type	Manufacturer/Model	Equipment Description	# of Units
Development	Joy 12CM27	Continuous Miner	2
	Joy BF14 / Cat 7MFBH	Feeder Breaker	2
	Joy 10SC32	Shuttle Car	4
	Wagner ST3.5S	Scoop	2
	Fletcher HDDR15	Roof Bolter	2
	3600 KVA	Power Center	2
	Spendrup AMF 175 HP	Ancillary Fan	4
Longwall	Joy 7LS05	Shearer	2
	Joy 1.75m 955/1068 tons	Shields	176 x 2
	Cat PF5 1342-1756	AFC	2
	Cat BSL SK14/18	Stageloader & Crusher	2
	3,300 and 7,000 KVA	Power Center	2

14. PROCESSING AND RECOVERY METHODS

14.1. Introduction

The coal mined at Shoal Creek mine includes high ash parting and out of seam dilutions. It needs to be washed prior to shipping to customers. The coal handling and processing plant at Shoal Creek was constructed in 1994 and has been utilized to size and clean the ROM coal to meet the quality requirements of customers.

14.2. Process Selection and Design

The operation has made additional upgrades to the original facility as needed. In the year 2020, the operation replaced Baum Jigs with Heavy Media Vessels (HMV), and added extra deslime and refuse screens, etc. The current facility has adequate capacity to meet projected production and quality requirements.

14.3. Coal Handling and Processing Plant

The ROM coal produced at Shoal Creek is transported from the underground mine by 72" belt conveyors, through an inclined slope to the Shoal Creek processing plant. The processing plant utilizes an A/B side configuration. Each side of the plant is rated at 1,000 Tons per Hour (TPH), for a total ROM capacity of 2,000 TPH. The plant utilizes four types of key processing circuits, consisting of HMV, Heavy Media Cyclone (HMC), spirals, and froth flotation cells.

ROM coal mined from underground passes over a grizzly screen with eight-inch openings. The grizzly removes the oversized rock, which is then transported by truck to the refuse disposal area. The ROM coal passing through the grizzly is stored in a raw coal stockpile with a stacking tube. The capacity of the ROM coal stockpile is approximately 500,000 tons, and it utilizes dozers to push coal away from or toward the stacking tube. The ROM coal from the stockpile area is conveyed through the reclaim tunnel to scalping screens in the plant. The ROM coal with sizes smaller than three inches are fed to the preparation plant. The material with sizes larger than three inches is transported by belt conveyor to refuse bins and then disposed of at the refuse disposal area.

The configuration is identical for each side in the plant and the following description is the same for either the A or B side. The raw coal screens are used to separate the raw coal into three size fractions. The raw coal screens separate the coarse material (plus 1/4 inch) which is fed to the HMV. The deslime screens are used to screen out the intermediate fraction (0.75mm – 1/4 inch) which is fed to the HMC. The undersize material (minus 0.75mm) from deslime screens is piped to raw coal classifying cyclones which further separate the fine material into two fractions. The plus 100 mesh material is fed to spiral circuits and the minus 100 mesh material is fed to froth floatation circuits.

The clean product is stored in clean coal stockpiles utilizing two stacking tubes which have a total of 250,000 tons of capacity. The coarse refuse is conveyed to the refuse disposal area and the refuse slurry is pumped to the refuse disposal impoundment. The reclaimed clean coal is conveyed to a 2,000 TPH barge loadout on the Black Warrior River. It is then loaded onto barges with approximately a 1,550-ton capacity for shipment to Mobile, Alabama. The coal is then transloaded into export vessels for shipment to customers.

The detailed flow sheet, including equipment characteristics and specifications, for the coal processing plant, is shown in Figure 14-1. The general layout of the coal handling and processing plant and related infrastructures are shown in Figure 14-2.



Figure 14-2. Preparation Plant & Surface Facilities

14.4. Plant Yield

The underground mining equipment is constrained to certain mining heights. When coal seams are thin, the mining equipment might cut extra roof or floor rock to maintain the minimum height. In addition, the parting between Mary Lee and Blue Creek seams is mostly waste rock. The plant yield at Shoal Creek is highly correlated to the coal seam thickness. The heavy media circuits are normally configured to separate coal from refuse at a specific gravity ranging from 1.30 to 1.60. The plant yield is highly variable due to the above reasons and it ranges from 30% to 60%. The projected yield is shown in Table 29. More detailed discussions are included in sections 10.3, 12.2.2, and 12.2.3.

14.5. Energy, Water, Process Material, Personnel Requirements

The main consumables for the coal processing at Shoal Creek are electricity for crushing, conveyance, coal processing, magnetite for heavy media circuits, and water for coal processing. The typical usages are 20 – 30 million kWh per year, 800 tons per year, and 1000 - 1500 gallons per minute respectively based on historic records. Due to the recent installation of heavy medium vessels at the plant, the magnetite consumption will likely increase, but probably be less than one pound of magnetite for every ton of ROM coal processed.

The coal handling and processing plant operates from Monday to Thursday with two 12 hours shifts per day. Required maintenance is normally scheduled during Friday or weekends as needed. A total of 40 persons are needed to operate and maintain the processing plant at Shoal Creek.

15. INFRASTRUCTURE

Shoal Creek has built extensive infrastructure to support the operation and no additional new infrastructure is required to support current production. All infrastructure will require routine maintenance, and some might require periodic relocation or extension.

The main infrastructure was built in 1994 with the construction of the original Shoal Creek portal located in Jefferson County adjacent to the Black Warrior River. It encompasses the coal handling and processing plant, slope access with rail and conveyor haulage, ventilation shafts, man and material shaft, coal refuse disposal areas, barge loadout, administration, and other supporting facilities. In 2011, the operation added a newly constructed portal site in Walker County (currently named Camp Creek portal). The Camp Creek portal site includes a bathhouse for all mine employees, mine office, warehouse, supply yard, elevator shaft for personnel and materials, intake and return shafts, and a parking lot for employees. All personnel is from nearby towns and they drive in or out to the operations. There is no on-site accommodation or camp.

Shoal Creek has established all required roads for off-highway trucks and light vehicles to support daily operations. The Shoal Creek surface facilities at the Camp Creek and Shoal Creek portals are all accessible by paved and/or improved gravel roads. These are capable of being traversed by personnel vehicles and tractor-trailer trucks. Blackburn Road provides access to the Camp Creek Portal, and Nancy Ann Bend Road provides access to the Shoal Creek portal. These facilities are shown in Figures 15-1. and 15-2.

Coal mined from Shoal Creek is conveyed to the stockpiles located near the plant before being processed and then loaded onto barges. The barge loading facility is at Bankhead Lake, which is part of the Black Warrior Riverway. The barge loadout is located 370 water navigable miles from the McDuffie Coal Terminal in the city of Mobile, Alabama.

The Shoal Creek Plant processes ROM coal to produce a saleable product. Two waste byproducts result from this processing, coarse refuse and fine refuse (slurry).

Coarse refuse is transported and disposed of from the preparation plant to permitted coarse refuse disposal areas by conveyors, trucks, or scrapers. The coarse refuse is used as the embankment or cap material for the slurry impoundments or disposed to other designated areas. The current active coarse refuse disposal areas are areas A, B, E, F and G with a total potential capacity of 5-10 years with other extension areas available.

Fine refuse or slurry is disposed of via a series of slurry handing pumps from the preparation plan in permitted slurry impoundments. A Drisco pipe manifold is located along the inner perimeter of the impoundment with valves located strategically to direct the discharge where needed. The need is based on the desire to maintain a "beach" of material above the waterline to control seepage and the phreatic table. When an area has a well-established beach above the water level, valves are positioned to allow the slurry to be discharged in an area needing more of a beach.



Figure 15-1. Camp Creek Portal Site



Creek Portal

Figure 15-2. Plant and Barge Loadout Facilities at Shoal

The slurry impoundments are constructed with a combination of coarse refuse and earth fill material according to permit requirements. They are normally raised through phases using the downstream construction method as permitted. The current active slurry impoundments for Shoal Creek include areas C and H. The impoundment C is approaching its design life with approximately 330 acre-feet of capacity remaining. The impoundment H has been constructed for stage I with 331 acre-foot capacity and stage II has been permitted for construction for an additional 619 acre-foot capacity.

All refuse storages are monitored, inspected, and certified according to MSHA regulations. The expansion beyond the active storages for the coarse and slurry refuse storage has been planned and scheduled to meet future production. They will be permitted and constructed through phases in time.

The main water supply for the mine and processing plant is from the mine dewatering system and Black Warrior River.

Power is supplied by the Alabama Power Company. The point of connection between the overhead three-phase 115k volts conductors from Alabama Power Company and 115k volt three-phase switch is located within the 115k-14.4v three-phase substation at the Shoal Creek Portal and White Oak near the Camp Creek Portal. The main power consumption is for underground mining equipment, coal conveyance, coal processing, water pumps, ventilation, etc. The typical consumption is approximately 150– 200 million kWh per year.

16. MARKET STUDIES AND MATERIAL CONTRACTS

16.1. Introduction

Shoal Creek is an active operation with a well-established customer base and brand in Europe, South America, and East Asia and the market has been very well defined for international metallurgical coal used for steel making. The pricing used to establish coal reserves was established and provided by the Company and the details are discussed in section 19.1. The Company provides a general outlook for the metallurgical coal market in quarterly SEC filings.

16.2. Product and Market

Shoal Creek supplies coal to steel manufacturers primarily in Europe, South America and North East Asia traditionally on a term contract basis. The product has a well-established customer base in those regions. These sales are normally executed through annual and multi-year international coal supply agreements that contain pricing linked to well-established coal indices or may include provisions requiring both parties to renegotiate pricing periodically. Industry common practice is to negotiate price for seaborne metallurgical coal contracts on a quarterly, spot, or index basis. Depending on the market, Shoal Creek occasionally sells coal products on the spot market. Historically, the operation has supplied one main product as the High Volatile (HV) coking coal. The typical quality specifications in recent contracts from different customers vary slightly on ash and volatile matter (VM), but the ranges are normally from 9.5% to 10.5% for ash, and from 29% to 30.5% for VM on a dry basis. The coal reserves stated in this report assume the contracts are for 10%-10.5% ash and 30%-30.5% VM. The typical moisture of Shoal Creek coal is from 8.0% to 9.0%. Other typical coking coal properties are discussed in section 10.1.2.

16.3. Market Outlook

It is the Company's view that the long-term outlook for global seaborne metallurgical demand shows consistent, albeit modest, growth over the next several years. The demand for metallurgical coal products is impacted by economic conditions; government policies; demand for steel; and competing technologies used to make steel, some of which do not use coal as a manufacturing input, such as electric arc furnaces. The supply and demand can be significantly impacted by the availability of domestic coal production in leading import countries, such as China, and the competitiveness of seaborne supply from leading metallurgical coal exporting countries, such as Australia, Canada, Mongolia, and the US. Shoal Creek's product competes globally on the basis of coal quality and characteristics, delivered cost, and reliability of supply.

16.4. Material Contracts

The company continues to closely monitor market conditions and to negotiate sales contracts for the future years. The future sales will be dependent on general economic conditions, weather, and other factors. Price forecasts, supply and demand models, and other key assumptions and analysis used to establish the reserves, are developed internally and stress tested against independent third-party research not commissioned by us, to confirm that the conclusions reached through our analytical processes, and our price forecasts, fall within the ranges of the projections included in this third-party research. The development of the analysis, price forecasts, supply and demand models and related assumptions are subject to multiple levels of management review.

Shoal Creek has all supply and service contracts in place to provide necessary materials and services for the current and future operation. Due to the price fluctuation recently, some materials are

purchased on a non-contract basis. Table 16-1. includes the key purchase arrangements for the operation.

Table 16-1. Material and Service Contracts

Material Type	Supplier	Comments
Shearer Exchange Agreement	Joy Global	Shearer rebuilds including parts required for two longwalls
Electric Power	Alabama Power Company	Existing 'Requirements' supply with evergreen term.
Roof Bolt	Jennmar	Non-contract basis on spot purchase
Magnetite	Quality Magnetite	Non-contract basis on spot purchase

17. ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

17.1. Environment Studies

There have been numerous environmental studies conducted for the Shoal Creek Mine. These studies supported permitting at the state level.

At the state level, studies have been conducted to support Alabama Surface Mining Commission surface coal mine permitting. These studies covered the topics of land use, archaeology, paleontology, climatology, geology, hydrology, soil, vegetation, wildlife, and wetlands, which are presented in the ASMC surface mining permit.

Results of these studies supported agency findings and authorizations for coal leasing and mining. The resultant agency decisions allowed mining and reclamation activities to proceed in compliance with state and federal requirements.

Periodically, other studies are required for additional mining, such as habitat assessment and subsidence reporting.

17.2. Permitting

As of December 31, 2021, all required licenses and permits are in place for all activities for the operation of the Shoal Creek Mine. Table 17-1. below list's major permits.

Underground coal mining operations in Alabama are required to obtain other permits and leases to conduct support activities. Other permits held by Shoal Creek Mine include but are not limited to mining licenses, underground injection permits, permits for sewage, water withdrawal permits, nuclear device permits, generator ID, and mine plan approvals. Many of these permits require regular monitoring, reporting and renewals.

Based on historical permitting efforts and the anticipated reserve life, no obstacle to permitting is anticipated.

17.3. Social and Community Impact

Shoal Creek Mine's primary contribution to the community is through employment opportunities and it employed 379 people at the end of 2021. Shoal Creek mine's workforce includes union employees through a collective bargaining agreement with United Mine Workers of America, ratified in September of 2021. Direct and indirect economic benefits to local communities were provided through wages, taxes, capital investments, and vendor contracts. At the state and local level, the taxes paid by Shoal Creek Mine included ad valorem, severance, real estate property, personal property, sales, and unemployment. At the federal level, Shoal Creek Mine paid reclamation fees to the AMLP (Abandoned Mine Land Program) and black lung tax.

Shoal Creek Mine is located in a rural setting and is required to conduct environmental monitoring to determine compliance with regulatory requirements that protect people and the environment. Routine monitoring includes particulate matter, surface water discharges; groundwater for level and quality; and revegetation species and amounts. Results are reported to the appropriate regulatory agencies.

Shoal Creek Mine also employs numerous operational controls to ensure mining activities occur according to regulatory requirements. The following are examples of controls that protect the surrounding community.

Table 17-1. Operational Permits

Permit No.	Regulatory Agency	Issue Date	Renewal/ Expiration Date	Description
P-3666	Alabama Surface Mining Commission	Originally issued June 20, 1991 (most recently renewed June 25, 2021)	Renewal - June 19, 2026	Alabama Permit to Mine (Also referred to as the SMCRA Permit)
	Alabama has primacy for the Surface Mining Control and Reclamation Act (SMCRA). This permit authorizes surface/underground coal mining and reclamation activities. The pre-mining land use consists of primarily forestland. The approved postmining land use is forestland which includes undeveloped lands and unmanaged timberland. The reclamation plan describes the required activities to meet state reclamation standards for the approved postmining land use. The plan addresses: approximating original contours, topsoil salvage and replacement, and revegetation. Periodic reporting and associated monitoring, renewals, and revisions (as needed) are required to maintain the permit.			
4-07-2707-001-01*	Jefferson County Department of Health	September 11, 2019	N/A	Jefferson County, Alabama Air Permit to Construct and Operate
	This permit authorizes coal processing, backup generator use, and gasoline dispensing at the Shoal Creek Preparation Facility. Appropriate control measures, monitoring, reporting and periodic notifications are required to maintain the permit.			
414-0023-X001*	Alabama Department of Environmental Management	April 26, 2019	N/A	Alabama Air Permit to Construct and Operate (Excluding Jefferson County, Alabama)
	This permit authorizes backup generator use at Shoal Creek Mine's Camp Creek Portal. Appropriate control measures, monitoring, reporting, and periodic notifications are required to maintain the permit.			
AL0062421	Alabama Department of Environmental Management	October 6, 2016	Administratively extended on October 5, 2021	Alabama Pollutant Discharge Elimination System Permit
	This permit authorizes the discharge of water from mine-related point sources into waters of the state. Regular monitoring, reporting, revisions and treatment (as needed) are required to maintain the permit.			
SAM-2016-01565-CMS	US Army Corps of Engineers	October 26, 2018	July 5, 2023	Individual Permit
	This decision authorizes the construction of Impoundment H refuse disposal area. Extensions, as needed, are required to maintain this permit.			
AL91-02077-N	US Army Corps of Engineers	June 24, 1992	June 24, 1995	Individual Permit
	This decision authorizes the Shoal Creek barge loadout facility. No work is required to maintain this authorization.			
* These represent the current permit and associated issue date.				

- Planned subsidence activity is performed according to the requirements of the ASMC. The risk to local landowners and the surrounding community is minimized through the use of subsidence controls. These controls include pre-mine surveys, subsidence monitoring, advanced mining notifications, and, if needed, engineering controls to prevent or mitigate damage.
- Dust control follows the requirements of the Alabama Department of Environmental Management (ADEM) and the Jefferson County Department of Health. Roads are treated with water and chemicals on a regular basis. Reclamation occurs in a contemporaneous fashion to ensure bare soil is stabilized. Various dust control methods are utilized for coal handling processes including water sprays on conveyor transfer points, coal storage piles, and barge loading as needed.
- All surface water runoff from disturbed areas is required to pass through sediment control, as required by ASMC and ADEM. Shoal Creek Mine uses diversion ditches and berms to direct runoff through designed sediment control structures. These structures include sedimentation ponds as well as alternative sediment control measures (check dams, silt fences, etc.).

As part of the regulatory process with several agencies, Shoal Creek Mine provides notices to the public and interested parties about various activities. This includes notices of certain permitting, active mining, bond release, or other actions. These notices provide the opportunity to participate in the respective actions.

17.4. Mine Reclamation and Closure

At Shoal Creek Mine, Waste and Water Management will continue to be central to daily activities through mine closure. Processed waste from the washing of coal is disposed of in several refuse areas permitted with ASMC and MSHA. Requirements for the operation and reclamation of these disposal areas include periodic inspections, compaction tests, and abandonment plans upon completion of the disposal. Components of the approved reclamation for these disposal areas also include the utilization of appropriate cover to meet the approved post-mine land use. Water Management at Shoal Creek Mine will continue through bond release and removal of the permitted NPDES outfalls. Through the use of pumps, diversion ditches, and berms, water is directed to approved sediment control/discharge structures at which time the discharge is periodically tested for quality as required by the appropriate regulatory agencies.

Land reclamation is a vital part of the mining life cycle that is integrated with the mining process. Reclamation occurs on an ongoing contemporary basis as soon as land becomes available to create a safe, stable and sustainable landform that benefits generations to follow. Reclamation is undertaken on a progressive basis with consultation between the environmental, technical services and production teams. In any given year, land reclamation activities can vary due to production needs, mine development, weather conditions, or other unforeseen factors.

Besides the contemporaneous reclamation activities consisting primarily of grading, topsoil replacement and re-vegetation of facility areas, the operation also estimates its liabilities for final reclamation and mine closure based upon detailed engineering calculations of the amount and timing of the future cash spending for a third party to perform the required work. Spending estimates are escalated for inflation and then discounted at the credit-adjusted, risk-free rate. It is recorded as an Asset Retirement Obligation (ARO) asset associated with the discounted liability for final reclamation and mine closure. The obligation and corresponding asset are recognized in the period in which the liability is incurred. The ARO asset is amortized on the units-of-production method over its expected life and the ARO liability is accreted to the projected spending date. As changes in estimates occur (such as mine plan revisions, changes in estimated costs or changes in the timing of the performance of reclamation activities), the revisions to the obligation and asset are recognized at the appropriate

credit-adjusted, risk-free rate. ARO estimates are reviewed and updated annually at a minimum. As of August 2021, the estimated ARO for the life of mine is shown in Table 17-2. below.

Table 17-2. Discounted Asset Retirement Obligation Estimates

Category	ARO as End of Mine Life <i>(US\$ in thousands)</i>
Current ARO	22
Support Areas	8,666
Mine Closing	2,011
Total Liability	10,699

At Shoal Creek Mine, Waste and Water Management will continue to be central to daily activities through mine closure. Processed waste from the washing of coal is disposed of in several refuse areas permitted with ASMC and MSHA. Requirements for the operation and reclamation of these disposal areas include periodic inspections, compaction tests, and abandonment plans upon completion of the disposal. Components of the approved reclamation for these disposal areas also include the utilization of appropriate cover to meet the approved post-mine land use. Water Management at Shoal Creek Mine will continue through bond release and removal of the permitted NPDES outfalls. Through the use of pumps, diversion ditches, and berms, water is directed to approved sediment control/discharge structures at which time the discharge is periodically tested for quality as required by the appropriate regulatory agencies.

17.5. Comments from Qualified Person(s)

Shoal Creek Mine's current mine plans reflect a strong dedication to compliance at a federal, state, and local level. Through compliance with the regulatory agency's permitting programs, all potential pollutant sources are addressed and mitigated if needed. In addition, Shoal Creek Mine's permitting efforts have continued to provide a smooth path forward to continued operations through advanced planning and the renewal or revision of permits. Lastly, the recent ratification of the collective bargaining agreement between Shoal Creek Mine and the United Mine Workers of America (UMWA) helps provide a strong experienced workforce for continued operations while also providing numerous economic and social benefits to the local community.

18. CAPITAL AND OPERATING COSTS

18.1. Introduction

Shoal Creek is an active operation with a long operating history. The LOM plan and financial model have been developed periodically. The coal volumes and product quality are developed from the detailed mine plan with production reflecting historic performance. The manpower requirement, operating cost, and capital are estimated from the historic data and future mine plan requirements on an annual basis.

18.2. Operating Costs

The cost estimates used to establish coal reserves are generally estimated according to internal processes that project future costs based on historical costs and expected future trends. The estimated costs include mining, processing, transportation, royalty, add-on tax, and other mining-related costs. Peabody's estimated mining costs reflect projected changes in prices of consumable commodities (such as steel), labor costs, geological and mining conditions, targeted product qualities, and other mining-related costs. Estimates for other sales-related costs (mainly transportation, royalty, and add-on tax) are based on contractual prices or fixed rates. All reserves in the LOM plan are leased from private parties or the federal government. The royalty expenses are included in the category of Sales Related Costs computed from the projected revenue and contractual rates. Other sales-related costs include barge transport and port handling.

Operating costs are projected based on historical operating costs and adjusted based on projected changes in staffing, hours worked, production, and productivity for mining areas in the LOM plan. The LOM Plan operating cost projections are shown in detail in Table 18-1. The projected operating cost is \$224M on an annual average. These operating cost estimates are based on a substantial operating history and are in the accuracy range of +/- 15%. No contingency is included.

Table 18-1. LOM Operating Cost Projection (in millions of US\$ as nominal value)

Operating Cost	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Labor Cost	49.9	51.5	53.2	54.9	54.9	54.0	55.8	57.7	56.6	42.7
Materials & Supplies	41.2	42.1	47.2	43.6	39.1	37.7	38.8	44.7	31.5	15.7
Power	12.3	12.5	12.7	13.0	13.3	13.6	13.9	14.3	14.6	13.8
Outside Services	29.8	37.0	25.2	27.4	23.7	20.2	19.5	25.6	19.0	8.4
Joint Facilities	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Other Costs	3.9	-2.9	17.7	7.5	13.2	15.4	18.0	11.8	15.9	19.9
Sales Related Costs	53.3	48.5	65.7	57.4	53.5	48.0	53.5	53.9	48.3	37.8
Non-Cash Costs	36.3	36.4	36.9	36.3	35.2	24.6	26.5	25.8	21.4	16.7
Total Cost	228.7	227.3	260.6	242.2	234.9	215.6	228.1	235.9	209.4	157.0

18.3. Capital Expenditures

Shoal Creek will require capital expenditures each year for infrastructure additions/extensions, as well as for mining equipment rebuilds/replacements to continue producing coal. The capital expenditures have been projected based on mining equipment and infrastructure requirements as scheduled in the LOM. The capital expenditures are estimated to cover safety, equipment major rebuilds and replacement, conveyance system, infrastructure, etc. The capital expenditures, from 2022 through 2031, are shown in Table 18-2.

The total estimated capital expenditure is \$72M from 2022 to 2031 with an annual average of \$7.2M. All capital expenditure is considered as needed to maintain current operations. There is no expansion capital required for the current LOM plan. These capital cost estimates are based on a substantial operating history and are in the accuracy range of +/- 15%. No contingency is included.

Table 18-2. Capital Expenditure Projection (in millions of US\$ as nominal value)

Capital Expenditure	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Facility & Development	2.0	1.0	0.0	2.9	2.8	2.0	1.1	0.3	0.3	
Equipment	6.9	8.3	11.4	9.0	7.4	5.4	5.3	4.0	1.5	
Total Capex	9.0	9.3	11.4	11.8	10.1	7.5	6.4	4.3	1.9	

19. ECONOMIC ANALYSIS

19.1. Macro-Economic Assumptions

The Peabody Markets & Pricing Committee is responsible to provide the macro economic assumptions according to internal processes which rely on internal proprietary forecasts, existing contract economics and other third-party research. The sales price for Shoal Creek coal is benchmarked as 89% of Low-Volatile Premium Hard Coking Coal (LV PHCC) on the seaborne market based on historic quality and freight discount. The details for the pricing assumption are shown in Table 19-1. The cost and capital in the economic analysis assume 2.0-5.0% annual inflation for each category as shown in Table 19-2. The tax rate and discount rate used for the cash flow analysis are assumed to be 25% and 15% respectively.

Table 19-1. Sales Price Assumption

Sale Price	2022	2023	2024	2025	2026	2027 Thru LOM
LV PHCC (US\$/Metric Tonne)	152.00	150.00	154.00	158.00	162.00	2.8% Inflation
Quality and Freight Discounts	89%	89%	89%	89%	89%	89%
Shoal Creek Price (US\$/Short Ton)	122.47	121.56	124.29	127.91	130.64	

Table 19-2. Inflation Assumptions

Cost Category	2022	2023	2024	2025	2026	2027 - LOM
General	2%	2%	2%	2%	2%	2.5%
Wage & Salary	3%	3%	3%	3%	3%	3.0%
Health Care	5%	5%	5%	5%	5%	5.0%
Steel	5%	2%	2%	2%	2%	2.5%
Capital	2%	2%	2%	2%	2%	2.5%

19.2. Cash Flow Model

The cash flow is calculated in detail as shown in Table 19-3. The annual cash flow fluctuates between \$7 million to \$53 million with an average of \$36 million from the years 2022 to 2031. The coal reserves are projected to be mined out after 2031. The cash flow after 2031 includes mainly income tax, working capital, and ARO. The NPV at a 15% annual discount rate is computed as \$179 million which reflects the mid-year value of 2022. Since Shoal Creek is an existing operation with no requirements for major capital investment, the Internal Rate of Return (IRR) and payback period are not applicable. The positive annual cash flow and NPV demonstrate the positive economic value for reserves in the LOM plan.

Table 19-3. Cash Flow Analysis (in millions of US\$ in nominal value)

Economic Analysis	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033-LOM
Revenue	229	216	297	261	246	224	254	261	227	181		
Cash Generated (EBITDA)	37	25	74	55	46	33	53	51	39	41		
Income Tax	-1	-4	8	4	2	2	6	6	4	6	-1	
Working Capital	0	2	-7	3	1	1	-2	0	1	2	12	
ARO/Mine Closure Expense	1	1	1	1	1	0	1	1	1	5	4	3
Capex	9	9	11	12	10	7	6	4	2			
Non-Cash Cost Adjustment	6	13	-7	3	-3	-5	-8	-2	-6	-15		
Cash Flow	22	7	53	38	37	30	45	42	39	46	9	-3
Cash Flow (Cumulative)	22	29	82	120	157	187	231	273	312	358	367	364

19.3. Sensitivity Analysis

The sensitivity analysis is conducted on sales price, cost, productivity and capital with the detailed results in Table 19-4. The quality and yield for in situ coal are fairly consistent, and the grade is not included in the sensitivity study. The NPV is calculated for 10%, 15%, and 20% annual discount rates. The minimum NPV is \$40 million at a 20% discount rate and -\$15 per ton for price variance.

Table 19-4. Sensitivity Analysis (in millions of US\$ as nominal value)

SALE PRICE	Changes	\$ 15.00	\$ 10.00	\$5.00	\$ -	\$(5.00)	\$(10.00)	\$(15.00)
	NPV @ 10%	357	309	261	220	164	116	68
	NPV @ 15%	291	251	211	179	131	91	51
	NPV @ 20%	243	209	175	148	107	74	40
COST	Changes	\$(7.50)	\$(5.00)	\$(2.50)	\$ -	\$2.50	\$5.00	\$7.50
	NPV @ 10%	268	249	231	220	194	176	157
	NPV @ 15%	215	201	186	179	156	142	127
	NPV @ 20%	178	165	153	148	129	117	105
PRODUCTIVITY	Changes	7.50%	5.00%	2.50%	0.00%	-2.50%	-5.00%	-7.50%
	NPV @ 10%	306	275	244	220	181	150	119
	NPV @ 15%	248	222	197	179	146	120	95
	NPV @ 20%	206	184	163	148	120	98	77
CAPITAL	Changes	-7.50%	-5.00%	-2.50%	0.00%	2.50%	5.00%	7.50%
	NPV @ 10%	213	213	213	220	212	212	212
	NPV @ 15%	171	171	171	179	171	171	171
	NPV @ 20%	141	141	141	148	141	141	141

20. ADJACENT PROPERTIES

Adjacent properties to Shoal Creek, of competing coal companies are #4 and #7 mines of Warrior Met Coal to the South, Blue Creek project of Warrior Met Coal to the northwest, and Oak Grove mine to the southeast.

To the north, east and west, additional coal leases might be available for future expansion. The available public drilling information from Coal Bed Methane wells in adjacent properties are included in the geological model, but they are only used to extend the model beyond the Shoal Creek mine area. They don't have an impact on the coal resource and reserve estimates in this report. The Blue Creek coal seam in those leases is generally thin and will require additional exploration and development.

21. OTHER RELEVANT DATA AND INFORMATION

All data relevant to the associated mineral reserves and mineral resources have been included in the sections of this Technical Report Summary.

22. INTERPRETATION AND CONCLUSIONS

22.1. Geology and Resources

The regional and local geology at Shoal Creek is understood well by the Qualified Person through working experience and historic mining in the area. The exploration data at Shoal Creek has been collected with high-quality standards and the geological models have been further enhanced by incorporating mine survey and sampling programs. The points of observation, including the structure and coal quality, are sufficient for the determination of resource classification criteria which is developed from the DHSA method which is widely adopted in the coal mining industry. Most of the coal within the resource areas is under control by leases. The coal resources at Shoal Creek are estimated to be 82 million tons which have the potential to be converted to reserves with additional exploration and studies in the future.

22.2. Mining and Reserves

The Shoal Creek Mine has a long operating history with all required infrastructure to support future production. All required property control, including coal and surface for the reserve area, has been obtained to support the operation. Shoal Creek is an underground mine using a longwall mining method to extract coal which is processed by the preparation plant on the surface. The mining and processing methods have been adapted and practiced at Shoal Creek and the related mining industry for many decades. All major equipment is located at the operation and it will be adequate to support future production. The LOM plan shows the projected economic viability for the estimated reserves of 18 million tons.

22.3. Environmental, Permitting and Social Considerations

As of December 31, 2021, all required licenses and permits are in place for all activities needed for the operation of Shoal Creek. There are no current requirements for additional work or studies on the above-mentioned document. Many of these permits require regular monitoring, reporting, and renewals.

Land reclamation is a vital part of the mining life cycle that is integrated with the mining process. Shoal Creek is committed to complying with the Company's Environmental policy. This includes taking responsibility for the environment, which benefits the communities and restores the land for generations that follow. The historic performance on the reclamation activities and the projected future ARO are supportive of the reserve estimates at Shoal Creek.

22.4. Economic Analysis

The LOM plan and financial model have been developed periodically. The coal volumes and product quality are developed from the detailed mine plan with production reflecting historic performance. The manpower requirement, operating cost, and capital are estimated from the historic data and future mine plan requirements on an annual basis, and they are considered accurate to support the reserve estimates.

23. RECOMMENDATIONS

23.1. Geology and Resources

Routine exploration work should be evaluated to provide further geological confidence, along with the existing mine survey and sampling program. This will provide adequate support to the operation for short-term and mid-term planning, production, and coal quality control purposes.

It is recommended to further define the faults near the L4 panels in the current LOM. Horizontal drilling should be evaluated and possibly conducted from nearby gate roads once they are developed.

It is recommended to continue having an experienced geologist log core holes, measure core recovery, and conduct sampling. All future drilling should be geophysically logged to verify the depth and thickness of any boreholes, and the depth, thickness and core recovery percentages of core holes. All activities should be conducted according to Peabody drilling exploration standards.

23.2. Mining, Processing and Reserves

It is recommended to conduct a reconciliation to further validate the assumptions for loss and dilution during mining and processing. The yield gain from the plant upgrade should be verified with the actual plant performance once adequate operational data is available.

The operation should continue to follow the approved roof control and ventilation plan. Any material changes on the plans or from the plans should be assessed, and any related impacts on resource and/or reserve estimates should be incorporated in any future updates.

23.3. Environmental, Permitting and Social Considerations

It is recommended to maintain current reclamation practices and ensure the appropriate balance of disturbance and reclamation activities. Any significant mine plan change should be considered for the ARO update.

23.4. Economic Analysis

The ability of Peabody, or any coal company, to achieve production and financial projections is dependent on numerous factors. These factors primarily include site-specific geological conditions, the capabilities of management and mine personnel, the level of success in acquiring coal leases and surface properties, coal sales prices and market conditions, environmental issues, securing permit renewals and bonds, and developing and operating mines in a safe and efficient manner. Unforeseen changes in legislation and new industry developments could substantially alter the performance of any mining company. It is recommended that those factors should be assessed regularly according to the Company's internal control, and material changes are to be reflected in the future resource and/or reserve estimates.

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25. RELIANCE ON INFORMATION PROVIDED BY THE REGISTRANT

This technical report summary has been prepared by Qualified Persons who are employees of the registrant. In their specific areas of expertise, these Qualified persons have contributed to the appropriate sections of this report. These Qualified Persons have also relied on the information provided by the Company for property control, marketing, material contracts, environmental studies, permitting and macro-economic assumptions as stated in Section 3.2, Section 16, Section 17, and Section 19. As the operation has been in production for many years, the Company has considerable experience in those areas. The Qualified Persons have taken all appropriate steps, in their professional opinion, to ensure that the above information from the Company is sound.



TECHNICAL REPORT SUMMARY WILPINJONG MINE

In accordance with the requirements of SEC Regulation S-K (subpart 1300)

EFFECTIVE DATE: DECEMBER 31, 2021
REPORT DATE: FEBRUARY 18, 2022

PEABODY ENERGY CORPORATION
701 Market Street, Saint Louis, Missouri 63101

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SIGNATURE PAGE**Title:**

Technical Report Summary - Wilpinjong Mine, S-K1300
Peabody Energy Corporation (BTU)

Effective Date of Report:

December 31, 2021

Project Location:

The Wilpinjong Mine (WPJ) is a surface coal mine located approximately 40 kilometres (25 miles) north-east of Mudgee in the State of New South Wales, AUSTRALIA near the village of Wollar. Wilpinjong Coal Pty Ltd, a subsidiary of Peabody Energy Corporation, is the operator for the Wilpinjong Mine. WPJ is situated in the Western Coal Field on the north-west margin of the Sydney Basin.

Qualified Person(s) Preparers:

Peabody Energy Corporation

/s/ Emma Ewart

Geology (Prepared Sections: 1,2,3,4,5,6,7,8,9,10,11,21,22,23,24,25)

/s/ Brian Neilsen

Mining Engineering (Prepared Sections: 1,2,3,4,5,12,13,14,15,16,17,18,19,20,21,22,23,24,25)

Signature Date:

February 18, 2022

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1. EXECUTIVE SUMMARY

1.1. Disclaimer

This Technical Report Summary for the Wilpinjong Mine (WPJ) has been prepared by a team of qualified persons (QP) on staff at Peabody Energy. The purpose of this statement is to provide a report of the Coal Resources and Reserves in accordance with SK-1300. All information within this report has been prepared based on present knowledge and assumptions.

1.2. Property Description

The Wilpinjong Coal mine is an existing open-cut coal mining operation situated approximately 40 kilometres (25 miles) north-east of Mudgee in the State of New South Wales (AUSTRALIA) near the village of Wollar. The general location of WPJ is shown in Figure 1. The coal control is comprised of Mining Leases granted by the state of NSW.



Figure 1. General Location Map

The mine extracts the Moolarben and Ulan seams with a combined thickness from 6 to 10 metres and a typical depth less than 60 metres in the Permian Illawarra Coal Measures on the northwest margin of the Sydney Basin. The mining tenements consist of two exploration licenses of 1518 hectares and three mining leases of 3723 hectares. The mining leases require renewal upon expiration in 2027 for 2863 hectares and in 2039-2040 for 860 acres. The renewal application for two exploration licenses is currently pending for approval. As of December 31, 2021, all required licenses and permits were in place for the operations of Wilpinjong.

1.3. Geology and Mineralization

The Wilpinjong Mine is located in the Permian Illawarra Coal Measures on the northwest margin of the Sydney Basin. This coal measure is around 115m thick in the area, where the dominant lithologies are mudstone, siltstone, sandstone, coal, carbonaceous mudstone and tuffaceous claystone. The coal seams of interest at Wilpinjong include the Moolarben seam and the Ulan seam.

The surface geology of the Wilpinjong Mine is dominated by subcrops of the Illawarra Coal Measures. This unit overlies the Shoalhaven Group, which crop out immediately south of Wilpinjong. The coal measures are overlain by the Narrabeen Group, which forms the cliff-lines and plateaus to the north and south, the ridges that protrude out from these plateaus and outliers such as those adjacent to the Slate Gully area. In places, the Illawarra Coal Measures are concealed beneath younger alluvial deposits, particularly those that occupy abandoned channel-fill, referred to on site, as "palaeo-channels". Quaternary alluvial deposits also flank Wilpinjong and Cumbo Creeks.

The Moolarben seam consists of three plies, of which the lower half of the basal ~0.50m thick ply (M4) is currently being mined. The other plies – M1, M2 and M3 all exceed 40% in ash and have yields of less than 50% and are not considered mining targets. The Moolarben seam has not been mined in the local area in the past.

The Ulan seam ranges between 11 and 22.5 m in total thickness, however the mineable coal plies have a combined thickness of 5.7 to 9.0 m. The seam consists of a number of coal and stone plies that are correlated across the Wilpinjong resource area and into adjacent mines and projects. From these plies, Wilpinjong Coal Mine is currently using selective mining and washing, with some bypass to produce both domestic and export thermal coal products.

The surrounding ridges of resistant Triassic strata have combined with the thick seam and shallow dips resulting in an extensive area of shallow coal that is amenable to open cut mining. These ridges are generally within the National Park and are excluded from mining.

1.4. Exploration

Exploration at Wilpinjong has occurred since the early 1950s when the Joint Coal Board first developed cored boreholes in the area. Since acquiring the Wilpinjong Coal Mine in 2006, Peabody Energy has completed over a large number of boreholes, including holes cored for coal quality analysis.

Geological exploration activities continue to be undertaken to provide input to detailed mine planning and engineering studies to refine the understanding of geological structures and coal quality.

1.5. Development and Operations

WPJ currently has eight active open cut pit areas, necessary for quality blending, and efficient coal production. Overburden is removed by a combination of cast, doze, and truck/excavator methods.



Figure 2. WPJ Mine Map

1.6. Coal Resource and Reserve Estimates

The Coal Reserve estimate prepared by Peabody is based on a Life of Mine (LOM) Plan and associated financial model. This mine plan excludes any coal quantities considered as Inferred Resources. As reported Coal Resources are exclusive of Reserves, some of the Resources consist of coal volumes that fall within the planned LOM pit shells but are Inferred. Other reported Resources are in areas adjacent to the planned LOM pit shell, but have reasonable prospects for eventual economic extraction subject to conditions (e.g. boundary coal requiring an agreement with a neighboring coal company). Summaries of Coal Resources and Reserves are shown in the following tables.

Tenement	Measured	Indicated	Inferred	Total
EL6919	41.1	8.6	1.0	80.7
EL7091	3.8	6.2	2.4	12.4
ML1573	21.3	4.1	0.8	26.2
ML1779	13.5	1.3	0.3	15.1
ML1795	14.2	2.4	0.9	17.5
TOTAL	93.9	22.6	5.4	121.9

Table 1. Coal Resources by Tenement (Mt)

Area	Run of Mine (ROM)						Marketable Product				
	Proven Q _{Mine} (Mt)	Probable Q _{Mine} (Mt)	Total Q _{Mine} (Mt)	Moist (%)	ROM Ash (% - adb)	Strip Ratio (Dom/D)	Proven Q _{Meas} (Mt)	Probable Q _{Meas} (Mt)	Total Q _{Meas} (Mt)	Prod Ash (% - adb)	Moist (%)
ML1573	37.6	1.3	38.8	8.8	31.0	3.2	30.6	1.2	31.8	25.3	9.6
ML1795	0.3	0.1	0.4	8.7	31.6	6.0	0.25	0.07	0.3	27.0	9.5
ML1779	33.4	2.9	36.3	8.8	29.1	4.2	27.1	2.8	29.9	23.7	9.6
EL6169	8.3	0.2	8.5	9.0	31.4	4.4	6.7	0.2	6.8	25.0	9.8
TOTAL	79.5	4.4	84.0	8.8	30.2	3.8	64.6	4.2	68.8	24.6	9.6

Table 2. Coal Reserves by Tenement

1.7. Economic Analysis

The coal reserve estimates are supported by the site's Life of Mine (LOM) plan which is compliant with the requirements of Regulation S-K 1300.

The LOM plan mines the defined Reserves within a 10 year period, during which time the mine is projected to produce 68.8 million tonnes of product with a total cost of \$4,101 million and a capital expenditure of \$129 million. The LOM plan will produce \$722 million in positive total cash flow and ~\$556 million Net Present Value (NPV).

1.8. Conclusion

WPJ has a long operating history and a significant amount of historic exploration, in-mine thickness and elevation measurements, and in-mine channel samples in order to determine Coal Reserve estimates and projected economic viability. The data has been determined by the Qualified Persons to be adequate in quantity and reliability to support the Coal Resource and Reserve estimates in this Technical Report Summary.

The Coal Reserve estimates and supporting Life of Mine (LOM) plan conclude that there are 68.8 million clean recoverable tonnes of surface mineable Reserves at WPJ. The Reserves are economically mineable based on the historical mining performance, mine projections, historical and projected coal sales prices, historical and projected operating costs, and capital expenditure projections for the LOM Plan.

The ability of Peabody, or any coal company, to achieve production and financial projections is dependent on numerous factors. These factors primarily include site-specific geological conditions, the capabilities of management and mine personnel, level of success in acquiring Reserves and surface properties, coal sales prices and market conditions, environmental issues, securing approvals and bonds, and developing and operating mines in a safe and efficient manner. Unforeseen changes in legislation and new industry developments could substantially alter the performance of any mining company.

Coal mining is carried out in an environment where not all events are predictable. While an effective management team can identify known risks and take measures to manage and/or mitigate these risks, there is still the possibility of unexpected and unpredictable events occurring. It is not possible therefore to totally remove all risks or state with certainty that an event that may have a material impact on the operation of a coal mine will not occur.

1.9. Recommendations

1.9.1. Geology and Resources

Although most of the Wilpinjong deposit is classified as Measured Resources, it is recommended that annual drilling programs are continued to assist with detailed mine planning and marketing strategies.

1.9.2. Mining Processing and Reserves

The Reserves at Wilpinjong aren't materially sensitive to Coal Prices, with low mining costs providing significant head-room against projected pricing. The mine is a medium to high ash producer (14-30% typically). If the market changes to favour low-ash (i.e. steepening of the price/ash curve) there are some washing strategies that may enable the mine to improve its value, but this will have a negative impact on the Marketable (and potentially some of the ROM) Reserves. Continued monitoring of the price/ash curve and appropriate adjustment of the washing strategy to maximise value is recommended.

1.9.3. Environmental, Permitting and Social Considerations

The mine requires the granting of a small mining lease in the north-west part of the mine to deliver all of the Reserves in this Technical Report Summary. Although there are no perceived obstacles to the successful granting of this lease area it is recommended that appropriate applications are submitted as required.

1.9.4. Economic Analysis

The ability of Peabody, or any coal company, to achieve production and financial projections is dependent on numerous factors. These factors primarily include site-specific geological conditions, increasing strip ratio, the capabilities of management and mine personnel, level of success in acquiring reserves and surface properties, coal sales prices and market conditions, environmental issues, securing permit renewals and bonds, and developing and operating mines in a safe and efficient manner. Unforeseen changes in legislation and new industry developments could substantially alter the performance of any mining company. It is recommended that those factors should be assessed regularly according to the Company's internal control and material changes are to be reflected in the future reserve estimates.

2. INTRODUCTION

2.1. Introduction

This Technical Report Summary was prepared for the Wilpinjong Mine (WPJ), which is operated by Peabody Australia Pty Ltd's wholly owned subsidiary, Wilpinjong Coal Pty Limited (WCPL).

This Technical Report Summary for the Wilpinjong Mine (WPJ) is in accordance with the United States' Securities and Exchange Commission (SEC) S-K 1300. The S-K 1300 sets the standards for the reporting of scientific and technical information on mineral projects and specifies that the Technical Report Summary must be prepared by, or under the supervision of, a Qualified Person(s).

This report is the first time filing in accordance with S-K 1300 for the registrant. The report summarizes information on the operation and Coal Reserve estimates. The information will be used to support disclosures in Peabody's annual SEC filings.

The Qualified Persons identified technical risks related to the reporting and development of these Coal Resources and Reserves. This report is not intended to be a detailed marketing, and/or mining feasibility study and is for advisory purposes only.

2.2. Terms of Reference

Coal Resource and Reserve estimates are reported according to the definitions of S-K 1300 on a 100% controlled basis. The point of reference for Coal Resource estimates is thermal coal as in-situ tonnages. The point of reference for Coal Reserves estimates is thermal coal as the saleable product for an ongoing mining operation. Reserve Estimates are also provided on a Run of Mine (ROM) basis, prior to processing operations taking place.

Coal Resource estimates, exclusive of Coal Reserves, are also provided in this report.

Units used in this report are expressed in the Metric system, unless otherwise noted. Currencies are expressed in year-end 2021 AUD dollars. (These units differ to those summarized in the Annual 10-K filing, which are Imperial Units and year-end 2021 USD.)

Reserve estimates developed for this report are provided as updates to Reserve estimates previously reported in Peabody's annual 10-K submissions. These updates are the first to be prepared using the S-K 1300 rules. Resources are reported for the first time for these properties.

2.3. Sources of Information and References

The sources of information used in this Technical Report Summary include several systems developed by Peabody that are integrated into a process for estimating and reporting Coal Reserves.

- GeoCore- Geologic database of drill hole and coal quality information.
- Task Manager – A user interface application for entering, validating and exporting the relevant GeoCore project database;
- LOM - Life of Mine Planning includes mine layout, scheduling and economic evaluation in a standardized process used across Peabody's operations.
- LMS – Land Management System which include all property and lease information.
- Geology and mining software – Specifically, the Geographical Information System programs Mapinfo and ArcMap for mapping of cadastral, structure, coal quality and geological data and Maptek Vulcan for creating the 3D geological models and mine plans;
- WCPL's publicly available Approvals database, including the project's Development Consent granted by the relevant government authority and various Management Plans
- In-house marketing and supply studies from the Global Analytics Group

2.4. Involvement of Qualified Persons

The following Peabody employees serve as Qualified Persons (QPs) for this report as defined in S-K 1300.

- Mining Engineering: Brian Neilsen (BEng(Hons), MAusIMM(CP), RPEQ)
- Geology: Emma Ewart (BSc(Hons), MAusIMM)

Mr. Neilsen is employed as Director of Engineering – Opencut Mining at Peabody's Corporate Office in Brisbane, Australia. He has responsibilities for supporting mine planning and design at Peabody's operational open cut mines, particularly regarding the Australian assets. He has over 25 years of coal industry experience in opencut coal mines in the US and Australia. He has regularly travelled to each of the company's Australian Opencut mines. His latest visit to Wilpinjong was in June of 2019, when he took part in a tour of the entire operation. Covid-19 related restrictions to travel across State borders during much of 2020 and 2021 have prevented recent physical inspections of the Wilpinjong mine.

Mrs. Ewart is employed as a Sr. Resource Geologist. She is located at Peabody's Corporate Office in Brisbane, Australia with responsibilities for geological modelling of Peabody's Australian deposits across multiple coal basins. As part of her role, she often travels to Peabody's active coal mines and projects. Her last visit to Wilpinjong was in March 2021, where she took part in a tour of the entire operation and the exploration drilling that was being conducted at the time.

3. PROPERTY DESCRIPTION

3.1. Location

The Wilpinjong Coal Mine is located approximately 40 kilometres north-east of Mudgee, near the Village of Wollar, within the Mid-Western Regional Local Government Area, in central New South Wales (NSW), Australia. The Wilpinjong Coal Mine is owned and operated by Wilpinjong Coal Pty Ltd (WCPL), a wholly owned subsidiary of Peabody Energy Australia Pty Limited (Peabody Energy). The general location of the Mine is shown on Figure 1.

The mine produces thermal coal products which are transported by rail to domestic customers for use in electricity generation and to ports for export. Open cut mining operations and associated mobile equipment movements are undertaken 24 hours per day, seven days per week.

3.2. Property Rights

WCPL and Peabody Pastoral Holdings Pty Ltd are a major landholder owning adjacent rural properties and land to the east and south-east of the mine. Land to the west of the mine are owned by adjacent mining companies, whilst the National Parks and Wildlife Service estate own significant land to the north and south-west of the Mine. Private properties are located predominantly in and around the Wollar Village approximately 1.5 km to the east of the Mine and along Mogo Road to the north of the Mine.

The Mine originally operated under Project Approval (PA 05-0021) that was granted by the Minister for Planning under Part 3A of the NSW Environmental Planning and Assessment Act 1979 (EP&A Act) on 1 February 2006. On 24 April 2017, WCPL was granted Development Consent (SSD-6764) for the Wilpinjong Extension Project (WEP) that provides for the continued operation of the Mine at rates of up to 16 million tonnes per annum (Mtpa) of run-of-mine (ROM) out to 2033, and access to approximately 800 hectares (ha) of open cut extensions. Development Consent (SSD-6764) has superseded the original Project Approval (Project Approval 05-0021). A summary of the conditions of this Approval is shown in the table below:

Component	Approved Wilpinjong Coal Mine
Mining Method	<ul style="list-style-type: none"> Open cut mining operation extracting ROM coal.
Open Cut Extent	<ul style="list-style-type: none"> Eight contiguous open cut pits (including a new open cut pit in Slate Gully i.e. Pit 8) and associated contained infrastructure area comprising approximately 2,790 hectares.
ROM Coal Production Rate	<ul style="list-style-type: none"> Up to 16 Mtpa of ROM coal.
Waste Rock Management	<ul style="list-style-type: none"> Waste rock deposited predominantly within mined-out voids. Elevated waste emplacement area (Pit 2).
Annual Waste Rock Production	<ul style="list-style-type: none"> Annual waste rock production of approximately 43 million bank cubic metres.
Coal Washing	<ul style="list-style-type: none"> Beneficiation of ROM coal in the CHPP. Facilities for the handling and stockpiling of both washed and unwashed (bypass) coal.
Product Coal	<ul style="list-style-type: none"> Approximately 13 Mtpa of thermal product coal for domestic electricity generation and export, capped at maximum rail limits.
Coal Rejects (tailings and coarse rejects)	<ul style="list-style-type: none"> Coal rejects placed predominantly within mine voids. Tailings filter press to allow co-disposal of the tailings with coarse rejects
Water Supply	<ul style="list-style-type: none"> Make-up water demand to be met from runoff recovered from mine operational areas, recovery from tailings disposal areas, open cut dewatering, advanced dewatering of pit areas and supply from a borefield (if required). Recovery of water from tailings via tailings filter press.
Water Disposal	<ul style="list-style-type: none"> Mine water treated in a Water Treatment Facility (WTF) and discharged to Wilpinjong Creek in accordance with Environment Protection Licence (EPL) 12425.
Project Life	<ul style="list-style-type: none"> 28 years (from the date of grant of a Mining Lease 1573).
Product Coal Transport	<ul style="list-style-type: none"> An average of six and a maximum of 10 laden trains per day leaving the mine. Transport via the Sandy Hollow-Gulgong Railway.
Hours of Operation	<ul style="list-style-type: none"> Open cut mining, handling and processing of ROM coal at the CHPP and train loading at the Wilpinjong Coal Mine is currently undertaken 24 hours per day, seven days per week.

Table 3. Summary of Mining Approval Conditions

Land use in the vicinity of the Mine is a combination of coal mining operations, conservation areas, stock grazing and rural residential development.

WPJ approved mining activities occur within ML1573, ML1779 and ML1795. ML1573 was granted under the Mining Act 1992, on 08 February 2006. ML1779 was granted under the Mining Act 1992, on 20 December 2018. ML1795 was granted under the Mining Act 1992, on 27 September 2019.

WCPL's exploration activities will continue to occur within adjacent exploration licences (EL) EL 6169 and EL 7091 and within ML1573, ML1779 and ML1795. The date of grant and duration of mining and explorations licenses relevant to WCPL are provided in Table 2.

A summary of the surface and mineral leases is shown in Table 4.

Tenement	Tenement Name	Holder	Term Years	Grant Date	Commencement Date	Expiry Date	Status	Hectares
EL6169	Wilpinjong Coal Tender Area	WILPINJONG COAL PTY LTD	19	22/12/2003	22/12/2003	28/11/2022	Renewal Application pending approval	1238
EL7091	Wilpinjong	WILPINJONG COAL PTY LTD	16	3/03/2008	3/03/2008	3/03/2024	Renewal Application pending approval	280
ML1573	Wilpinjong	WILPINJONG COAL PTY LTD	21	8/02/2006	8/02/2006	7/02/2027	Current	2863
ML1779	Wilpinjong Ext No 2	WILPINJONG COAL PTY LTD	21	20/12/2018	20/12/2018	20/12/2039	Current	704
ML1795	Wilpinjong Ext No 2	WILPINJONG COAL PTY LTD	21	27/09/2019	27/09/2019	27/09/2040	Current	156.4

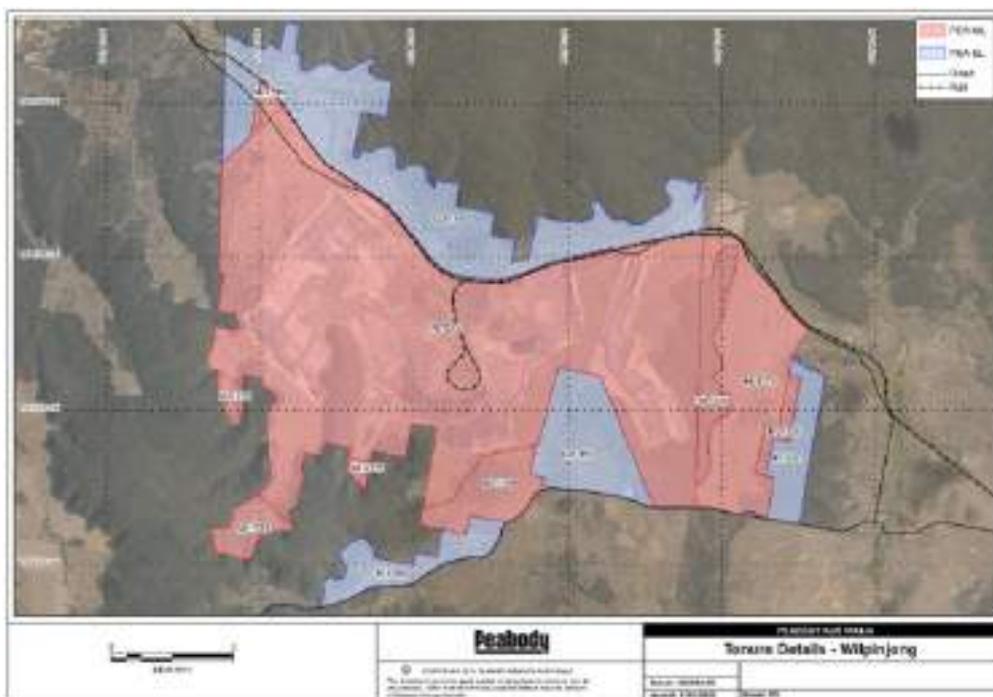


Table 4. Leases

Figure 3. Coal Control Property Map

In order to maintain Mining Leases and Exploration Licenses, the company is required to pay annual statutory fees (including rental) and levies. All coal mined is also subject to the standard NSW Coal Royalty, which is currently 8.2% of Revenue less certain deductions.

The following table provides a summary of the other approvals, leases and licences that the Mine operates under.

Relevant Authority	Instrument	Approval/Licence No.	Expiry Date
DPIE	Development Consent	SSD-6764	28 years from commencement of Project Approval (i.e. 2033)
DRG	Mining Lease	ML1573	February 2027
	Mining Lease	ML1779	20 December 2039
	Mining Lease	ML1795	27 September 2040
	Mining Lease Application	MLA 3 (yet to be lodged)	Currently part of EL6169
	Exploration Licence	EL 6169	28/11/2022
		EL 7091	03/03/2024
	Mine within Wilpinjong B Notification Area	ML 1573	Endorsed DSC 19 February 2013 Approved 24 January 2014
	Mining Operations Plan (MOP)	MOP 2021-2022	31 December 2022
	Tailings Emplacement	Section 101 – TD1 and TD2 (approv. No. 07/1226)	February 2006 (Facility decommissioned)
	Tailings Emplacement	TD3 and TD4 (High Risk Activity Notification)	December 2011 (Facility decommissioned)
	Tailings Emplacement	TD5 (High Risk Activity Notification)	December 2013 (Facility decommissioned)
	Tailings Emplacement	TD6 (High Risk Activity Notification) 02/09/2016	-
	Tailings Emplacement	Section 101 - Decommission TD2 (approv. No. 09/2396)	29 April 2009 (Facility decommissioned)
Tailings Emplacement	Section 101 - Decommission TD1 (approv. No. 09/2396)	28 October 2011 (Facility decommissioned)	
EPA	Environment Protection Licence (EPL)	EPL 12425	Until the licence is surrendered, suspended or revoked. The licence is subject to review every 3 years
	NSW Radiation Control Act 1990 Registration	Licence Number 5061384	02 January 2022
Work Cover NSW	Explosives Licence	NSW Explosives Act 2003 Part 3 Licence (Licence Number XSTR200024)	24 March 2023
DPI-Water	Water Licences	Refer to Table 6	Refer to Table 6

Note: Copies of the Development Consent (SSD-6764), EPL 12425, ML 1573, ML1779 and ML1795 are available on the Peabody Energy website (<http://www.peabodyenergy.com>)

Table 5. Summary of Approvals

WAL	AL #	Water Source	Category	Entitlement*	Holder	Work Approval	Expiry date
21499	20AL211215	Wollar Creek	Aquifer	474 Unit shares	Peabody Pastoral Holdings Pty Ltd / Wilpinjong Coal Pty Limited as 100/374 share	20CA211216	31/7/2022
19045	20AL209956	Upper Goulburn	Unregulated	183 Unit shares	Peabody Pastoral Holdings Pty Ltd	20CA209957	12/11/2022
19055	20AL209954	Upper Goulburn	Unregulated	50 Unit shares	Peabody Pastoral Holdings Pty Ltd	20CA209955	31/7/2022
19057	20AL209966	Upper Goulburn	Unregulated	110 Unit shares	Peabody Pastoral Holdings Pty Ltd	20CA209967	7/2/2024
19058	20AL209974	Upper Goulburn	Unregulated	168 Unit shares	Peabody Pastoral Holdings Pty Ltd	20CA209975	19/11/2022
19426	20AL210793	Wollar Creek	Unregulated	40 Unit shares	Peabody Pastoral Holdings Pty Ltd	20CA210794	31/7/2022
19423	20AL210790	Wollar Creek	Domestic & stock	2 ML	Peabody Pastoral Holdings Pty Ltd	20WA210792	31/7/2022
19425	20AL210795	Wollar Creek	Domestic & stock	1 ML	Peabody Pastoral Holdings Pty Ltd	20WA210796	31/7/2022
19430	20AL210798	Wollar Creek	Domestic & stock	5 ML	Peabody Pastoral Holdings Pty Ltd	20WA210799	31/7/2022
36398	20AL212799	Wollar Creek	Domestic & stock	1 ML	Peabody Pastoral Holdings Pty Ltd	20WA212768	30/7/2023
9476	N/A	Macquarie/ Cudgegong	<i>Regulated (General Security)</i>	790 Unit shares	Wilpinjong Coal Pty Limited	No nominated work	
41862	N/A	Sydney Basin - North Coast Groundwater	Aquifer	3121 Unit shares	Wilpinjong Coal Pty Limited	20MW065002	N/A

*Note: Water entitlement held under NSW Water Management Act, 2000 is granted in perpetuity. One unit is currently equivalent to 1.0 ML as per the Available Water Determination Order for Various NSW Unregulated and Alluvial Water Sources (No. 1) 2013

Table 6. Water Licences

3.3. Comments from Qualified Person(s)

To the extent known to the QP, there are no other significant factors and risks that may affect access, title of the right or ability to perform work on the property.

4. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES

4.1. Physiography

WPJ is surrounded by the narrow flood plains associated with the upper reaches and tributaries of the Wollar Creek catchment (which in turn drains to the Goulburn River), the undulating foothills, ridges and escarpments of the Great Dividing Range and the dissected landforms of the Goulburn River National Park.

Local elevations range from approximately 350m (1150ft) AHD (Australian Height Datum) on Wilpinjong Creek just to the east of the confluence with Cumbo Creek, to approximately 745m (2440ft) AHD at a series of peaks to the south of the Project along the Great Dividing Range. Elevations in the Goulburn River National Park to the north of the Project are generally less than 600m (1970ft) AHD. Within the Mining Lease Area, elevations generally range from approximately 350 to 440m (1150 to 1440ft) AHD, while escarpment areas and narrow ridges adjoining the Munghorn Gap Nature Reserve rise to above 510m (1670ft) AHD in places.

The condition of native vegetation in the mine area and surrounds varies, with the most disturbed areas generally occurring along watercourses and on flat and undulating areas which have been cleared for agriculture. Most natural vegetation is restricted to the steep hills and slopes outside of mining disturbance areas. There are some small uncleared areas of remnant vegetation scattered throughout the mining area and surrounds and these are mainly associated with stony outcrops.

The area supports a diversity of flora species and communities. Remnant vegetation is dominated by eucalypt woodland and forests. A number of tree species including Narrowleaved Ironbark (*Eucalyptus crebra*), Coast Grey Box (*E. moluccana*), Black Cypress Pine (*Callitris endlicheri*), and Rough-barked Apple (*Angophora floribunda*) are widespread and common and associate with many other species. Other dominant tree species include Yellow Box (*E. melliodora*), Blakely's Red Gum (*E. blakelyi*), White Box (*E. albens*) and Grey Gum (*E. punctata*).

4.2. Access

WPJ is located approximately 58 kilometres (36 miles) by sealed road to the north-east of Mudgee, NSW.

From Mudgee, take Ulan Road for approximately 45 kilometres (28 miles) before turning right onto the Ulan-Wollar Road. The mine entrance is located on the right hand (south) side of this road approximately 10.6km (6.6miles) from the turn. Mudgee also contains the nearest commercial airport to WPJ, with regular flights to/from Sydney.

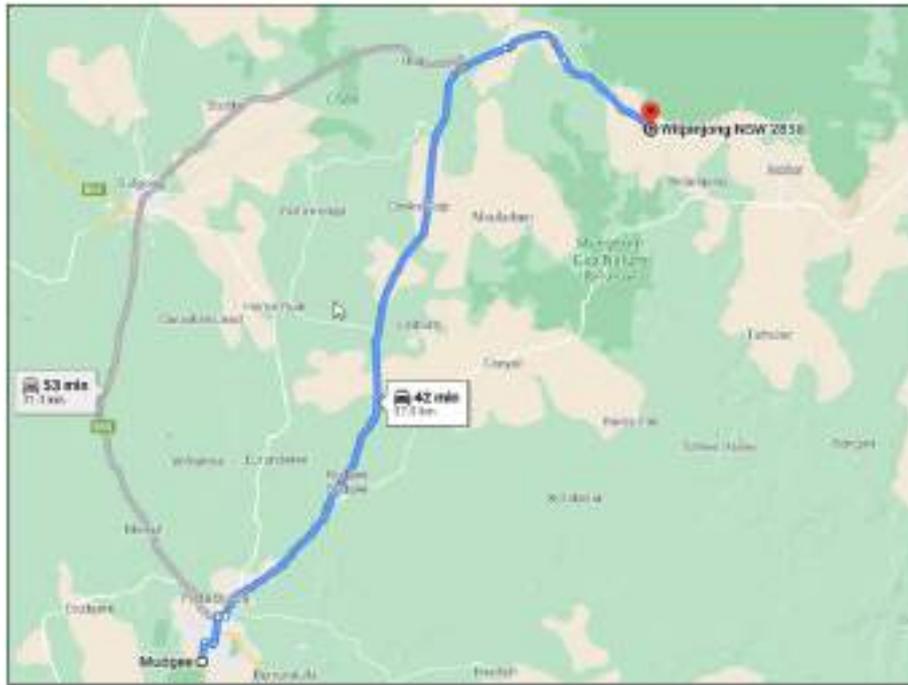


Figure 4. Access Map - from Mudgee

If approaching from the East, from Newcastle, follow the A15 / M15 (Hunter Valley Exp[ressway] for approximately 65km (40miles) before turning on to the Golden Highway (B84). Follow the Golden Highway for 82km (51 miles) to Sandy Hollow before turning onto the Bylong Valley Way and following that road for 85km (53miles) to Wollar. Then follow the Ulan Wollar Road for 11km (7miles) to the Mine Entrance. Newcastle also has a large airport facility, with frequent and regular flights to a number of Australian cities.



Figure 5. Access Map – from Newcastle

All product coal is loaded via the site's train loading facility, which includes a rail spur and loop. Coal is transported by rail to either

- the Antiene-Newdell Coal Unloaders (located between Singleton and Muswellbrook), where coal is offloaded for use as domestic fuel for the Liddell and Bayswater Power Station or
- to the Port of Newcastle, where the coal is offloaded for export

The rail distances to Antiene and Newcastle are 155km (96miles) and 260km (162miles) respectively. Rail Transport corridors are displayed in Figure 6.



Figure 6. NSW Rail Transportation

4.3. Climate

The area experiences a humid sub-tropical climate, with semi-arid characteristics, allowing for mine operations year-round. Temperatures vary from -8 degrees Celsius (18 °F) in Winter to 44 degrees Celsius (111 °F) in Summer. Yearly average temperature is ~16 degrees Celsius (61 °F). Average rainfall is around 650mm (25.6 inches) per year.

4.4. Available Infrastructure

The mine employs over 500 people directly, most of whom live in the local area. The mine's proximity to other large coal mining projects provides access to a significant pool of experienced miners, well-equipped support vendors and suppliers.

Electrical power is supplied to the site via a 66kV powerline.

The mine maintains a comprehensive water management system, utilizing a series of on-site water storages to use a combination of captured surface runoff and recycled water to meet requirements for coal processing and dust suppression activities. The mine is permitted to collect make-up water from Water Supply bores on-site if required.

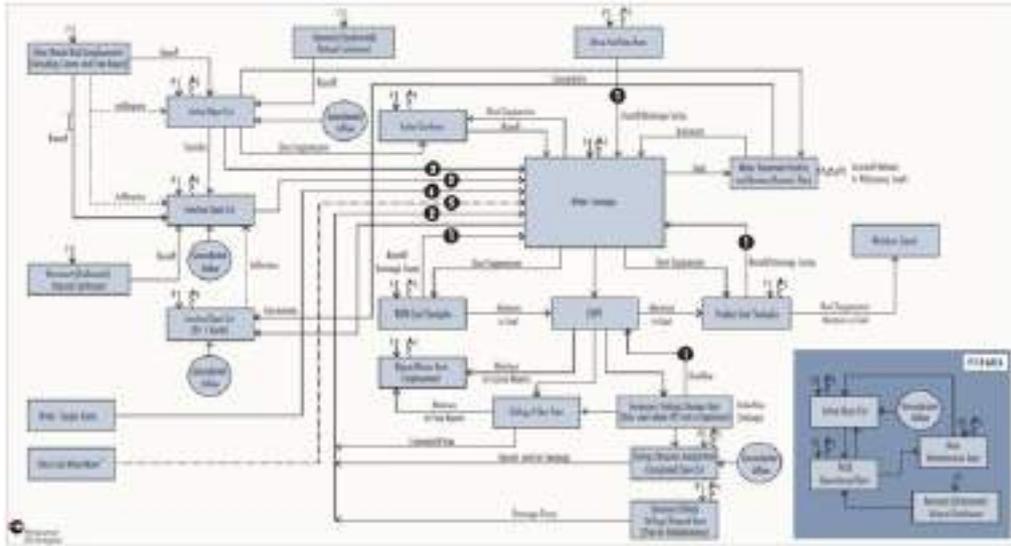


Figure 7. Mine Water Management Schematic

4.5. Comments from Qualified Person(s)

It is the QP's opinion that the local resources and infrastructure are well developed through historic coal mining developments in the region. It is sufficient to support the declaration of Coal Reserves and the mine plan.

5. HISTORY

5.1. Prior Ownership

The Wilpinjong Mine began after Wilpinjong Coal Pty Ltd (WCPL – then a subsidiary of Excel Coal Ltd) successfully tendered in 2003 for a coal supply agreement for Macquarie Generation (then a NSW Government owned company) to supply coal to the nearby Bayswater and Liddell Generating Stations. In December of 2003, Exploration Licence (EL) 6169 was granted to WCPL by the NSW government.

Development of the mine by WCPL began in February 2006, with construction/mining contractor Thiess awarded a contract to build and operate the mine. First coal was railed from the mine in October, 2006. Excel Coal Pty Ltd was purchased by Peabody Energy during 2006, and the mine continued to be operated by Thiess for several years, until Peabody made the decision to convert the mine to Owner-Operate in 2013.

5.2. Exploration, Development, and Production History

The exploration programs leading to the development of the resource knowledge of the Wilpinjong deposit included drilling by:

- Joint Coal Board
- Joint Development Program
- Energy Recycling Corporation Pty Ltd
- Electricity Commission of NSW
- NSW Department of Mineral Resources
- Excel Coal
- Wilpinjong Coal Pty Ltd

Joint Coal Board

In the early 1950's, the Joint Coal Board (JCB) conducted an exploration program in the area to support the development of the Ulan Power Station. In the Wilpinjong area, the JCB drilled the Ulan-Wilpinjong and Ulan-Cumbo series of holes. These holes were NX-size (54.7mm diameter) cored holes, and 12 of these holes were located near Wilpinjong.

Detailed ply sampling and analysis (down to 1" sample size) was undertaken on bore cores. Coal samples were subjected to proximate analysis, sulphur analysis, British Swelling Number and calorific value. Stone samples were only tested for ash content, and no density tests were undertaken. Coal quality data from this drilling has limited value for resource definition, as sampled coal recovery was poor. The boreholes did, however, indicate the continuity of coal in the area.

Joint Development Program

In 1977, under a joint arrangement between the Commonwealth Government, the Joint Coal Board and NSW Department of Mines, 21 scout boreholes were drilled in a program to define Coal Resources in the greater Ulan area. This program provided better core recoveries than the previous JCB drilling and analysis of samples included ply by ply, analysed clean and washed

coal composite analysis, and petrography. The size of the core is not specified on the logs from this drilling; however geophysical logs record a nominal hole size of 3 1/8" (79.4mm). Four of these holes occur in the immediate Wilpinjong area and are located outside of the current Wilpinjong coal tenements.

These holes were geophysically logged using self-potential, resistivity, natural gamma, density, neutron, temperature, and caliper tools. Analog outputs from these logs are typical of the vintage of this drilling.

Energy Recycling Corporation Pty Ltd

Energy Recycling Corporation Pty Ltd (ERC) held title to Authorisation No. 167, which covered a large portion of the current Wilpinjong mine area. This company drilled 77 boreholes, which were partly cored and geophysically logged (with the exception of the first four holes). Forty holes were drilled in the immediate Wilpinjong area, including two holes located in Goulburn River National Park to the north. Hole-size is not recorded on the English logs of these holes, but is around 3" (75mm) according to caliper logs.

The main target of interest to ERC was the Ulan seam, which was sampled in detail. Individual plies were tested for moisture, ash and RD, and combinations of plies (excluding those with ash contents >40%) were analysed for proximate analysis, CSN, specific energy, total sulphur, chlorine and HGI.

Certain boreholes deemed to be located in "potential open cut areas" were subjected to additional tests including ash composition and fusibility, ultimate analysis, forms of sulphur and petrographic analysis.

No washability tests were carried out on the cores, as part of the focus of the program was processing of raw coal in a novel coal beneficiation technique owned by ERC.

Electricity Commission of NSW

The Electricity Commission of NSW held title to Authorisation No. 322. Twenty four holes were drilled as part of this program. Six holes lie due east of Wilpinjong, and were HQ-size cored holes. Ply sampling and analysis from these holes is comprehensive with detailed ply sampling and analysis, raw and washed coal composites, and fairly detailed characterisation tests on thermal and coking coal composites.

Holes were geophysically logged using BPB instruments, and these included gamma, neutron, density, caliper, resistance and sonic logs.

Department of Mineral Resources Drilling

The DMR drilled numerous holes in the region in several programs to define Coal Resources. These programs included the various stages of the Wilpinjong-Moolarben and Cumbo-Wilpinjong Programs.

The first phase of drilling, undertaken in 1992, included the drilling of three partly cored holes, designed to provide an indication of the washability characteristics of the Ulan seam.

The second phase of drilling was completed in 1998 and included the drilling of 13 partly cored boreholes, and 14 rotary holes in the Moolarben area. As with Stage 1, the second stage of drilling targeted resource definition and washability testing of the Ulan seam.

Stage 3 drilling involved the drilling of seven cored holes and four rotary holes. The drilling at this time was focused on open cut and underground resource identification in several prospective areas, including the "Wilpinjong Open Cut" area.

Eighty one of the 'DM' holes have been drilled at Wilpinjong and formed the basis for a competitive tender package released in 2002. The drilling was largely HQ-size core.

Documentation of the complete set of drill holes undertaken in the Moolarben and Wilpinjong area by the DMR is poor. Stage 4 and 5 drilling was also undertaken for the project, as evidenced in borehole header data supplied by the DMR. These stages included the drilling of six large diameter holes (146mm or 5¾" core) for detailed sizing and washability analysis. It is unclear from available documentation, what order the holes were drilled in and the exploration rationale for the program. Analysis of the large diameter core samples was reported in 2003.

During these drilling campaigns, the DMR adopted the subdivision of the Ulan seam as used at Ulan Mine. Sampling of the coal seams was largely done on this basis, aided by the recognition of tuffaceous marker bands within the seam. Coal ply samples from the DMR drilling were analysed for RD, proximate analysis, CSN and total sulphur, whereas stone samples were tested for moisture, ash and density. The plies were composited into working sections that matched the seam nomenclature used at Ulan, and subjected to float-sink tests at densities from 1.3 to 2.0 in 0.1 increments. A particular focus of the drilling appeared to be proving up the "DWS" or D working section, which is mined underground at Ulan.

Excel & Peabody Wilpinjong (WCPL)

Following competitive tender, Excel Coal Ltd was granted Exploration Licence (EL) 6169 in December, 2003. In 2004 and 2005, Excel drilled 29 cored holes and 152 open holes. All of these holes were geophysically logged and samples taken from cored holes were subjected to analysis.

In February, 2006, Excel was granted Mining Lease (ML) 1573. During the same year, Peabody Energy acquired Excel and ownership of Wilpinjong Mine. By that stage, Excel had completed around 45 cored holes, and two "gas" holes, and 169 open holes, mostly limit of oxidation drilling. The core drilling was all HQ-size drilling.

Most of the holes drilled by Excel were geophysically logged. Sampling of the Ulan seam by Excel followed a similar subdivision of the Ulan seam, as adopted by the DMR, but with some refinement to account for local conditions.

Raw coal samples were analysed for proximate analysis, RD, total sulphur and calorific value, whereas stone samples were analysed for moisture, ash, RD and total sulphur. Selected float-sink intervals, largely based on the recognised seam subdivisions, were sized at -11.2m to +0.125m and float-sink tests undertaken at densities of 1.40 to 1.80 in 0.1 density increments. Ash analysis, ash fusion temperature (red.), chlorine, fluorine and nitrogen were determined on nominated clean coal composites, usually the CF1.60 composite.

The Mine originally operated under Project Approval (PA 05-0021) that was granted by the Minister for Planning under Part 3A of the NSW Environmental Planning and Assessment Act 1979 (EP&A Act) on 1 February 2006. On 24 April 2017, WCPL was granted Development Consent (SSD-6764) for the Wilpinjong Extension Project (WEP) that provides for the continued operation of the Mine at rates of up to 16 million tonnes per annum (Mtpa) of run-of-mine (ROM)

out to 2033, and access to approximately 800 hectares (ha) of open cut extensions. Development Consent (SSD-6764) has superseded the Project Approval (Project Approval 05-0021).

WCPL continues to conduct 'in-fill' exploration drilling as required to improve the confidence levels of the resource within the 5 year mine plan horizon. In recent years, a focus of this drilling has been to delineate coal 'washout' features (known as 'paleo-channels'), in the southern 'up-dip' areas of the mine.

6. GEOLOGICAL SETTING, MINERALIZATION, AND DEPOSIT

6.1. Geological Setting

6.1.1. Regional Geology

The Sydney Basin is a large sediment basin located on the east coast of Australia and is part of the larger contiguous Sydney-Gunnedah-Bowen Basin that extends from coastal southern NSW to central Queensland. Sediments in the Sydney Basin date from the Early Permian to Triassic with Quaternary alluvium overlaying the earlier units in erosional valleys and along coastal plains. Two periods of coal deposition occurred during the Permian with the Late Permian where the more widespread coal measures were developed including the Illawarra Coal Measures deposited in the south and west (Hutton, 2009). Generally, the Sydney basin has only been mildly deformed with some faulting cutting the coal measure sequences. Seam dips are mostly sub horizontal with up to 5 to 10° due to local structures.

The Western Coalfield lies along the northwestern margin of the Sydney Basin (Yoo, 2001). The coal bearing sequences in the Western Coalfield is the Permian Illawarra Coal Measures. The coal measures overlay the marine-influenced Shoalhaven Group. A quarto-lithic fluvial sequence of the Narrabeen group then overlay the coal measures. Seams general dip 1 or 2° in an easterly direction except along the margin of the coalfield where dips can reach 10°. Dominate structures are regional scale meridional monoclines with sub parallel large faults with localized small-scale faults of >5m (16ft) throw trending in north-south direction. Jurassic to mid Tertiary Igneous intrusion are present in the centre and north east of the coalfield. Six coal seams are recognized in the Illawarra Coal measures including Katoomba Seam, Middle River Seam, Moolarben Seam, Ulan Seam, Lidsdale Seam and Lithgow Seam.

A regional geologic stratigraphic column and geologic map are shown in Figure 8 and Figure 9 respectively.

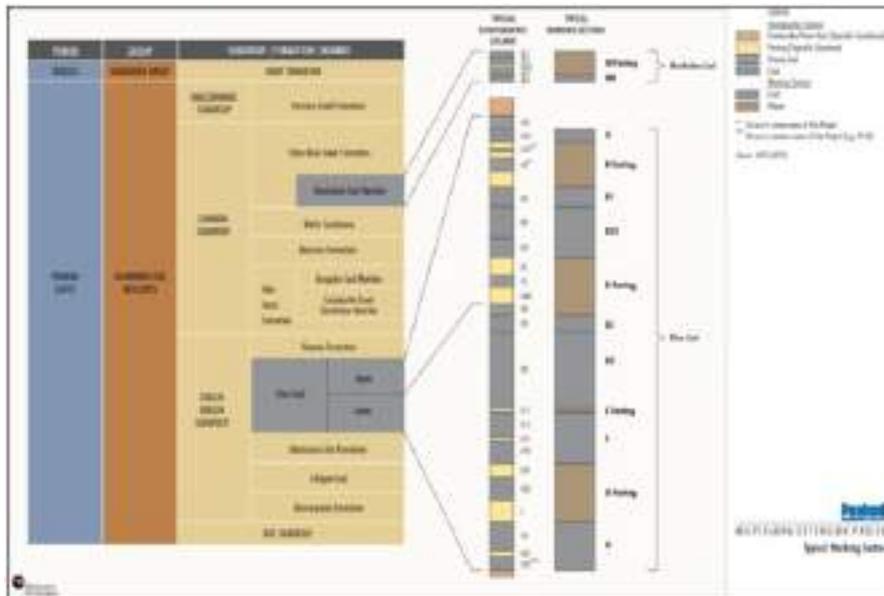


Figure 8. Geologic Stratigraphic Column

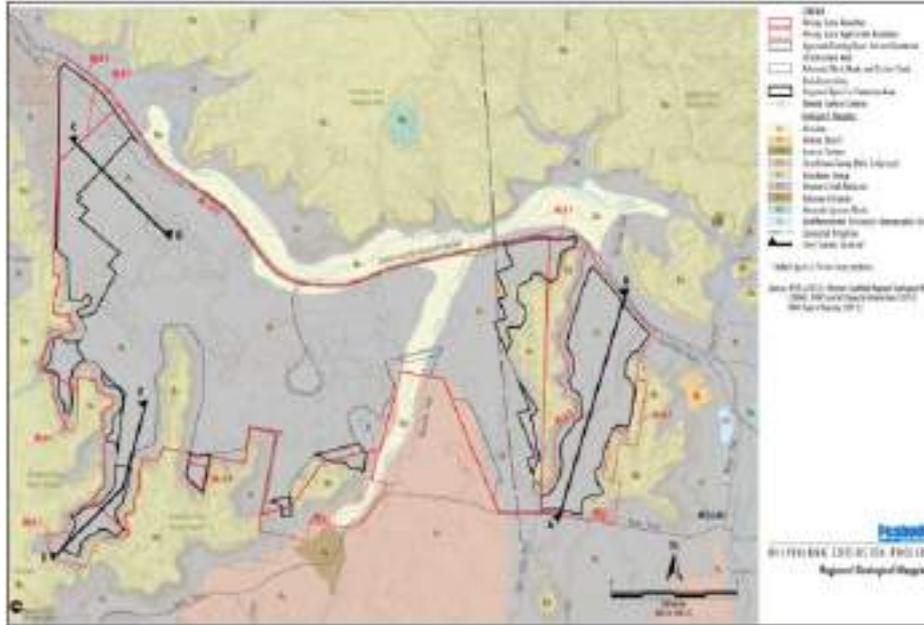


Figure 9. Regional Geology Map

6.1.2. Local Geology

The surface geology of the Wilpinjong Mine is dominated by subcrops of the Illawarra Coal Measures. This unit overlies the Shoalhaven Group, which crop out immediately south of Wilpinjong. The coal measures are overlain by the Narrabeen Group, which forms the cliff-lines and plateaus to the north and south, the ridges that protrude out from these plateaus and outliers such as those adjacent to the Slate Gully area. In places, the Illawarra Coal Measures are concealed beneath younger alluvial deposits, particularly those that occupy abandoned channel-fill, referred to on site, as "palaeo-channels". Quaternary alluvial deposits also flank Wilpinjong and Cumbo Creeks.

In the Wilpinjong Coal Mine area, the shallow nature of the coal seam, combined with flat topography has resulted in extensive interaction between the base of weathering and the coal seam, to the extent that in some areas the seam has been completely oxidised. In addition, several extensive paleochannels have been identified adjacent to ridgelines that have deeply incised the coal seam. Locally, dips are relatively flat (1 to 3 degrees), with strata dipping to the north-northeast.

The Moolarben seam consists of three plies, of which the lower half of the basal ~0.50m (1.6ft) thick ply (M4) is currently being mined. The other plies – M1, M2 and M3 all generally exceed 40% in ash and have yields of less than 50% and are generally not considered mining targets. The Moolarben seam has not been mined in the local area in the past.

The Ulan seam ranges between 11 and 22.5m (36 to 74ft) in total thickness, however the mineable coal plies have a combined thickness of 5.7 to 9.0m (18.7 to 30.5ft). The seam consists of a number of coal and stone plies that are correlated across the Wilpinjong resource area and into adjacent mines and projects (Figure 43). The Ulan seam has minimal stone partings in the north west of the project with midburden partings opening up to the east.

The Ulan Seam is broken up into the A, B, C, D, E, F and G plies. These sections are selectively mined (Figure 10) and campaign washed or bypassed at the CHPP to produce

product coal at a specific ash point for both domestic and export thermal coal products. Some coal plies are mined across the whole site including A12, B1, B23, D1, D2, E1 and G. Other coal plies are mined only in certain pits (eg. C1 and D0 taken in Pit 6). The plies of the D seam (D0, D1, D2, DD2) are mined selectively or combined depending on the coal quality of the mining block. Several smaller splits occur either approximately on a north-south orientation (such as the G floor coal ply) or an east-west trend (such as B1 splitting away from B23). Generalised coal quality trends area also present across Wilpinjong for different coal plies in similar north-south and east-west orientations that the structure of the seams follow.

Three representative geologic cross section derived from drill hole information and model orientated through the remaining WPJ coal deposit are shown in Figure 11. The exact locations of these cross sections are shown on the Regional Geology Map (Figure 9).

The rank of the coal seams is high volatile bituminous (ASTM D388 'Standard classification of Coal by Rank'), based on the volatile matter (daf) content of the coal plies, which is generally in the range 35 to 44%.

The average volatile matter content of the Ulan seam plies ranges from 11 to 35%. For the plies that are less than 40% ash ad, the volatile matter content is between 20 and 35%. The low volatile matter content of parts of the Ulan seam is largely a function of the high inertinite content of the dull coal plies. The basal ply of the Moolarben seam is 32% ad.

The air-dried moisture content of the Ulan seam averages 2.9% ad and is around 2% for high ash plies, and ranges from 2.5 to 3.5% ad for the coal sections. The basal section of the Moolarben seam has an average air-dried moisture content of 3.8% ad.

The total sulphur content of the majority of coal plies is <0.5% ad. Certain plies are known to be locally higher in sulphur content (e.g., E and G plies) with values generally in the range 0.5 to 1.2% ad; and isolated analyses over 2.0%.

The calorific value of the raw coal closely follows that of the ash content. On an air-dried basis, coal that is less than 28% (ad) ash yields greater than 24 MJ/kg (ad) (5730 kcal/kg).

The surrounding ridges of resistant Triassic strata have combined with the thick seam and shallow dips resulting in an extensive area of shallow coal that is amenable to open cut mining. These ridges are generally within National Park and are excluded from mining.

No major faults have been identified within the Wilpinjong Coal Mine area, however, some minor faulting (<5m vertical throw) produces normal faults with a few meters throw or small thrust faults producing localised seam rolls that have limited impact on the current mine's coal recovery.

Identified igneous activity in the area (Figure 12) has resulted in one north-south trending dyke in the east of the mining lease, and several smaller localised dykes in the middle of the tenement. There have also been two igneous diatreme features identified whilst mining, and two tertiary basalt plugs in the far east of the tenement which has been confirmed by exploration drilling. The coal tonnes over these have all been excluded from the Resource estimate. There is no heat affected coal zone so an additional exclusion boundary has not been applied.

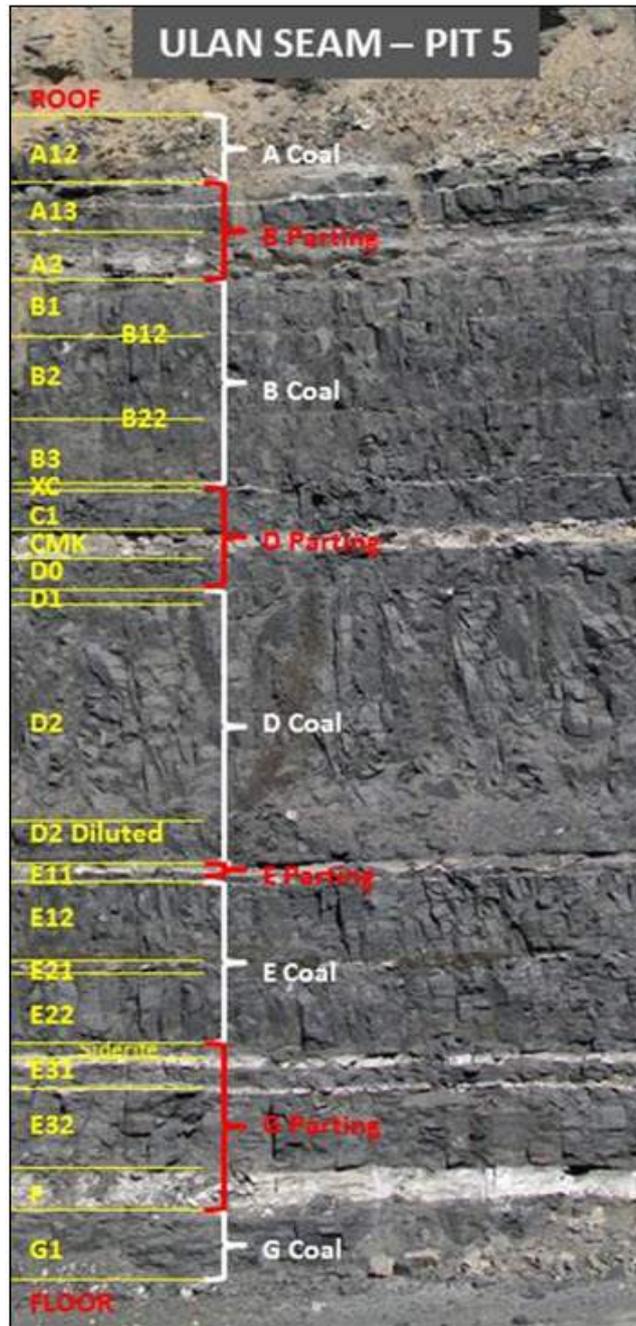


Figure 10. Sub plies of the Ulan Seam

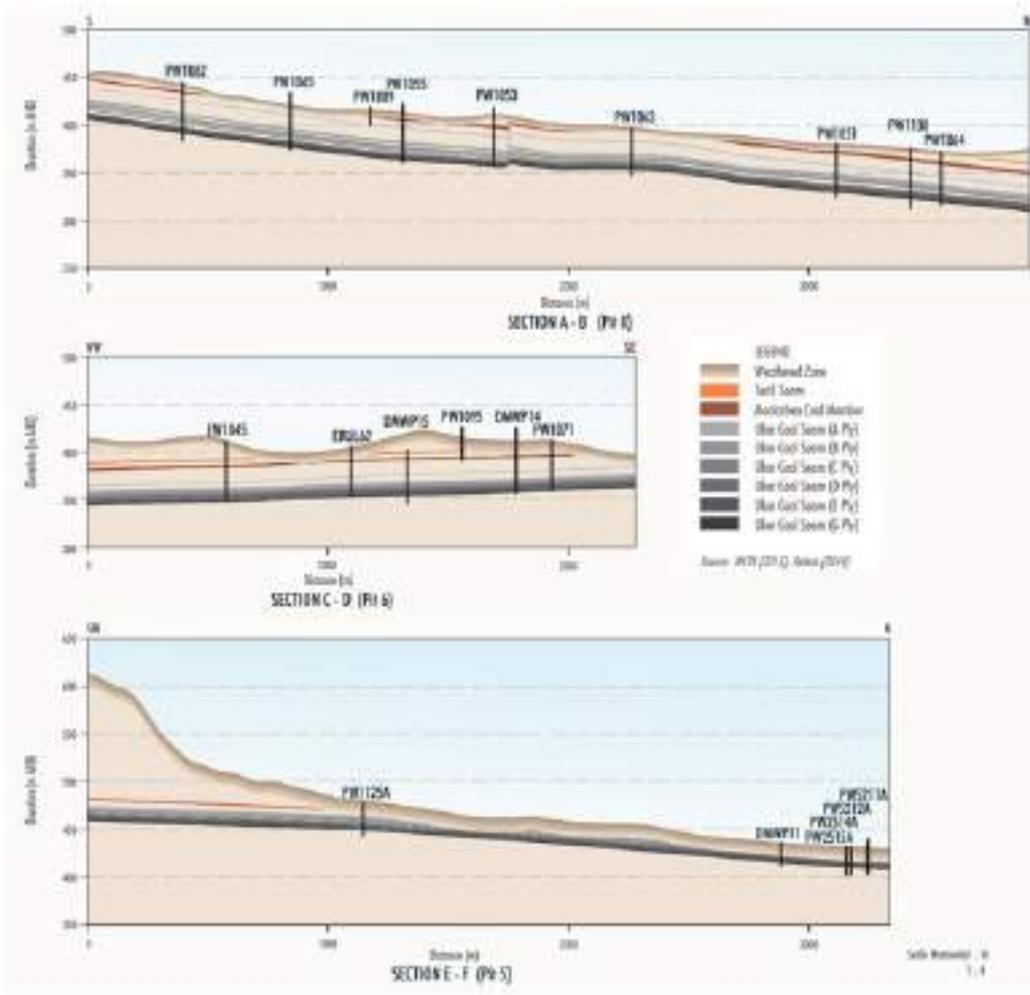


Figure 11. Geological Cross Section



Figure 12. Undifferentiated Intrusives

6.2. Hydrology Setting

6.2.1. Regional Hydrology

The Project is located at the headwaters of the Goulburn River catchment which is a major tributary of the Hunter River. The Hunter River catchment drains some 22,000 km² of central-eastern NSW to the Pacific Ocean at Newcastle (Peabody Energy EIS, 2016).

The Hunter River is one of six river basins that have been regulated by the NSW Government however the Goulburn River and other major tributaries of the Hunter River remain unregulated. There are no public water supply dams in the Project area or on the Goulburn River.

The Project area is located in the greater Wollar Creek catchment which drains to the Goulburn River approximately 12 km to the north-east of the Project area. The greater Wollar Creek catchment consists of several tributaries including Wilpinjong Creek, Spring Flat Creek and Barigan Creek.

Baseline surface water quality monitoring has been undertaken for the Wilpinjong project since June 2004 (generally, on a monthly basis and following rainfall events, where possible). Baseline groundwater data has also been reviewed and compiled from a number of sources including mapping data, government department information, Wilpinjong Coal Mine data, assessments and investigations.

A Groundwater Impact Assessment for the Wilpinjong project was conducted by Australasian Groundwater and Environmental Consultants (AGE) in 2005. The assessment included a review of field hydrogeological investigations conducted in 2003 and 2004, as well as the results of groundwater level and groundwater quality monitoring during a bore census in February 2005.

The existing baseline groundwater data was augmented with the results of a Project groundwater investigation programme undertaken by Groundwater Exploration Services in 2014 and 2015.

The main aquifers in the project area are the Ulan seam and the underlying Marrangaroo Formation (sandstone). Additional aquifers are developed in surface alluvial and colluvial deposits as well as in the sandstones and siltstones of the Narrabeen Group and the upper part of the Illawarra Coal Measures (above the Ulan seam).

6.2.2. Local Hydrology

Records of groundwater levels in the vicinity of the Wilpinjong Coal Mine are available from as early as 2004 (WEP Feasibility Report, 2018). A monitoring network at the Wilpinjong Coal Mine has been progressively expanded over time to include the WCPL exploration tenements, and on Peabody Energy-owned land in and to the south of the Village of Wollar.

An analysis of the available time related data (including hydrographic plots) to illustrate cause and-effect relationships with rainfall, mining and groundwater levels at the Wilpinjong Coal Mine and surrounds was conducted by HydroSimulations in 2015 as part of the Environmental Impact Statement for the Wilpinjong Extension Project (Peabody Energy EIS, 2016).

This analysis indicates a general trend for mining-related drawdown to be apparent in monitoring bores targeting the coal seams, typically within a few hundred metres of active mine areas, but drawdown is much less apparent, if apparent at all, in bores placed in the surface alluvium.

HydroSimulations conclude this is due to the following properties and processes:

- alluvial bodies are not directly connected to or intersected by the footprint of the open cut pits;
- rock strata between the coal seams and the alluvium mitigate the drawdown response because of low vertical hydraulic conductivity; and
- the unconfined conditions and greater aquifer storage of the alluvium compared to the confined coal seams result in a much lower head variation (drawdown) in the alluvium.

No mining effects have been observed in any hard rock or alluvial monitoring bores in the Village of Wollar.

Groundwater in the alluvium has a higher average salinity than the underlying coal measures. Groundwater is monitored via a network of bores, which are monitored and sampled in accordance with the site's Groundwater Monitoring Program.

Five aquifer systems have been recognised in the Project area including:

- alluvial and colluvial deposits;
- sandstones and siltstones of the Narrabeen Group
- Illawarra Coal Measures overlying the Ulan Seam;
- Ulan Seam; and
- Marrangaroo Sandstone

6.3. Mineralization and Deposit Type

The Wilpinjong mine accesses the Ulan Seam, a 15m-thick seam that is hosted at the base of the late Permian aged Illawarra coal measures. The paleoenvironment is a protected swamp environment on the stable Carboniferous granite basement. The Ulan seam consists of ten plies, including plies of good quality coal, high ash coal, stony coal and partings of claystone, carbonaceous claystone, tuffs and other non-coal lithologies. The working plies at the Ulan seam are inter-bedded with clay stone and siltstone horizons. The seam is shallow and sub crops in the deposit area.

The Coal Reserves reported are high volatile bituminous in rank. The various coal products making it marketable for thermal use in domestic electricity generation and export.

Peabody classifies the Wilpinjong property as a coal deposit with low geological complexity based on the following factors:

- The Ulan seam is laterally continuous and can be correlated using geophysical logs across large distances with high confidence.
- The seam is relatively flat lying (1 to 3 degrees), gently dipping towards the north-northeast
- There are no major faults in the area.
- The Ulan seam is currently mined across the area at two other mining operations.

The overall confidence in the geological interpretation of the deposit is high. This is due to low variability (both structural and coal quality) as evidenced by the laterally consistent seam dip, lack of structure and relatively homogeneous coal quality (ply by ply basis).

Two areas of relatively high variability are around intrusions (dykes, sills and plugs) and palaeochannels (adjacent to Triassic age ridges and hilltops). In these areas a multi-faceted exploration approach has been utilized to increase confidence in the geological interpretation; including ground mapping, geophysical surveys and associated validation drilling.

6.4. Comments from Qualified Person(s)

In the opinion of the QP, for both regional and local geology, the structural controls on mineralization are well studied and understood from decades of exploration and mining activities over the area. It is sufficient to support the estimation of Coal Reserves.

7. EXPLORATION

7.1. Coordinate System

All survey for Wilpinjong is captured in Geocentric Datum of Australia (GDA 94). The standard map projection associated with GDA94 is the Map Grid of Australia 1994 which is a transverse Mercator projection. Older boreholes may have been captured in different coordinate systems however have since been transformed to GDA94.

Height data is captured as Australian Height Datum (AHD) which is tied to mean sea level.

All survey associated with drill collars, geophysical surveys and mine workings conducted using mine site RTK high precision equipment, with an accuracy of <50mm.

7.2. Geological Structure Mapping and Quality Sampling

The geological understanding of the Wilpinjong deposit has been built on successive exploration drilling work in addition to geophysical surveys and pit mapping. This includes a plethora of in-mine seam thickness and structural measurements along with the further described geophysical surveys that have provided targets for drilling. Currently there is no in-pit strip sampling for coal quality. Coal quality samples have been acquired from exploration borecore as described in section 8.1.1

Pit survey data

Pit survey data includes coal roof and floor pickup, base of alluvial channels, fault mapping and intrusion mapping. The mine surveys the coal seam elevation periodically during coal mining process. The surveyed floor elevation of the coal seams has been used as additional structural control in the geological model. The top elevation of coal seams is surveyed as well, but the surveyed results are used for validation purposes. Point cloud data of pit walls is also collected to measure thickness of units (including alluvial channels) and fault traces to validate the model.

In-pit geophysical logging of selected blast holes

The geophysical logging results, mainly density and gamma logs, are interpreted and added to the drilling database for structure delineation only. Blast hole logging is rarely used at Wilpinjong but is helpful for structural control in an area where the seam may show a variation to the geological model.

Local ground magnetic and radiometric geophysical survey (2005, 2014)

Magnetics is an effective tool for locating geological structure (faults, dykes) rapidly and accurately from the surface. Radiometric survey is useful for identify non-magnetic sills. The survey at Wilpinjong was conducted over Pit 8 to identify anomalies that may be a hazard to mining such as faults, dykes and sills. The anomalies were followed up with a drilling program to either discount or confirm them.

Local Thiel Surface Impedance geophysical survey (2014)

The TSIM (Thiel Surface Impedance Method) technique is a geophysical method used to map faults, intrusions, structure, dykes, LOX lines, mineral deposits and coal seam sub crops, with a potential for hydrogeological applications. It is a shallow surveying technique, typically measuring to a depth of around 50 m. TSIM is an electromagnetic surveying technique which receives and records information from single-frequency VLF (very low frequency – typically around 15 to 30 kHz) electromagnetic waves transmitted by a distant source.

The survey at Wilpinjong was acquired in Pit 3 to define an intrusion and Pit 5 to paleochannels.

The area covered in Pit 5 covered an area equivalent to 3 years scheduled production and did help define the paleochannel extent which was followed up with an extensive drilling campaign to confirm the available coal. Further geophysical surface surveys were not conducted to cover the entire potential paleochannel area as pit mapping and drilling provided adequate coverage.

Aerial Survey

Aerial topographic surveys, including Lidar mapping and Orthoimagery, are conducted every month. The survey covers all currently active mining areas. A larger extent Lidar survey was conducted in 2015 and the result is used for the topography model. Topographic control captured using Lidar aerial survey, with an accuracy of +/- 50mm (2 inches).

Geotechnical Data

Highwall mapping of defects has been done periodically over the last 2 years. This has built up a database of defects to conduct kinematic analysis.

7.3. Drilling

Exploration of the property began in the early 1950's and has been undertaken over the years by both government and private parties. An expansive exploration database has been developed since that time which includes 1271 total holes (Table 7) of which 1142 holes are within the WPJ leased area (Figure 13).

Hole Type	Wilpinjong
Chip holes	967
Core holes	260
Geotechnical holes	30
Gas Holes	14

Table 7. Drilling Statistics

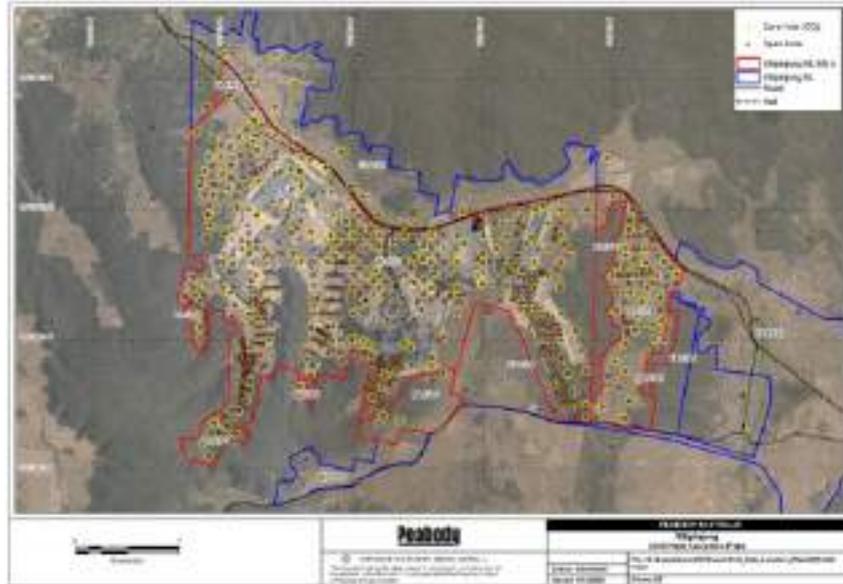


Figure 13. Exploration Drill Hole (within lease) Location Map

On lease exploration programs are drilled most years. The number of holes drilled for each drilling campaign varies depending on mine plan changes. Significant drilling programs have been conducted since 2010 to better define coal quality and structure. A feature of the coal quality program was to subsample all available coal and rock to refine loss and dilution coal quality parameters applied in the mining model. A feature of the structure drilling program was better definition of the paleochannel interactions with the coal across the south of the mine. The drill holes are geophysically logged for caliper, density, gamma and other parameters as required.

The types of exploration drill holes include:

- Chip or rotary holes are drilled with air or water using a blade or PCD (polycrystalline diamond) bit with the chips laid out in 1 m piles on the drill pad. Holes are lined to the base of weathering with PVC or steel casing to ensure that Tertiary sands and gravels and weathered Permian material are isolated from the drilling process. The drill cuttings are geologically logged at 1 m intervals and a suite of downhole geophysical logs are run. The drillers and geologists' logs are reconciled against the downhole geophysics to establish the exact depth of the seams. These are used to define the structure, such as seam splits, faulting, oxidation lines, paleochannels etc. Cuttings may be collected for overburden suitability analysis or coal oxidation determination. There are currently 967 chip drillhole locations.
- Partially cored holes are generally completed to recover the coal seam for coal quality testing and roof and floor material for dilution and geotechnical testing. Core diameter is typically HQ (61 mm) but other diameter holes may also be collected. Downhole geophysical logs are run and used to define structure while samples of whole core are submitted for coal quality analysis. Samples of the stone roof and floor of each seam are routinely analyzed for mining dilution studies. There are currently 260 core drillholes locations.
- Geotechnical core holes are generally fully cored from surface to 6 m below the floor of the target coal seam. Rock samples are often taken from partially cored holes within 6m above

a seam and 6m below the basal target seam. Rock samples are generally collected on one-meter intervals and tested to gain a spread of data for different lithology types. The strength testing helps in the highwall height and design. Currently 30 drillhole locations.

- Gas holes. These have drilled to determine gas content for fugitive emissions calculations. Often basic coal quality is done on the coal once the gas results are obtained. There are currently 14 locations within the leased area.

Open hole rotary air drilling was completed to below the base of weathering and casing inserted for hole stability.

Diamond drilling (triple tube HQ core) and conventional core (200mm diameter) was completed on the remaining overburden, coal and associated stone partings.

For all chip sections of the holes, samples were obtained on 1m increments and visually assessed by the field geologist.

For all core sections of the holes, samples were visually assessed on a centimeter by centimeter scale by the field geologist and placed in core boxes until down-hole geophysics were run on the completed hole. Once the geophysical logs were received, sampling of the core was undertaken to ensure correct sample intervals, recovery and representivity.

All chip and core samples are visually assessed by the rig geologist in a qualitative manner. Assessment undertaken using industry standard logging format and codes, with sufficient detail to support a Coal Resource estimate.

All drill core was photographed for later reference if required.

Sampling of the core undertaken utilizing down-hole geophysics to ensure correct sample intervals.

The entire hole is logged and recorded, with the detailed logging of core generally accounting for between 50-70% of the hole.

Sampling for analysis only undertaken on drill core.

For coal quality analysis, core is sampled in its entirety, placed into sealed plastic bags and then 200L drums for transport to the laboratory.

For geotechnical analysis, potential samples are chosen on the field table, wrapped tightly in plastic and sealed to prevent moisture loss. Following geophysical review, the relevant samples are dispatched to the laboratory.

Coal analysis types require different amounts of sample mass to ensure validity. The hole diameters mentioned previously are utilized to ensure sufficient sample mass is recovered.

Data collected includes:

- Geologist's log
- Driller run sheet
- Geophysical log (Gamma-Density log) with LAS file
- Core photos for all cores
- Rock samples
- Lab instructions (quality, overburden, and/or rock mechanics)
- Quality lab certificates (quality and/or rock mechanics)
- Final surveyed coordinates in MGA94
- Borehole sealing (if applicable)
- Borehole rehabilitation (if applicable)

Peabody has maintained records for all survey, geophysical logs and LAS files, geologist logs, quality sampling numbers and lab reports, and core photos. These documents have been scanned and linked to the drill hole within the GeoCORE SQL database.

7.3.1. Recovery

The bore core is logged for lithology type, structure, coal brightness and rock strength factors by geologists experienced in coal geology. Core recovery is compared to the driller's log and verified against geophysical logs. Any discrepancies documented. If less than 90% of the target coal seam is recovered, the hole is generally re-drilled unless the core loss is due to faulting and it is unlikely that a re-drill will improve the recovery.

HQ diameter diamond drilling produced satisfactory results in terms of sample recovery. The large diameter (200mm) drilling was used for specific holes that required greater sample mass for analysis.

Due to the relatively homogeneous nature of the coal seams, minimum sample recovery cut-off was set at 90% of the mining ply.

7.3.2. Drill Hole Surveys

The drill hole elevations are surveyed using GPS equipment and coordinate system as described in 7.1.

All drillhole collars have been compared to the topographic surface model which is based on 1m LIDAR contour data and are within an acceptable range for the purposes of developing a structure model (+/- 2m).

Drill depths are validated by the supervising geologist and are compared to the downhole geophysical logs for exact depth determination. The geophysical contractors which undertake the down hole geophysical logging comply with industry standard calibration techniques (tools are run in a calibration hole where log responses are known, any deviance is resolved prior to dispatching the tool for use on site). In some cases, coal seam intervals with less than 90% linear recovery have been used in the resource estimation have been used due to the consistency of the coal quality.

7.4. Geotechnical Data

Geotechnical testing of exploration bore cores collected from site has identified no weak zones or areas of concern (Peabody Energy WEP Feasibility Report, 2018). The performance of pit wall batter angles is supported through nearly 10 years of historical performance. Palaeochannels consisting of alluvial material are free dug, and walls are laid back at low repose angles in this material to improve stability.

The geological conditions for mining at Wilpinjong mine are relatively benign. Structural disturbances, such as faults and dykes, are present at the mine, however the strata above the mined coal seams is strong. Geotechnical sampling and analysis has not been a significant focus of previous exploration and only a small amount of strength testing has been carried out on historical core samples. A geotechnical sampling procedure is now in place with two geotechnical holes were drilled in 2014, PW1138 in Pit 6 and PW1159 in Pit 8 which form the basis for the current area's generic rockmass properties shown in Table 8. A number of drillholes in Pit 6 and Pit 8 have had acoustic/optical televue run to scan and a geotechnical report prepared.

Material	Density (KN/m ³)	Cohesion (kPa)	Friction Angle (°)	UCS (Av. Mpa)
Sandstone	23	68	34	25
Very Coarse Sandstone	22	68	31	-
Tuffaceous Sandstone	25	-	-	43
Carbonaceous Sandstone	17	-	-	28
Siltstone	24	65	33	36
Carbonaceous Siltstone	23	40	33	-
Tuffaceous Sandstone	25	-	-	43
Tuff	25	64	29	20
Tuff/Stony Coal	22	-	-	26
Coal	15	24	35	-
Dump Material Undrained	20	20	25	-
Dump Material Drained	18	50	30	-
Ripped/Dozed Floor	22	23	25	-
Blasted/Cratered Floor	22	30	28	-

Table 8. Wilpinjong Rock Mass Properties

7.5. Hydrogeology

During exploration drilling ground water levels are routinely collected from drillers observations and geophysical logging tools. This is gathered by using an electronic dipmeter tool, or in the case of the geophysical logging is captured by the logging operator by analyzing the density and gamma tools. Water amounts are measured by drillers performing a v-notch test in the water bearing zone. This data is stored with the drilling logs and stored within the geological database.

The Complex has implemented and maintained an extensive groundwater monitoring network within and around the permit area. The network consists of monitor wells, piezometers, creeks, and government registered bores and wells.

7.6. Coal Seam Gas Testing

Gas contents are estimated by containing the coal core sample within a canister immediately after retrieval from the core barrel. Gas is released from the coal as soon as the core is drilled and some gas will therefore be 'lost' during core retrieval before containment in the canister. An estimate of the 'lost' gas can be determined through measurement of the time since coring and the amount of gas released within the first few minutes after containment (Q1). The canister containing the core is then submitted to a laboratory to measure the amount of gas released after the measurement of Q1 (Q2). Sub-samples are then taken and crushed to measure the amount of gas retained in the coal after measurement of Q1 and Q2 (Q3). The sum of Q1, Q2 and Q3 provides an estimate of the amount of gas contained within the in-situ coal.

In some instances, the bore core is split after Q2 gas desorption testing has been completed and the bore core split submitted for coal quality testing to maximise data return from the same drill hole.

The majority of gas content testing has been conducted on the main Ulan Seam with some samples also representing the upper coal packages and carbonaceous material.

7.7. Comments from Qualified Person(s)

It is the opinion of the qualified person that there is adequate exploration undertaken to provide data for the support mineral resources and reserves.

8. SAMPLE PREPARATION, ANALYSES AND SECURITY

8.1. Sampling Method

8.1.1. Sampling for Coal Quality

The sampling for coal quality analysis at Wilpinjong follows an established internal site guideline to allow for consistency of sample technique and sample intervals (Figure 12). Historical sampling has often been undertaken on a somewhat different guideline that may not align with the current guideline. Coal quality sampling of the dilution and coal material considers the different plies that develop across the pit though the entire stratigraphy sequence, not just the Ulan seam.

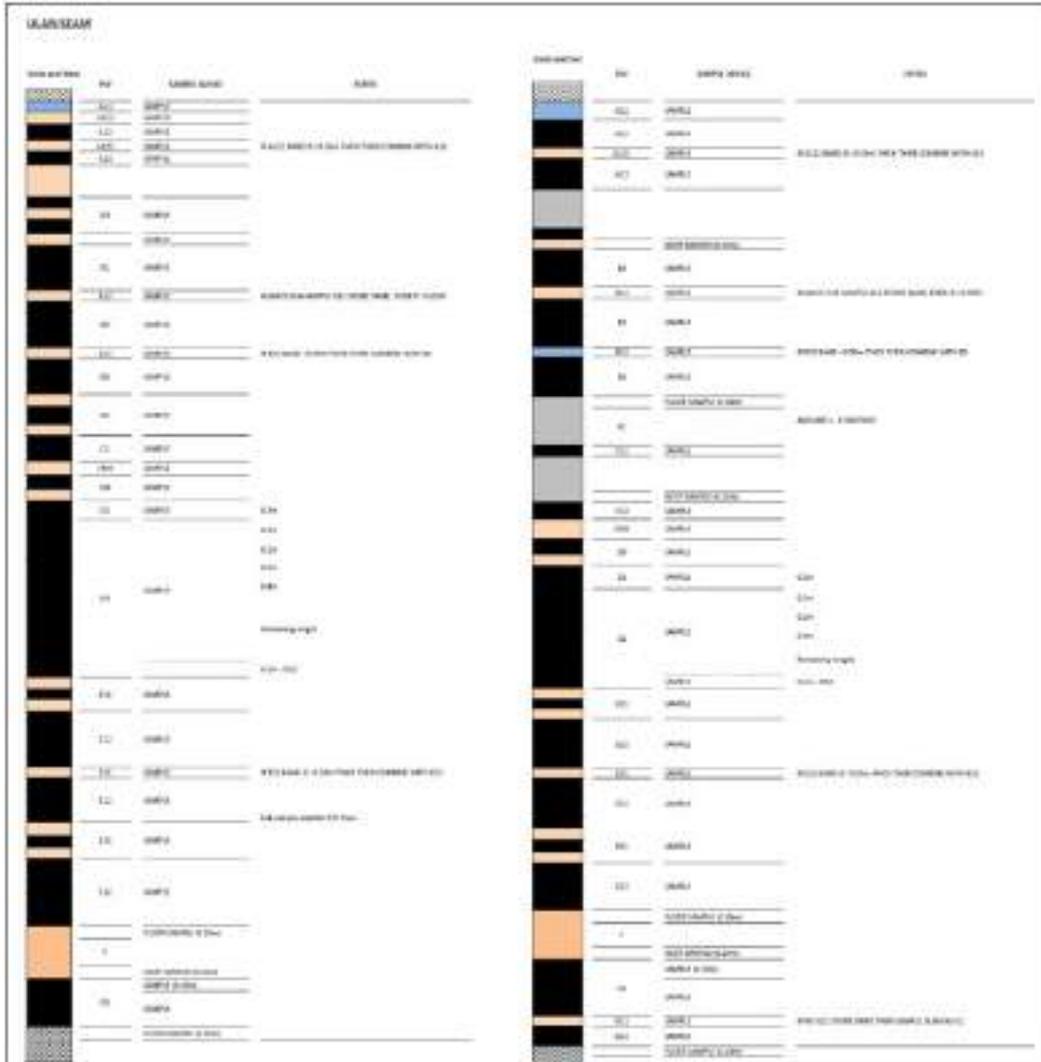


Figure 14. Ulan Seam Sampling Guide

Coal sample sections begin and end at defined geological boundaries. In the field they are identified and designated before sampling begins. Stone bands may be sampled as part of a seam if less than 5cm. Stone bands greater than this are sampled separately from coal. Core loss must not be included in a sample. Where core loss exists, it will be the boundary separating two different samples.

All borecores are sampled by brightness profile, efforts are made to not sample across the ply boundaries. Normally no roof interburden or floor material is included with the coal sample and is sampled separately.

If the core thickness measurements are not as expected or there is uncertainty as to what to include in a sample then subsampling at a smaller interval will be undertaken,

Samples are named in accordance with the sampling tickets provided for the project. These are usually a digit unique value and are used to identify samples in the lithology log as well as on the sample sheet.

After coal sample sections have been identified marked and photographed, each sample is double bagged in a plastic bag. Double bagging means collecting sample in one bag and then placing this bag into the second bag. The second bag is labelled with all relevant details including project, borehole ID, sample number and sampled depths. A sample ticket with relevant information is placed inside each bag before sealing the bag with zip tie.

Field sampling is supervised by the site geologist who ensures samples are appropriately labeled, bagged and packed ready for dispatched as soon as practical. Samples are transported using the established trucking companies and records of sample receipt and delivery are kept. The project geologist issues instructions to the laboratory on a borecore procedure for every sample and whether to combine any subsamples at any of the stages of analysis.

Laboratory results are compared to the field logging and downhole geophysics and any irregularities resolved before final validation and upload to the database.

8.1.2. Sampling from Production

Wilpinjong collects samples from multiple points around the CHPP conveyance system on a regular basis as per internal standard that are laboratory analysed to support processing, blending and shipment decisions.

Samples are collected by means of a Cross-Belt Samplers on conveyors.

Sampling for Bypass and Wash Products to the CHPP's are collected every 4hrs or when the feed type changes. A composite incorporating each of the 4 hourly samples is analysed every 12 hours to align with completion of sampled shift end (day/night)

CHPP product testing includes:

- Weight
- Ash
- Total Moisture
- Total Sulphur

CHPP internal stream sampling occurs on a 12hourly basis and includes:

- Plant feed sample analysed for standard ash and total moisture
- Plant reject analysed for standard ash and total moisture
- Reject thickener underflow standard ash and % solids

- Spirals product and reject analysed for standard ash and total moisture (or % solids)
- DMC product and reject analysed for standard ash and total moisture

Samples are collected from the Cross-Belt Sampling on the completion of the loading of every train and are analysed for:

- Weight
- Ash
- Total Moisture
- Total Sulphur

8.1.3. Sampling for Rock Mechanics

The sampling for geotechnical analysis at Wilpinjong follows an established internal site guideline to allow for consistency of sample technique and sample intervals.

Field sampling is supervised by the site geologist who ensures samples are appropriately labeled, bagged and packed ready for dispatch. Samples are transported using the established trucking companies and records of sample receipt and delivery are kept.

The geotechnical engineer provides the advice on the geotechnical analysis for the samples obtained. Boreholes were logged in agreement with Australian Standard 1726-2017. Rock samples were selected and wrapped in cling wrap and aluminium foil for transport to the NATA registered laboratory, TriLab Pty Ltd in Brisbane.

8.1.4. Sampling for Overburden

Sampling is conducted on an as required basis on the overburden for geochemical assessment. The testing program includes pH and electrical conductivity determination, acid base analysis and net acid generation testing. Sampling advice is provided by site environmental department or by consultants.

8.1.5. Sampling for Gas

The sampling for gas analysis at Wilpinjong has been conducted for a description of the gas reservoir and the implications for Fugitive Emissions Reporting to satisfy NGER guidelines.

The work was conducted consistent with industry standards (in particular, gas content and gas composition sampling was undertaken according to Australian Standard 3980/1999 and International Standards ASTM D1945-03/ISO6976-1995 respectively).

The selection of sites for the test was driven by the desire to sample evenly throughout the lease (spatial and representatively).

Drillholes are fully cored with sampling is done on all coals and all carbonaceous material (density greater than 1.95g/cm and greater than 0.5m) within the borehole. Time has been minimized between cutting of the core and the sample sealed in the cylinder. Canisters are sealed immediately after the removal from the drilling splits. Care is taken to separate main lithological types where reasonable. Canisters are purged with helium in the field and kept at a constant temperature with readings.

Field sampling is supervised by the site geologist who ensures samples are appropriately labeled, bagged and packed ready for dispatch. A gas technician is also used to conduct the initial onsite gas tests. Samples are transported using the established trucking companies and records of sample receipt and delivery are kept.

Lithology logging and photography occur at a later stage in the offline process.

8.2. Laboratory Analyses

8.2.1. Coal Quality Analysis

Core samples for coal quality are crushed at the laboratory to pass 11.2 mm and split into 2 fractions; one quarter for proximate analysis, three quarters used for washability and clean coal composite testing. Pulps are retained and stored at the laboratory for additional assays and repeat testing where required. Splitting of the sample is done using riffle splitters under industry standards.

Core samples acquired by Peabody were submitted to NATA accredited independent laboratories; namely ALS Richlands (formerly ACIRL), Bureau Veritas Australia and SGS Australia.

Coal quality analysis and testing is generally carried out in three stages:

Stage 1: Raw Coal Analysis

Individual coal samples or plies

- Proximate Analysis, Total Sulphur, Specific Energy;
- Apparent Relative Density (ARD) and/or Relative Density (RD).

Stage 1 results were reported on an air dried basis (ad).

Stage 2: Float/Sink Analysis

Individual coal plies or working section composites (combinations of coal plies where applicable) were subjected to float/sink or washability analyses using the following density fractions including 1.30, 1.35, 1.40, 1.45, 1.50, 1.55, 1.60, 1.70, 1.80, 1.90, 2.0 and 2.2 (density solutions were prepared from an organic medium). All fractions were analysed for:

- Yield; and
- Ash

Stage 2 results were reported on an air dried basis (ad).

Stage 3: Extended Analysis – Metallurgical and Marketing Analyses

Additional analyses for metallurgical and marketing purposes have been conducted on selected boreholes and have included:

- Ultimate analysis, forms of sulphur, chlorine and phosphorous;
- ash analysis and ash fusion;
- Hardgrove Grindability Index and Abrasion Index;
- Trace Element analysis; and
- CSN, Gieseler Plastometer testing and Petrographic analysis.

Stage 3 results were reported on an air dried basis (ad), dry (d) and dry ash free (daf) as required or appropriate.

A recent testing procedure for Wilpinjong is illustrated in Figure below:

- ANC determination;
- net acid producing potential (NAPP) calculation;
- exchangeable cation analysis;
- chromium reducible sulfur (CRS) analysis;
- single addition NAG test;
- acid buffering characteristic curve (ABCC) determination;
- kinetic NAG test; and
- multi-element scans on solids and water extracts.

The sample preparation, exchangeable cation analysis, acid-base analysis (total S assays and ANC determinations), NAG testing and ABCC determinations were performed by Australian Laboratory Services Pty Ltd (ALS) in Brisbane. The pH and EC determinations, and water extract preparation were conducted by GEM, and the multi-element scans were performed by Genalysis Laboratories in Perth.

8.2.4. Gas Material Test

Gas tests are undertaken in the field and at the Laboratory with results reported and QA/QC undertaken. Gas tests include:

- Gas volume measurements;
- Lost Gas (Q1);
- Desorbable Gas (Q2);
- Remaining Gas (Q3);
- Coal Analysis
- Total Gas Content (Qm)
- Gas Composition

Sample preparation and gas tests were undertaken at Australian Laboratory Serves Pty Ltd (ALS) in Richlands Brisbane. Core logging and photography were also done on the samples when offline at the Laboratory.

8.2.5. Density Determination

Laboratory densities are determined as per the relevant Australian Standard listed in Table 8.

8.2.6. Analytical Laboratories

All coal quality and geotechnical analysis techniques are per Australian Standards and completed at NATA accredited independent laboratories. Lab standards follow ASTM DM2013-D2013M for preparing samples.

The National Association of Testing Authorities, Australia (NATA) is Australia's national accreditation body for the accreditation of laboratories, inspection bodies, calibration services, producers of certified reference materials and proficiency testing scheme providers throughout Australia. It is also Australia's compliance monitoring authority for the OECD Principles of GLP.

Coal quality is expressed in SI units following Australian Standards.

These include AS1038.16 for acceptance and reporting of results, AS 4264.1 for sampling procedures, AS4264.4 for determination of precision and bias and the following standards for specific coal quality testing (Table 8);

NATA Accredited Tests		
Hard Coal Test	Abbreviation	Standard/Reference
Abrasion Index	AI	AS1038.19
Adiabatic Self Heating		AL035 (In-House)
Ash	A	AS1038.3
Ash Fusibility		AS1038.15
Carbon		AS1038.6.4
Carbonate Carbon	Cm	AS1038.23
Chlorine	C1	AS1038.8
Crucible Swelling Number	CSN	AS1038.12.1
Dilatometer		AS1038.12.3
Fixed Carbon	FC	AS1038.3
Float/Sink Analysis	F/S	AS4156.1
Forms of Sulfur	FOS [So, Sp, Ss]	AS1038.11
Gieseler		AS1038.12.4.1
Gray King Coke Type	GKCT	AS1038.12.2
Hardgrove Grindability Index	HGI	AS1038.20
Hydrogen	H	AS1038.6.4
Moisture (residual)	Mr	AS1038.3
Moisture Holding Capacity	MHC	AS1038.17
Nitrogen	N	AS1038.6.4
Oxygen	O	AS1038.16
Phosphorus	P	AS1038.14.3*
Relative Density	RD	AS1038.21.1.1
Relative Ignition Temperature	RIT	AL030 (In-House)
Size Analysis		AS3881
Gross Calorific Value	q	AS1038.5
Total Moisture	M	AS1038.1
Total Sulfur	S	AS1038.6.3.3
Volatile Matter	VM	AS1038.3
Ash Analysis		AS1038.14.3 *
Roga Index		ISO335
Caking Index		ISO15585
Hard Coal Test	Abbreviation	Standard/Reference
Proximate Analysis		AS1038.4
Note(s):		
1. Acceptance and reporting of results is in accordance with AS1038.16		
2. Sampling by ACIRL is in accordance with the following, AS4264.1 Sampling Procedures; AS4264.4 Determination of Precision and Bias		
3. All analyses reported to Air-Dried Basis unless otherwise indicated.		
*4. Ash Analysis performed at ACTest Newcastle laboratory (accreditation 15784/1422).		
Non Accredited Tests		

Test		Standard/Reference
Drop Shatter		AS2519
Durham Cone		AS1038.25
Froth Flotation		AS4156.2 and Client Specific Procedures
Mineral Matter		AS1038.22
Pre- Treatment		AS2519
Roadway Dusts		QLD Department of Mines and Energy – Quality of incompatible dust, sampling and analysis of roadway dust in underground coal mine – Coal Mining Safety Act 1999 Recognised Standard – No. 05, July 2003
Sapozhnikov		Journal of Mine Metals and Fuels India Oct 1978; GB/T 479-2000 Determination of plastometric indices of bituminous coal
Size Adjustment		AS2519

Table 9. Relevant Laboratory Standards

8.3. Sample Security

Field sampling is supervised by the site geologist who ensures samples are appropriately labeled, bagged and packed ready for dispatch. Samples are transported using the established courier companies and records of sample receipt and delivery are kept.

Samples are subject to a chain of custody arrangement to ensure security. Sample pulps are normally kept at the labs for one year so retesting can occur if required.

8.4. Comments from Qualified Person(s)

It is the opinion of the qualified person(s) responsible for this section that there are standards and procedures in place that are adequate for sample preparation, security and analytical testing.

9. DATA VERIFICATION

9.1. Data Verification Procedures

Verification of data gathered in the field takes place in several ways:

- Drill collar locations are recorded using a GPS at the time of drilling and verified against the planned coordinates. The locations surveyed by a licensed surveyor on a regular basis during the drill programs. Comparison between these 2 datasets allows a measure of location accuracy. Older data is checked by comparing collar elevation to the modelled topography grid created from LIDAR contour data which has a nominal vertical accuracy of 0.2 m in cleared areas.
- Geologist logs are reconciled to geophysical logs which have a higher depth precision than normal chip sample and core depths. General practice is to adjust seam depths and sample boundaries using the downhole density log to adjust depths. Generally geophysical tools used can include verticality, gamma, density, resistivity, temperature, sonic, magnetics and acoustic and optical scanners.
- Coal assay results from the NATA registered laboratory are compared with coal lithological logs and the downhole geophysical logs and any discrepancies investigated. Additional checks on assay results include reviewing the relationship between related parameters, such as raw ash and density and raw ash and specific energy. Sample results that do not match the predicted trends are investigated and re-assayed from a stored sample if necessary.

The validation process prior to geological modeling and resource generation involves the following steps:

- Mine site geologist validates all drill hole data following data acquisition and entry by the rig geologist,
- Coal technologist validates coal quality results,
- Project geologist validates all primary data (drill holes, geophysical surveys, ground mapping), coal quality results and external data
- Resource geologist validates all primary and coal quality data, mine operations data and any external data

Validation routines include, but are not limited to:

- Comparison of geology and geophysics in drill holes
- Cross sections of model vs drill holes and geophysical surveys
- Contours of seam thickness, midburden, roof and floor levels to identify anomalies
- Coal quality is compared to a synthetic quality report ran from the quality model, which uses surrounding data to interpolate the estimated quality at the drilled point.
- Surveyed locations are taken for every drilled location. Older data is checked by comparing collar elevation to the modelled topography grid and cross checked with legal description.
- Photographs of chip and core samples are reviewed when validating data.
- Reconciliation of geological model and boreholes against mined out areas
- Statistical review of geological and geotechnical data sets to highlight anomalies and outliers
- Reconciliation of modelled grids against data points using calculated relationships (ie Ash/Relative Density/Yield)

Peabody's GeoCore database has built in functions (through an interface application Task Manager) to allow the user to check drill hole location and elevation; geophysical interpretations; stratigraphic correlations and sample depth/thickness match to laboratory analysis. These data

validation tools provide for a robust process to verify historical and newly acquired data in both a systematic and efficient manner. This application has additional security measures to limit data entry errors and enforce coding and data formatting requirements.

Data verification is also undertaken in other software such as statistical reviews undertaken in ArcMap Geostatistics modules and seam contouring comparisons against in pit data undertaken in Maptek Vulcan.

Mine site visits are conducted by the Qualified Person(s) on a regular interval to validate the geological aspects of the exploration activities and active mining operations.

9.2. Limitations

No limitations to note.

9.3. Comments from Competent Person(s)

It is the opinion of the Qualified Person(s) responsible for this section that there are procedures and tools in place for adequate data verification.

10. COAL PROCESSING AND QUALITY TESTING

Coal quality trends within the Wilpinjong Mine have been modeled from an extensive database of exploration drill hole cores and in-mine samples covering coal, dilution and overburden material. Previous testing has been described in Section 8.2.1. The coal processing with an established plant is described in Section 14.

10.1. Coal Processing and Analytical Procedures

Coal quality estimates are only representations of the true quality parameters and although they can be considered accurate, they are not always precise. Coal quality models are estimates and may deviate from true values due to uncertainty in the estimation process. Variation from the true quality properties can be introduced through;

- Incomplete sampling – although intercepts with less than 90% recovery are excluded from the models in most cases, intervals with up to 10% missing core can be included and this introduces some error.
- Incomplete assay – variation in coal analysis procedures over many years of exploration has resulted in some parameters not determined in every sample. An example is where intra-seam stone bands were only assayed for ash and moisture values in some samples; density and volatile matter has been estimated for these samples to complete the full seam section used for compositing.
- Although rare, the sub-sampling and separation by density in washability analysis can result in insufficient material for detailed coal quality analysis in some fractions. Estimates are inserted to complete the washability tables in some cases.
- Deposit specific relationships between coal quality parameters can be determined by constructing a line of best fit or regression equation. The more ash and stony bands in a coal seam, the less carbon, energy and volatile matter. Conversely, the purer the coal, the lower the density and ash constituents.
- The interpolation algorithms used by the modelling software are by definition estimates. These may not account for local variation in properties between drillholes. The geostatistical analysis conducted during resource estimation provides a measure of this variability and determines the categorization of resources into Measured, Indicated and Inferred based on the distance between samples and the variation between seam parameters in these samples
- Reported coal quality is for the full seam/ply which may include non-coal intervals up to 0.30m in thickness, but makes no allowance for dilution or loss during mining process
- Estimates of clean coal product quality are based on laboratory separations that will not always be exactly reflected in the products of coal processing plants on-site. An example is the measurement of coking and caking parameters which deteriorate with oxidation and are generally underestimated in the exploration samples due to the time delay and sample oxidation between drilling and analysis.

Raw coal quality was composited and validated prior to import into modelling package. The data was then modelled on an air dried basis and included ash, relative density, volatile matter, fixed carbon, total sulphur, specific energy and moisture. Not all samples were analysed for specific energy; due to this a relationship between Ash (ad) and specific energy (Mg/kg) (ad) was developed and additional specific energy values were imputed.

To determine product coal quality, the composited raw database was used to apply variant analysis, data unification and CHPP simulation based on method as described in O'Brien, Meyers and Cameron, (2010) The results were imported into the modelling packing. Product coal qualities of ash, yield, sulphur and rom yield for the working sections were subsequently modelled on an air dried basis at fixed densities of 1.40, 1.45, 1.50, 1.55, 1.60, 1.65, 1.70, 1.75 and 1.80. Nominal working sections are used to reflect expected products.

Coal Quality Report

The following report (Table 9) show the average raw seam/ply qualities reported on an air dried basis of the Wilpinjong deposit.

Seam/Working Section	Thickness (m)	Raw Ash% (a.d.)	Relative Density (a.d.)	Inherent Moisture % (a.d.)	Volatile Matter% (a.d.)	Total Sulphur% (a.d.)	Specific Energy kcal/kg (a.d.)
M4	0.47	30.0	1.56	3.6	27.2	0.49	5158
A12	0.50	17.4	1.41	2.8	35.3	0.66	6639
B1	0.66	27.8	1.53	3.1	26.3	0.44	5630
B23	1.68	18.3	1.42	3.4	30.1	0.47	6376
C1	0.60	44.8	1.71	2.3	19.5	0.30	4251
D0	0.44	47.9	1.76	2.1	17.5	0.31	3940
D1	0.38	29.0	1.56	2.8	21.3	0.38	5564
D2	1.97	20.0	1.46	3.0	26.3	0.46	6304
DD2	0.20	28.9	1.54	2.5	27.3	0.43	5564
E1	1.71	29.2	1.55	2.5	26.8	0.54	5340
G	0.94	32.3	1.58	2.5	23.2	0.55	5277

Table 10. Coal Quality Parameter Statistics

Whole of site data has been used to establish the float 1.70 rd averages on an air dried basis that is displayed in Table 10. Wilpinjong Simulated Ash and Yield at Cumulative Float 1.70 rd

Seam/Ply	Cumulative Float 1.70 rd Qualities	
	% Ash (a.d.)	Yield % (a.d.)
M4	18.8	73.1
A12	14.7	87.8
B1	23.5	81.1
B23	15.7	88.2
C1	38.2	58.0
D0	37.1	52.5
D1	27.0	86.1
D2	18.9	91.2
DD2	24.1	81.6
E1	25.5	83.9
G	26.6	78.2

Table 11. Wilpinjong Simulated Ash and Yield at Cumulative Float 1.70 rd

10.2. Analytical Laboratories

Laboratories are the same as the ones described in section 8.2.6.

10.3. Recovery Estimates

Generally, yields are determined from the testing of crushed coal to one size at various densities in a testing process know as float/sink analysis. Results are combined to represent cumulate float ash and yields through increasing densities at various cumulative fixed densities. This theoretical number may differ to actual yields that are the result of a variety of sized fractions and densities processed.

Simulated product yield modelling has been undertaken at Wilpinjong to assist with determining a better accuracy for the recovery of coal by standardizing washability, applying liberation and CHPP circuit segregation models and reconciling against CHPP actuals.

10.4. Comments from Qualified Person(s)

It is the opinion of the qualified person(s) responsible for this section that there are significant amounts of data and processes in place to adequately predict coal tonnage and coal quality estimates for Wilpinjong production.

11. COAL RESOURCE ESTIMATES

11.1. Introduction

A Coal Resource is an occurrence of material of economic interest in the Earth's crust in such form, quality, and quantity that there are reasonable prospects for economic extraction. A Coal Resource is a reasonable estimate of tonnage, considering relevant factors such as quality, likely mining dimensions, location or continuity, that, with the assumed and justifiable technical and economic conditions, is likely to, in whole or in part, become economically extractable. It is not merely an inventory of all coal tonnage drilled or sampled.

Coal Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured classifications.

11.2. Geologic Model and Interpretation

The Wilpinjong geological model consists of both a stratigraphic and coal quality model based on verified drillhole data from Peabody's GeoCore database. The model is updated approximately every 1 to 2 years depending on the acquisition of new data from both drilling programs and in pit survey data.

The models are created using the GDCALC module in Vulcan by using the Integrated Stratigraphic Modelling menu, an audit trail is created within the specification files used in grid generation. The modelling method is based on a stacking method that utilises a reference horizon and includes design data from other sources to interpolate the seam structure.

For the structural model, the most lowermost seam was chosen as a reference surface (G1) and the other seams 'stacked' above and below using the drillhole intercept data and in pit survey data. Interpolation of the grids is based on a triangulation method, with seam/interburden thickness stacked using inverse distance squared algorithm. A base of weathering model was developed from the drillhole intersections and survey data with all final structure grids used to calculate coal tonnes clipped to this base of weathering surface to ensure oxidised coal was excluded from the Coal Resource calculations. The structural grids in the Wilpinjong model represent the structure of seam roof and floor, coal seam thickness and depth to the roof of the seam.

Coal quality parameters were modelled in house by the coal quality specialist using third party specialist plant simulation software. Composites of borehole sample results where individual samples are combined to represent the ply or working section intersection. The initial coal quality sample list was then flagged where samples thickness didn't match sample depth. Samples were also flagged where either excessive recovery or loss of samples occurred (<90% or >110%). These flagged samples were set for exclusion.

Coal quality grids were developed in Maptek Vulcan based on inverse distance squared for the mining working sections from the provided coal quality points. Parameters for both raw and simulated product coal quality is modelled at Wilpinjong on an air-dried basis and simulated product coal quality was modelled at a selection of fixed densities.

Local seams modelled are detailed below in Table 11.

Seam Name	Ply	Parent Seams	Coal Quality
Goulburn	GLB1	-> GLB1_2 -> GLB	
Goulburn	GLB12	-> GLB1_2 -> GLB	
Goulburn	GLB2	-> GLB1_2 -> GLB	
Goulburn	GLB22	-> GLB	
Goulburn	GLB3	-> GLB3_4 -> GLB	
Goulburn	GLB4	-> GLB3_4 -> GLB	
Turill	TUR1		
Turill	TUR12		
Turill	TUR2		
Moolarben	M1		
Moolarben	M2		
Moolarben	M22		
Moolarben	M3		
Moolarben	M4		M4
MLC	MLC		
Ulan	A11		
Ulan	A12		A12
Ulan	A13		
Ulan	A2		
Ulan	B1		B1
Ulan	B2	-> B23	B23
Ulan	B3	-> B23	B23
Ulan	XC		XC
Ulan	C11	-> C1	C1
Ulan	C12	-> C1	C1
Ulan	CMK		
Ulan	D0		D0
Ulan	D1		D1
Ulan	D2		D2/DD2
Ulan	E11		
Ulan	E12	-> E1	E1
Ulan	E21	-> E1	E1
Ulan	E22	-> E1	E1
Ulan	E31		
Ulan	E32		
Ulan	F		
Ulan	G1	-> G	G
Ulan	G21	-> G	G
Ulan	G22	-> G	G

Table 12. Seams Modelled

Coal Quality Parameters modelled are detailed below in Table 13.

Raw Coal Quality	Product Coal Quality
Moisture % (ad)	Ash % at Float 1.40, 1.45, 1.50, 1.55, 1.60, 1.65, 1.70, 1.75, 1.80
Ash % (ad)	Yield % at Float 1.40, 1.45, 1.50, 1.55, 1.60, 1.65, 1.70, 1.75, 1.80
Volatile Matter % (ad)	Sulphur % at Float 1.40, 1.45, 1.50, 1.55, 1.60, 1.65, 1.70, 1.75, 1.80
Fixed Carbon % (ad)	
Relative Density g/cc (ad)	
Total Sulphur % (ad)	
Specific Energy mj/Kg (ad)	

Table 13. Coal Quality Parameters Modelled

11.3. Resource Classification

The resource classification used for Wilpinjong encompasses the qualified person's confidence on the deposit. There were multiple factors used for the final analysis, including data quality, historic local and regional observations, operational history, as well as quantitative analysis.

- Measured resource has the highest level of confidence for the estimated quantity and quality based on the geological evidence and sampling. A set of criteria (Table 14) on the degree of uncertainty is assessed and the low degree of uncertainty normally corresponds to the category of Measured resource.
- Indicated resource has a lower level of confidence than the Measured resource, but a higher level of confidence than the Inferred resource. A set of criteria (Table 14) on the degree of uncertainty is assessed and the medium degree of uncertainty normally corresponds to the category of Indicated resource.
- Inferred resource has the lowest level of confidence. A set of criteria (Table 14) on the degree of uncertainty is assessed and the high degree of uncertainty normally corresponds to the category of Inferred resource.

Estimation of Coal Resources is based on drill hole intercepts that the QP determines meet the requirements of a Point of Observation (POB). For structural and coal quality POB's, the hole location must be accurately surveyed and geologically logged and typically would have downhole geophysical logs (gamma and density as a minimum). A coal quality POB must also have coal quality analyses of at least 90% of the interval (ash and density as a minimum). Intervals with less than 90% core recovery do not qualify as quality POBs unless otherwise determined by the CP.

The definition of a sample point as a POB provides reasonable confidence that the parameters represented by that sample are valid; accurately located, appropriate lithology and downhole geophysics collected, adequately sampled and assayed by a registered laboratory. The POB then becomes the basis for estimating the properties of the surrounding coal. Analysis of the variability between neighbouring POB's provides a measure of the distance that coal seam parameters can be extrapolated from a valid POB. This is done through geostatistical analysis based on precision tolerances from global estimation variance; also known as Drill Hole Spacing Analysis (DHSA). The DHSA method of resource classification is both valid and practical for coal deposits as compared to the more complex conditional simulation analysis

To complete this study, the ArcMap 10.6 geostatistical extension was used to validate and view the normalcy of the input data and construct semi variograms. Once the semi variogram was

plotted, the spherical model was fitted to the data using a calculated nugget, range and sill from the optimum model fit. This provides a mathematical function to explain the relationship between real-world values and distances between points. Then, the estimation variance was calculated for a range of test block sizes at varying sizes which in turn was converted to relative error at a 95% confidence. Lastly, the Resource classifications were defined based on relative error precision tolerances of 10%, 20%, 50% for Measured, Indicated and Inferred respectively. These precision tolerances were developed by Bertoli et al (2013) regarding the area of a five-year period. From this study the classification radii, based on the distance of the error tolerance, were used to create Resource classification polygons with individual modifications from supporting data as the QP determines.

The geostatistical analysis was conducted on the raw ash and the thickness variables taken from the points of observation. The most variable result (that results in a smaller spacing) of either the raw ash or thickness is used as a base to classify the resources before any individual modifications are made. DHSA classifications at Wilpinjong were undomained for analysis and carried out by working sections.

The Resource and Reserve estimates as of December 31, 2021 were calculated using the classification polygons from the 2021 geostatistical study with the drillhole spacing radii highlighted in bold text in Table 14.

Seam	Parameter	Measured	Indicated	Inferred
M4	Coal Thickness	555	890	1935
	Raw Ash	450	720	1500
A12	Coal Thickness	415	770	1625
	Raw Ash	335	550	1010
B1	Coal Thickness	500	850	1685
	Raw Ash	405	705	1385
B23	Coal Thickness	820	1405	2805
	Raw Ash	505	900	1830
C1	Coal Thickness	370	585	1075
	Raw Ash	340	620	1310
D0	Coal Thickness	295	555	1200
	Raw Ash	345	655	1505
D1	Coal Thickness	170	330	730
	Raw Ash	380	680	1390
D2/DD2	Coal Thickness	545	870	1580
	Raw Ash	625	1000	1820
E1	Coal Thickness	945	1700	4070
	Raw Ash	495	910	1905
G	Coal Thickness	590	975	1885
	Raw Ash	390	745	1665

Table 14. Drillhole Spacing Radii (m) from Points of Observation derived from Geostatistics

Source	Degree of Uncertainty		
	Low	Medium	High
Exploration	No significant issues. Protocols consistent with industry standards.	Historical information may not capture the array of information now standard. Used in model where more recent infill drilling validates results.	
Sampling method	Standard site operating procedures and guidelines.	Sampling sections of coal have changed over time to now sample in more detail. If recovery <90%, data not used. Quality trends across site is fairly consistent.	
Sample Prep/Analysis	On site, ASTM accredited and independent contracted lab consistent with industry standards.	Increased uncertainty for older cores where sample preparation and testing procedure may not be recorded. Infilled with newer core holes for comparison.	
Quality Assurance/Quality Control	Sample prep and analysis procedures follow ASTM and meet current industry standards. Laboratory is NATA certified. Quality is retested to confirm anything that looks abnormal.		
Data Verification	Collar and survey are checked and corrected for minor inconsistencies. Holes with unresolved inconsistencies removed. Surveyed top of coal points are used to confirm drillhole structure and further define currently mined areas with minor structural variations.		
Database	Location, geological and analytical data in the database verified to the QP's satisfaction. Unverified or questionable data inactivated and not used.		
Geologic Modeling	Model is reconciled to production for quantity and quality on an annual basis.		
Density	Borecore sample density and inherent moisture tested extensively across sites.		
Quantitative analysis (Drillhole Spacing Analysis)	Wilpinjong Mine data was run undomained. Ash is the main constraint from the Drillhole Spacing Analysis. Measured drillhole radii for each deposit highlighted within Table 13	Other quality may have higher variability. They are managed through blending. They are not limiting factors for the resources. Indicated drillhole radii for each deposit highlighted within Table 13	Inferred drillhole radii for each deposit highlighted within Table 13
Other Classification Criteria	Classification of high ash C1 and D0 plies is only applied in the west within the Pit 6 mine plan where a combination of lower ash, low/no incremental strip ratio and processing trials have found these plies economic.	Exposed open cut faces assist in assessing any small gaps within its vicinity in the classification polygons. This can positively affect (full standard coal face) or negatively affect (paleochannel) classification.	
Cut Off Criteria (Cut-off grade and metallurgic recovery)	The cutoff grade of coal less than 50% ash (ad) is practical for this deposit. Quality is managed through blending. Strip ratio increases gradually, but the existing pit lengths allows average mineable strip ratio.		
Mining Methods	Mature mining technology at existing operation.	Highwall mining or augering potential options within 500m of existing high walls.	
Costs	Long operating history with low cost variation		
Prices	Well established domestic and export market with a number of longtime customers.		

Table 15: Degree of Uncertainty

The following figures (Figure 16 to Figure 23) have the resource classification and points of observation plotted with the Resource Category component identified the resources that are being declared exclusive of the reserve.

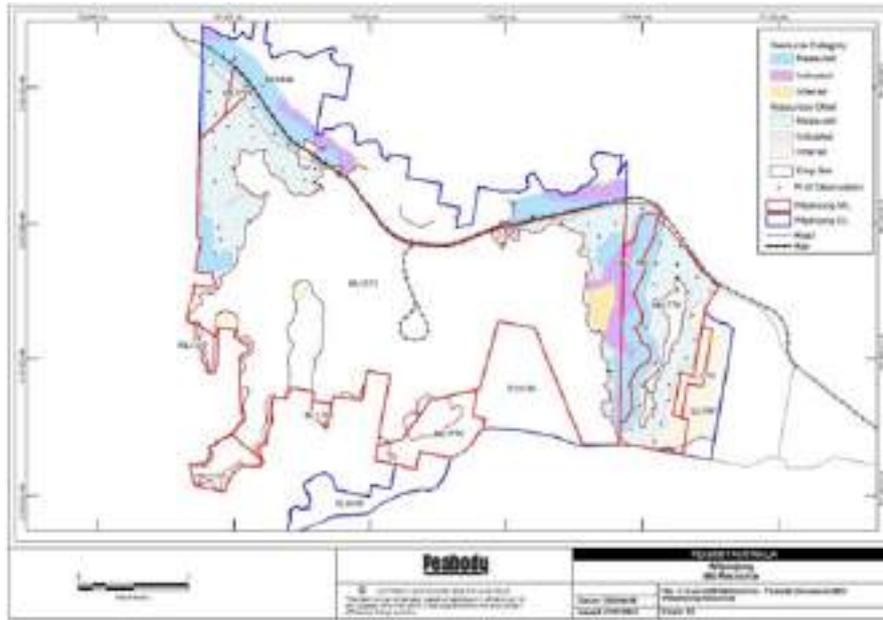


Figure 16. Wilpinjong Mine Resource Classifications - M4 Seam

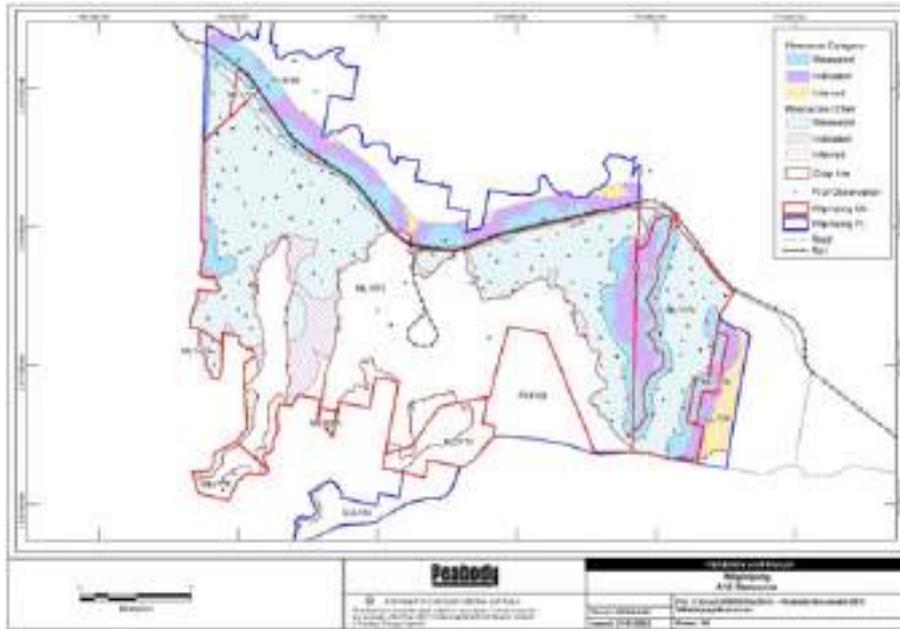


Figure 17. Wilpinjong Mine Resource Classifications - A12 Seam

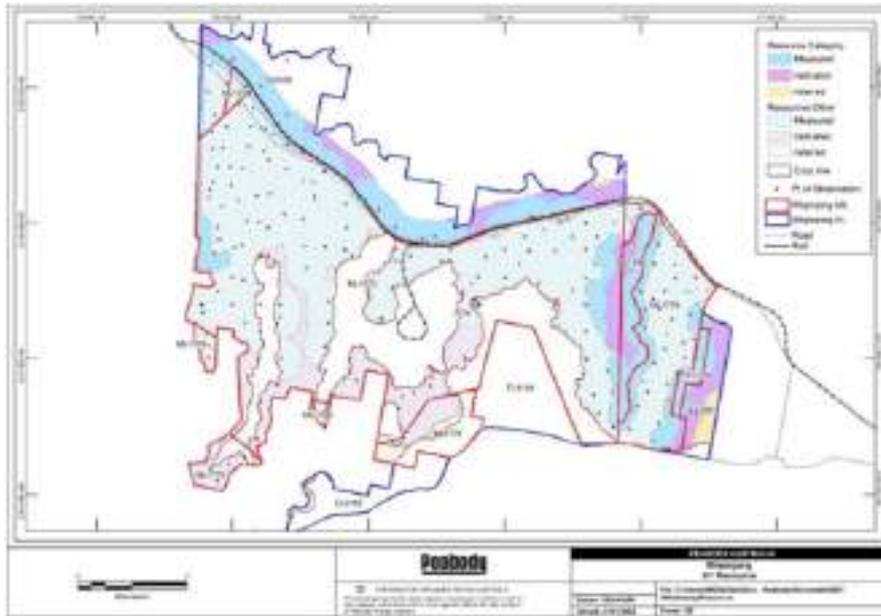


Figure 18. Wilpinjong Mine Resource Classifications - B1 Seam

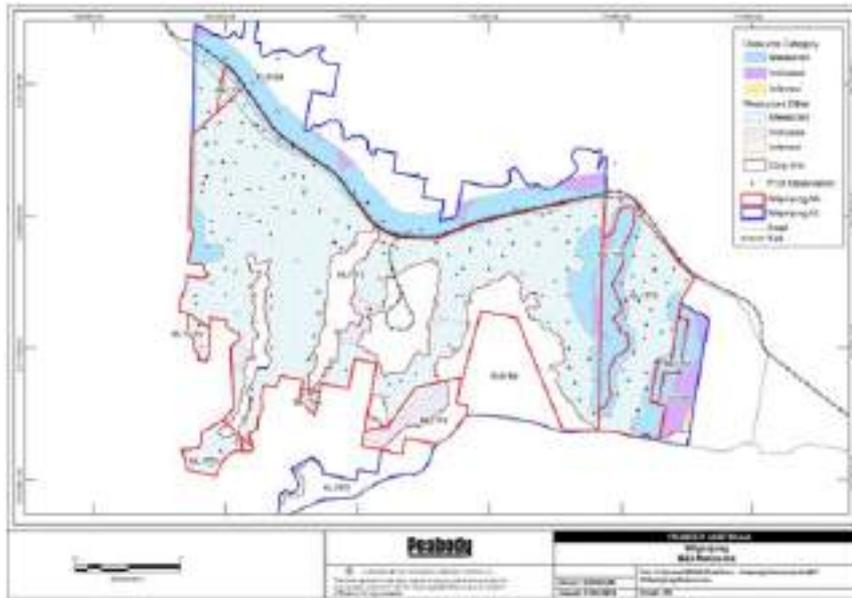


Figure 19. Wilpinjong Mine Resource Classifications - B23 Seam

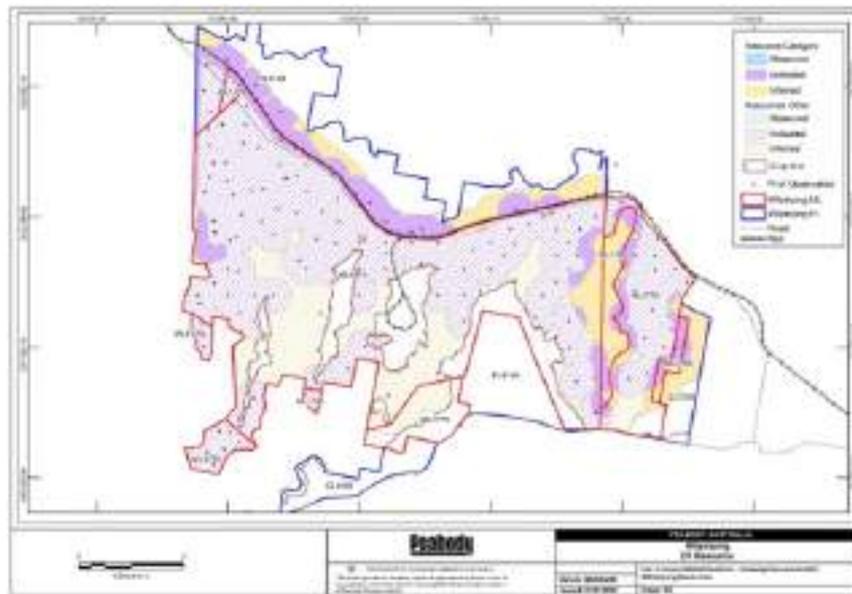


Figure 20. Wilpinjong Mine Resource Classifications - D1 Seam

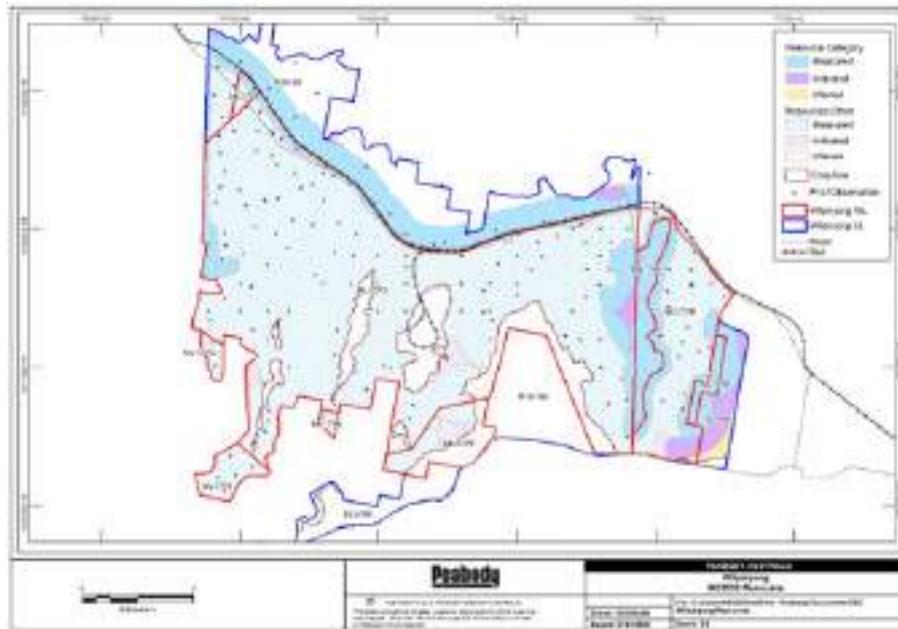


Figure 21. Wilpinjong Mine Resource Classifications - D2/DD2 Seam

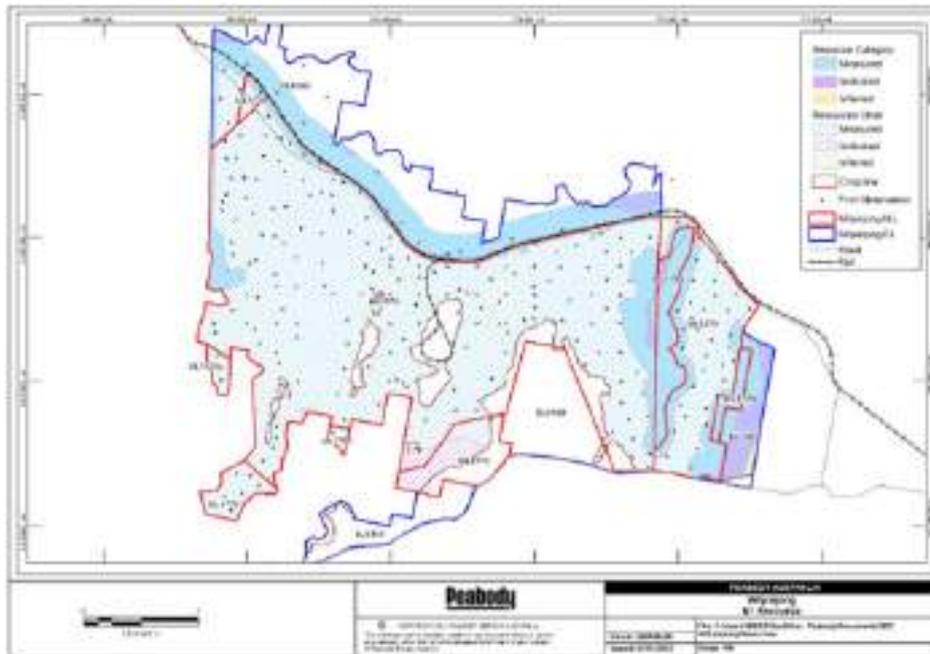


Figure 22. Wilpinjong Mine Resource Classifications - E1 Seam

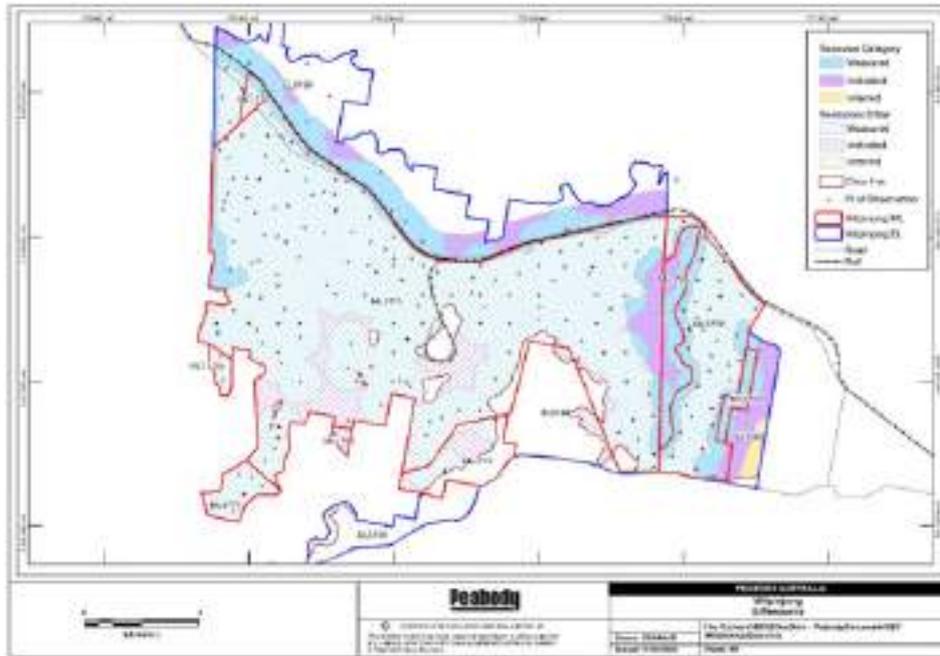


Figure 23. Wilpinjong Mine Resource Classifications - G Seam

11.4. Coal Resource Estimates

Resources have been classified (Table 15 and Table 16) and reported in accordance with the Regulation S-K (Subpart 1300). Resources are classified into "Measured", "Indicated" and "Inferred" categories based on the distribution of borehole intersections and coal quality data.

Estimation of the Coal Resources are mainly determined by geological criteria and property control boundaries along with the potential of current or future economic viability utilising available mining technologies. The criteria used to modify these Coal Resources to determine Coal Reserves are provided in Chapter 12. The Coal Resource estimates for Wilpinjong provided are on an insitu basis exclusive of these Coal Reserve estimates.

Modifying Factors for the generation of the Coal Resources includes:

- The exclusion of the mined out Resource tonnes up to End of Month December 2021;
- The known igneous intrusion zones have been excluded from the available Resource estimation areas;
- The generation of Coal Resources have been limited to areas within lease boundaries;
- The generation of Coal Resources have been limited to the base of weathering (including paleochannels);
- The generation of Coal Resources is on an insitu basis
- No minimum seam thickness is applied to the seams;
- No loss or dilution assumptions have been applied;
- Working section composites with Ash % (ad) >50% excluded from Resource
- No strip ratio or depth cutoff applied
- No recovery or yield cutoff applied

- Northern boundary of resource limited to within 500m of current high wall extraction

The in-situ density grid utilized to generate resource estimates was calculated from the relative density grids and inherent moisture grids using the Preston and Sanders formula (Equation 1) assuming an in-situ moisture of 6% for Wilpinjong deposits.

$$I.D. = \frac{RD \cdot (100 - Mad)}{100 - Mis + RD \cdot (Mis - Mad)}$$

Where I.D. = Preston Sanders In situ Density
RD = RD (Lab density)
Mad. = Inherent (air dried or Lab) Moisture
Mis = In situ Moisture

Equation 1. Preston and Sanders Formula

11.5. Coal Resource Statement

Tenement	Measured	Indicated	Inferred	Total
EL6919	41.1	8.6	1.0	50.7
EL7091	3.8	6.2	2.4	12.4
ML1573	21.3	4.1	0.8	26.2
ML1779	13.5	1.3	0.3	15.1
ML1795	14.2	2.4	0.9	17.5
TOTAL	93.9	22.6	5.4	121.9

Table 16. Coal Resources by Tenement (Mt)

Seam	Measured				Indicated				Inferred				Total			
	In-situ Tonnes (millions)	%Ash (a.d.)	%T.S. (a.d.)	Energy kcal/kg (a.d.)	In-situ Tonnes (millions)	%Ash (a.d.)	%T.S. (a.d.)	Energy kcal/kg (a.d.)	In-situ Tonnes (millions)	%Ash (a.d.)	%T.S. (a.d.)	Energy kcal/kg (a.d.)	In-situ Tonnes (millions)	%Ash (a.d.)	%T.S. (a.d.)	Energy kcal/kg (a.d.)
M4	4.0	30.2	0.50	5,195	1.6	30.7	0.49	5,143	0.4	30.1	0.50	5,181	6.0	30.4	0.50	5,180
A12	3.9	14.5	0.67	6,882	2.4	13.4	0.68	6,984	0.7	11.1	0.68	7,161	7.0	13.8	0.67	6,945
B1	7.9	29.8	0.43	5,509	2.4	29.5	0.44	5,541	0.3	27.2	0.53	5,720	10.6	29.7	0.44	5,521
B23	21.0	18.2	0.48	6,401	3.1	16.9	0.49	6,513	0.1	13.5	0.54	6,785	24.2	18.0	0.48	6,417
D1					3.2	27.9	0.48	5,657	3.0	31.0	0.40	5,399	6.2	29.4	0.42	5,532
D2/DD2	24.3	18.8	0.49	6,420	1.8	21.2	0.45	6,243	0.2	26.6	0.44	5,823	26.3	19.0	0.49	6,404
E1	22.7	26.0	0.57	5,840	3.0	24.2	0.58	5,994	0.2	25.7	0.57	5,863	25.9	25.8	0.57	5,858
G	10.1	31.6	0.53	5,358	5.1	32.8	0.52	5,242	0.5	30.6	0.53	5,437	15.7	32.0	0.53	5,322
Total	93.9	23.0	0.52	6,053	22.6	25.3	0.51	5,862	5.4	27.3	0.47	5,698	121.9	23.6	0.51	6,002

Table 17. Coal Resources by Seam (Mt)

11.6. Comments from Qualified Person(s)

Although most of the Wilpinjong deposit is classified as Measured Resources, it is recommended that annual drilling programs are continued to assist with detailed mine planning options (open cut/ high wall mining / augering) and marketing strategies.

A portion of the declared resources sit within exploration leases where there remains a requirement to apply for, and be granted, a mining lease and associated permits to progress any extraction of these resources.

12. COAL RESERVE ESTIMATES

12.1. Introduction

A Coal Reserve is the economically mineable part of a Measured and/or Indicated Coal Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies as appropriate that include application of Modifying Factors. Modifying Factors include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social, and governmental factors. Such studies demonstrate that, at the time of reporting, extraction could reasonable be justified. Coal Reserves are sub-divided, in order of decreasing geological confidence, into Proven and Probable classifications.

- Proven Coal Reserves - Reserves for which (a) quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes; grade and/or quality are computed from the results of detailed sampling and (b) the sites for inspection, sampling and measurement are spaced so closely and the geologic character is so well defined that size, shape, depth and mineral content of Reserves are well-established. A Proven Coal Reserve can only result from a Measured Coal Resource.
- Probable Coal Reserves - Reserves for which quantity and grade and/or quality are computed from information like that used for Proven Reserves, but the sites for inspection, sampling and measurement are farther apart or are otherwise less adequately spaced. The degree of assurance, although lower than that for Proven Reserves, is high enough to assume continuity between points of observation. Although a Probable Coal Reserve is typically associated with Indicated Coal Resources, it can also result from a Measured Coal Resource when the application of modifying factors present a higher risk to conversion of that Resource to a Reserve.

12.2. Coal Reserve Estimates

12.2.1. Reserve Classification

The following criteria were used to limit the Reserves estimate for the WPJ property

- Cutoff Grade – no specific cutoff grade has been applied, although most of the modelled coal in the WPJ project has an Ash Content of less than 50% (adb)
- Depth Cutoff – no specific depth cut-off, although all of the Resources modelled at Wilpinjong are less than 100m deep.
- Strip Ratio Cutoff – while no specific strip ratio cutoff has been applied, an assessment of scheduled strips has been completed and the ratios in the approved mining areas are lower than 8:1 BCM/ROMt
- Economic Cutoff – an economic assessment using an anticipated long term price of \$70USD(real)/tonne (NEWC Benchmark Thermal), and historic Activity Based Costs has been undertaken on all scheduled mining blocks. Using these assumptions all blocks scheduled in the LOM plan are considered to be economic.
- Reserves were estimated as of December 31, 2021

The LOM Plan projections and timing were developed by Peabody based on the pit layouts to maximize economic coal recovery recognizing seam thicknesses, strip ratio, property geometry, mining conditions and coal quality.

Pit Design Specifications recommended based on Geotechnical considerations are detailed below

Pit Wall	Batter Angle (°)		Batter Height (m)	Overall Slope Angle (°)
	Weathered/ Paleo	Fresh		
Pit 1	45	70	Up to 60*	70
Pit 2	45	70	Up to 60*	70
Pit 3	45	70	Up to 60*	70
Pit 4	45	70	Up to 60*	70
Pit 5	45	70	Up to 60*	70
Pit 6	45	70	Up to 60*	70
Pit 7	45	70	Up to 60*	70
Pit 8	45	70	Up to 60*	70
Low wall cuts	N/A	45	Up to 40	45
Dumps	37	37	Up to 40	37

* Where pit depth is greater than 60 metres, additional controls are evaluated and implemented into the highwall design.

Table 18. Pit Design Specifications

A mining model was developed in SPRY software to apply modifying factors and develop schedules, utilizing design block volumes and quality information from geologic model grids developed in Vulcan software. The output schedule of coal production from this process was used in the economic cash flow analysis.

Key assumptions used within the mining model are:

- Estimated Moisture Contents
 - o Insitu – 6%
 - o Run-of-Mine (ROM) and Product by Seam

Seam	ROM (and Bypass Product) Moisture (%)	Washed Product Moisture (%)
M4	9.7	11.2
A12	8.2	9.7
B1	10.4	10.5
B23	10.4	10.5
C1	9.0	10.0
D0	9.0	10.0
D1	7.9	9.5
D2	9.2	10.7
DD2	9.2	10.7
E1	7.3	9.3
G	7.8	10.6

Table 19. ROM and Washed Product Moisture Content by Seam

- Minimum Separable Parting – 0.2m
- Minimum Mineable Thickness – 0.2m

12.2.2. Mining Loss and Dilution

Loss and Dilution assumptions are based on quantity and quality reconciliations performed in previous years and are summarized below. As per the following Table, each of the separable Ulan seam plies has different Loss and Dilution assumptions applied. These assumptions have been applied for several years, and were originally back-calculated during a reconciliation of actual performance.

Seam / Ply	Top Seam Loss (m)	Bottom Seam Loss (m)	Top Seam Dilution (m)	Bottom Seam Dilution (m)
M4	0.05	0.02	0.15	0.15
A12	0.03	0.03	0.10	0.10
B1	0.05	-	0.02	-
B23	-	0.02	-	0.05
D1	0.05	-	0.05	-
D2	-	0.02	-	0.05
E1	0.05	0.02	0.05	0.05
G	0.02	0.05	0.01	0.01

Table 20. Loss and Dilution Assumptions

12.2.3. Coal Product Quality

Coal Qualities are reported in the following tables reporting Coal Reserves by Seam, Pit and Tenement.

12.2.4. Reporting

Reserves are calculated utilizing the Mining Model developed in SPRY with previously described assumptions. Classification of Reserves is based on Resource classifications, converting Measured and Indicated Resources within the mine plan to Proven and Probable Reserves.

Following a review of Modifying Factors, a small area of Measured Resources within the mine plan have been converted to a Probable Reserve. This has been done due to community concerns associated with mining through identified sites of high cultural significance in Pit 8. Although approval has previously been granted to mine through this area, the company is currently assessing alternative options.

Likewise, the mine's approvals allow mining through the Cumbo Creek area, subject to the successful completion of a permanent stream diversion which is capable of sustaining sub-alluvial flows. Due to the high cost of establishment of this diversion, and the risk that its performance cannot be satisfactorily demonstrated, it is currently considered that the Cumbo Creek area is unlikely to ever be mined so this area has been left out the mine's Life of Mine Plan, and the calculated Reserve for Wilpinjong.

Other than as described above, the level of geological certainty reflected in the classification of Measured and Indicated Resources is considered appropriate to convert these Resources planned to be mined in the LOM plan to Proven and Probable Reserves respectively.

12.3. Coal Reserves Statement

Peabody estimates a total of 84.0Mt of ROM Reserves for the Wilpinjong opencut mine. Of the total ROM Reserve, 79.5Mt was assigned to the Proven category directly from the Measured Resource portion of the Moolarben and Ulan seams. The remaining 4.4Mt of ROM Reserve was assigned to the Probable category. Table 17 and Table 18 summarise the ROM Reserves, strip ratio and moisture content of the ROM Reserves.

Area	Run of Mine (ROM)					Strip Ratio (bcm/t)
	Proven @M _{ROM} (Mt)	Probable @M _{ROM} (Mt)	Total @M _{ROM} (Mt)	M _{ROM} (%)	ROM Ash (% - arb)	
ML1573	37.6	1.3	38.8	8.8	31.0	3.2
ML1795	0.3	0.1	0.4	8.7	31.6	6.0
ML1779	33.4	2.9	36.3	8.8	29.1	4.2
EL6169	8.3	0.2	8.5	9.0	31.4	4.4
TOTAL	79.5	4.4	84.0	8.8	30.2	3.8

Table 21. Open Cut Coal ROM Reserve by Tenement

Seam	Run of Mine (ROM)				
	Proven @M _{ROM} (Mt)	Probable @M _{ROM} (Mt)	Total @M _{ROM} (Mt)	M _{ROM} (%)	ROM Ash (% - arb)
M4	4.3	0.06	4.4	8.3	42.9
A12	5.9	0.10	6.0	8.2	36.3
B1	6.2	0.20	6.4	10.4	31.0
B23	14.8	0.23	15.0	10.4	21.3
C1	4.7	0.02	4.8	9.0	43.7
D0	2.2	0.01	2.3	9.0	42.1
D1	-	3.3	3.3	7.9	29.1
D2	14.5	0.11	14.6	9.2	18.1
DD2	2.7	0.06	2.8	9.2	48.6
E1	16.8	0.17	17.0	7.3	32.0
G	7.4	0.16	7.6	7.8	35.6
TOTAL	79.5	4.4	84.0	8.8	30.2

Table 22. Open Cut Coal ROM Reserves by Seam

Table 23 summarises the ROM Reserves on a Pit basis.

Area	Run of Mine Reserves	Quantity (Mtonnes) @100%	ROM Ash (% arb)	As - Recieved Moisture (%)	Inherent Moisture (%)
Pit 1	Proven Coal Reserves	1.9	30.3	8.4	2.9
	Probable Coal Reserves	0.3	31.2	9.0	3.3
	Pit Sub-Total	2.2	30.5	8.5	2.9
Pit 2	Proven Coal Reserves	-	-	-	-
	Probable Coal Reserves	-	-	-	-
	Pit Sub-Total	-	-	-	-
Pit 3	Proven Coal Reserves	7.7	27.1	8.3	2.9
	Probable Coal Reserves	0.3	30.4	7.9	2.9
	Pit Sub-Total	8.0	27.2	8.2	2.9
Pit 4	Proven Coal Reserves	-	-	-	-
	Probable Coal Reserves	-	-	-	-
	Pit Sub-Total	-	-	-	-
Pit 5	Proven Coal Reserves	2.9	34.6	8.2	2.6
	Probable Coal Reserves	0.3	39.7	8.5	3.0
	Pit Sub-Total	3.2	35.1	8.3	2.6
Pit 6	Proven Coal Reserves	38.1	31.9	9.0	2.9
	Probable Coal Reserves	0.9	23.5	8.0	3.2
	Pit Sub-Total	39.0	31.7	9.0	2.9
Pit 7	Proven Coal Reserves	1.5	28.0	8.6	3.2
	Probable Coal Reserves	0.02	44.9	8.3	3.6
	Pit Sub-Total	1.5	28.2	8.5	3.2
Pit 8	Proven Coal Reserves	27.4	28.4	8.9	3.1
	Probable Coal Reserves	2.6	30.7	8.2	2.7
	Pit Sub-Total	30.0	28.6	8.8	3.1
WILPINJONG TOTAL	Proven Coal Reserves	79.6	30.2	8.8	3.0
	Probable Coal Reserves	4.4	29.8	8.2	2.9
	TOTAL	84.0	30.2	8.8	3.0

Table 23. Open Cut Coal ROM Reserves by Pit

Open Cut Marketable Reserves

Marketable Product tonnages have been estimated by converting ROM tonnages using a practical yield based on a maximum density washing plan (F1.70). Peabody estimate a Marketable Open Cut Reserve of 68.8 Mt within the Wilpinjong Open Cut. A summary of the Marketable Reserve is shown in the following Tables.

Seam	Marketable Product						
	Proven @M _{PROD} (Mt)	Probable @M _{PROD} (Mt)	Total @M _{PROD} (Mt)	Prod Ash (% - adb)	Prod Sulphur (% - adb)	Prod CV kcal/kg (adb)	M _{PROD} (%)
M4	2.5	0.03	2.5	21.9	0.47	6143	9.4
A12	3.6	0.07	3.7	20.2	0.67	6291	9.7
B1	6.0	0.19	6.1	32.6	0.41	5232	10.4
B23	12.4	0.18	12.6	16.6	0.48	6602	10.5
C1	3.0	0.01	3.0	32.7	0.32	5225	10.0
D0	1.4	0.01	1.4	32.2	0.43	5264	10.0
D1	-	3.29	3.3	30.7	0.40	5394	7.9
D2	14.1	0.11	14.2	19.0	0.52	6397	9.6
DD2	1.7	0.04	1.8	33.3	0.20	5167	10.5
E1	13.9	0.14	14.0	27.4	0.50	5677	8.8
G	6.1	0.13	6.2	31.8	0.49	5302	9.2
TOTAL	64.6	4.2	68.8	24.6	0.48	5916	9.6

Table 24. Open Cut Marketable Reserves by Seam

Area	Marketable Product						
	Proven @M _{PROD} (Mt)	Probable @M _{PROD} (Mt)	Total @M _{PROD} (Mt)	Prod Ash (% - adb)	Prod Sulphur (% - adb)	Prod CV kcal/kg (adb)	M _{PROD} (%)
ML1573	30.6	1.2	31.8	25.3	0.49	5857	9.6
ML1795	0.25	0.07	0.3	27.0	0.43	5708	9.5
ML1779	27.1	2.8	29.9	23.7	0.47	5989	9.6
EL6169	6.7	0.2	6.8	25.0	0.50	5877	9.8
TOTAL	64.6	4.2	68.8	24.6	0.48	5916	9.6

Table 25. Open Cut Marketable Reserves by Tenement

Area	Marketable Reserves	Quantity (Mtonnes) @100%	Prod Ash (% - adb)	Prod Sulphur (% - adb)	Prod CV kcal/kg (adb)	M _{PROD} (%)
Pit 1	Proven Coal Reserves	1.6	26.6	0.55	5741	9.4
	Probable Coal Reserves	0.25	30.3	0.47	5425	9.3
	Pit Sub-Total	1.9	27.1	0.54	5700	9.4
Pit 2	Proven Coal Reserves	-	-	-	-	-
	Probable Coal Reserves	-	-	-	-	-
	Pit Sub-Total	-	-	-	-	-
Pit 3	Proven Coal Reserves	6.5	21.7	0.50	6164	9.2
	Probable Coal Reserves	0.3	31.5	0.38	5326	8.0
	Pit Sub-Total	6.8	22.1	0.49	6125	9.1
Pit 4	Proven Coal Reserves	-	-	-	-	-
	Probable Coal Reserves	-	-	-	-	-
	Pit Sub-Total	-	-	-	-	-
Pit 5	Proven Coal Reserves	2.4	30.7	0.53	5390	9.3
	Probable Coal Reserves	0.3	41.8	0.33	4445	8.5
	Pit Sub-Total	2.7	31.9	0.51	5289	9.3
Pit 6	Proven Coal Reserves	30.6	25.7	0.49	5818	9.8
	Probable Coal Reserves	0.9	23.8	0.54	5986	8.0
	Pit Sub-Total	31.5	25.7	0.49	5823	9.7
Pit 7	Proven Coal Reserves	1.3	22.4	0.49	6099	9.5
	Probable Coal Reserves	-	-	-	-	-
	Pit Sub-Total	1.3	22.4	0.49	6099	9.5
Pit 8	Proven Coal Reserves	22.3	22.3	0.47	6107	9.8
	Probable Coal Reserves	2.4	30.3	0.36	5428	8.4
	Pit Sub-Total	24.7	23.1	0.45	6041	9.6
WILPINJONG TOTAL	Proven Coal Reserves	64.6	24.3	0.48	5940	9.7
	Probable Coal Reserves	4.2	29.7	0.41	5478	8.3
	TOTAL	68.8	24.6	0.48	5916	9.6

Table 26. Open Cut Marketable Reserves by Pit

Maps

Maps of the Reserve areas by seam ply are displayed below.

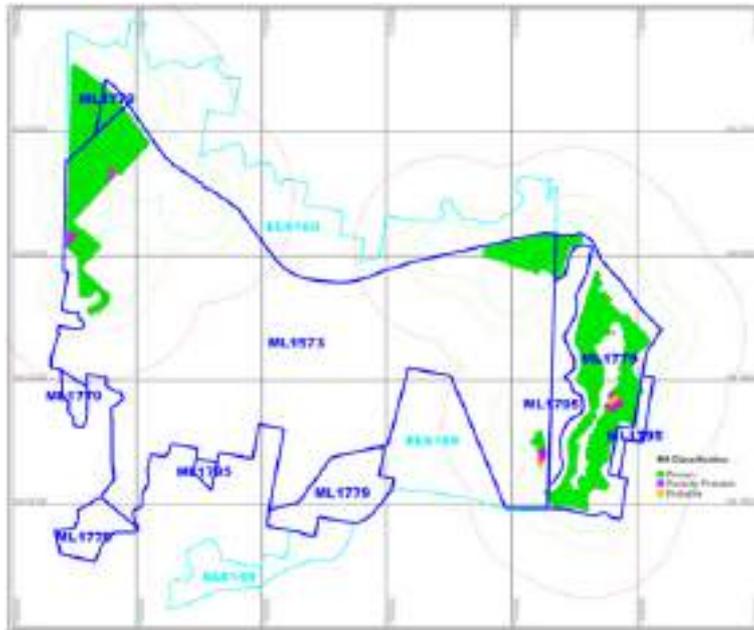


Figure 24. Reserve Plan M4 Seam

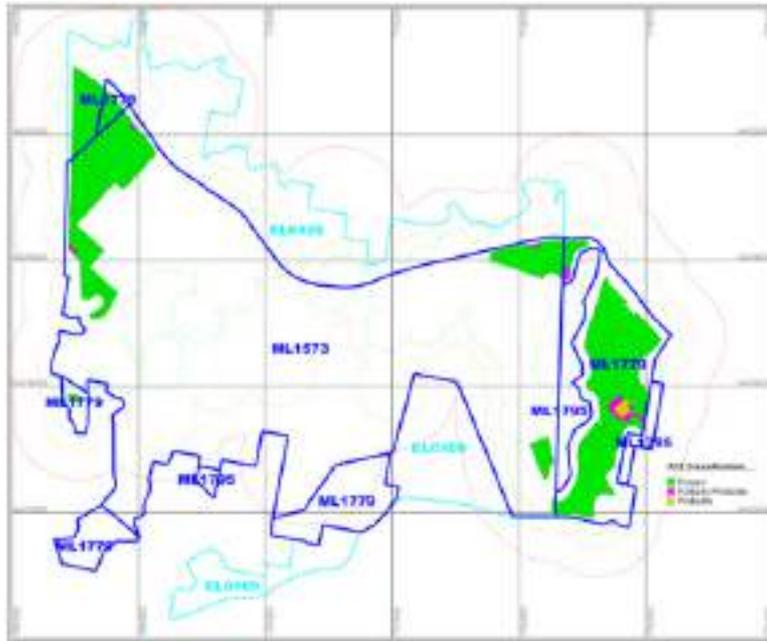


Figure 25. Reserve Plan A12 Seam

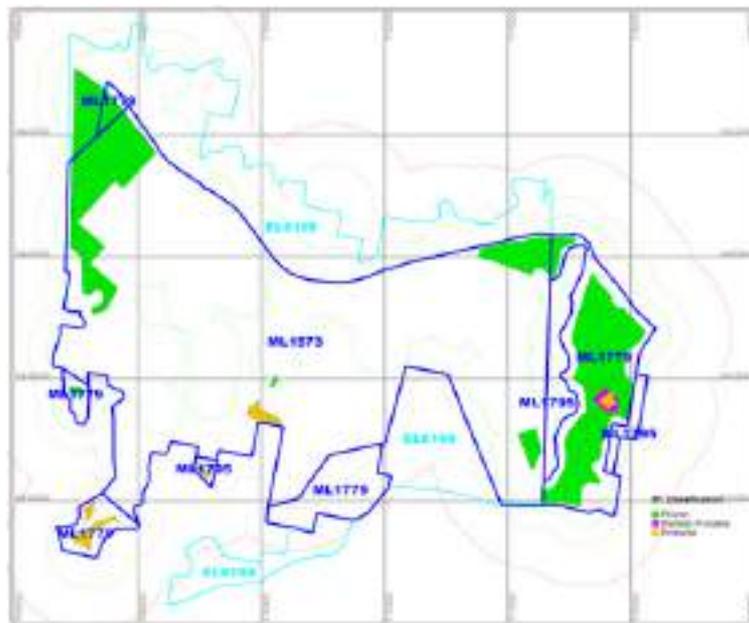


Figure 26. Reserve Plan B1 Seam

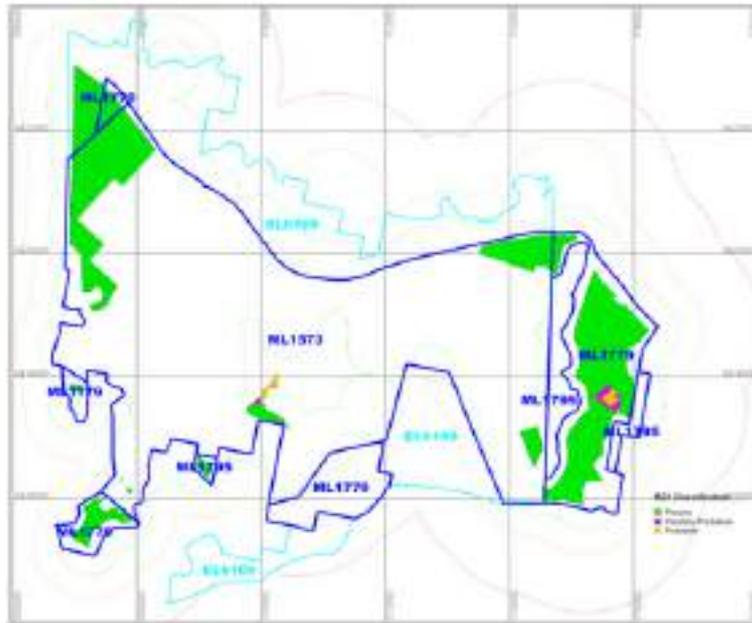


Figure 27. Reserve Plan B23 Seam

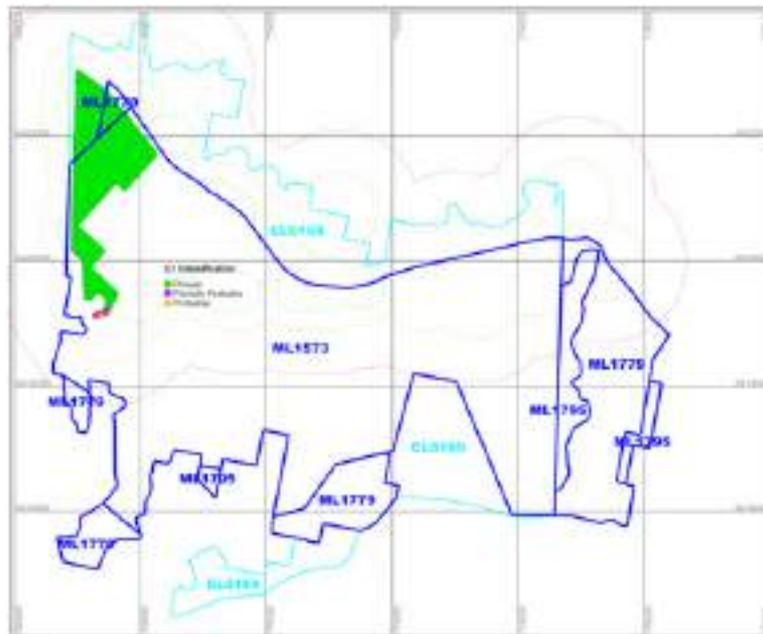


Figure 28. Reserve Plan C1 Seam

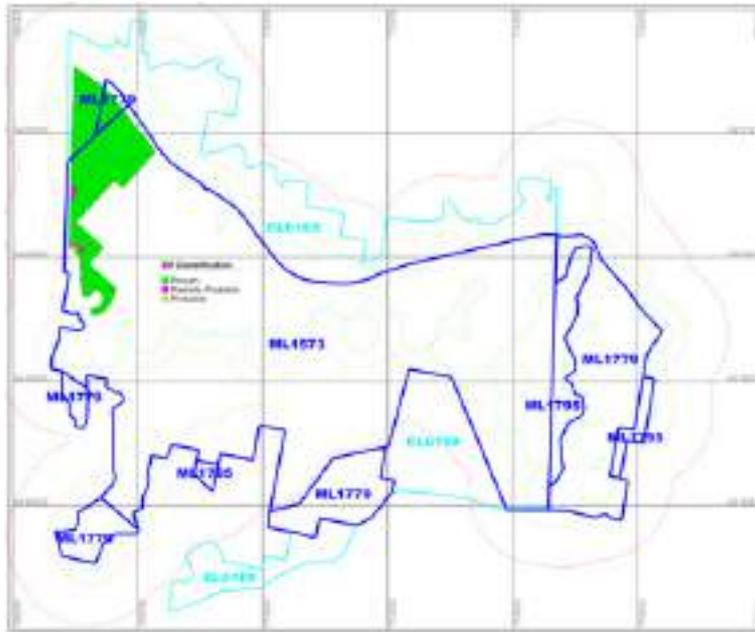


Figure 29. Reserve Plan D0 Seam

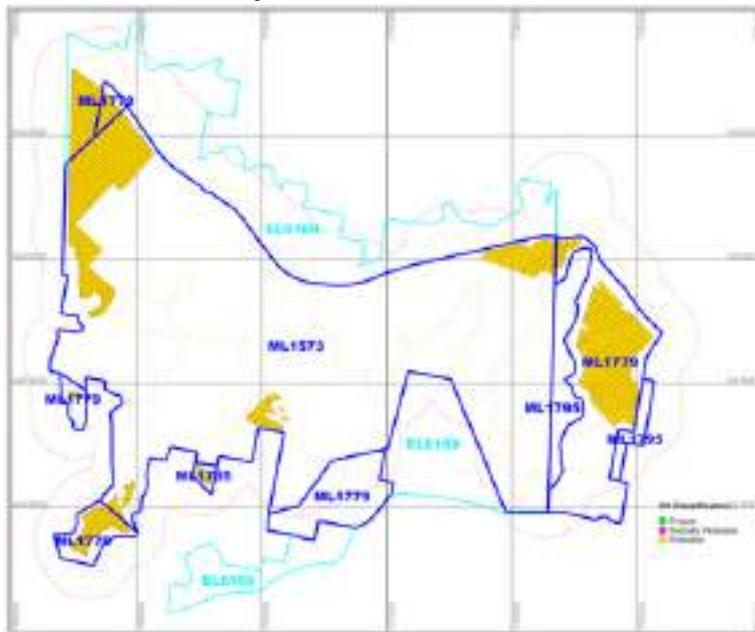


Figure 30. Reserve Plan D1 Seam

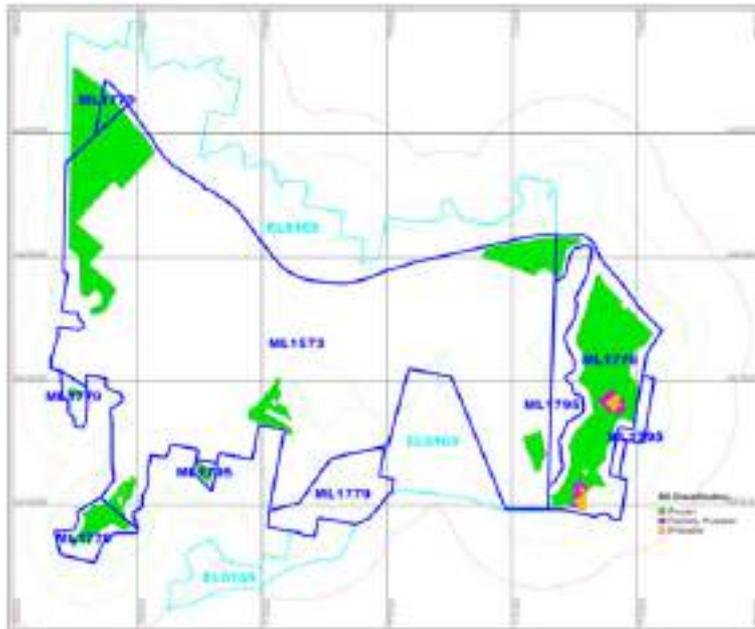


Figure 31. Reserve Plan D2 Seam

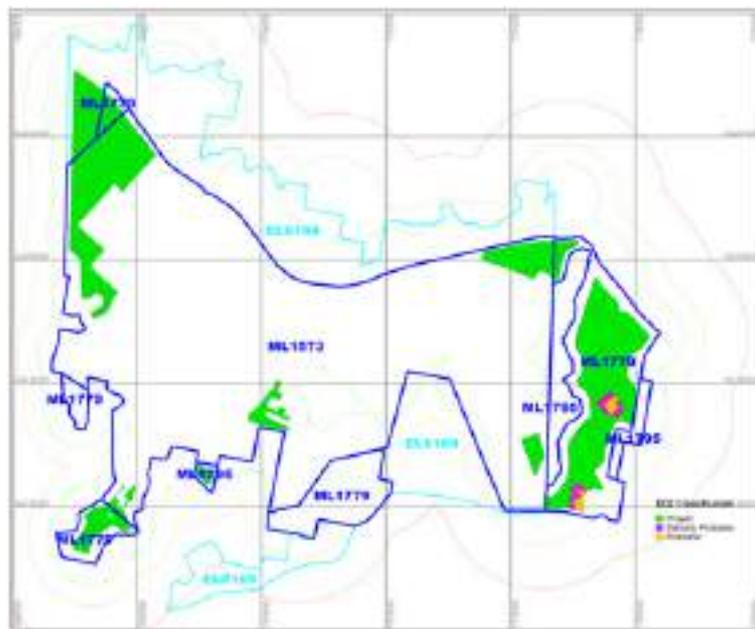


Figure 32. Reserve Plan DD2 Seam

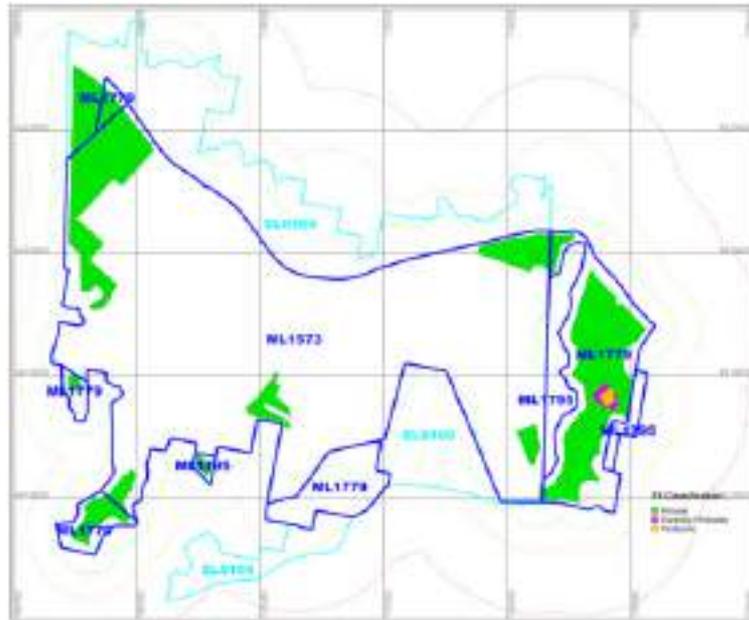


Figure 33. Reserve Plan E1 Seam

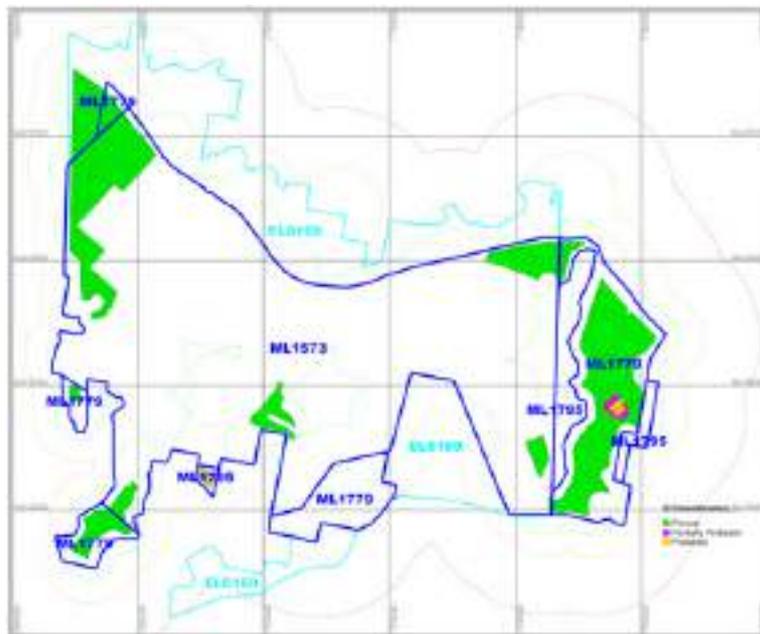


Figure 34. Reserve Plan G Seam

12.4. Comments from Qualified Person(s)

The Reserves at Wilpinjong aren't materially sensitive to Coal Prices, with low mining costs providing significant head-room against projected pricing. The mine is a medium to high ash producer (14-30% typically). If the market changes to favour low-ash (i.e. steepening of the price/ash curve) there are some washing strategies that may enable the mine to improve its value, but this will have a negative impact on the Marketable (and potentially some of the ROM) Reserves.

13. MINING METHODS

13.1. Introduction

Conventional open cut mining methods are used at the Wilpinjong Coal Mine, with a low strip ratio allowing for relatively rapid pit advance.

13.2. Mine Design

13.2.1. Geotechnical Considerations

All Peabody Energy open-cut operations are required to have a geotechnical management system that provides a framework to assist relevant mining personnel (including contactors and consultants) relating to the application of sound ground control practices at their respective operations. A Geotechnical Hazard Management Plan (GHMP) is developed to ensure that Principal Hazards associated with geotechnical features of the mine environment are effectively managed.

Typical slope design parameters for excavations and dumps for Wilpinjong Mine are shown in the following sections. Local conditions may require variance to these parameters.

Excavated slopes at Wilpinjong are designed to the specifications detailed in Table 22.

Pit Wall	Batter Angle (°)		Batter Height (m)	Overall Slope Angle (°)
	Weathered/ Palaeo	Fresh		
Pit 1	45	70	Up to 60*	70
Pit 2	45	70	Up to 60*	70
Pit 3	45	70	Up to 60*	70
Pit 4	45	70	Up to 60*	70
Pit 5	45	70	Up to 60*	70
Pit 6	45	70	Up to 60*	70
Pit 7	45	70	Up to 60*	70
Slate Gully	45	70	Up to 60*	70
Low wall cuts	N/A	45	Up to 40	45
Dumps	37	37	Up to 40	37

* Where pit depth is greater than 60 metres, additional controls must be evaluated and implemented into the highwall design. For example, catch benches, change to slope angle, increase to standoff distance and implementation of berms.

NOTE: As mining operations progress more design criteria will become available

Table 27. Slope Design specifications for highwalls at Wilpinjong Coal Mine.

Dump design Parameters are as follows:

In-pit Dump

The design of spoil/truck dumps takes into consideration the following parameters, shown in Figure 21.

- Overall Slope Angle should not exceed 37° (crest to toe angle).
- Lift heights should be ~20 m to 30 m dump lifts with standoff distances of ~10 m to 15m for successive lifts.
- Lift heights greater than 30m require specific Job Safety Analysis (JSA)
- Dump height should be consistent with the natural stability of the material being dumped. In general, the higher the dump face, the greater the risk the dump face has of collapsing under the influence of the vehicle tipping.
- The surface of the dump shall be free draining and comply with dumping procedures.
- Seepage from the dump and natural groundwater inflow should be drained to sumps, and ponding at the toe of or within the in-pit dump should be kept to a minimum.
- The dump designs and slopes are such that the run of water reports to the site sedimentation dams.
- Reduced bench heights minimising the potential dump instability especially in weak material dumping spots.
- Maintain a minimum berm, safety windrow or stop log at the tip face of ½ wheel height of the largest vehicle using the dump thereby increasing the Factor of Safety (FoS).
- Where the base of the dump is subject to the influence of water or mud, recognise the requirement to dump short of the tip face;
- Where cracks appear tip short and seek supervisory and geotechnical advice, especially where cracking may be more severe than minor tension cracks due to dump settlement.

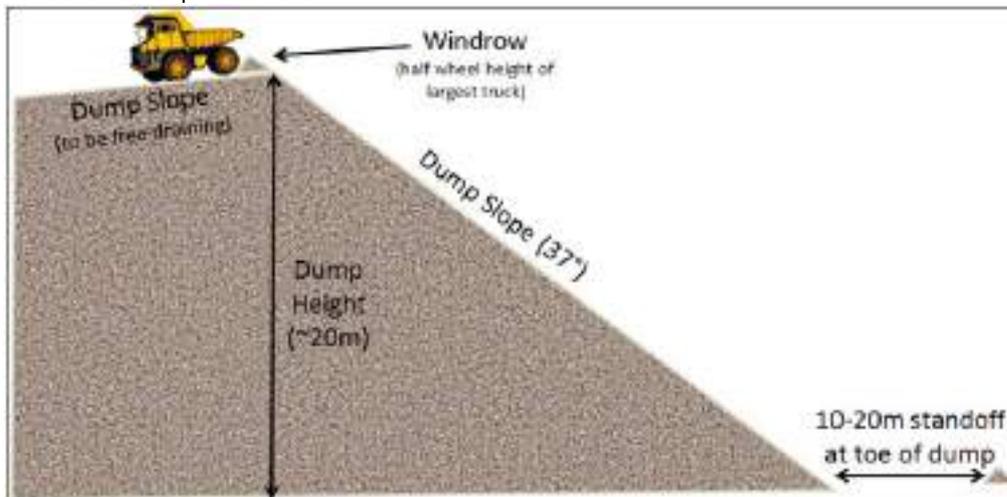


Figure 35. Waste spoil dump/truck dump design.

Out-of-Pit Waste Dumps

Out-of-pit waste dumps are comprised of either:

- 20 m lifts with ~35-37° batter angles and a 10 m standoff between the crest and toe of successive lifts, or
- 30 m lifts with ~35-37° batter angles and a 15 m standoff between the crest and toe of successive lifts.
- Lift heights greater than 30m require specific Job Safety Analysis (JSA)

13.2.2. Hydrological Considerations

As part of the mine approvals process, detailed modelling of both surface and sub-surface hydrology has been undertaken. Monitoring programs for both surface and ground water are continued to enable regular updating and tuning of these models.

Water management activities are undertaken in accordance with the Mine's water management system. In summary, water management for the Mine is based on the containment and re-use of mine water as well as the control of sediment laden water that may be potentially carried with runoff from disturbed areas. The key components of the Mine's water management system include:

Collection and re-use of surface runoff from disturbed areas;

Capture and on-site containment of mine water, comprising groundwater inflows and incident rainfall-runoff to operational areas;

Re-use of contained mine water for dust suppression over active surfaces (e.g. haul roads).

Recycling of mine water associated with the CHPP and tailings disposal areas;

Consumption of contained waters in the Mine water supply system;

Management of treated sewage effluent in accordance with the OEH's Environmental Guidelines for the Utilisation of Treated Effluent;

Discharge of treated water via a water treatment facility to Wilpinjong Creek in accordance with EPL 12425

13.3. Mine Plan

13.3.1. Mining Process

The general sequence of open cut mining is as follows:

1. Vegetation clearance and removal (including mulching).
2. Topsoil/subsoil stripping by scrapers and/or dozers. Stripped topsoil is used directly in progressive rehabilitation or is placed in stockpiles for later re-use.
3. Drilling and blasting of overburden, with some waste rock 'cast blast' into the adjacent mined-out strip.
4. Dozer pushing of blasted overburden into the adjacent mined-out strip to expose the target seam, or removal with excavator and haul truck.
5. Drilling and blasting plus ripping of coal/parting material.

6. Mining of exposed coal seams by excavator and loading into haul trucks for transport directly to the ROM dump hopper or ROM pads.
7. Interburden/parting material is then drilled and blasted, ripped, pushed or excavated and hauled to expose the underlying working coal sections.
8. Coarse rejects and tailings from the CHPP are selectively placed within mine voids, waste rock emplacements and approved tailing storage facilities.
9. Hauled overburden/interburden/parting material is strategically placed within mine voids and associated waste rock emplacements to develop the final landform.
10. Progressive landform profiling and rehabilitation of mine voids and waste rock emplacements. In some areas, temporary rehabilitation is undertaken to stabilise landforms until further mining operations are carried out in the future.

ROM coal is either hauled directly to a ROM dump hopper and conveyed to the CHPP for processing, or delivered to ROM pads and later rehandled to the ROM dump hopper using a front end loader and trucks.

The existing capacity of the ROM pads is over 2.5 million tonnes (Mt). Due to previous spontaneous combustion events on ROM pads that contained coal held on-site for an extended period, WCPL has put in place a risk identification system, whereby coal stockpiles that have a higher propensity to spontaneously combust are closely monitored (including physical inspections at daily intervals and/or use of thermal probes to identify areas of heating). In addition, after select ROM coal types have been stockpiled on-site for a designated period, they are prioritised for washing in the CHPP.

Coal removal is performed 12 hours/shift, 2 shifts/day, 7 days/week.

13.3.2. Production Schedule

The current LOM plan mining sequence map is shown in Figure 36.

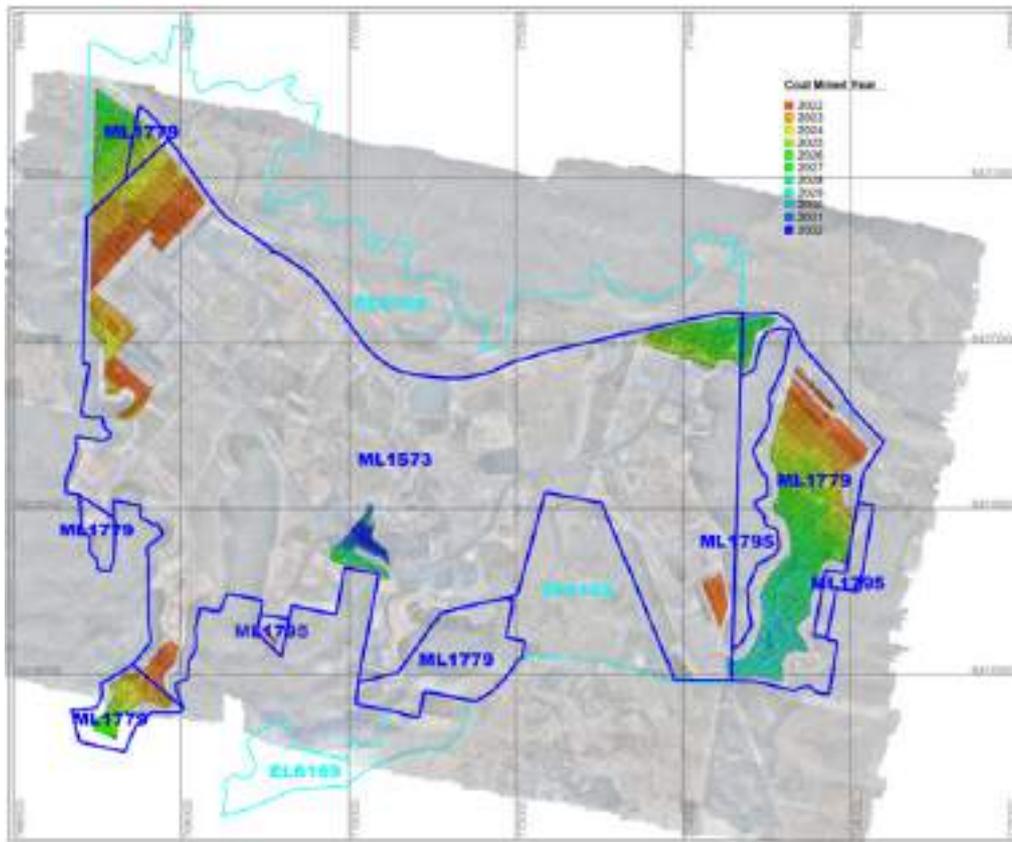


Figure 36. Mining Sequence Plan

The latest LOM projected the last year of production from WPJ is 2032. The detailed annual production statistics are projected in Table 25.

It should be noted that the plans developed for modelling the economics to support the estimates of Reserves were based on the Life of Mine Plans developed for Wilpinjong in mid-2021, using projected year-end face positions from a plan starting at the beginning of June 2021. The Reserve estimates stated in this report are based on actual face positions at the end of December, 2021. The difference between the projected and actual remaining Product Tonnes is ~0.23 Mt (68.57Mt vs 68.8Mt) or ~0.3% of the total Reserve estimate. This difference is not considered to be material to the economic modelling supporting the estimate of Reserves for Wilpinjong.

Table 28. LOM Production Schedule

13.4. Mining Equipment and Personnel

Peabody is utilizing the following mining equipment at WPJ (Table 24).

Basic Mining Equipment (as of September 2021):

Mining Equipment Description	Make and Model	Number of Fleet
Excavator (overburden/coal)	R9350	4
	R9400	1
	Hitachi 5500	1
	CAT 6060	1
	R9250	1
Haul Trucks (overburden/coal)	EX1200	1
	CAT 789	19
	CAT 793	5
Dozers (open cut pit/product stockpile)	MT4400	8
	CAT D9	3
	CAT D10	5
	CAT D11	14
	CAT 854 G Wheel	2
Front End Loader	CAT 994K	2
Grader	CAT 14M	1
	CAT 16M	3
	CAT 24M	1
Water Trucks	Haulmax 3900	1
	20,000 Ltr Water Cart	2
Drill Rig	ROCD65	2
	PitViper235	2
	ReedriillSKS75	1
Scraper	CAT 637	2
Tyre Handler	MHT10180T	1

Table 29. Current Mining Equipment

The type of mining equipment utilized by Peabody is suitable for the mining conditions experienced and expected at WPJ, with a long history of successful operation. Planned requirements throughout the LOM is as follows.

14. PROCESSING AND RECOVERY METHODS

14.1. Introduction

ROM coal from the open cut pits at the Wilpinjong Coal Mine is transported via internal haul roads for direct dumping to the ROM hopper, or rehandled from a main or satellite ROM pad to the dump hopper.

14.2. Coal Handling and Processing Plant

ROM coal is reclaimed at a rate of up to 1,600 tph from ROM Dump Hopper 1 and up to 1,400 tph from ROM Dump Hopper 2 to Sizing Station 1 and 2 respectively, via a feeder breaker. The broken coal is then screened, and if oversized, further crushed in separate sizers. Sized coal less than 50 millimetres (mm) is transferred to either a raw coal stockpile or a product coal stockpile (bypass coal). Raw coal is reclaimed from the raw coal stockpiles and is fed to the coal preparation plant at up to 1,400 tph.

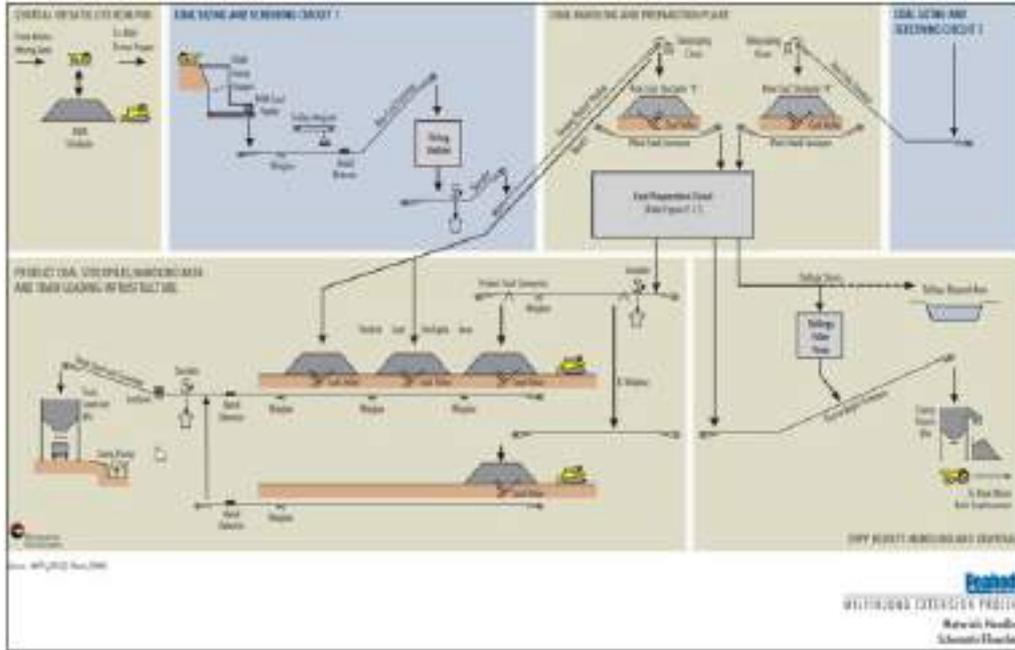


Figure 37. Coal Handling and Loading Facilities Map.

Sized coal is washed in the raw coal and desliming screens, with fine coal/slimes (less than 0.7 mm) fed to the fine coal circuit, washed medium coal (greater than 0.7 mm and less than 2 mm) fed to the medium coal washing circuit and washed coal (greater than 2 mm) fed to the coarse coal circuit.

The fine coal circuit separates coal fines from slimes and comprises cyclones, spirals, centrifuges, a screen and a tailings thickener.

Tailings are pumped from the tailings thickener to the tailings filter press, which then dewateres the material to allow it to be conveyed to the reject bin.

The medium coal and coarse coal circuits comprise dense medium cyclones to separate the coarse rejects from the washed coal.

15. INFRASTRUCTURE

Most of the on-site infrastructure is centralized near the rail load-out loop. A notated aerial photo of the central infrastructure is shown in Figure 25.



Figure 39. Central Infrastructure Aerial View

The mine also maintains a series of haul roads, light vehicle access roads, communications towers and equipment, remote 'ready-lines' for mobile equipment (including mobile crib huts and light maintenance facilities) as well as water management infrastructure. Explosive storage facilities are also maintained away from the central infrastructure area.

To deliver the current LOM, some minor infrastructure (roads, small powerlines and a remote 'ready-line') will need to be re-located.

All off-site infrastructure required for the mine is already in place (power, rail, access roads, etc..) and no further changes are required to deliver the LOM plan.

Administration and Ancillary Buildings

As shown above, Wilpinjong has numerous administration buildings, workshops and warehouses located at the site. Additional temporary 'remote ready-line' and crib (lunchroom) facilities are also utilized across the sites. These facilities are adequate to support expected production.

Fuel Storage

Hydrocarbons used on-site include fuels (i.e. diesel and petrol), oils, greases, degreaser and kerosene. Two bunded 88,000 litre (L) and one 110,000 L diesel storage tanks are located on-site. Oil is stored in two 28,000 L self-bunded double-skinned oil storage tanks, and a 110,000 L self-bunded multiple compartment hydrocarbon storage tank is also maintained for storage of coolant and oil. Two shipping containers are used for the storage of oil and grease pods.

Hydrocarbon storage facilities are constructed and operated in accordance with Australian Standard (AS) 1940:2004 The Storage and Handling of Flammable and Combustible Liquids and the NSW Work Health and Safety Regulation, 2011.

Explosive Storage

Explosives required for the Mine include initiating products and detonators, ammonium nitrate fuel oil and emulsion explosives. The explosives storage and blast reload facilities are currently located in Pit 1, however explosives storages would be periodically relocated as mining progresses. Explosives on-site are stored and used in accordance with *AS 2187.2:2006 Explosives – Storage, Transport and Use – Use of Explosives*. *AS 2187.2:2006* details the requirements for the safe storage, handling and land transport of explosives, safe storage distances from other activities and bunding requirements

Roads

Wilpinjong has established all required roads for off-highway trucks and light vehicles to support daily operations. There is sufficient equipment, such as dozers, grader, water trucks, to continue to maintain and relocate those roads as needed for the current mine plan.

Rail and Train Loadout

A train loading facility capable of loading coal at a rate of approximately 4,500 tonnes per hour is located at the head of the rail loop within the mine infrastructure area. Coal is reclaimed from load out conveyors that run the length of the product coal stockpiles. Product coal is loaded onto trains 24 hours per day, seven days per week.

Coal is railed east to domestic power generation customers or to the Port of Newcastle for export. No coal is railed west of the Mine.

Coal Storages

In order to ensure product coal specifications are met, and to reduce mining related delays in pit operations, Wilpinjong maintains multiple ROM and Product stockpiles according to quality. Although efforts are made to reduce coal rehandle where possible, when required to be stored ROM coal is kept in open stockpiles in near proximity to the two ROM feeder bins to be processed as needed. A recent image depicting the current configuration of ROM stockpiles is shown below.



Figure 40. ROM Coal Stockpiles

Product Stockpiles are created from raw crushed coal, or from coal washed in the on-site washplant. Multiple piles are created according to ash/energy content, and then blended from these piles into the train loadout. A schematic of the Product Piles is shown below:

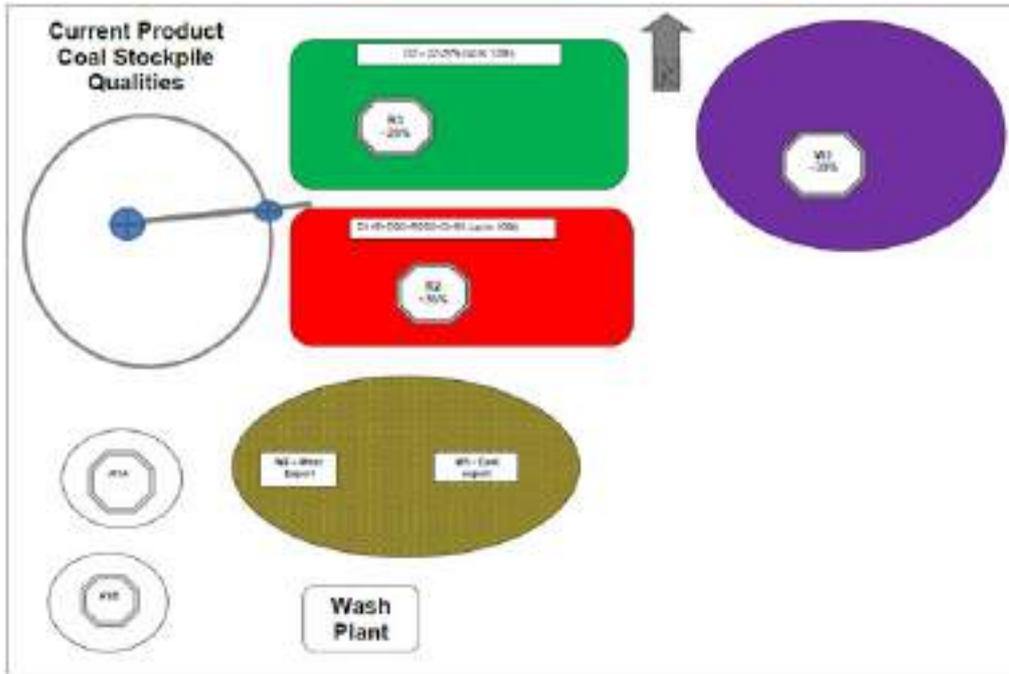


Figure 41. Product Coal Stockpile Schematic

Product Stockpile coal is placed by overhead conveyor structures, and withdrawn through recovery valves to be conveyed to the train loadout. Stockpile dozers are used to push coal to and from the valves when required in order to create additional stockpile capacity, or to maintain high recovery rates when loading trains.

Spoil Piles

Mined waste rock (including overburden and interburden) is progressively placed in mine voids behind the advancing open cut operations, once the coal has been removed. A combination of temporary and permanent out-of-pit waste rock emplacements are located adjacent to the open cut mining operations. Mine waste rock emplacements behind the advancing open cut are constructed to approximate the pre-mining topography. The waste rock emplacements are progressively shaped (as soon as reasonably practicable following disturbance) by dozers for rehabilitation activities (i.e. re-contouring, topsoiling and revegetation).

Some of the overburden is also utilised to construct internal walls for the tailings emplacements and visual bunds along select pit boundaries. Final landform levels and topography of the backfilled mine landforms generally approximate the pre mining topography, with some variations.

Water Supply and Management

See Section 13.2.2

Power Supply

The Wilpinjong Coal Mine receives electricity from a 66 kV supply system owned and operated by Essential Energy. Power is distributed by overhead cable or underground cable where necessary.

Power for remote ready-lines are typically provided by small on-site diesel generators where required.

Camp and Accommodation

There is no on-site accommodation or camp. All personnel are from nearby towns and they drive in or out to the operations.

16. MARKET STUDIES AND MATERIAL CONTRACTS

16.1. Introduction

The pricing information used to establish Coal Reserves includes internal, proprietary price forecasts and existing contract economics, in each case on a mine-by-mine and product-by-product basis. In general, price forecasts are based on a thorough analytical process utilizing detailed supply and demand models, global economic indicators, projected foreign exchange rates, analyses of price relationships among various commodities, competing fuels analyses, projected steel demand, analyses of supplier costs and other variables. Price forecasts, supply and demand models and other key assumptions and analyses are stress tested against independent third-party research (not commissioned by Peabody) to confirm the conclusions reached through our analytical processes, and our price forecasts fall within the ranges of the projections included in this third-party research. The development of the analyses, price forecasts, supply and demand models and related assumptions are subject to multiple levels of management review.

16.2. Product and Market

Wilpinjong has a long-term Coal Supply Agreement to supply power plants located in the Hunter Valley. The contract allows for flexible quantity nominations.

The remaining production is sold on the Seaborne Thermal market (exported to other countries) into a large variety of customers predominately in SE Asia.

The ash of these products typically ranges from ~15% (6260kcal/kg GAR) to ~30% (5300kcal/kg GAR).

16.3. Market Outlook

Several factors can influence thermal coal supply and demand and pricing. Demand is sensitive to total electric power generation volumes, which are determined in part by the impact of weather on heating and cooling demand, inter-fuel competition in the electric power generation mix (such as from natural gas and renewable sources), changes in capacity (additions and retirements), competition from other producers, coal stockpiles and policy and regulations. Supply considerations impacting pricing include Reserve positions, mining methods, strip ratios, production costs and capacity and the cost of new supply (greenfield developments or extensions at existing mines).

Internationally, thermal coal competes with alternative forms of electricity generation. The competitiveness and availability of natural gas, oil, nuclear, hydro, wind, solar and biomass varies by country and region. Seaborne thermal coal consumption is also impacted by the competitiveness of delivered seaborne thermal coal supply from key exporting countries such as Indonesia, Russia, Colombia, the U.S. and South Africa, among others. In addition, seaborne thermal coal import demand can be significantly impacted by the availability of domestic coal production, particularly in the two leading coal import countries, China and India, among others.

16.4. Material Contracts

Consistent with general coal mining industry in Australia, Peabody maintains a number of supply agreements for various required elements of their operations, including for fuel, electricity, tyres and equipment supply and maintenance. It also has commitments with Port and Rail service and infrastructure providers to enable its products to be brought to market.

In terms of sales, Wilpinjong has a long-term 'open-book' Coal Supply Agreement with a domestic electricity generator. This supply agreement provides for a total amount of energy to be sold to the generator over a multi-year term. Traditionally this has amounted to ~7Mtpa of

product coal, but with the retirement of a certain power station in early 2023, it has been modelled to reduce in line with customer requirements, and within flexible quantity nominations allowed in the contract.

17. ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

17.1. Environment Studies

Prior to the granting of Approvals for mining operations at Wilpinjong in 2006, an Environmental Impact Study (EIS) was completed to satisfy the Terms of Reference provided by the Director General of the Department of Infrastructure, Planning and Natural Resources (DIPNR), now known as the Department of Planning, Industry and Environment (DPIE). A summary of these requirements is listed below:

Specific Issues to be Addressed
Under clause 13(1) of the Environmental Planning and Assessment Regulation, 2000, the Director General requires the following specific issues to be addressed in the EIS:
Description of the Proposal Describe and justify the proposal, clearly identifying the resources, the proposed site, the proposed works (including any rehabilitation works), and the proposed intensity and duration of mining operations.
Permissibility Demonstrate that the proposal is permissible with consent.
Statutory Instruments-Policies Assess the proposal against the relevant provisions of: <ul style="list-style-type: none"> • State Environmental Planning Policy No. 11 – Traffic Generating Development; • State Environmental Planning Policy No. 23 – Hazardous and Offensive Development; • State Environmental Planning Policy No. 44 – Wildlife Habitat Protection; • State Environmental Planning Policy No. 55 – Remediation of Land; • Budget Local Environmental Plan 1998; and • any relevant development control plan or Schedule 5D conditions application.
Key Issues Assess the following potential impacts of the proposal, and describe what measures would be implemented to avoid, mitigate, offset and/or manage these potential impacts: <ul style="list-style-type: none"> (a) surface water and groundwater; (b) noise; (c) blasting and vibration; (d) air quality (including odour); (e) heritage, both Aboriginal and non-Aboriginal; (f) fauna and flora, particularly on critical habitats, threatened species, populations, or ecological communities (including potential off-site); (g) soil; (h) traffic, transport, utilities and services; (i) hazards; (j) visual; (k) waste management; (l) social; and (m) economic (including detailed benefit-cost analysis).
Environmental Monitoring and Management Plans Describe in detail how the environmental performance of the proposal would be monitored and managed over time.
Water Resources During the preparation of the EIS, pay particular attention to the potential surface water, groundwater and water supply impacts of the proposal, both locally and regionally, and to consider the proposal's consistency and compliance with relevant water management legislation and policies.
Flora and Fauna/Vegetation Clearing The flora and fauna assessment in this EIS should explicitly consider the potential impacts of the proposal on the adjoining National Parks and Nature Reserves.

<p>Under clause 72(1) of the Environmental Planning and Assessment Regulation, 2000, the Director-General requires the following specific issues to be addressed in the EIS (Continued)</p> <p>EIS Guidelines</p> <p>During preparation of the EIS, consider the Department's EIS guidelines on Coal Mine and Associated Infrastructure</p> <p>Integrated Authorities</p> <p>The agencies that administer integrated approvals should be consulted and their requirements addressed in the EIS.</p> <p>Consultation</p> <p>During the preparation of the EIS, relevant local, State and Commonwealth government authorities, service providers and community groups in the area should be consulted and address any issues they may raise in the EIS.</p> <p>In particular, consult the surrounding landowners and occupiers that are likely to be affected by the proposal.</p> <p>The EIS must include a report indicating who was consulted, what consultation occurred and what issues were raised during this consultation.</p> <p>Pursuant to Schedule 2 and Clause 72 of the Environmental Planning and Assessment Regulation, 2000, an EIS must include:</p>
1. A summary of the EIS.
2. A statement of the objectives of the development or activity.
3. An analysis of any feasible alternatives to the carrying out of the development or activity, having regard to its objectives, including the consequences of not carrying out the development or activity.
4. An analysis of the development or activity including:
(a) a full description of the development or activity;
(b) a general description of the environment likely to be affected by the development or activity, together with a detailed description of those aspects of the environment that are likely to be significantly affected;
(c) the likely impact on the environment of the development or activity;
(d) a full description of the measures proposed to mitigate any adverse effects of the development or activity on the environment; and
(e) a list of any approvals that must be obtained under any Act or law before the development or activity may be lawfully carried out.
5. A compilation (in a single section of the EIS) of the reasons referred to in item 6(b).
6. The reasons justifying the carrying out of the development or activity in the manner proposed, having regard to biological, economic and social considerations, including the following principles of ecologically sustainable development:
(a) The precautionary principle;
(b) Inter-generational equity;
(c) Conservation of biological diversity and ecological integrity;
(d) Improved valuation, pricing and incentive mechanisms.

Table 31. EIS Terms of Reference

Subsequent to this original EIS, as part of the Wilpinjong Extension Project, another EIS was prepared to address impacts generated by that project. Details of these studies are publicly available at <https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Wilpinjong-Mine/Approvals,-Plans-Reports>

Wilpinjong Coal Mine has an Environmental Management Strategy in place that has been developed to minimise environmental impacts and provides the strategic context for environmental management of the site. Existing management plans, monitoring programmes and control strategies include:

- a Noise Management Plan;
- a Blast Management Plan (including a Blast Fume Management Strategy);
- an Air Quality Management Plan;
- a Water Management Plan (including a Site Water Balance, an Erosion and Sediment Control Plan, a Surface Water Management and Monitoring Plan, a Groundwater Monitoring Program and a Surface and Groundwater Response Plan);
- a Biodiversity Management Plan;
- an Aboriginal Cultural Heritage Management Plan;
- a Waste Management Plan (including a Life of Mine Tailings Strategy);
- a Mining Operations Plan (incorporating a Rehabilitation Management Plan);
- a Spontaneous Combustion Management Plan;

- a Pollution Incident Response Management Plan;
- a Bushfire Management Plan; and
- an Environmental Monitoring Program.

17.2. Permitting

As of December 31, 2021, all required licenses and permits are in place for all current activities at operation of WPJ. These have been previously summarized in Table 5.

To deliver the Life of Mine plan (and hence Reserves reported in this TRS), there is a small Mining Lease Application (MLA3), in the north-west of the property, which is yet to be lodged. The application for this lease has been delayed to negotiate surface ownership / disturbance rights over the defined area. There are no perceived obstacles to the successful granting of this lease area.

An extensive petroleum exploration title, PEL456, overlaps the entire package of Wilpinjong Coal Pty Limited titles. PEL456 is held by Hunter Gas and Santos QNT and was due for expiry on 05 March 2018. It is understood that an application to extend the term of this licence has been submitted. There are currently no activities planned by the holder of this licence in the Wilpinjong area.

17.3. Social and Community Impact

WCPL is an active contributor to the local community, making regular donations to local charities and events.

WCPL has a range of communication methods in place which enables it to share information with the local community. These methods include:

- Community Consultative Committee (CCC);
- Aboriginal Heritage Meetings;
- The Peabody Energy website - <https://www.peabodyenergy.com/Operations/AustraliaMining/New-South-Wales-Mining/Wilpinjong-Mine>
- Community Newsletters; and
- 'Have a Chat' meetings on the first Thursday of every month in Wollar Village which allows for ad hoc meetings with members of the community. The dates of the 'Have a Chat' meetings are posted on the Peabody Energy website for WCPL.

The WCPL CCC is run in accordance with NSW Planning and Infrastructure Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects. CCC meetings allow WCPL to provide to the community a report on the progress of the mine as well as environmental performance. CCC meetings are held quarterly and include the following:

- An independent chairperson approved by the DPE;
- Council (MWRC) and National Parks and Wildlife Services (NPWS) representation;
- WCPL representation; and,
- Community representation.

WCPL has established a Complaint Response Protocol to respond to all community concerns. This Protocol involves operation of a community information and complaints hotline (Complaints line: 1300 606 625) which receives complaints from members of the public. WCPL also maintains a separate blasting hotline for blasting information (Blast hotline: 1800 649 783).

Complaints received from the community are logged in WCPL's complaints management system, Consultation Manager.

17.4. Mine Reclamation and Closure

As part of WCPLs annual financial reporting obligations, a review of Asset Retirement Obligations (ARO) is required to be undertaken. This review estimates the cost of reclaiming the active parts of the mine, including works to remove mine infrastructure and otherwise meet the relinquishment requirements of the mine's permit (Development Consent). The estimate also includes allowances for 'post-closure' costs such as required monitoring, completion surveys, project management etc...

The year end 2020 estimate for Asset Retirement Obligation at Wilpinjong is summarized below (in AUD):

Support Areas	\$32m
Closure Costs	\$41m
Ongoing Areas	\$9m
TOTAL COSTS	\$82m

Table 32. Asset Retirement Obligation Cost Summary

This estimate is captured in the mine's LOM Financial Model.

17.5. Comments from Qualified Person(s)

In the opinion of the Qualified Person, the current approach to matters of environmental compliance, permitting and community impacts generally is sound, and doesn't present any current concerns with respect to the reporting of Resources or Reserves.

18. CAPITAL AND OPERATING COSTS

18.1. Introduction

WPJ is an active operation with a long operating history. The LOM plans and financial models have been developed and updated on a regular basis. The coal and waste volumes, and product quality are developed from the detailed mine plan. The manpower requirements, operating costs and capital are estimated from the historic data and future mine plan requirements on regular basis.

18.2. Operating Costs

The cost estimates used to establish Coal Reserves are generally estimated according to internal processes that project future costs based on historical costs and expected future trends. The estimated costs normally include mining, processing, transportation, royalty, add-on tax and other mining-related costs. Peabody's estimated mining costs reflect projected changes in prices of consumable commodities (mainly diesel fuel, and explosives), labor costs, geological and mining conditions, targeted product qualities and other mining-related costs. Estimates for other sales-related costs (mainly transportation, royalty and add-on tax) are based on contractual prices or fixed rates.

Operating costs are projected based on historical operating costs and adjusted based on projected changes in staffing, hours worked, production, and productivity for mining areas in the LOM Plan. The LOM Plan operating cost projections are shown in detail in the following chart:

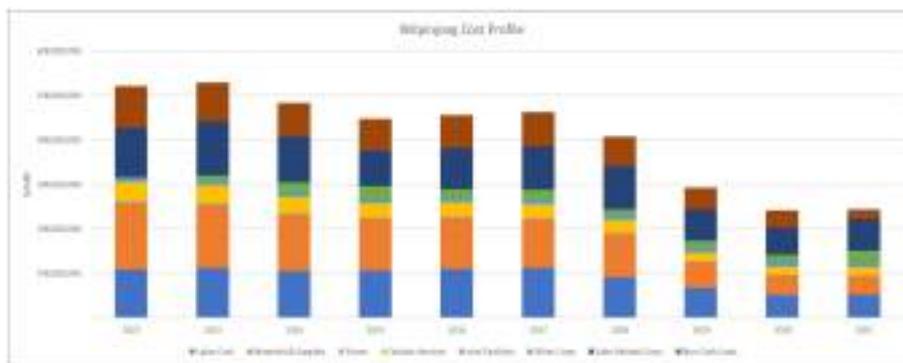


Table 33. LOM Operating Cost Schedule

These operating cost estimates are based on a substantial operating history, contain no contingency and are in the accuracy range of + - 15%.

18.3. Capital Expenditures

WPJ will require capital expenditures each year for infrastructure additions/extensions, as well as for mining equipment rebuilds/replacements to continue producing coal. The capital expenditures are categorized according to Development and Facilities, Equipment and Land and Reserves. The capital expenditures in escalated AUD are shown in following chart. The capital expenditures have been projected based on mining equipment and infrastructure requirements, with pricing based on current costs.



Table 34. LOM Capital Cost Schedule

These capital cost estimates are based on a substantial operating history, contain no contingency and are in the accuracy range of + - 15%.

19. ECONOMIC ANALYSIS

19.1. Macro Economic Assumptions

As part of the Life of Mine Financial Modelling process, several economic assumptions are determined internally within Peabody's Corporate group. Key assumptions used for the current modelling are:

Inflation: From 2022-2026 2.1%
Beyond 2026 2.5%

(Note: multiple inflation rates are developed for different cost inputs – the values presented above represent averages of modelled inflation)

Royalties/Levys: NSW Royalty on Opencut Coal – 8.2% of Revenue (less deductions)
Other standard government levies (including Research Levy) are included.

Tax: Australian Corporate Tax of 30%

Discount Rate: 10%

AUD:USD FX Rate: 2022 0.77
2023 and beyond 0.73

Coal Prices:

Sales Prices	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Current LDM inputs (USD)										
Soft Ash - 15%	80.00	89.00	74.00	76.00	78.00	80.00	83.00	86.00	88.00	91.00
Mid Ash - 27%	57.00	65.00	69.00	71.00	73.00	75.00	78.00	81.00	83.00	86.00
Mid Ash - 23%	60.00	55.00	53.00	55.00	57.00	59.00	62.00	65.00	67.00	70.00
High Ash - 30%	42.00	43.00	34.50	35.50	40.50	43.50	46.50	48.50	49.50	51.50
Domestic Pricing (in AUD)	21.36	18.95	20.78	20.46	21.25	20.85	21.65	22.93	24.24	25.10

Table 35. Projected Export Coal Prices (escalated - FOB Newcastle)

Coal sold domestically is priced according to the open-book principles of the Long Term Supply Agreement.

The average modelled sales price for Wilpinjong is compared to the broker consensus price for the Thermal benchmark coal (NEWC index) in the following chart (Note: the KPMG data is escalated beyond 2028 at 2.5% per annum). The Wilpinjong price shown is the average of all coal sold, so is expected to be lower than the NEWC benchmark in line with the average quality sold.

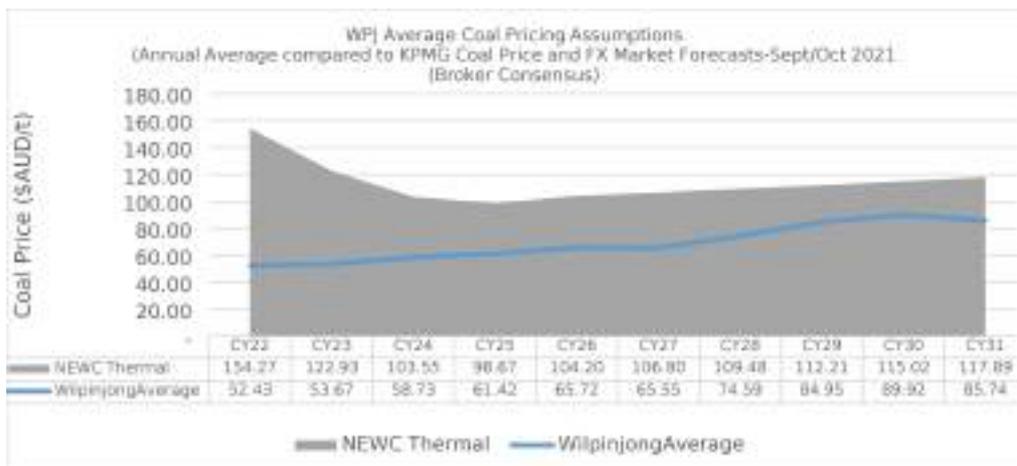


Figure 42. Projected average price compared to Broker Consensus of benchmark Thermal coal

19.2. Cash Flow Model

The key results of the Financial Modelling are displayed below, with a summary of annual (undiscounted) cash flows, along with the economic viability metric of NPV at different discount factors. Other economic measures such as IRR and Payback Period are of limited informative value due to the low capital required in an operating mine with strong cashflows.

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
CASH FLOW (AUD)										
Coal Revenue (2000000)	187,114,184	154,086,388	139,687,002	103,136,286	120,121,890	140,982,894	134,758,065	136,022,838	146,868,888	150,171,832
Income Tax	-26,258,093	-15,330,547	-13,485,253	-1,969,314	-32,641,394	-17,499,854	-34,248,530	-22,426,365	-24,507,059	-15,222,036
Winding Costs	-	-	-	-	-	-	-	-	-	-
Operating (3000000)	-	-	-	-	-	-	-	-	-	-
CapEx	-31,886,000	-17,338,640	-13,081,838	-25,596,838	-33,883,989	-11,887,400	-8,000,843	-5,807,687	-3,889,030	-
Cash Flow	138,970,190	120,737,191	113,125,911	73,452,355	54,333,945	121,855,493	105,858,547	111,297,917	125,745,602	1,255,207
Less: Pre-Production	1,988,120	208,733,106	373,895,099	401,346,385	540,551,207	682,406,788	768,257,013	851,925,412	730,213,478	747,998,280

Table 36. LOM Projected Cashflows

NPV @ 10%	555,617,491
NPV @ 15%	493,700,046
NPV @ 20%	443,072,084

Table 37. Financial Modelling KPIs

These results show that Wilpinjong exhibits strong projected cashflows throughout its planned life, which contribute to a high NPV10. Estimated high operational costs associated with longer waste haulage towards the end of the expected mine life are required as part of the mine's closure obligations.

19.3. Sensitivity Analysis

A high-level sensitivity analysis of the impact of changes in Sales Price, Cost, Productivity and Capital has been completed in the Financial Model. Sensitivity to product grade has not been completed, but as a thermal coal product, changes to ash / energy content would have a direct effect on price. The results of this analysis are shown below. This analysis demonstrates the project value to be relatively robust, with positive NPVs reported across the range of values assessed.

SALE PRICE	± 0.50	± 1.50	± 1.00	± 0.50	-	(0.50)	(1.00)	(1.50)
NPV @ 10%	612,321,267	590,008,094	567,696,521	555,617,481	523,071,775	500,759,402	470,447,609	
NPV @ 13%	539,590,528	520,306,308	501,022,088	493,700,049	462,453,649	443,169,430	425,085,210	
NPV @ 20%	481,814,403	464,895,748	447,897,094	443,072,084	413,979,705	397,021,131	380,062,477	
COST	± 0.128	(0.394)	(0.256)	(0.128)	-	0.128	0.256	0.384
NPV @ 10%	580,450,075	525,430,099	550,406,124	555,617,481	540,362,172	525,340,191	530,318,221	
NPV @ 13%	494,527,367	490,284,201	496,071,625	493,700,049	477,474,703	473,211,537	466,948,171	
NPV @ 20%	442,014,164	438,322,265	434,630,355	443,072,084	427,246,525	423,554,610	419,862,695	
PRODUCTIVITY	± 2.50%	7.50%	5.00%	2.50%	0.00%	-2.50%	-5.00%	-7.50%
NPV @ 10%	341,275,290	671,978,263	610,681,175	555,617,481	480,037,121	414,790,094	349,493,066	
NPV @ 13%	643,457,333	592,894,178	537,331,025	493,700,049	436,164,714	370,591,560	315,018,425	
NPV @ 20%	575,944,889	527,409,392	479,173,910	443,072,084	382,702,963	334,467,463	286,232,011	
CAPITAL	± 2.50%	-7.50%	-5.00%	-2.50%	0.00%	2.50%	5.00%	7.50%
NPV @ 10%	544,599,960	544,861,256	545,122,752	555,617,481	545,645,544	545,906,940	546,168,336	
NPV @ 13%	481,271,150	480,426,725	481,582,299	493,700,049	481,893,642	482,049,215	482,204,788	
NPV @ 20%	430,650,945	430,776,376	430,896,408	443,072,084	431,020,471	432,322,503	433,164,535	

Table 38. Financial Model Sensitivity

20. ADJACENT PROPERTIES

The Western Coalfield has a number of coal mining operations, of which the nearest are shown in Figure 28. Of importance to the operation at WPJ, are the nearest mines (operator in brackets):

- Moolarben Coal Complex (Yancoal Australia Ltd).
 - This mine is located to the west of the WCM and extracts from the Ulan Coal Seam using both open cut and underground (longwall) methods. This mine has been operational since 2010, and occupies the area between 0 and 8 km west of Wilpinjong Pit 6, i.e. the approved Moolarben Open Cut 4, once active, will be excavated in an area immediately west of Pit 6.
- Ulan Mine Complex (Glencore).
 - This mine is located 11 km to the northwest of the WCM on the other side of the Goulburn River, although the bulk of the underground mine is located 12-14 km away. Ulan Mine Complex extracts from the Ulan Coal Seam using both open cut and underground (longwall) methods. Coal mining has occurred at Ulan since the 1920s, however the current open cut and underground operations commenced in the 1980s (Mackie, 2011).
- Bylong Coal Project (Kepco Bylong Australia)
 - located approximately 15 km to the south-east of the WCM, is in the proposal/application stage, and not yet operational.

Additionally, Bowden's Silver Project is a proposed silver mine near Lue. This is more than 25 km south of WPJ.

No information from adjacent properties has been used in the preparation of this Resource and Reserve estimate.

21. OTHER RELEVANT DATA AND INFORMATION

Peabody reports greenhouse gas emissions from the Wilpinjong mine according to the requirements of the National Greenhouse and Energy Reporting Act 2007. Fugitive gas emissions released from the mining of coal are reported based on a model developed in accordance with the Method 2 guidelines developed under ACARP project C20005. The mine has established baseline emissions under the safeguard mechanism, and is not anticipating any additional costs associated with exceedance of emissions targets with its current plans.

There is no additional relevant information or data to be discussed.

22. INTERPRETATION AND CONCLUSIONS

The ability of Peabody, or any coal company, to achieve production and financial projections is dependent on numerous factors. These factors primarily include site-specific geological conditions, the capabilities of management and mine personnel, level of success in acquiring Reserves and surface properties, coal sales prices and market conditions, environmental issues, securing permits and bonds, and developing and operating mines in a safe and efficient manner. Unforeseen changes in legislation and new industry developments could substantially alter the performance of any mining company.

Coal mining is carried out in an environment where not all events are predictable. While an effective management team can identify known risks and take measures to manage and/or mitigate these risks, there is still the possibility of unexpected and unpredictable events occurring. It is not possible therefore to totally remove all risks or state with certainty that an event that may have a material impact on the operation of a coal mine will not occur.

22.1. Geology and Resources

It is the opinion of the Qualified Person that the exploration data reviewed for the WPJ area is sufficient to reasonably interpret the geology of the area and to construct geological and coal quality models. WPJ has been conducting exploration and in-fill drilling programs on the property for many years.

The Qualified Person has reviewed the available studies and geological data on file for WPJ, and has the opinion that the exploration and geological work is thorough and conforms to reasonable standards. The results of the exploration and its interpretation have been consistent over time, lending confidence to the conclusions that have been reached. These include the following bulleted items.

- The WPJ geological model for the mining areas reasonably represent the drill hole and other data provided and are a reasonable interpretation of that data. The models are sufficient for use as the basis of Resource and Reserve estimates.

- Based on a review of historic performance and the forward projections the projected coal preparation plant yields are reasonable.

- Coal sampling procedures, sample preparation; sample analysis and sample security procedures are adequate, within industry standards and sufficient to ensure representative sampling results

22.2. Mining and Reserves

The Wilpinjong Mine has a solid operating history and has a significant number of drill holes, in order to determine Coal Resource and Reserve estimates and projected economic viability. The data has been determined by the Qualified Persons to be adequate in quantity and reliability to support the Coal Resource and Reserve estimates in this Technical Report Summary.

The Coal Reserve estimates are 68.8 million marketable (product) tonnes of surface mineable Reserves, at WPJ. These Reserves are economically mineable based on the historical mining, mine projections, historical and projected thermal coal sales prices, historical and projected operating costs, and capital expenditure projections for the LOM Plan.

22.3. Environmental, Permitting and Social Considerations

As of December 31, 2021, all required licenses and permits are in place for all activities at the operation of WPJ. There remains a requirement to apply for, and be granted, a small Mining Lease in the north-west part of the mine, but there are no foreseen impediments to this process.

Many of these permits require regular monitoring, reporting, and renewals – these activities are a normal undertaking in the business of mining within NSW, AUSTRALIA.

Land reclamation is a vital part of the mining life cycle that is integrated with the mining process. WPJ is committed to being compliant with the Company's Environmental policy and take responsibility for the environment, benefit our communities and restore the land for generations

that follow. The historic performance on the reclamation activities and the projected future reclamation costs are supportive of the Reserve estimates at WPJ.

22.4. Economic Analysis

Based on the results of the LOM Plan, the qualified persons of this report conclude that WPJ is economic, and pre-tax cash flows for proposed operations should generate a positive NPV, based on the saleable coal price levels and exchange rates forecast by Peabody.

23. RECOMMENDATIONS

23.1. Geology and Resources

WPJ generally has sufficient exploration data to determine mineral Reserves, and most of the Resources within the Mine Plan footprint are considered to be at a Measured status. Future exploration work will be undertaken to provide geologic data primarily to improve the quality of the model to enable better planning of short term operations. This 'in-fill' drilling program is budgeted within the LOM financial model, and should be continued according to Peabody's exploration drilling standards.

23.2. Mining and Reserves

The Reserves at Wilpinjong aren't materially sensitive to Coal Prices, with low mining costs providing significant head-room against projected pricing. The mine is a medium to high ash producer (14-30% typically). If the market changes to favour low-ash (i.e. steepening of the price/ash curve) there are some washing strategies that may enable the mine to improve its value, but this will have a negative impact on the Marketable (and potentially some of the ROM) Reserves. Continued monitoring of the price/ash curve and appropriate adjustment of the washing strategy to maximise value is recommended

There are some plies within the mining footprint that have not been included in the LOM plan as they are inherently high in ash. When the premium paid for low-ash coal is low, there is a possibility that mining and processing these additional plies becomes an attractive option, as the incremental cost of production is quite low, and the lower ash coal can be blended to create a saleable product that offers more value than would otherwise be assumed. Currently, the amount of data collected for these plies is limited, and they are not used in any way to support the calculation of the Reserves in this report. Although considered unlikely, if in the future the long term view on low-ash price premiums is lowered, additional quality data on these plies may help to increase the Reserves which may be reported at this mine, and extend the expected Mine Life.

23.3. Environmental, Permitting and Social Considerations

The mine requires the granting of a small mining lease in the north-west part of the mine to deliver all of the Reserves in this Technical Report Summary. Although there are no perceived obstacles to the successful granting of this lease area it is recommended that appropriate applications are submitted as required.

23.4. Economic Analysis

The ability of Peabody, or any coal company, to achieve production and financial projections is dependent on numerous factors. These factors primarily include site-specific geological conditions, increasing strip ratio, the capabilities of management and mine personnel, level of success in acquiring reserves and surface properties, coal sales prices and market conditions, environmental issues, securing permit renewals and bonds, and developing and operating mines in a safe and efficient manner. Unforeseen changes in legislation and new industry developments could substantially alter the performance of any mining company. It is recommended that those factors should be assessed regularly according to the Company's internal control and material changes are to be reflected in the future reserve estimates.

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Websites:

Wilpinjong Public Plans and Reports, <https://www.peabodyenergy.com/Operations/Australia-Mining/New-South-Wales-Mining/Wilpinjong-Mine/Approvals,-Plans-Reports>

Google Maps

Minview (NSW Government)

25. RELIANCE ON INFORMATION PROVIDED BY THE REGISTRANT

This technical report summary has been prepared by Qualified Persons who are employees of the registrant. In their specific areas of expertise, these Qualified persons have contributed to the appropriate sections of this report. These Qualified Persons have also relied on the information provided by the Company for property control, marketing, material contracts, environmental studies, permitting and macro-economic assumptions as stated in Section 3.2, Section 16, Section 17, and Section 19. As the mine has been in operation for many years, the Company has considerable experience in those areas. The Qualified Persons have taken all appropriate steps, in their professional opinion, to ensure that the above information from the Company is sound.



TECHNICAL REPORT SUMMARY COPPABELLA- MOORVALE JOINT VENTURE (CMJV)

In accordance with the requirements of SEC Regulation S-K (subpart 1300)

EFFECTIVE DATE: DECEMBER 31, 2021

REPORT DATE: FEBRUARY 18, 2022

**PEABODY ENERGY CORPORATION
701 Market Street, Saint Louis, Missouri 63101**

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SIGNATURE PAGE**Title:**

Technical Report Summary - Coppabella-Moorvale Joint Venture (CMJV), S-K1300
Peabody Energy Corporation (BTU)

Effective Date of Report:

December 31, 2021

Project Location:

The Coppabella Moorvale Joint Venture (CMJV) controls multiple tenements authorizing exploration and extraction of coal approximately 100-130 kilometres (60-80 miles) southwest of Mackay in Queensland, AUSTRALIA. These include 2 operating mines and a project under construction as well as several exploration plays in various states of development. This report documents the Resources and Reserves supporting the Coppabella and Moorvale coal mines and the Moorvale South project which has commenced development. Additional Resources held by the CMJV under surrounding exploration and other tenements are not documented here. Peabody Energy holds the majority interest of 73.3% in the CMJV and performs the operational management of the coal mining and exploration assets.

Qualified Person(s) Preparers:

Peabody Energy Corporation

/s/ James Lawell and Duwayne Rossouw

Geology (Prepared Sections: 1,2,3,4,5,6,7,8,9,10,11,21,22,23,24,25)

/s/ Brian Neilsen

Mining Engineering (Prepared Sections: 1,2,3,4,5,12,13,14,15,16,17,18,19,20,21,22,23,24,25)

Signature Date:

February 18, 2022

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1. EXECUTIVE SUMMARY

1.1. Disclaimer

This Technical Report Summary for the Coppabella Moorvale Joint Venture (CMJV) coal mines has been prepared by a team of qualified persons (QP) on staff at Peabody Energy. The purpose of this statement is to provide a report of the Coal Resources and Reserves supporting the existing and proposed coal mines held by the CMJV in accordance with SK-1300. All information within this report has been prepared based on present knowledge and assumptions.

1.2. Property Description

The CMJV controls multiple mining and exploration tenements in the northeast of the Bowen Basin, approximately 100-140 kilometres south-west of the city of Mackay in Central Queensland, AUSTRALIA (Figure 1).

The most developed of these include the tenements listed in Table 1 authorizing the operating Coppabella and Moorvale coal mines and development of a third coal mine, Moorvale South. For the purposes of this report, CMJV is defined by this group of tenements. The operations target the Rangal Coal Measures producing PCI and coking coal (with minor quantities of thermal by-product) for the export market.

Mine	Tenement Number	Tenement Name	Date Granted	Expiry Date	Area (Ha)	Purpose	Interest
Coppabella	ML 70161	Johnson	14/05/1998	31/05/2040	989	Coal	CMJV
Coppabella	ML 70163	Johnson Extended	14/05/1998	31/05/2040	41.02	Coal	CMJV
Coppabella	ML 70164	Johnson Extended No. 2	13/08/1998	31/05/2040	1774	Coal	CMJV
Coppabella	ML 70236	Coppabella East	18/04/2002	30/04/2023	581.7	Coal	CMJV
Coppabella	ML 70237	Coppabella South	31/01/2002	31/01/2023	348.7	Coal	CMJV
Coppabella	ML 70384	Johnson Extended No. 3	25/11/2014	30/11/2035	46.52	Coal	CMJV
Coppabella	ML 70385	Johnson Extended No. 4	25/11/2014	30/11/2035	45.25	Coal	CMJV
Coppabella	ML 70386	Johnson Extended No. 5	25/11/2014	30/11/2035	43.91	Coal	CMJV
Coppabella	ML 70387	Johnson Extended No. 6	25/11/2014	30/11/2035	42.56	Coal	CMJV
Moorvale	ML 70290	Moorvale A	5/12/2002	31/12/2023	3473	Coal	CMJV
Moorvale	ML 70291	Moorvale B	5/12/2002	31/12/2023	365.7	Coal	CMJV
Moorvale	ML 70319	Moorvale C	1/11/2007	30/11/2028	534.2	Coal	CMJV
Moorvale South	ML 70354	Olive Downs A	2/04/2009	30/04/2030	1631.6	Coal	CMJV
Moorvale South	ML 70355	Olive Downs B	2/04/2009	30/04/2030	107.2	Infrastructure	CMJV
Moorvale South	MDL 3034	Moorvale South	14/02/2019	29/02/2024	3435	Coal	CMJV
Total					13459		

Table 1. CMJV Leases subject to this report

The CMJV operates under tenure issued by the State Government of Queensland. Tenement holders are bound by the Mineral Resources Act 1989 and the Mineral Resources Regulation 2013 which define the laws pertaining to coal exploration and mining in Queensland. Peabody Energy Australia Pty Ltd is the authorized holder representative (AHR) for these tenements and Peabody Coppabella Pty Ltd is the authorized tenement holder. The CMJV coal mining

operations are managed by Peabody Energy Australia PCI Pty Ltd (PEA PCI) on behalf of the CMJV which is structured as follows;

- Peabody Coppabella Pty Ltd 73.3%
- CITIC Australia Coppabella Pty Ltd 14.0%
- Winchester Coal Operations Pty Ltd 7.0%
- KC Resources Pty Ltd 3.7%
- NS Coal Pty Ltd 2.0%



Figure 1. Location Map

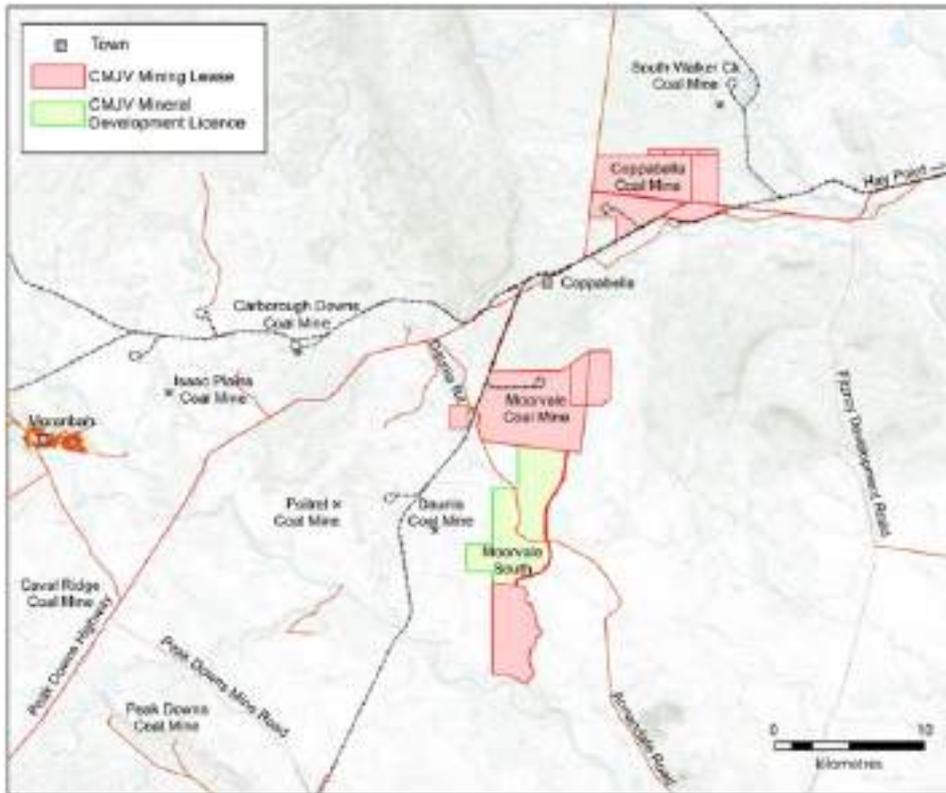


Figure 2. CMJV Tenements

The CMJV properties currently have all required permits to produce the coal products described as Reserves in this summary document. Mining Lease Renewals are necessary over some tenements, but these are expected to be granted as required.

Recently introduced legislation in the State of Queensland requires the preparation of Progressive Rehabilitation and Closure Plans (PRC Plans). These are required to be completed at each of the sites over the next few years. As the CMJV operations are covered by transitional arrangements within the legislation, there are currently no significant risks perceived by the Qualified Person that would impact on the plans that have been developed.

1.3. Geology and Mineralization

The CMJV coal reserves lie along the eastern limb of the Nebo Synclinorium in the north of the Permo-Triassic Bowen Basin. The target coal seams are the Late-Permian Rangal Coal Measures (RCM) which are mined at numerous locations in the Nebo Synclinorium including immediately along strike and up-dip of the CMJV tenements at the Daunia, Carborough Downs, and South Walker Creek mines. The interpreted regional geology of the central Nebo Synclinorium is presented in Figure 14.

The seams of the Rangal Coal Measures (RCM) formed in an alluvial setting at the very end of the Permian ~250 Ma. The coal seams show dulling upwards trends where the percentage of inertinite over vitrinite is higher towards the top of the seams. The seams are divided into plies and working sections that enable selective mining where the seam properties vary significantly

from base to top. The overlying Triassic Rewan Group sandstones, siltstones and mudstones are devoid of coal.

Regional naming conventions divide the RCM coal into 3 main seam groups; the Phillips Seam, the Leichhardt Seam and the Vermont Upper Seam. The Vermont Lower Seam is part of the underlying Fort Cooper Coal Measures (FCCM) which are separated from the RCM by the regionally extensive Yarrabee Tuff Bed (YT). The Vermont Lower and Vermont Upper are commonly found together as a single seam with a half meter parting of tuff (the Vermont Seam). Historical interpretations have led to some naming differences between regions of the Nebo Synclinorium with the result that seams and plies with the same name may not be directly equivalent between mines.

In the Moorvale and Coppabella mines, the Phillips and Leichhardt plies of the RCM are coalesced to form a single seam up to 10 m thick. Splitting of the seam occurs along the margins of the mining areas and historically, some of these splits have been mined. Splitting is more pronounced at Moorvale South where the Leichhardt plies form 2 main seams instead of one. The Vermont plies are not targeted in the Coppabella and Moorvale mines, but resources have been defined at Moorvale South where this seam is expected to contribute to the overall production from this mine. The resources and reserves reported here are derived from the Phillips, Leichardt, and Vermont seams.

Folding and faulting during the late Triassic formed a series of synclines and thrust blocks that together form the north-northwest trending keel shaped Nebo Synclinorium. Deformation is strongest in the east where subsidiary folding has formed the Carborough and Coxendean synclines along the eastern basin margin. The coal measures are further disrupted by Cretaceous granitic intrusions, particularly the Bundarra Granodiorite which forms a dome around which the coal measures outcrop. The Coppabella and Moorvale mines are located along this eastern outcrop line where the coal seams dip to the northeast into the syncline keel. The Moorvale South deposit lies across the thinned northern neck of the Coxendean Syncline where several regional scale thrusts and secondary granitic intrusions have modified the overall structure of the synclinorium.

Relaxation during the Tertiary created numerous normal faults with a predominantly northeast strike. Basaltic intrusions form dykes, sills and plugs along these fault systems. Heat affected and coked coal are generally localised around these intrusions which can be common in areas such as Coppabella east pit, and areas of Moorvale South.

The coal would be classified as Low Volatile Bituminous coal (ASTM).

1.4. Exploration

Exploration for coal commenced in the Coppabella region in 1964 and has since led to the establishment of several world class mines producing hard coking coal (Hail Creek) and PCI coal (Coppabella, South Walker Creek) with thermal coal as a minor by product.

The precursor tenements to the CMJV mine leases were amalgamated under various consortiums headed by Macarthur Coal Pty Ltd by the late 1990's. Macarthur Coal established the size and geometry of the deposits through 2D seismic and drilling until being acquired by Peabody in 2012 in an essentially seamless transition. Since then, additional drilling and seismic have been acquired by Arrow Energy and Peabody totaling 4793 holes, 43.5 km of 2D seismic, 5.9km² of 3D seismic over the CMJV tenements. All drilling and seismic activities have been conducted to the standards within the Bowen Basin coal exploration industry and, except where otherwise noted, are considered of acceptable quality for inclusion in resource estimation.

Rotary or chip drilling has been used to establish the depth of coal seams on the tenement package and selected holes were then twinned with standard HQ-sized (61 mm) partly cored holes. There are 3544 chip holes, 1240 partially cored holes, and 9 fully cored holes within the resource area in the CMJV deposits. The drilling data is managed in the Peabody proprietary database called GeoCORE which stores data from Peabody projects on a global basis.

All drill holes were down hole geophysically logged and the results used for lithological validation purposes and subsequent correction of coal seam roof and floor depths. Additional drill hole and coal quality data has been obtained from adjacent tenements through data sharing arrangements with neighbouring coal miners and overlapping coal seam gas explorers. The

data provides additional confidence to the overall geological structural setting and coal quality trends.

Coal quality is ascertained through submission of bore core samples to National Association of Testing Authorities, Australia (NATA) registered laboratories following the appropriate Australian Standards for coal testing.

Geological exploration activities continue to be undertaken to provide input to detailed mine planning and engineering studies to refine the understanding of geological structures and coal quality.

1.5. Development and Operations

The CMJV currently produces export quality, low-volatile PCI coal at a rate of ~2.9-3.4Mtpa from the Coppabella coal mine and ~1.0-1.5 Mtpa from the Moorvale coal mine. Coal is mined from the Rangals Coal Measures.

LV-PCI coal is produced at Coppabella through conventional strip mining, using a dragline with truck and shovel fleets for pre-stripping operations. The average coal seam thickness at Coppabella is ~10.5 metres. Coppabella has Run-of-Mine (ROM) capacity of up to 5 million tonnes of coal per annum (100 percent basis), with coal processing carried out through a 770 tph coal handling and preparation plant (CHPP)

LV-PCI coal, Weak Coking coal and Thermal coal are produced at Moorvale, where the average resource thickness is 10 metres and mining operations are undertaken using trucks and excavators. Moorvale Mine has the capacity to process ~4 million tonnes of ROM coal per annum (100 percent basis) with coal processing carried out through a 600 tph CHPP.

The Moorvale South Project is currently under development. When commissioned, this project is expected to generate ~1-1.5Mtpa of Semi-Hard Coking and PCI Coal. ROM Coal from Moorvale South will be processed through the Moorvale CHPP.

Coal is railed to the Dalrymple Bay Coal Terminal, south of Mackay, then exported to customers in North Asia, China, Brazil and Europe.

1.6. Coal Resource and Reserve Estimates

Coal resources and reserves have been estimated for the relevant CMJV properties based on the potential for extraction by open cut and underground methods. The open cut resources have been determined using an internal Pit Optimisation process, with underground resources limited to a depth of cover less than 500 m depth at Coppabella and Moorvale South, undergrounds resources are limited to a depth of cover less than 300m at Moorvale mine. The resources are contained within the Philips, Leichhardt, and Vermont seams of the Rangal Coal Measures (RCM).

The resources are limited by the tenement boundaries. Seams with thickness less than 0.3m thickness or full seam ash greater than 50% (adb) are also excluded. In-situ density was estimated at an assumed 6% insitu moisture for Coppabella and Moorvale South, and 5.7% insitu moisture for Moorvale using the Preston-Sanders formula to adjust the air-dried density determined in the laboratory to what is expected in the ground. The resource estimates are on an in-situ basis and do not account for dilution or loss during mining.

The CMJV tenements stipulated in Table 1 contain 231.3 million tonnes.

The area covered by these estimates is displayed in Figure 43 to Figure 48 .

Deposit	Seam	Measured					Indicated					Inferred					Total				
		In situ Tonne (millions)	Wob (s.d.)	S/M (s.d.)	S/Phos (s.d.)	CSN	In situ Tonne (millions)	Wob (s.d.)	S/M (s.d.)	S/Phos (s.d.)	CSN	In situ Tonne (millions)	Wob (s.d.)	S/M (s.d.)	S/Phos (s.d.)	CSN	In situ Tonne (millions)	Wob (s.d.)	S/M (s.d.)	S/Phos (s.d.)	CSN
Coppabella	Leichardt Uppers	1.9	22.1	12.2	0.117		4.7	21.6	10.4	0.131		29.0	19.9	10.0	0.090		29.0	20.5	10.0	0.097	
	Leichardt Lower	14.2	15.0	13.2	0.114		54.7	13.6	13.0	0.092		67.3	14.0	12.8	0.086		136.2	14.0	12.9	0.092	
Coppabella	All seams	16.1	15.8	12.1	0.114		59.4	14.2	12.8	0.094		96.3	15.5	12.2	0.088		165.0	15.2	12.5	0.090	
Moorvale	Phillips	4.0	16.5	17.1	0.108	2	1.8	16.3	17.1	0.129	3	-	-	-	-	-	5.8	16.4	17.1	0.135	2
	Leichardt Uppers	3.7	22.0	16.1	0.117	1	1.7	20.4	15.8	0.134	1	-	-	-	-	-	5.4	21.5	16.0	0.136	1
	Leichardt Lower	14.9	17.9	16.8	0.112	1	15.4	16.9	16.7	0.128	2	6.5	19.9	16.7	0.095	2	34.8	17.1	16.7	0.125	2
Moorvale	All seams	22.6	18.3	16.7	0.112	2	16.9	17.2	16.7	0.107	2	6.5	15.9	16.7	0.085	2	46.0	17.3	16.7	0.106	2
Moorvale South ML	Leichardt Lower 2	2.8	18.5	18.5	-	2	0.2	15.5	18.1	-	2	0.2	19.7	19.3	-	5	3.2	18.5	18.5	-	2
	Leichardt Lower 3 Vermont Upper	0.3	26.6	18.0	-	4	-	-	-	-	-	0.2	28.5	18.2	-	6	1.0	27.0	18.0	-	4
Moorvale South ML	All seams	0.3	13.3	18.6	-	5	0.4	15.9	15.5	-	3	0.8	14.5	16.4	-	3	1.2	14.3	17.1	-	4
Moorvale South MDL	Leichardt Lower 2	-	-	-	-	-	5.7	19.7	18.4	-	3	2.8	17.1	17.6	-	2	8.6	18.6	18.1	-	3
	Leichardt Lower 3 Vermont Upper	-	-	-	-	-	0.7	17.1	15.5	-	7	0.6	21.7	17.8	-	6	1.3	19.3	18.6	-	6
	All seams	-	-	-	-	-	1.7	14.7	18.3	-	5	1.4	13.0	18.1	-	4	3.2	13.9	18.3	-	4
Moorvale South MDL	All seams	-	-	-	-	-	8.1	18.4	18.3	-	3	5.9	16.6	17.7	-	3	14.1	17.6	18.3	-	3
CMJV Total		12.3					85.0					103.7					231.5				

Table 2. Total insitu coal resources on CMJV operations tenements in Million tonnes. Quality basis is air dried
 *Raw phosphorous not modelled for Moorvale South ML & MDL, raw CSN not modelled for Coppabella

Estimated Reserves for the CMJV are shown in Table 3 and Table 4 at both Run of Mine (ROM) and Marketable reference points respectively.

Site	Run of Mine Reserves	Quantity (Mtonnes) @100%	Quantity (Mtonnes) @73.3% Peabody Share	Ash (% arb)	As - Received Moisture (%)	Inherent Moisture (%)
Coppabella	Proven Coal Reserves	12.8	9.4	17.0	7.0	1.6
	Probable Coal Reserves	7.1	5.2	20.6	7.0	2.0
	Site Sub-Total	19.9	14.6	18.3	7.0	1.7
Moorvale	Proven Coal Reserves	2.5	1.9	20.4	6.1	1.6
	Probable Coal Reserves	0.0	0.0	-	-	-
	Site Sub-Total	2.5	1.9	20.4	6.1	1.6
Moorvale South	Proven Coal Reserves	6.6	4.8	21.6	7.0	1.5
	Probable Coal Reserves	3.9	2.9	18.4	7.0	1.4
	Site Sub-Total	10.5	7.7	20.4	7.0	1.5
CMJV TOTAL	Proven Coal Reserves	21.9	16.1	18.8	6.9	1.6
	Probable Coal Reserves	11.0	8.1	19.8	7.0	1.8
	TOTAL	32.9	24.1	19.1	6.9	1.6

Table 3. CMJV Run of Mine (ROM) Reserves

Site	Marketable Reserves	Quantity (Mtonnes)	Quantity (Mtonnes) @73.3% Peabody Share	Ash (% adb)	Phos (% adb)	Sulphur (% adb)	Volatile Matter (% adb)	As - Received Moisture (%)
Coppabella	Proven Coal Reserves	10.4	7.6	8.9	0.072	0.22	10.3	9.0
	Probable Coal Reserves	4.9	3.6	9.4	0.071	0.19	8.6	9.0
	Site Sub-Total	15.3	11.2	9.1	0.072	0.21	9.8	9.0
Moorvale	Proven Coal Reserves	2.0	1.4	11.8	0.121	0.28	16.2	9.5
	Probable Coal Reserves	0.0	0.0	-	-	-	-	-
	Site Sub-Total	2.0	1.4	11.8	0.121	0.28	16.2	9.5
Moorvale South	Proven Coal Reserves	4.4	3.3	11.0	0.059	0.41	18.4	9.0
	Probable Coal Reserves	2.8	2.0	9.7	0.062	0.39	17.4	9.0
	Site Sub-Total	7.2	5.3	10.5	0.060	0.40	18.0	9.0
CMJV TOTAL	Proven Coal Reserves	16.8	12.3	9.8	0.074	0.28	13.1	9.1
	Probable Coal Reserves	7.7	5.6	9.5	0.068	0.26	11.8	9.0
	TOTAL	24.4	17.9	9.7	0.072	0.27	12.7	9.0

Table 4. CMJV Marketable Reserves

1.7. Economic Analysis

The coal reserve estimates are supported by the Life of Mine (LOM) plans that have been prepared to be compliant with the requirements of Regulation S-K 1300.

These plans mine the defined Reserves within a 7 year period, during which time the combined operations are projected to produce ~24.4 million tonnes of product with a total cost of \$3,340 million and a capital expenditure of \$108 million. The LOM plan will produce \$450 million in positive total cash flow and ~\$358 million Net Present Value (NPV).

1.8. Conclusion

The CMJV operations include 2 operating coal mines producing ~4-4.5Mtpa of high-quality export PCI coal and a development project scheduled to produce ~1.0-1.5Mtpa of Semi-Hard Coking or PCI coal by the end of 2022.

The data has been determined by the Qualified Persons to be adequate in quantity and reliability to support the coal resource estimates in this Technical Report Summary.

The ability of Peabody, or any coal company, to achieve production and financial projections is dependent on numerous factors. These factors primarily include site-specific geological conditions, the capabilities of management and mine personnel, level of success in acquiring reserves and surface properties, coal sales prices and market conditions, environmental issues, securing permits and bonds, and developing and operating mines in a safe and efficient manner. Unforeseen changes in legislation and new industry developments could substantially alter the performance of any mining company.

Coal mining is carried out in an environment where not all events are predictable. While an effective management team can identify known risks and take measures to manage and/or mitigate these risks, there is still the possibility of unexpected and unpredictable events

occurring. It is not possible therefore to totally remove all risks or state with certainty that an event that may have a material impact on the operation of a coal mine will not occur.

1.9. Recommendations

1.9.1. Geology and Resources

It is recommended that appropriate actions are undertaken to convert Inferred Resources in advance of mining at Coppabella to at least an Indicated level. Subsequent transfer of these Resources to Reserves is highly likely.

It is recommended that appropriate actions are undertaken to investigate the extent of igneous intrusives at Moorvale South and their subsequent impact on coking properties of the affected seams.

1.9.2. Mining Processing and Reserves

The following recommendations are made with respect to Reserves:

- Continue study works to facilitate the continuation of Coppabella mining into the north-eastern area of the mining leases (the 'Humbug Gully' area).
- With increasing depths of the Moorvale deposit challenging the economics of continued Opencut mining, continue to evaluate opportunities to develop the remaining Resources at Moorvale through Underground mining methods.
- Continue study work on additional Moorvale South Resources. Additional conversion to Reserves is highly likely, but subject to completion of Pre-Feasibility studies.

1.9.3. Environmental, Permitting and Social Considerations

With recent legislation changes in Queensland, all mine sites are required to submit Progressive Rehabilitation and Closure Plans over the course of the next two years. As these plans are developed, it is recommended that the potential impact on current and future Reserve estimates is assessed against the commitments required by these documents.

1.9.4. Economic Analysis

The ability of Peabody, or any coal company, to achieve production and financial projections is dependent on numerous factors. These factors primarily include site-specific geological conditions, increasing strip ratio, the capabilities of management and mine personnel, level of success in acquiring reserves and surface properties, coal sales prices and market conditions, environmental issues, securing permit renewals and bonds, and developing and operating mines in a safe and efficient manner. Unforeseen changes in legislation and new industry developments could substantially alter the performance of any mining company. It is recommended that those factors should be assessed regularly according to the Company's internal control and material changes are to be reflected in the future reserve estimates.

2. INTRODUCTION

2.1. Introduction

This Technical Report Summary was prepared for the Coppabella Moorvale Joint Venture (CMJV) documenting the Coal Resources and Reserves for a group of coal mines in Central Queensland, Australia. The report describes 14 Mining Leases (ML) and 1 Mineral Development Licence (MDL) which support 2 operating coal mines and a third mine in development. Peabody Energy Corporation holds a 73.3% interest in the CMJV through a wholly owned subsidiary, Peabody Energy Australia PCI Pty Ltd.

This Technical Report Summary for the CMJV has been completed in accordance with the United States' Securities and Exchange Commission (SEC) S-K 1300. The S-K 1300 sets the standards for the reporting of scientific and technical information on mineral projects and specifies that the Technical Report Summary must be prepared by or under the supervision of a Qualified Person(s).

This report is the first time filing for the registrant. The report summarizes information on the operation and Coal Reserve estimates. The information will be used to support disclosures in Peabody's annual SEC filings.

The Qualified Persons identified technical risks related to the reporting and development of these Coal Resources and Reserves. This report is not intended to be a detailed marketing, and/or mining feasibility study and is for advisory purposes only.

2.2. Terms of Reference

Coal Resource and Reserve estimates are reported according to the definitions of S-K 1300 on a 100% controlled basis. Reserves are also stated on a Peabody share (73.3%) basis. The point of reference for Coal Resource estimates is coal as in-situ tonnages. The point of reference for Coal Reserves estimates is coal as the saleable product(s). Reserve Estimates are also provided on a Run of Mine (ROM) basis, prior to processing operations taking place.

Coal Resource estimates are provided in this report exclusive of Coal Reserves.

Units used in this report are expressed in the Metric system, unless otherwise noted. Currencies are expressed in year-end 2021 AUD dollars. (These units differ to those summarized in the Annual 10-K filing, which are Imperial Units and USD.)

Reserve estimates developed for this report are provided as updates to Reserve estimates previously reported in Peabody's annual 10-K submissions. These updates are the first to be prepared using the S-K 1300 rules. Resources are reported for the first time for these properties.

2.3. Sources of Information and References

The sources of information used in this Technical Report Summary include several systems adopted by Peabody that are integrated into a process for estimating and reporting coal Resources and Reserves.

- GeoCore - Geological database which contains all data for drill hole geology, down hole geophysics, drill collar survey and coal quality information;
- Task Manager – A user interface application for entering, validating and exporting the relevant GeoCore project database;
- LOM - Life of Mine Planning includes mine layout, scheduling and economic evaluation in a standardized process used across Peabody's operations;
- LMS – Land Management System which include all property and lease information to constrain the results of coal resource estimates determined from geological modelling and mine planning;
- Geology and mining software – Specifically, the Geographical Information System programs Mapinfo and ArcMap for mapping of cadastral, structure, coal quality and geological data and Maptek Vulcan for creating the 3D geological models and mine plans;
- In-house marketing and supply studies from the Global Analytics Group

2.4. Involvement of Qualified Persons

The following Peabody employees serve as Qualified Persons (QPs) for this report as defined in S-K 1300.

- Mining Engineering: Brian Neilsen (BEng(Hons), MAusIMM(CP), RPEQ)
- Geology: James Lawell (BSc(Hons), MAusIMM)

Mr. Neilsen is employed as Director of Engineering – Opencut Mining at Peabody's Corporate Office in Brisbane, Australia. He has responsibilities for supporting mine planning and design at Peabody's operational open cut mines, particularly regarding the Australian assets. He has over 25 years of coal industry experience in opencut coal mines in the US and Australia. He has regularly travelled to each of the company's Australian Opencut mines. His latest visit to the CMJV mines was in May of 2021, when he took part in a tour of the entire operation.

Mr. Lawell is employed as a Sr. Resource Geologist. He is located at Peabody's Corporate Office in Brisbane, Australia with responsibilities for geological modelling of Peabody's Australian deposits across multiple coal basins. As part of his role, he often travels to Peabody's active coal mines and projects, and was previously employed directly at the CMJV operations as a Site Geologist. His latest visit to the CMJV mines was in May of 2021, when he covered mine geologist duties of the entire operation.

Mr. Rossouw is employed as a Mine Geologist. He is located at Coppabella Moorvale in central Queensland, he is responsible for the geological function across the CMJV operations. As part of his role, he was previously employed as resource manager in the Brisbane office. He has extensive experience in coal across 4 continents and numerous Geological settings.

3. PROPERTY DESCRIPTION

3.1. Location

The CMJV mines are located approximately 120 kilometres south-west of Mackay, near the township of Coppabella, within the Isaac Regional Local Government Area, in central Queensland (QLD), Australia. The mines are managed by Peabody Energy Australia PCI Pty Ltd (PEAPCI), a wholly owned subsidiary of Peabody Energy Australia Pty Limited (Peabody Energy). The general location of the mines are shown in Figure 3.

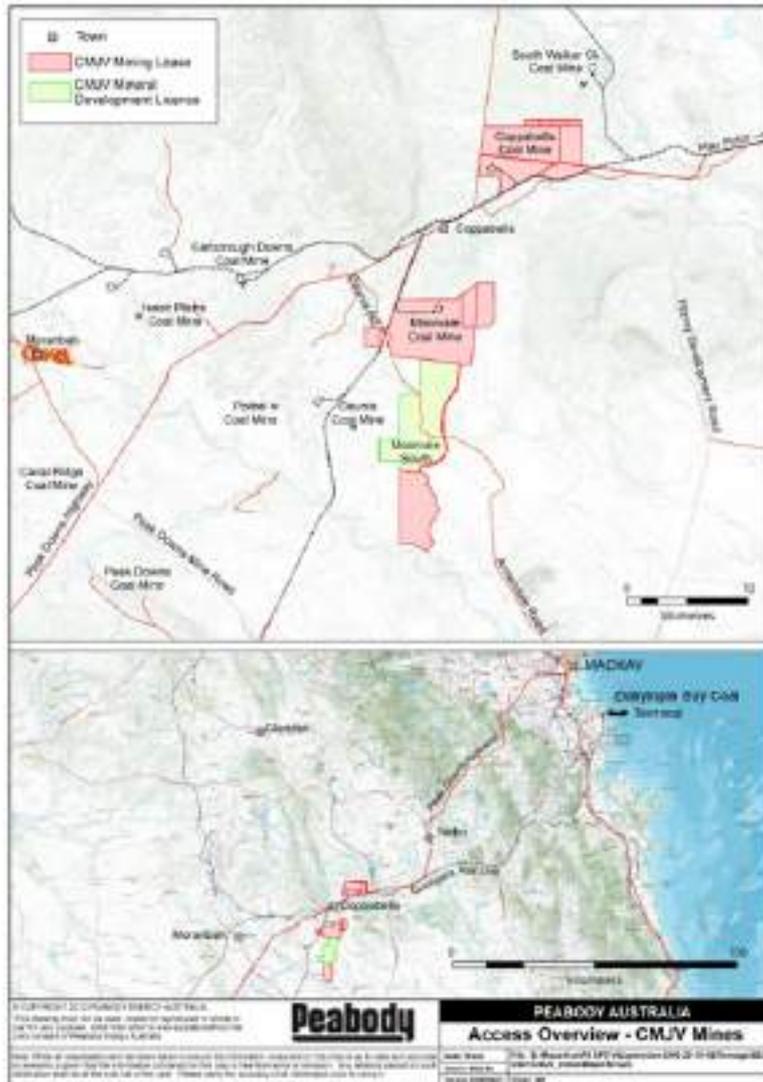


Figure 3. Access Map

The mine produces metalliferous and thermal coal products which are transported by rail to ports for export to customers for use in steel making and electricity generation. Open cut mining operations and associated mobile equipment movements are undertaken 24 hours per day, seven days per week.

3.2. Property Rights

The CMJV operate under tenure issued by the State Government of Queensland. Tenement holders are bound by the Mineral Resources Act 1989 and the Mineral Resources Regulation 2013 which define the laws pertaining to coal exploration and mining in Queensland. Under the system administered by the Department of Natural Resources, Mines and Energy (DNRME), tenements are held as either EPC (Exploration Permit Coal), MDL (Mineral Development Licence) or ML (Mining Lease).

The CMJV assets described in this report include 14 Mining Leases (ML) and 1 Mineral Development Licence (MDL) which support 2 operating coal mines and a third mine in development targeting the Rangal Coal Measures of the Blackwater Group.

Mine	Tenement Number	Tenement Name	Date Granted	Expiry Date	Area (Ha)	Purpose	Interest
Coppabella	ML 70161	Johnson	14/05/1998	31/05/2040	989	Coal	CMJV
Coppabella	ML 70163	Johnson Extended	14/05/1998	31/05/2040	41.02	Coal	CMJV
Coppabella	ML 70164	Johnson Extended No. 2	13/08/1998	31/05/2040	1774	Coal	CMJV
Coppabella	ML 70236	Coppabella East	18/04/2002	30/04/2023	581.7	Coal	CMJV
Coppabella	ML 70237	Coppabella South	31/01/2002	31/01/2023	348.7	Coal	CMJV
Coppabella	ML 70384	Johnson Extended No. 3	25/11/2014	30/11/2035	46.52	Coal	CMJV
Coppabella	ML 70385	Johnson Extended No. 4	25/11/2014	30/11/2035	45.25	Coal	CMJV
Coppabella	ML 70386	Johnson Extended No. 5	25/11/2014	30/11/2035	43.91	Coal	CMJV
Coppabella	ML 70387	Johnson Extended No. 6	25/11/2014	30/11/2035	42.56	Coal	CMJV
Moorvale	ML 70290	Moorvale A	5/12/2002	31/12/2023	3473	Coal	CMJV
Moorvale	ML 70291	Moorvale B	5/12/2002	31/12/2023	365.7	Coal	CMJV
Moorvale	ML 70319	Moorvale C	1/11/2007	30/11/2028	534.2	Coal	CMJV
Moorvale South	ML 70354	Olive Downs A	2/04/2009	30/04/2030	1631.6	Coal	CMJV
Moorvale South	ML 70355	Olive Downs B	2/04/2009	30/04/2030	107.2	Infrastructure	CMJV
Moorvale South	MDL 3034	Moorvale South	14/02/2019	29/02/2024	3435	Coal	CMJV

Table 5. Tenement Details

Peabody Energy Australia Pty Ltd is the authorized holder representative (AHR) for these tenements and Peabody Coppabella Pty Ltd is the authorized tenement holder. The CMJV coal mining operations are managed by Peabody Energy Australia PCI Pty Ltd (PEA PCI) on behalf of the CMJV which is structured as follows;

- Peabody Coppabella Pty Ltd 73.3%
- CITIC Australia Coppabella Pty Ltd 14.0%
- Winchester Coal Operations Pty Ltd 7.0%
- KC Resources Pty Ltd 3.7%
- NS Coal Pty Ltd 2.0%

Together, the leases cover 13,459 hectares stretching north and south of the town of Coppabella in Central Queensland, Australia (Figure 4). They fall within the Emerald Mining District and the Isaac Regional Local Government Area.

Coppabella

The Coppabella coal mine is authorized under 5 ML's with a total surface area of 3734 ha (Figure 5). There are an additional 4 adjacent mining leases to the north of the current opencut mining area which are currently conditioned for underground mining (Johnson Extended 3, 4, 5 & 6) over an area of 178 ha. The first lease was granted in 1998 and the most recent granted in 2014 with the main mining leases due for renewal before May 2040 and other, peripheral leases requiring renewal between January 2023 and November 2035.

Moorvale

Moorvale comprises 3 ML's with a total surface area of 4373 ha (Figure 6). The first 2 leases (Moorvale A and B) were granted in 2002 and are due for renewal before December 2023, while the third (Moorvale C) was granted in 2007 and is due for renewal before November 2028. It should be noted that the Moorvale A and B MLs currently have registered ownership that is different to the CMJV ownership structure, however the interests held by each of the JV partners over these leases are, by agreement, the same as for the overall CMJV.

Moorvale South

The proposed Moorvale South coal mine is authorized under 2 ML's, with eventual expansion considered on an adjacent MDL, which all together cover 5067 ha (Figure 7). The 2 ML's were granted in 2009 and require renewal before April 2030, while the MDL was granted in 2019 and requires renewal before February 2024. Olive Downs A (ML 70354) covers the proposed initial mining area and Olive Downs B (ML 70355) is reserved for infrastructure only. Exploration activities are authorized on MDL 3034. Although the area covered by ML 70355 is within the defined limits of MDL 3034, it is excluded (pursuant to section 182 of the Mineral Resources Act 1989) as the ML was current at the time the MDL application was lodged.



Figure 6. Coal Control Property Map - Moorvale

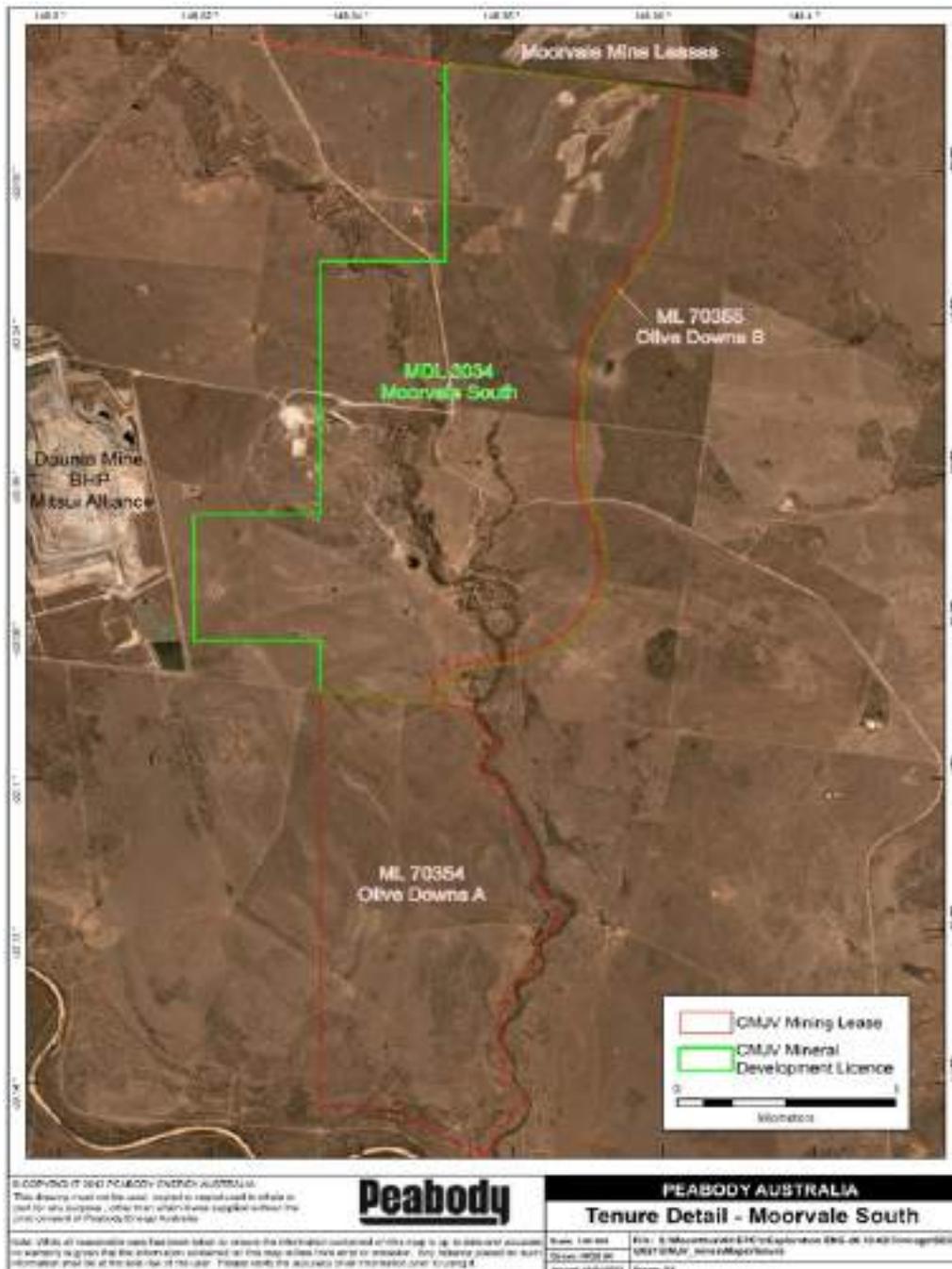


Figure 7. Coal Control Property Map – Moorvale South

Surface Ownership

The following figures illustrate the status of surface ownership. The CMJV, through Peabody Bistrotel, owns significant parcels of land covering the entirety of the Coppabella mine, and a significant part of Moorvale Mine. The surface ownership of other tenements is to a variety of Freehold owners, with compensation agreements in place to enable mining and exploration related activities to be conducted as allowed under the conditions of various Environmental Authorisations (EAs).

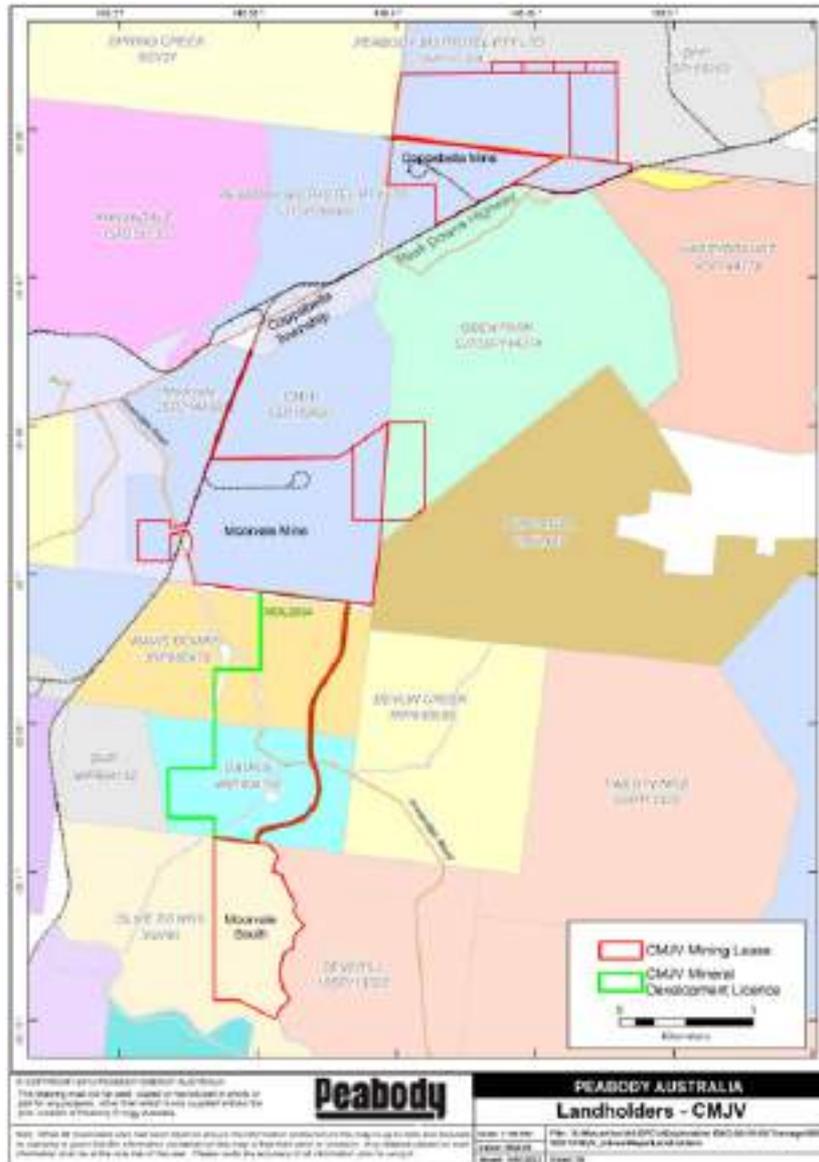


Figure 8. Landholder Details

LOT	PLAN	Name	Tenure	Primary Land Use	Owner	Area (Ha)
1	SP107309	Coppabella Mine	Freehold	Extractive (mining)	Peabody Bistrotel Pty Ltd	3505
1	SP144274	Coppabella Mine	Lands Lease	Extractive (mining)	Peabody Bistrotel Pty Ltd	149
9	SP113033	Coppabella Mine	Lands Lease	Extractive (mining)	Peabody Bistrotel Pty Ltd	926
1	SP144274	Coppabella Mine	Lands Lease	Extractive (mining)	Peabody Bistrotel Pty Ltd	148
1	SP158697	Moorvale Mine	Freehold	Extractive (mining)	Coppabella Moorvale JV	6239
1	SP158697	Moorvale Mine	Freehold	Extractive (mining)	Coppabella Moorvale JV	538
3	RP866478	Mavis Downs	Freehold	Cattle breeding and fattening	Private Owner A	1756
5	RP866478	Mavis Downs	Freehold	Cattle breeding and fattening	Private Owner A	2209
4	RP866478	Mavis Downs	Freehold	Cattle breeding and fattening	Private Owner A	320
4	RP894192	Moorvale	Freehold	Cattle breeding and fattening	Private Owner B	1057
4	RP894192	Moorvale	Freehold	Cattle breeding and fattening	Private Owner B	1577
4	RP894192	Moorvale	Freehold	Cattle breeding and fattening	Private Owner B	402
2	SP214498	Moorvale	Freehold	Cattle breeding and fattening	Private Owner B	1402
5270	SP144274	Oben Park	Lands Lease	Cattle breeding and fattening	Private Owner C	8204
3	GV90	Olive Downs	Freehold	Cattle breeding and fattening	Private Owner D	3938

Table 6. Overlapping Land Ownership Details

The CMJV tenements are overlapped by exploration permits for petroleum (EPP or ATP) held by Arrow Energy operating as CH4 Pty Ltd (Authority to Prospect 1103) with a small area of MDL 3020 overlapped by Eureka Petroleum Pty Ltd (Authority to Prospect 814).

Arrow CSG (ATP 364) Pty Ltd, AGL Energy Limited and CH4 Pty Ltd are the holders of tenement ATP 1103 which was granted on the 23 December 2010 and replaced ATP 364. ATP 1103 overlaps four mining leases that form part of the Coppabella Mine complex (MLs 70161, 70163, 70164 & 70237). The CMJV Participants as the holders of these Mining Leases and the holders of ATP 1103 have not entered into a Co-Development Agreement in

relation to the mining leases that are overlapped by ATP 1103.

Peabody (as manager on behalf of the CMJV) and Arrow Energy Pty Ltd are in regular contact in relation to overlapping tenure related matters. Peabody is not aware, nor has Arrow advised Peabody of any production development plans that Arrow has with respect to the area of overlap. Peabody and Arrow Energy have exchanged strategic development information regarding the overlap and surrounding area and continue to co-ordinate activities.

Recently, PL1015 was granted to the CMJV Participants. All gas production, transportation, compression and truck refuelling is proposed to be carried out under the administration of the Coal Mine Health & Safety Act (and the coal mine Site Senior Executive) as coal mining activities. The licensed petroleum activities are the transmission off site of surplus gas or power generated from gas as may be beyond that required for beneficial use by the coal mining operations.

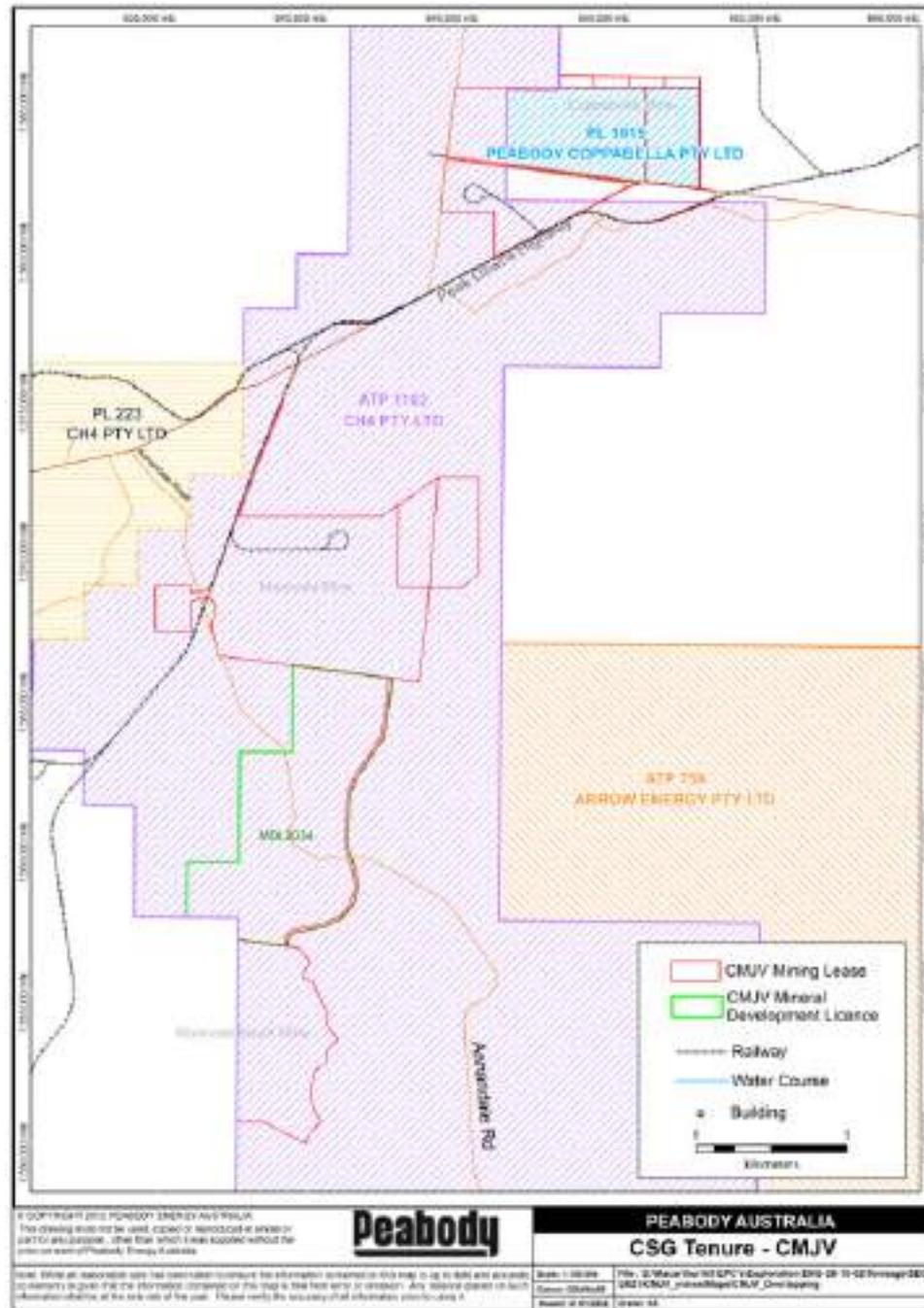


Figure 9. Overlapping and Adjacent Petroleum Tenements

Royalties

Production from the CMJV Coal Mines is subject to the Queensland Government Royalty charged on total revenue.

Queensland Government royalties are based on the price paid with the rate using the parameters as defined in Queensland Public Ruling MRA001.2. (summarized in Figure 10 below)

Storage price per tonne (excludes GST)	Rate	
Up to and including \$100		7%
Over \$100 and up to and including \$150	Over \$100	7%
	Balance	12.5%
Over \$150 and \$170	Over \$100	7%
	Next \$20	12.5%
	Balance	15%

Figure 10. Qld Govt Royalty Rates

In addition to this standard Government royalty, there are special private Royalty agreements established in relation to early exploration efforts. These are based on the historical extent of EPC531 which covers most of the Coppabella Mining Leases, and ML70290 which covers a large part of Moorvale Mine. A summary of these royalties arrangements are:

- EPC531 (historical extent)
 - Payment equivalent to 1% of USD Gross Sales Exported (excluding Purchased Coal) paid quarterly



Figure 11. Coppabella Mining Leases with historic extent of EPC531 and EPC646 and royalty area shaded

- ML70290
 - \$0.10 per Tonne (adjusted by CPI after quarter ending Dec 31, 1997)
 - Payable on Tonnes sold from this lease, with weight adjusted to a standard 8% Moisture basis

3.3. Comments from Qualified Person(s)

To the extent known to the QP, there are no other significant factors and risks that may affect access, title of the right or ability to perform work on the property.

4. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES

4.1. Physiography

The topography is dominated by nearby Triassic sandstone ranges and scarps in the centre of the Nebo Synclorium and the hornfelsed margins of the Bundarra Granodiorite which attain heights over 500 m above sea level. The topography on the CMJV leases is relatively flat, sloping gently northward, eastward and southward from around 250 m at the drainage divide near Moorvale to less than 200 m above sea level in the bed of the Isaac River (Figure 3).

Ephemeral creeks drain eastward across the Coppabella mine leases as tributaries of Harrybrandt Creek and flow generally southward in the Moorvale area as tributaries of North Creek which flows into the Isaac River near the southern boundary of Moorvale South. The Isaac River flows south-eastward to join the Mackenzie River and then the Fitzroy River which meets the Queensland coast near Rockhampton, 300 km to the southeast of the CMJV tenements.

Vegetation is open woodland that has been partially cleared to support cattle grazing. The overlapping pastoral leases are shown in Figure 8 with the details of ownership listed in Table 6.

4.2. Access

Access to the tenements is via the Peak Downs Highway which runs from Mackay on the central Queensland coast to Clermont in the Isaac Region. This highway forms the southern boundary of the Coppabella Leases and access to the mine is directly off the Peak Downs Highway. Moorvale and Moorvale South are also accessed via the Peak Downs highway along an access road to the south on the western side of the township of Coppabella. Heavy vehicle access to Moorvale South is proposed via the Moorvale Mine and along the haul road to be built on ML70355. Light vehicles will access via a new road built adjacent to an existing private quarry, located approximately 2Km to the north of the lease from the Daunia-Annandale Road, which turns south from the Peak Downs Highway 9 km west of the town of Coppabella. (Figure 3).

Regular domestic flights to and from Brisbane, the capital city of Queensland, can be accessed at Moranbah airport, approximately 40 km to the west of the tenements or at Mackay, 120 km to the northeast.

The Macarthur Branch of the Goonyella-Peak Downs Rail Line services the Coppabella Mine and connects to the export coal terminal at Dalrymple Bay. The Moorvale Branch services the Moorvale Mine and connects to the Dysart Line before joining the Goonyella Line just west of Coppabella. ROM coal from Moorvale South will be hauled by truck to Moorvale for processing and raiing.

4.3. Climate

The area is characterized by hot, wet summers and mild, dry winters. Daily maximum temperatures range from 30o to above 40o C in summer and 18o to 25o C in winter. Average annual rainfall of around 660 mm falls mainly between December and March and although pools of water are found in the major drainages all year, water flow in the creeks and rivers is largely restricted to these rainfall events. The climatic conditions of the region generally allow for all-season operation of the mines, although allowances for time lost due to impacts of typical seasonal rain events are usually higher during the summer months.

4.4. Available Infrastructure

Local infrastructure in the district includes:

- The Peak Downs Highway from Mackay, approximately 30km north via local roads;
- Annandale Public Road which runs from the highway roughly south east past Moorvale South;
- The Norwich Park to Hay Point Coal Rail Corridor;
- Existing MIA, Coal Processing and Rail Load Out facilities at both Coppabella and Moorvale Mines

- A SunWater pipeline which can be used to supply water to the CMJV operations under existing agreements, although most water used on-site is harvested from the on-site catchments.
- A High Voltage electricity grid that provides electricity to the existing facilities at Coppabella and Moorvale mines

Townships for supply of labour and materials include:

- Moranbah, approximately 30km to the north west;
- Nebo, approximately 55km to the north east; and
- Mackay, approximately 165km to the north east.

Accommodation villages in the area which support the workforce include:

- The CMJV's Terowie Camp adjacent to the Moorvale Mine; and
- The privately owned (Civeo) Coppabella Camp on the Peak Downs highway

4.5. Comments from Qualified Person(s)

It is the QP's opinion that the local resources and infrastructures are well developed through historic coal mining developments in the region. It is sufficient to support the declaration of coal Reserves and the mine plan.

5. HISTORY

5.1. Prior Ownership

The CMJV resource authorities were preceded by exploration permits (EPC's) that were granted to subsidiaries of Macarthur Coal Pty Ltd. The Coppabella mine leases were initially held under EPC 531 and EPC 646. The Moorvale mining leases were initially held under EPC 646, EPC 649, EPC 680 and EPC 749. The Moorvale South tenements were preceded by EPC 649. The tenements were amalgamated through a series of transfers and joint ventures from initial grant of EPC 531 in 1993 through to the current arrangements. Previous lease interest holders include QCoal Pty Ltd, Coppabella Coal Pty Ltd, Australian Premium Coals Pty Ltd and Sunrise Mining (QLD) Pty Ltd which was a subsidiary of Macarthur Coal Pty Ltd.

Macarthur Coal had established a majority interest in the exploration tenements by 1997 and were granted the first Mining Lease at Coppabella on June 1st, 1998, with overburden removal commencing one month later and first coal being mined in October of the same year. The early production at Coppabella was undertaken by contractors (Roche – now Downer EDI, and Peter Champion Mining) until Macarthur commenced converting to an 'Owner-Operate' model in 2006, with completion of the transition in June 2008.

The first Moorvale Mine leases were granted on December 5th, 2002 with overburden removal commencing in the same month. First coal was mined in March of 2003 – all mining operations were done under a contract with Leighton Contracting. The CMJV was officially formed in December of 2003.

The Moorvale South Mining Lease (previously known as Olive Downs North) was granted in May of 2009, with development considered as a small-scale opencut satellite pit operation with a connecting haul road to the Moorvale CHPP. Plans to develop this operation were put on hold, with Macarthur focusing on developing other tenements within its portfolio.

Peabody Energy acquired 100% of Macarthur Coal in December of 2011 and began managing the CMJV assets. In 2013, Peabody converted the Coal Handling and Processing Plant (CHPP) operations on both sites to Owner-Operate, replacing the contractor Sedgman who had been there since the inception of both facilities. Coppabella and Moorvale have continued to operate in this manner, with production levels adjusting to market forces.

Studies into the development of Moorvale South were progressed in 2018 and approval to commence the project was granted by the CMJV in October of 2019. Construction of initial infrastructure was commenced in December 2019 before the project was again put on hold in 2020 in response to a declining coal market. Construction activities re-commenced in late 2021.

5.2. Exploration, Development, and Production History

The existence of extensive coal deposits in the Bowen Basin was identified in the 1890's but successful coal mining operations were not established until 1920 at Collinsville, over 100 km to the north of the project area. Exploration of the Bowen Basin was intensified in the 1960's with several exploratory holes drilled in the CMJV tenement area by the Queensland Government. By the 1970's, several mines had been established along the western margin of the Nebo Synclinorium producing premium quality coking coal (Goonyella, Peak Downs, Saraji and Norwich Park). The towns of Moranbah and Dysart were founded to house the coal mining workforce and several more mines were developed in the area.

Exploration for coal commenced in the east of the basin in 1964 when Thiess Peabody Mitsui (TPM) identified potentially economic coal deposits in the Kemmis-Walker Creek area to the immediate east of Coppabella. Continued exploration by the Queensland Government and mining companies including MGC Resources and the Utah Development Company established the geological structure of the Carborough and Coxendean synclines and defined the arcuate outcrop of the Permian coal measures around the domed Bundarra Intrusive Complex. This work was followed up by White Industries in the 1980's with a program of shallow holes oriented in sections perpendicular to the Bundarra Granodiorite margins. Continued coal exploration through the 1990's identified the coal resources currently being mined at Coppabella and Moorvale mines and saw the commissioning of the South Walker Creek Mine in 1996.

By 1998, the exploration tenure preceding the existing CMJV mining leases had been consolidated by Macarthur Coal Pty Ltd through various subsidiaries and joint ventures. The

open cut mining operations at Coppabella commenced in 1998 and those at Moorvale commenced in 2003. Since then, several other coal mines have been established in the immediate vicinity including Carborough Downs in 2006 and Daunia in 2011.

In 2012, Macarthur Coal was acquired by Peabody Energy and all data relating to the CMJV resources were transferred as part of the acquisition. The Moorvale South mine was at that time known as Olive Downs North and continued under this project name until 2018 when Peabody commenced work on new studies to develop the deposit. In February 2019, the Mineral Development Licence (MDL 3034) was granted to Peabody.

Historical production from the existing operating mines of Coppabella and Moorvale since they commenced is illustrated in the following charts.

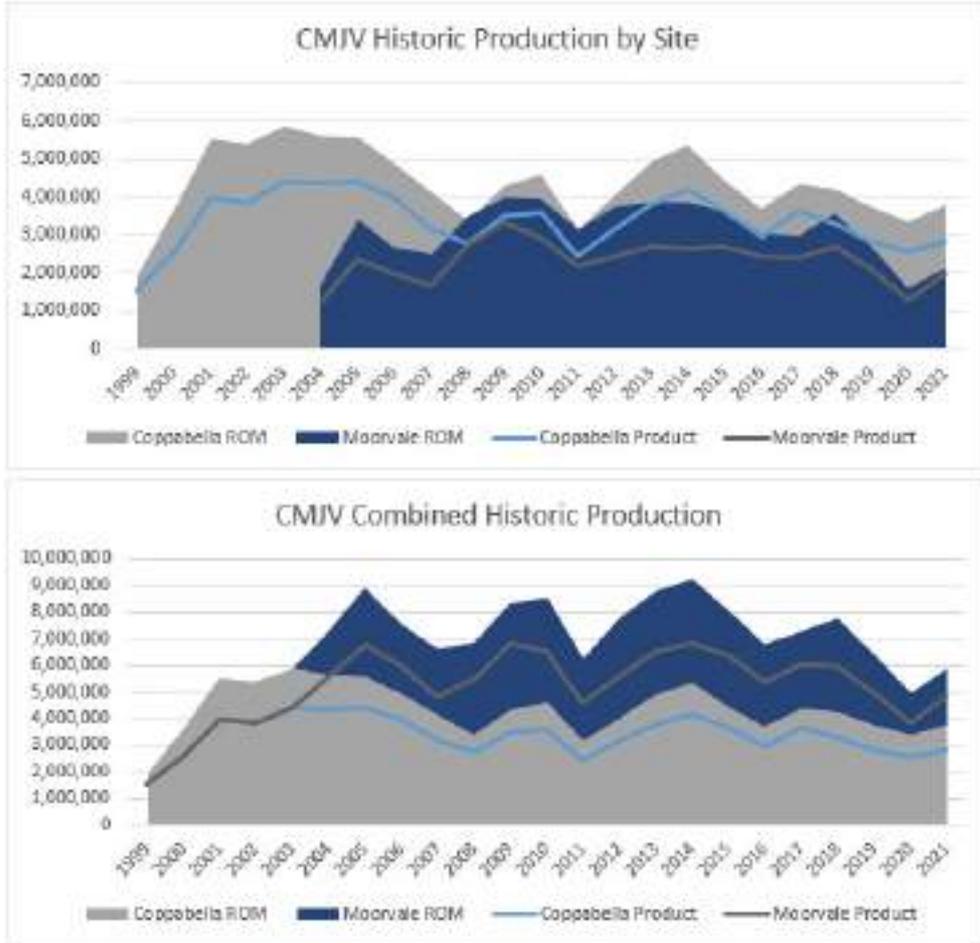


Figure 12. Historic Production

6. GEOLOGICAL SETTING, MINERALIZATION, AND DEPOSIT

6.1. Geological Setting

6.1.1. Regional Geology

The Bowen Basin formed as a result of plate convergence during the Permian and Triassic periods and contains up to 10,000 m of sediment in parts. Initiation in the Early Permian deposited rift related volcanics, sediments and coal seams that were buried by relatively uniform marine sediments across the Bowen Basin during the mid to late Permian. In the Latest Permian, coastal systems migrated in from the margins allowing peat to form. The environment in the Nebo Synclinorium during this time was progressively deltaic to alluvial sands and silts covered by extensive peatlands. The resulting coal seams of the Blackwater Group are renowned for their extent and continuity and support numerous mining operations in the Bowen Basin producing premium export coal.

There are 3 formations in the Blackwater Group; the progressively younger Moranbah Coal Measures (MCM), Fort Cooper Coal Measures (FCCM) and Rangal Coal Measures (RCM) (Figure 13). The MCM host numerous mines in the western Nebo Synclinorium but are generally found at depth in the east and little is known about this formation in this area.

The FCCM contain numerous tuff beds preserving volcanic ash-fall deposits both within the coal seams and interburden. While several thick seams of coal are found in the FCCM, the high inherent ash makes them currently uneconomic as mining targets. The exception is the Vermont Lower 1 (VL1) seam package which is occasionally mined in the Nebo Synclinorium when it directly underlies the target seams of the RCM.

The boundary between the FCCM and the RCM is taken at the regionally extensive Yarrabee Tuff (YT) which gives a high gamma response in downhole geophysics and is the youngest of the numerous tuffs in the FCCM. The overlying RCM are essentially free of tuff, making the YT a useful marker horizon for seam correlations.

Individual coal seams are often traceable over tens of kilometres although splitting and coalescing are common on a regional scale (Sliwa et al. 2017). Thinner seams are generally less extensive being locally prone to thinning or 'carbing' out, particularly the uppermost Permian coal seam, the Phillips Seam, which is commonly used to define the top of the RCM.

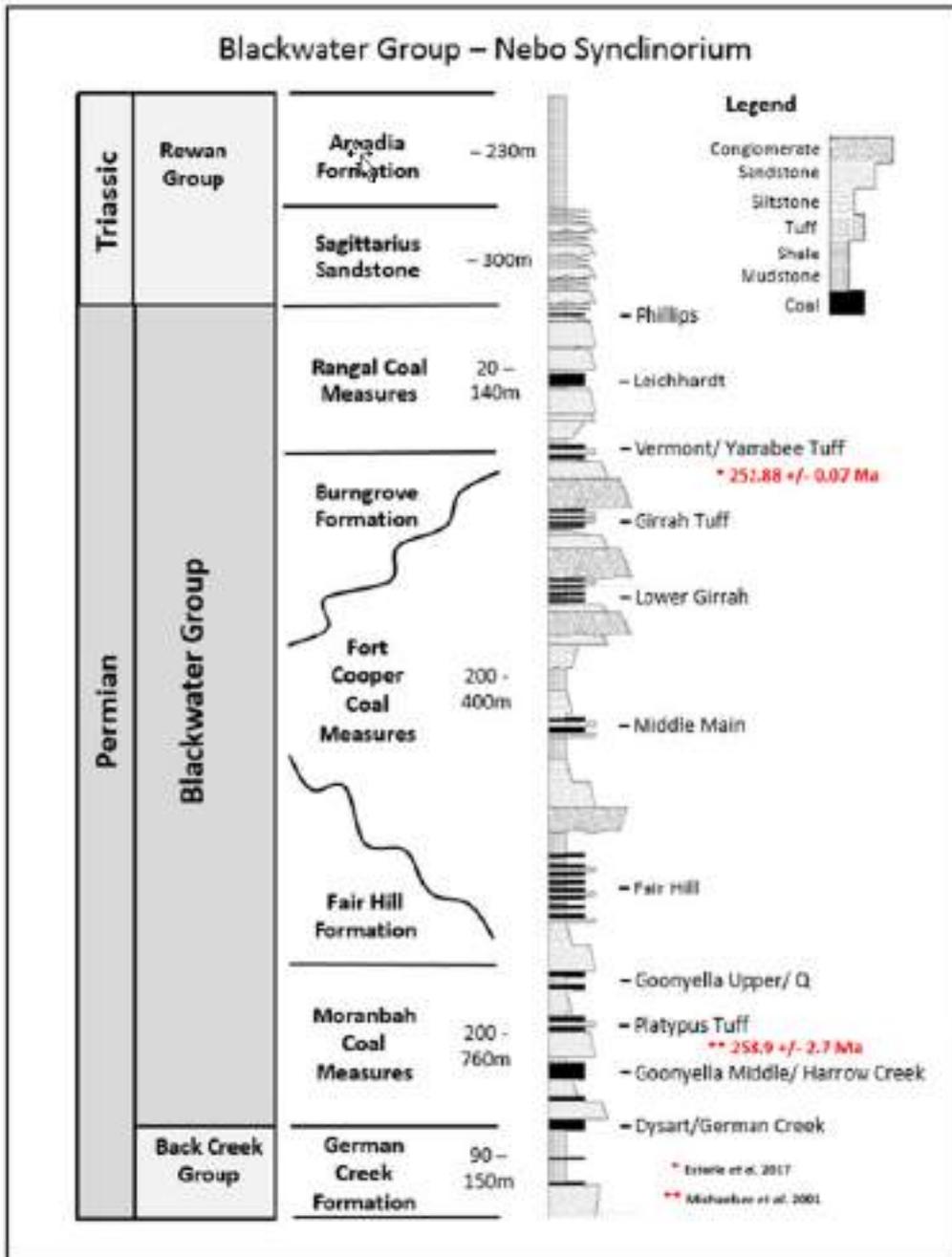


Figure 13. Bowen Basin Coal Seam Stratigraphy

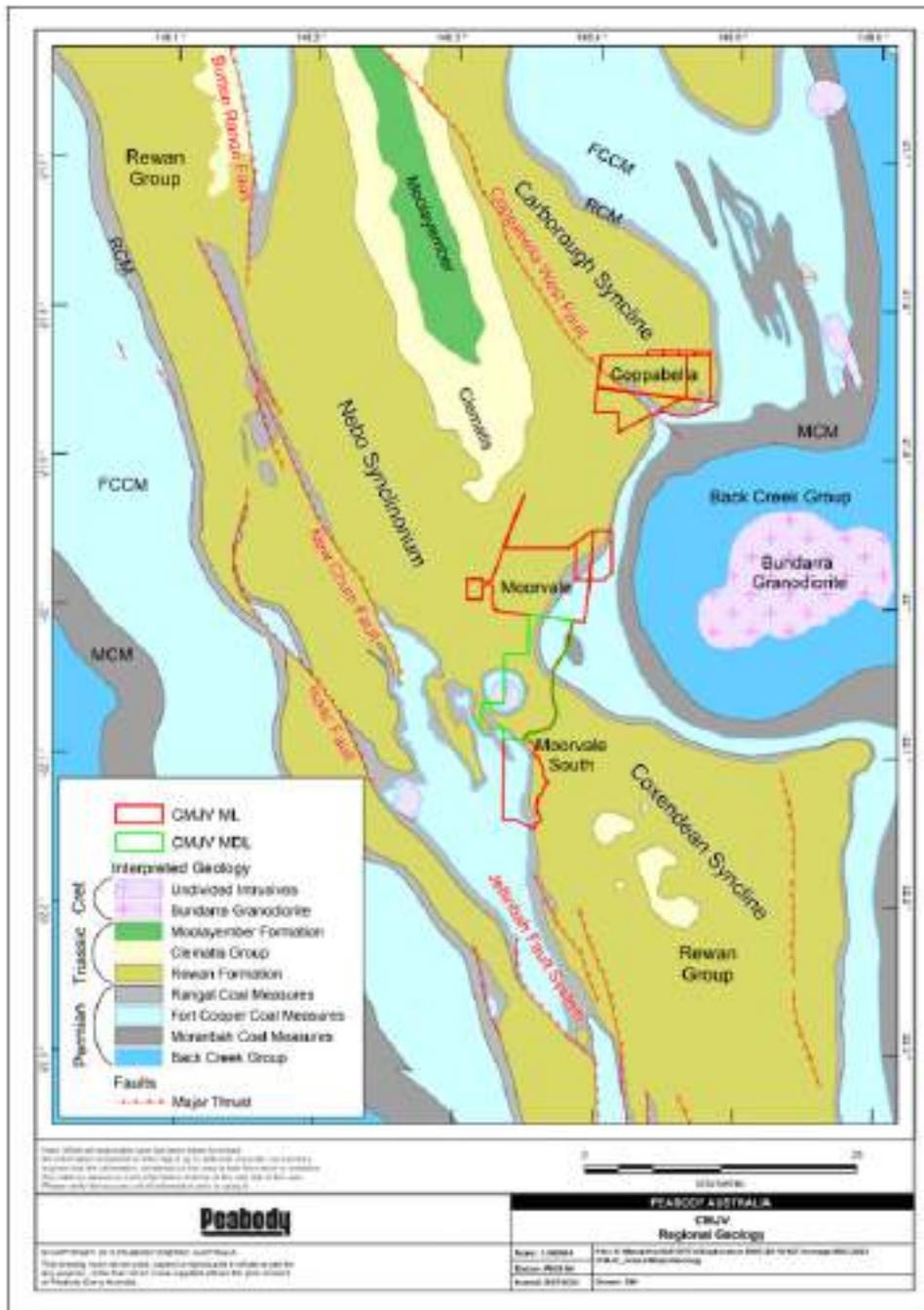


Figure 14. Regional Geological Setting

Peat production was terminated at the Permo-Triassic boundary which is interpreted to lie immediately above the coal seams of the RCM. An increasingly arid climate during the final stages of the Permian resulted in high percentages of inertinite in the RCM seams, with the consequently lower vitrinite contents producing a coal with poorer metallurgical qualities than those of the underlying formations. Seams in the RCM show a dulling upward trend that may be associated with global climate change at this time. The overlying Triassic Rewan Group is characterized by a lack of coal seams and has a wider distribution than the Blackwater Group sediments, extending across the entire Bowen Basin and into the Galilee Basin to the west.

Deposition in the Bowen Basin ended around 230 Ma when thrusting and folding propagated from the east caused uplift and deformation of the sediments. The resulting Jellinbah Fold and Thrust Belt (JFTB) can be traced across the Bowen Basin striking north-west through the centre of the Nebo Synclinorium. Folding and faulting is more pronounced in the east forming a series of sub-ordinate synclines and thrust faults sub-parallel to the major thrust belt.

Relaxation allowed deposition of the Jurassic-Cretaceous Surat Basin over most of the Bowen Basin however, erosion has since removed the northern and eastern sections and the original extent of the Surat Basin is unknown. Burial of the coal seams during this period raised the rank of the coal to low volatile bituminous with reflectance in the order of 1.6 – 1.8.

Intrusion of granitic plutons also occurred in the Cretaceous with a prominent example (the Bundarra Granodiorite) outcropping between the Moorvale and Moorvale South areas. Coal seams in the vicinity of these intrusions are often cindered. Fluid flow associated with emplacement of the Bundarra Granodiorite is suspected to be responsible for the high levels of phosphorous in the surrounding coal seams, but the link has yet to be definitively proved.

Uplift and erosion during the Tertiary Period exposed the Permian coals across the Bowen Basin although they are often covered by a veneer of more recent silts, sands, gravels and clays. Extensive volcanic activity along the east coast of Australia during this time introduced basaltic intrusions and eruptions which have locally altered the coal seams and occasionally covered them with thick sequences of basalt.

6.1.2. Local Geology

The Coppabella, Moorvale and Moorvale South mining areas all target the RCM in the east of the Nebo Synclinorium. The coal seams in this formation are laterally extensive, forming numerous thin seams that occasionally coalesce into thicker seams. The geological models are constructed from sub-units known as plies which may be individual seams in some areas, or parts of thicker seams in others. Details specific to each area are presented below.

Coppabella

The Coppabella deposit lies in the southern closure of the northwest-trending Carborough Syncline forming an arcuate outcrop modified by several faults (Figure 16). There are 4 mining areas from west to east known as; Creek Pit, Johnson Pit, South Pit and East Pit. The Carborough Syncline plunges to the northwest from the mining operations into an area traditionally known as Spring Creek and also referred to as Coppabella North. The mine operations are limited to the south and east by erosion of the target seams and to the west by the north-northwest trending Coppabella West Fault which has up to 400 m throw and is recognisable over 40 km of strike. Subsidiary faulting associated with this system separates the Creek Pit from the Johnson Pit, showing up to 20 m throw in some areas. Additionally, the area is affected by regional north to north-east trending normal faulting including the 'Graben Fault' which shows up to 15 m throw and several smaller northwest-trending normal faults.

A major feature of the area is the Cretaceous Bundarra Granodiorite intrusion approximately 12km to the southeast of the deposit. This intrusion has pushed up the formations significantly to the south as can be seen in aerial photos of the area.

In the central part of the deposit thin sub-vertical dykes in the order of 0.5m thick occur. The composition of the intrusive is acid to intermediate. The heating aureole around the dykes is thin generally less than 0.5m. The heat-affected coal has been devolatilised from the normal volatile content of approximately 12% - 13%(a.d.) to 3% - 4%(a.d.). A sill also occurs at the seam floor in the current pit.



Figure 15. Intrusive sills and dykes in east pit Coppabella mine

In the eastern side of the deposit intrusion becomes more intense (sills and presumably feeder dykes) and multiple sill horizons occur within the seam (). The heat-affected coal is thicker in this area. There are strong indications that the sills appear to stay within particular horizons (floor, roof and top third). Floor and roof stability problems are possible in this area as a result of clayey sills in the roof and floor. The sills do split in places resulting in thin, coked coal plies approximately 0.5m thick between sill layers. Intrusive dykes and sills are treated as parting in the model.

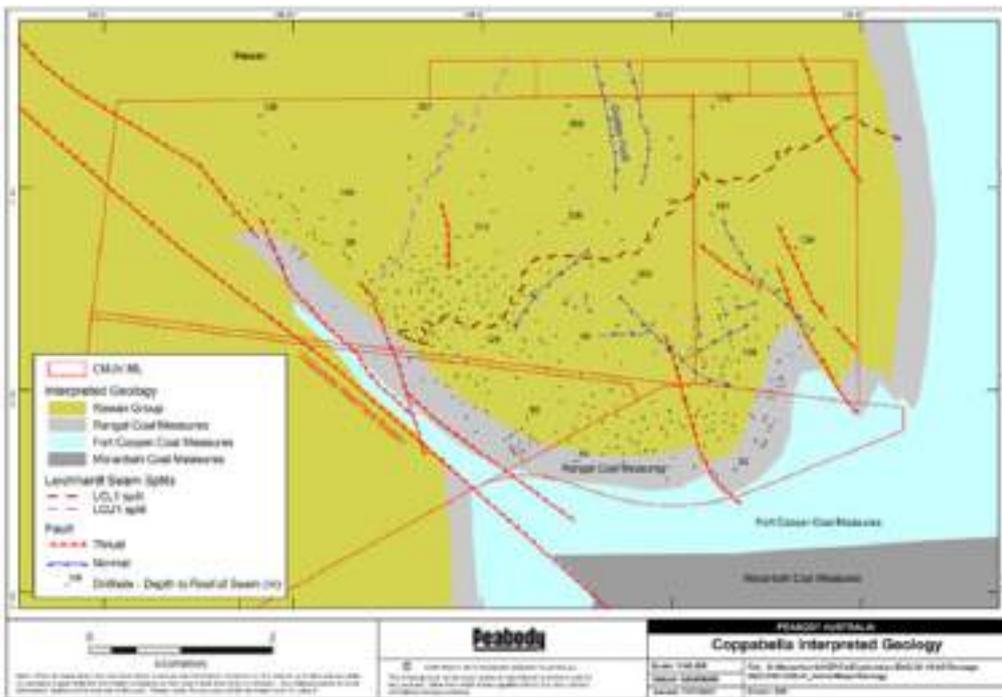


Figure 16. Coppabella Geology

The Leichhardt Seam of the RCM forms a thick and consistent seam in this area and is the source of all coal production from the mine. Historical naming conventions have resulted in the seam formed by the confluence of the Leichhardt plies being known as the Macarthur Seam. Numerous roof splits occur with each split thinning the main seam which then becomes known by a different seam name. Figure 17 shows the sequential seam names as each roof split diverges from the main seam. The Vermont Upper Seam of the RCM and the Vermont Lower Seam of the FCCM are coalesced in this area along with some plies of the underlying Girrah Seam. The high inherent ash of the FCCM coal seams precludes them from the resource estimations at Coppabella.

The Phillips Seam marks the top of the RCM and is generally thin and high in ash. Because of this, the Philips seam is also precluded from the resource estimations at Coppabella.

The ply nomenclature at the Coppabella Mine differs from the regional convention where the Leichhardt plies are divided into lower (LL) and upper (LU). At Coppabella the plies are similar but denoted LCL for the lower and LCU for the upper. There are 4 main Leichhardt Lower plies, from base to top, the LCL4, LCL3, LCL2 and LCL1. In the northern parts of the lease, a locally developed roof split is denoted the LL1A which is more in keeping with the regional nomenclature applied in the surrounding exploration tenements. The Leichhardt Upper plies are denoted from base to top as the LCU2 and LCU1.

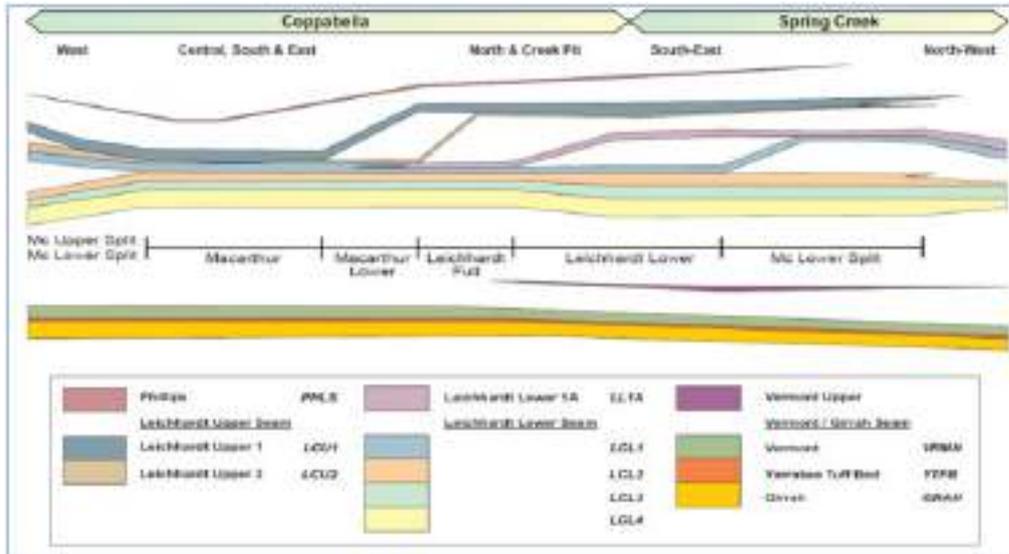


Figure 17. Coppabella Seam Schematic

Moorvale

The Moorvale deposit lies approximately 15 km to the southwest of Coppabella where the sediments have been raised in a ring around the Bundarra Granodiorite. The strata strike north-east and dip westwards into the Nebo Synclinorium at 6 to 20°.

Numerous normal faults radiate away from the Bundarra Granodiorite in a northwest direction and these are likely to be associated with the late movement of the strata associated with the emplacement of this intrusive unit. Reverse faults are also evident at Moorvale mine, these appear to be reactivated faulting of previous normal faults.

The plies of the Phillips and Leichhardt Seams are coalesced across most of the deposit forming a single 10 m thick seam which is the source of all coal production from the mine. To the north and south, several roof splits occur. Below the base of the Leichhardt seam is characterized by a carbeneous mudstone unit often referred to as a the HAF (High Ash Floor).

The Vermont seams have been intersected in a few holes at Moorvale mine. However, they are not currently targeted for mining at Moorvale mine as they are considered uneconomic due to high ash content and low yield.

The coal plies at Moorvale retain the regional naming convention and are denoted from top to base as the PHI (Phillips), LU1 (Leichhardt Upper 1), LU2 (Leichhardt Upper 2), LL1T (Leichhardt Lower 1 Top), LL1B (Leichhardt Lower 1 Base), LL2 (Leichhardt Lower 2).

The main seam is also divided according to the coal quality properties which reflect the dulling upwards trend in the coal seams of the RCM. There are 3 working sections with the aim of producing 3 mining products. Generally the Top Working Section (TWS) comprises the Phi ply and LU1 ply to produce a PCI product. The Middle Working Section (MWS) comprises the LU2 and LL1T plies and produces a high ash PCI product. The Lower Working Section (LWS) comprises the LL1B and LL2 plies and produces a coking or PCI product. Ply combinations for the working sections can vary towards the north and south of the deposit, depending on the qualities required to meeting blending requirements.

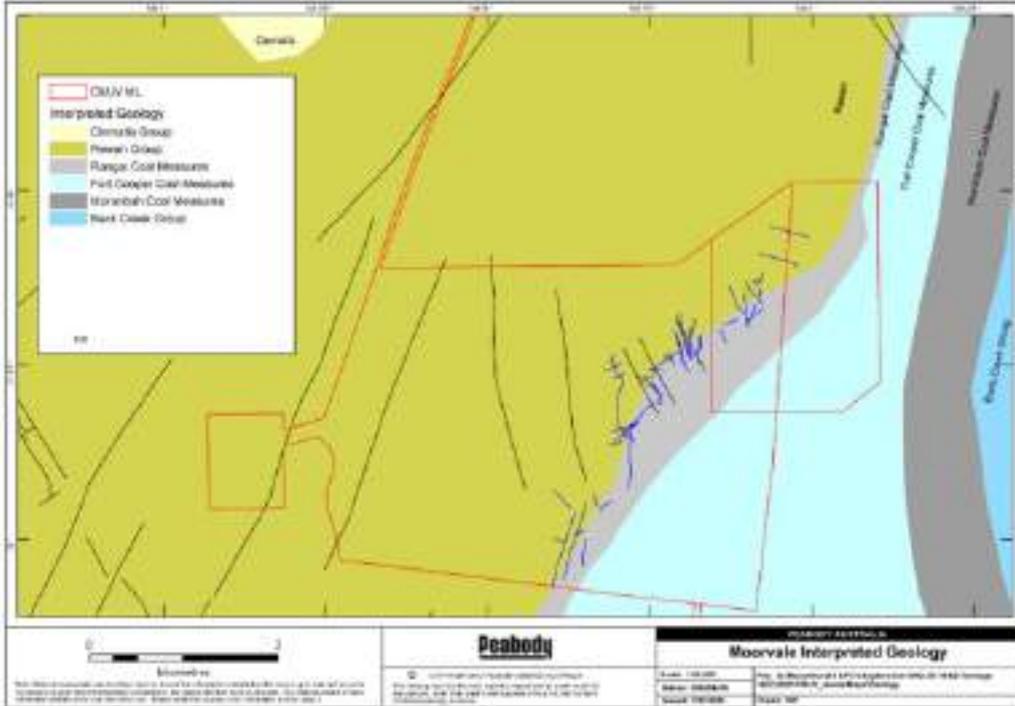


Figure 18. Moorvale Geology

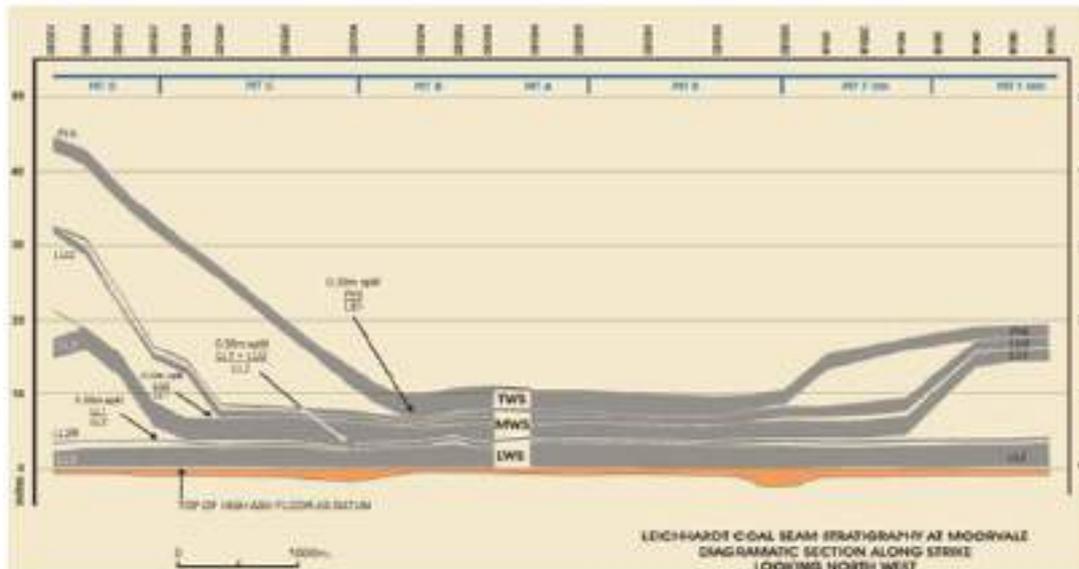


Figure 19. Moorvale Seam Schematic

Moorvale South

The Moorvale South tenements cover an area of the Nebo Synclinorium where the geological structure is dominated by a series of Cretaceous intrusions formed along an east-northeast trending lineament. The westerly dipping seams of the Moorvale deposit strike southwards through MDL 3034 following the arcuate trend around the eastern Bundarra Igneous Complex intrusions, significantly narrowing the main syncline. Several smaller intrusions are inferred to the west including the Daunia intrusion which forms a ring-like structure in the southwest of MDL 3034. The proposed initial mining area is located further south on ML 70354, along the western limb of the Coxendean Syncline where the seams dip to the east between 5 and 20°. Localised intrusions have been encountered through exploration drilling within the Leichardt and Vermont seams in this area, causing the seam to be heat-affected and partially replaced by the intrusion. The intrusion is modelled as parting in this instance.

The project area features a series of faults interpreted from drilling information, geophysical surveys and geological modelling. Interpreted project area thrust faulting is generally observed to trend northwest-southeast and possess displacements of up to $\geq 30\text{m}$.

Identified coal resources are predominantly hosted in the Leichardt Seam package with lesser contributions from the Vermont Seam. Within ML 70354, the Leichardt Seam package occurs as 2 seams; the LL2 and LL3, and the Vermont Seam package comprises the VU of the RCM and the VL1 of the FCCM. The LL2 is composed of the LL2T and LL2B plies which together range from 2.8 to 4.8 m thick. The coal is generally banded with the proportion of bright to dull bands increasing towards the base. The LL3 comprises interbedded carbonaceous mudstone and bright coal bands, ranging from 1.0 to 1.6 m thick averaging 1.5 m.

The Vermont Seam occurs approximately 40 m below the LL3 and comprises the Vermont Upper (VU) and Vermont Lower (VL) separated by the Yarrabee Tuff (YT). The VU is further divided into a dull, upper ply (VU1) and brighter lower plies (VU2 and VU3). The combined VU ranges from 2.5 to 3.7 m thick and is heavily intruded and cindered in the southern half of ML 70354. The VL seam is also divided into 3 plies; an upper, banded coal (VL1) and 2 lower, stony coals (VL2 and VL3). The VL1 averages 1.3 m thick and is the only FCCM ply contributing to the Moorvale South resource in the Y-pit and Y-pit North areas only.

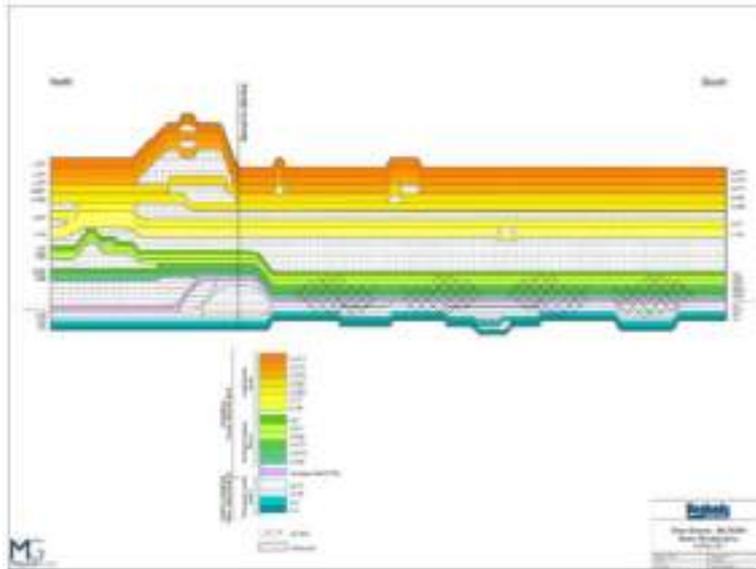


Figure 20. Moorvale South Seam Schematic



Figure 21. Moorvale South Geology

6.2. Hydrology Setting

6.2.1. Regional Hydrology

The CMJV mines lie within the catchment area of the Connors and Isaac Rivers.

Both Connors and Isaac Rivers are major tributaries of the Mackenzie and Nogoia Rivers in the Fitzroy Basin.

The Connors River flows into the Isaac River approximately 95 kilometres (km) downstream of Moorvale South. The Isaac River discharges into the Mackenzie River approximately 50 km further downstream.

Ultimately, the Mackenzie River joins the Fitzroy River, which flows initially north and then southeast towards the east coast of Queensland and discharges into the Coral Sea southeast of Rockhampton, near Port Alma.



Figure 22. CMJV Mining Leases in Fitzroy River Basin

With respect to Regional Groundwater sources, the Permian and Triassic overburden is covered by a thin veneer of unconsolidated to semi-consolidated Cainozoic sediments (Quaternary alluvium). These alluvial sediments are localised along rivers and creeks (i.e. Isaac River and North Creek).

Alluvial groundwater supplies are variable but generally range between 1-2 L/sec. The aquifers are associated with Cainozoic (alluvial) or fractured rocks of the Upper Permian Coal measures at depths ranging down to 45m.



Figure 23. Localised Seepage from the base of the Tertiary material - Coppabella



Figure 24. Localised Seepage from fractured Permian Overburden - Coppabella

Groundwater in the CMJV area is also associated with the coal seams. Due to the elevated electrical conductivity (EC) and high total dissolved solids (TDS) these groundwater resources are primarily used only for industrial purposes. Baseline water quality data supports the assessment that the groundwater resource within the vicinity of the operation is not usable for stock or domestic purposes. Extensive exploration drilling and groundwater assessments have been undertaken in the area without the identification of useable groundwater supplies.

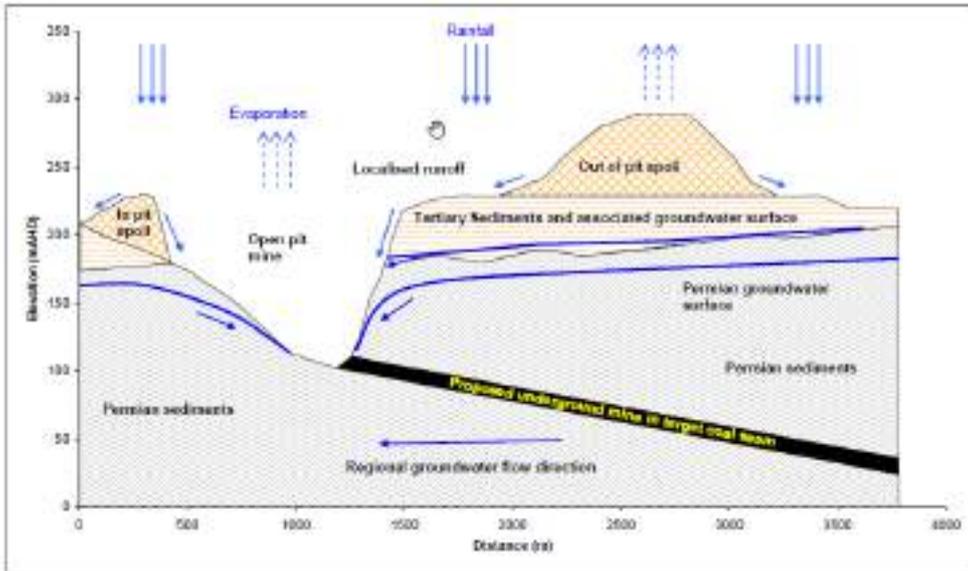


Figure 25. Conceptual Groundwater Model

6.2.2. Local Hydrology

The Coppabella mine surface water catchment lies within the Connors River central tributaries sub area of the Isaac Connors Rivers Sub-basin. The Connors River is a key regional water supply source extending to its confluence with the Isaac River.

This catchment is drained by 30 Mile Creek and Humbug Gully both of which are lower order tributaries of Harrybrandt Creek. Harrybrandt Creek is a tributary of the Connors River, via Bee Creek and Funnel Creek. There are no major water bodies located within the proximity of Coppabella.

The Moorvale mine is located in the upper catchment of three minor tributaries that feed into the Isaac River. Moorvale is located on the catchment divide between North, Devlin and Harrybrandt Creeks which are ephemeral streams that only flow for short periods following rainfall.

Moorvale South mine is located along the northern side of the Isaac River and the western side of North Creek. The confluence of the Isaac River and North Creek is located to the southeast of the southern ML boundary. The Isaac River and North Creek are ephemeral streams that only flow for short periods following rainfall.

Previous water balance investigations and observations by site personnel at Coppabella and Moorvale have concluded that the contribution of groundwater inflows to the open cut mining operations is insignificant and does not constrain mining operations. This supports the assessment that hydraulic connections between the mine pit areas and any surrounding aquifers is limited by low conductivities within the coal seam aquifers and presence of confining inter-burden sequences.

6.3. Mineralization and Deposit Type

The CMJV coal deposits comprises coal seams hosted within a sedimentary interbedded package of sandstone, siltstone and mudstone. The depositional environment is interpreted as entirely alluvial with little evidence supporting marine influence. Sandy river channels traverse extensive peat mires where the peat mounds constrain the channels. Periodic high sediment flow events occasionally breach the peat levy and form lobed splays of sand and silt which cover and compress the peat. Peat growth establishes on the new surface as the locus of deposition shifts away and a second seam is established. This second seam merges with the first seam at the edges of the splay, often at a steep angle due to peat compaction related bed rotation.

The deposit types of Coppabella and Moorvale South are considered to have high geological complexity based on the following factors:

- Presence of intrusive sills and dykes within the Coppabella and Moorvale South deposits. This can have negative impacts on coal product yields as adjacent heat affected coal has a higher relative density and can therefore be lost during lower density washing at the coal handling and preparation plant (CHPP)

- There are multiple thrust faults across Moorvale South. Whilst tonnages maybe be increased in close proximity to the thrust, quality estimates can vary due to duplication of plies within the seams and existence of fault breccia which may lead to increased ROM dilutions

Burial during the Triassic and Jurassic raised the rank of the coal to low volatile bituminous (ASTM). Geological cross-sections of the deposits are shown in Figure 27, Figure 28, and Figure 29. The major product sourced from the Coppabella and Moorvale deposits is low-volatile PCI coal but coking and thermal fractions are locally generated through beneficiation of the seams at Moorvale. Moorvale South is expected to produce predominantly Semi-Hard Coking Coal through blending of seams within that deposit, with PCI and Thermal produced where the washed qualities don't support creation of a SHCC.

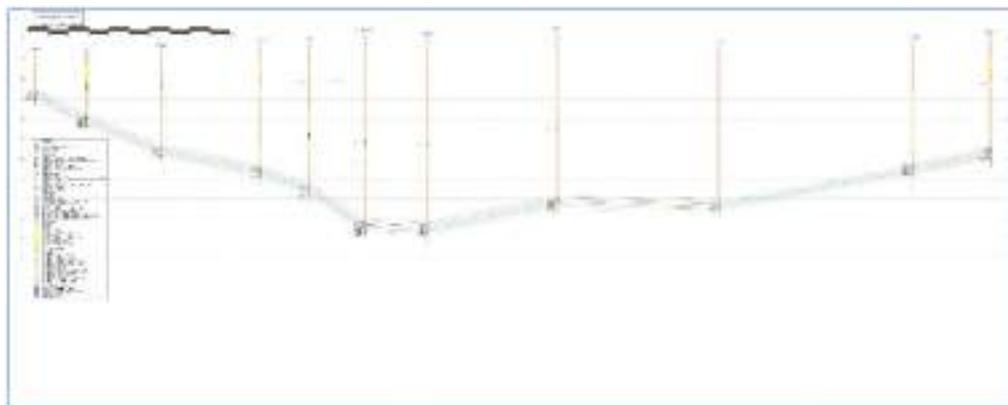


Figure 27. Coppabella Geological Cross Section

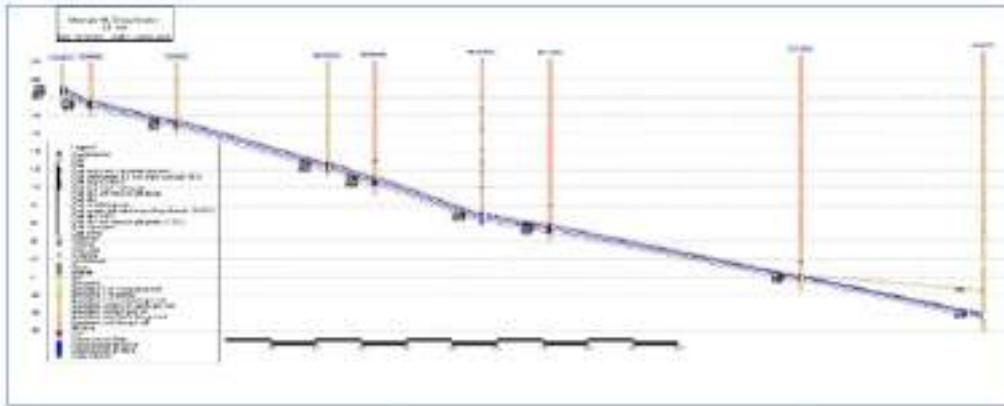


Figure 28. Moorvale Geological Cross Section

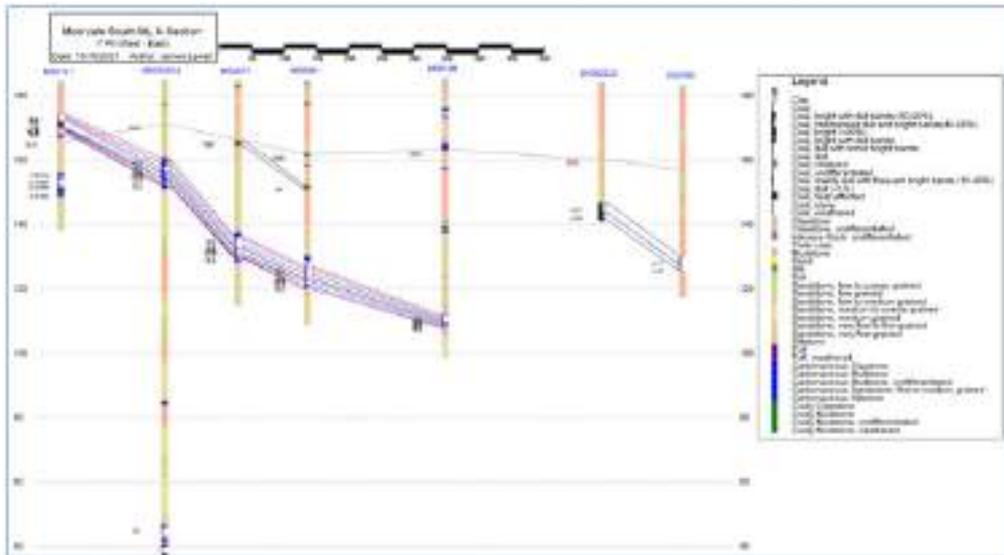


Figure 29. Moorvale South Geological Cross Section

6.4. Comments from Qualified Person(s)

In the opinion of the QPs, for both regional and local geology, the structural controls on mineralization are well studied and understood from decades of exploration and mining activities over the area. It is sufficient to support the estimation of Coal Resources and Reserves.

Further work is to be completed on the Moorvale South deposit to understand the impact of intrusion on the coking properties of affected seams.

7. EXPLORATION

7.1. Coordinate System

Survey data for Moorvale mine and Moorvale South is based on Geocentric Datum of Australia 1994 (GDA94) projected in Map Grid of Australia (MGA) zone 55. Survey data for Coppabella is based Australian Geodetic Datum 1984 (AGD84) projected in Australian Map Grid (MGA) zone 55.

Height data is captured as Australian Height Datum (AHD) which is tied to mean sea level.

All survey associated with drill collars, geophysical surveys and mine workings conducted using mine site RTK high precision equipment, with an accuracy of <50mm.

7.2. Geological Structure Mapping and Quality Sampling

The geological understanding of the CMJV deposits has been built on successive drilling, seismic and aeromagnetic surveys since exploration began within the tenements in 1964. Geological structure mapping via highwall exposures in the CMJV active pits using laser scanners and photogrammetry has occurred since 2016, contributing to the understanding of the local faulting and coal seam structure. Currently there is no in-pit strip sampling for coal quality. Coal quality samples have been acquired from exploration borecore as described in section 8.1.1.

Magnetic Survey

In February 2003 UTS Geophysics were contracted to complete an aeromagnetic program from Coppabella to Moorvale South to assist the structural interpretation of the region and to indicate the extent of intrusive activity. Aimex Geophysics were contracted to oversee the survey, provide data processing services and interpretation of the geophysical data. Results from this survey greatly enhanced earlier structural interpretations of the region.

In 2019, a targeted low altitude aerial drone aeromagnetic survey (DroneMag) was acquired over parts of the Moorvale South deposit. The DroneMag survey investigated anomalous Ground Penetrating Radar results in the southern part of ML 70354. DroneMag results were interpreted as delineating a magnetically responsive igneous sill and several linear anomalies allowing more detailed interpretation of the intrusives in this area.

Deep Ground Penetrating Radar

Ultramag Geophysics was contracted to the Moorvale Mine and Moorvale South project to conduct a deep Ground penetrating radar survey in September 2018. The survey was restricted to existing tracks and focused mainly over the 3D seismic area. The survey reportedly experienced interference from vegetation cover, potential interference from the alluvium overburden and from igneous intrusives but was successful in locating several structural targets for further investigation and delineation.

Agricultural Transient Electro Magnetic Survey (AgTEM)

An AgTEM survey was conducted over Moorvale South in 2018 to investigate groundwater and associated hydrogeological properties of soils and immediately underlying lithologies. The survey highlighted the spatial distribution and occurrence of shallow (<2m) quaternary alluvial sediments, limits of clay infilled paleochannels and resistive linear features which correlate with features interpreted as potential fault zones.

Seismic Surveys

There have been several seismic programs that contribute to the geological understanding of the CMJV deposits. MGCRA acquired deep but low resolution 2D seismic lines across the northern Bowen Basin in the 1990's which although not crossing any of the CMJV operations, assisted with establishing the gross structural architecture of the area. Similarly, regional scale 2D seismic lines have been acquired by Arrow Energy in the early part of this century and data sharing arrangements have provided access to these data.

Coppabella

There are 4 seismic surveys that cover parts of the Coppabella Mine Leases.

In 2001 a 3D seismic survey was carried out over an area of 1.35km x 0.96km, as was 3km of 2D seismic split into four lines, initiated by NEDO (The New Energy and Industrial Technology Development Organisation). The area of interest was towards the western side of the Johnson pit area. The 3D seismic delineated 2 normal faults and 2 reverse faults. All faults generally trended north-south, with one normal fault trending east-west.

Six Vibroseis 2D seismic lines with a total length of 18 km were commissioned by Macarthur Coal in 2007. The survey was acquired and processed by Velseis and investigated the northern parts of the mine area, extending into the Spring Creek tenement (MDL 494). Horizons and faults were interpreted by Velseis but have been superseded by more recent interpretations incorporating additional survey results. Fifteen Vibroseis and two combined Mini-SOSIE/Vibroseis 2D seismic lines with a total length of 64.2 km were commissioned by Peabody Energy in 2014. The survey was acquired and processed by Velseis and was focused on potential for underground expansion into MDL 494. Three of these lines were acquired in the northwest of the Coppabella Mine Leases. Velseis provided a detailed interpretation of faults and horizons for this survey and forms the base for the current reinterpretation.

The seismic data over Coppabella was re-interpreted along with the exploration drilling results in 2019 by an independent structural geology specialist (Integrated Geoscience Pty Ltd). This work was compiled in a project which included the results from neighbouring tenements and provides a consistent regional structural framework for the Peabody tenements in the northern Bowen Basin (Silwa, 2019).

In August 2018 2D seismic lines totalling 17.9km were acquired and processed by Velseis. These lines were acquired in the eastern and western sides of the Coppabella mine leases. Interpretation of faults and horizons provided by Velseis from this survey also considered select seismic lines from previous surveys. This data is referenced to assist with structural modelling of the coal seams at Coppabella mine.

Moorvale

There have been 3 seismic surveys at Moorvale mine including 3D seismic covering 7.38km². These occurred in 2006, 2007, and 2017.

The 2007 survey covered approximately 4.6 km² and was acquired within the Moorvale area, Queensland for Macarthur Coal Limited by Velseis Pty Ltd. The 2007 data and 2006 Moorvale Underground 3D data were merged before processing to produce a seismic volume incorporating both surveys and covering a total area of 6.8 km². These seismic data were processed and interpreted by Velseis Processing Pty Ltd from November 2007 to January 2008.

The 3D data is excellent and is amongst the best Mini-SOSIE data acquired in this area to date. It is believed that the thin and uniform weathering in the Moorvale Underground area has resulted in a seismic volume free from noise and this has produced highly interpretable data.

The principle purpose of the 3D Seismic Survey was to locate faults and other features, associated with the Phillips (PHI) and Leichardt (LL2) Seams (target seams) that might hinder underground mining operations. The survey achieved this aim. An attempt has been made to accurately characterise structures based on position, seismic displacement and associated width along strike. Throughout the survey area the roof of Phillips Seam has been mapped with a high degree of confidence.

Due to limitations in the vertical seismic resolution of these data, it has not been possible to reliably map the roof of the LL2 seam. Rather the position of this horizon has been derived by bulk shifting the roof PHI seam horizon down to the zero crossing below this Horizon. In the southwest and northeast corners of the survey area, the PHI to LL2 interburden has thickened sufficiently such that a discrete roof reflection is visible and has been mapped.

The 2017 Moorvale survey covers approximately 0.58 km². It was acquired by Velseis Pty Ltd for Peabody Energy, using the Envirovibe Vibroseis source within the Moorvale Project Area, near Coppabella Queensland, during September 2017. These seismic data were processed and interpreted by Velseis Processing Pty Ltd from October – November 2017.

Data quality for the Moorvale 3D seismic survey was primarily very good. While there were some reduced data quality areas observed in the raw volume, processing greatly improved the signal to noise ratio in these areas, resulting in a processed volume exhibiting strong and

primarily continuous reflectors. In general, areas of reduced seismic amplitude are related to structure at the target seam, rather than e.g. unfavourable surface conditions.

Peabody Energy requested that an attempt be made to map the roof of the Leichardt seams and to characterise the structure at the Leichardt Upper (LU) seam. Characterisation of structure refers to providing Peabody Energy with information about structure position, vertical displacement, lateral distance over which the displacement is measured and the confidence level of the interpretation. It was also requested that a reliable horizon depth conversion be undertaken for the LU horizon.

The principle purpose of the 3D Seismic Survey was to locate faults and other features associated with the Leichardt seam which may prove a hindrance to mining operations. The survey achieved this aim, with the identification of a total of 21 structures at the Leichardt seam horizon level. However, it should be noted that there is some redundancy in this total number, as the process of structure classification often requires that a single geological feature be sub-divided into multiple structures with different levels of interpretation confidence.

This data is referenced to assist with structural modelling of the coal seams at Moorvale mine.

Moorvale South

There have been 2 seismic surveys conducted for Peabody in the Moorvale South project area.

During 4th to 6th November 2018, Velseis Pty Ltd acquired approximately 15.4km of 2D seismic data for Peabody Energy, within the Moorvale project areas, Queensland. These data, consisting of 4 Vibroseis lines and a ghost line, were processed by Velseis Processing Pty Ltd during December 2018, with the interpretation completed in February 2019.

Data quality observed is generally very good.

The main purpose of the survey is to locate faults and other structural features associated with the LL2 (Leichardt) and Vermont Upper (VU) seam roofs, to assist in the planning of mining operations and in the design of future 3D seismic programs in the area.

The 2019 Moorvale South survey covers approximately 1.31 km². It was acquired by Velseis Pty Ltd for Peabody, using the Vibroseis source within the Moorvale South Project Area near Coppabella Queensland, during May 2019. These seismic data were processed and interpreted by Velseis Processing Pty Ltd from June-August 2019.

Data quality for the Moorvale South 3D seismic survey was primarily very good. While there were some reduced data quality areas observed in the raw volume, processing greatly improved the signal to noise ratio in these areas, resulting in a processed volume exhibiting strong and primarily continuous reflectors.

Peabody requested that an attempt be made to map the roof of the Vermont Upper (VU) and Leichardt (LL2) seams and to characterise the structure at both seams. The VU seam is the priority target. Characterisation of structure refers to providing Peabody with information about structure position, vertical displacement, lateral distance over which the displacement is measured and the confidence level of the interpretation.

It was also requested that a reliable horizon depth conversion be undertaken for both horizons. Two depth conversions have been performed. The first method involves depth converting the horizons only using formation tops and horizon times to derive a velocity model. The second method involved using a structurally interpolated time-depth model derived from synthetic seismograms. Both the full dataset and the horizons were depth converted in this manner. Note the horizons depth converted using the first method will not honour the depth seismic because the velocity models are different. Both sets of horizons have been supplied.

The principle purpose of the 3D seismic survey was to locate faults and other features associated with the VU and LL2 seams which may prove a hindrance to mining operations. The survey achieved this aim, with the identification of a total of 153 structures at the VU seam and 60 at the LL2 seam. However, it should be noted that there is some redundancy in this total number, as the process of structure classification often requires that a single geological feature be sub-divided into multiple structures with different levels of interpretation confidence.

Intrusive bodies are present in the area. While it was not possible to identify the location of these bodies in the seismic data, attribute maps, particularly seismic amplitude, may be helpful in identifying areas where intrusives are present.

7.3. Drilling

A total of 4763 exploration holes drilled by Macarthur Coal and Peabody in the CMJV operations tenements. Some quality points of observation have been excluded from the resource estimation due to insufficient core recovery. Details of hole type are presented in Table 7 with hole locations illustrated in Figure 30.

Hole Type	Coppabella	Moorvale	Moorvale South	Total
Chip holes	1471	1039	1034	3544
Core holes	756	336	127	1219

Table 7. Drilling Statistics

Drilling followed industry standard practices where vertical holes are drilled using top-drive, truck mounted exploration drill rigs. The types of exploration drill holes include:

- Chip or rotary holes are drilled with air or water using a blade or PCD (polycrystalline diamond) bit with the chips laid out in 1 m piles on the drill pad. Holes are lined to the base of weathering with PVC or steel casing to ensure that Tertiary sands and gravels and weathered Permian material are isolated from the drilling process. The drill cuttings are geologically logged at 1 m intervals and a suite of downhole geophysical logs are run. The drillers and geologists' logs are reconciled against the downhole geophysics to establish the exact depth of the seams. Chip holes are used to define oxidation lines and seam splits and are often used as pilot holes for core holes.
- Partially cored holes are generally completed to recover the coal seam for coal quality testing and roof and floor material for dilution and geotechnical testing. Core diameter is typically 4C (100 mm) providing approximately 11.3kg of sample per metre of coal core but other diameter holes such as PQ (93 mm) and HQ (61 mm) are also collected. Downhole geophysical logs are run and used to define structure while samples of whole core are submitted for coal quality analysis. Samples of the stone roof and floor of each seam are routinely analysed for mining dilution studies. A total of 1240 partially cored holes have been drilled on the CMJV project.
- Geotechnical core holes are generally fully cored from surface to 6 m below the floor of the target coal seam. Rock samples are often taken from partially cored holes within 6m above a seam and 6m below the basal target seam. Rock samples are generally collected on one-meter intervals and tested to gain a spread of data for different lithology types for Tri-Axial (3 Stage), UCS, Youngs Modulus with Poisson's Ratio and Slake Durability. A total of 1423 geotechnical samples have been collected on the CMJV project.
- Gas desorption core holes are generally the same as a partly cored holes except the coal seam is either dedicated to gas desorption testing or is split in half and used for both coal quality and gas testing. A total of 108 gas samples have been collected on the CMJV project.

Downhole geophysical logs are run in boreholes, where conditions allow. The vast majority of the CMJV boreholes are geophysical logged with a minimum gamma, density, and verticality. Wherever it is not possible to geophysical log the borehole it is often excluded from the geological model, unless deemed valid by the QP.

Other tools that are run include, but are not limited to; verticality, resistivity, sonic, acoustic scanner, optical televiewer, and dipmeter.

Resistivity has been routinely used since 2016 at Coppabella mine to assist with the definition of heat affected coal and intrusives in the intruded area within the eastern part of the deposit.

In addition to drilling, a plethora of in-mine seam thickness, structural measurements, and in-pit chip samples are recorded and collected, including:

- Pit survey data (coal roof and floor pickup, base of tertiary, fault mapping, intrusion mapping)
- In-pit geophysical logging of selected blast holes

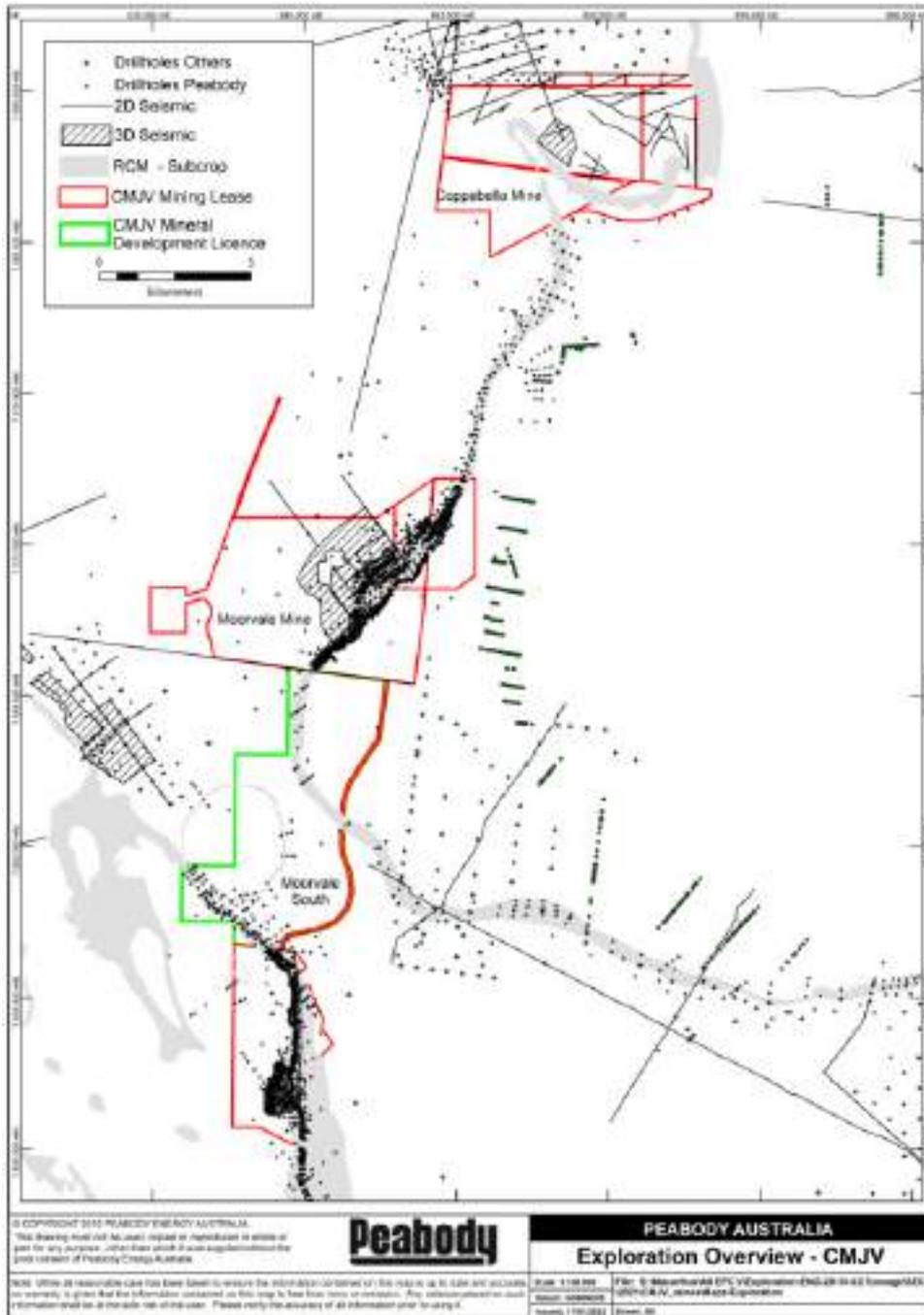


Figure 30. Exploration Activity Overview Map

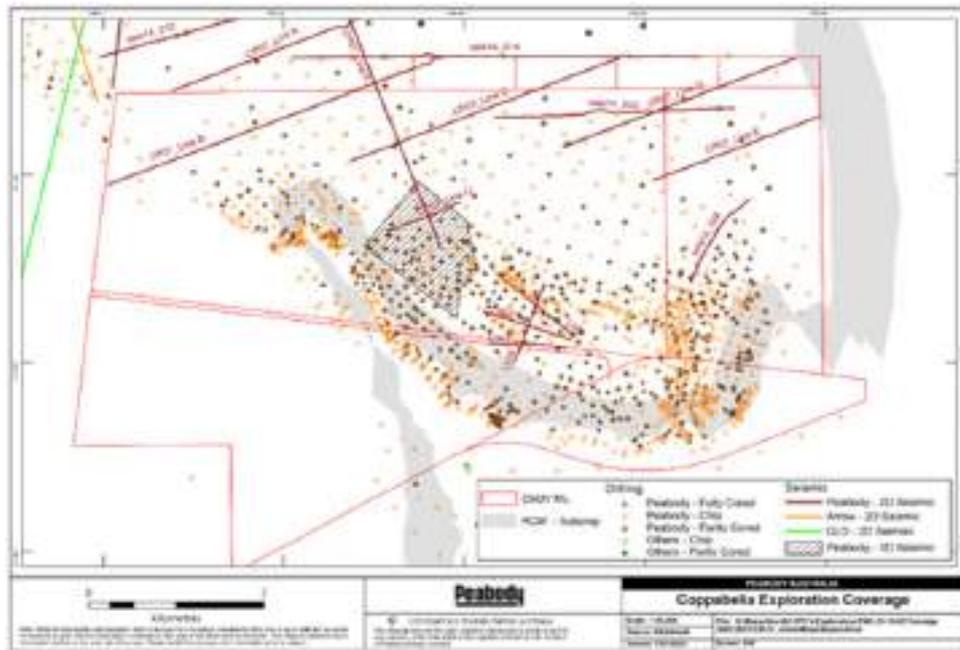


Figure 31. Exploration Activity Coppabella

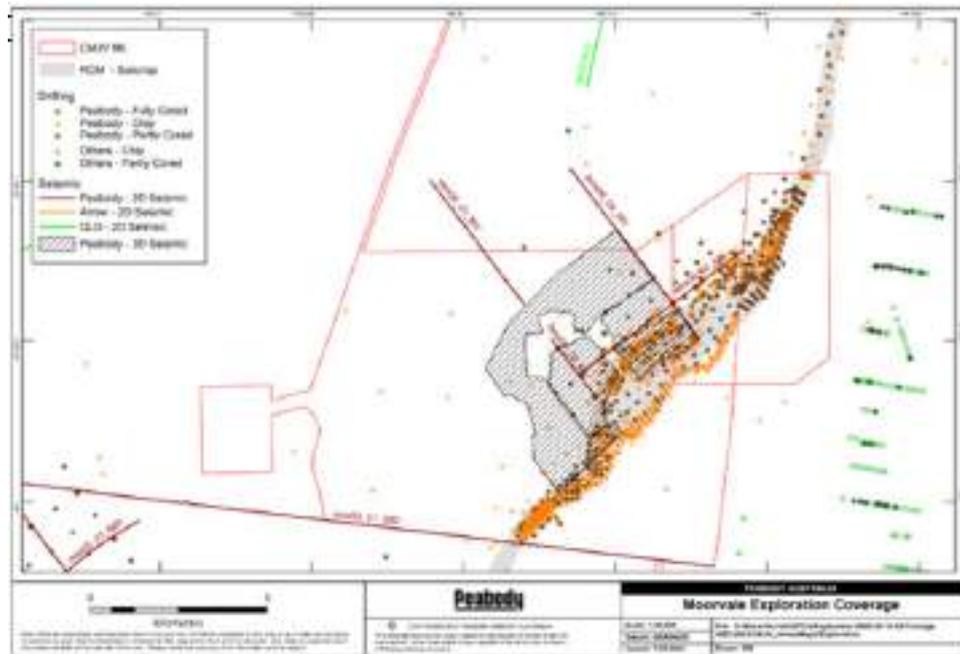


Figure 32. Exploration Activity Moorvale

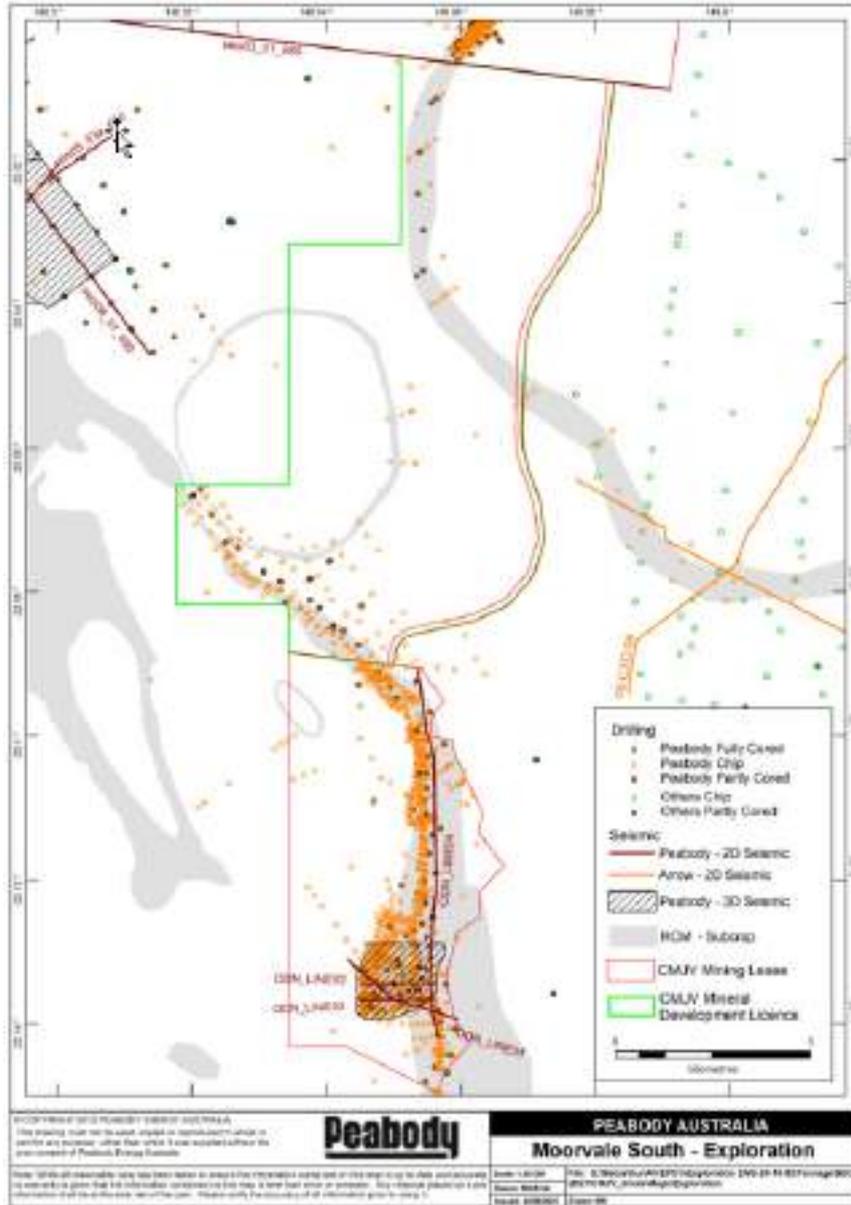


Figure 33. Exploration Activity Moorvale South

7.3.1. Recovery

The bore core is logged for lithology type, structure, coal brightness and rock strength factors by geologists experienced in coal geology. Core recovery is compared to the drillers log, and

verified against geophysical logs. Any discrepancies documented. If less than 90% of the target coal seam is recovered, the hole is re-drilled unless the core loss is due to faulting and it is unlikely that a re-drill will improve the recovery.

7.3.2. Drill Hole Surveys

All drill hole locations have been surveyed by a registered surveyor. All drillhole collars have been compared to the topographic surface model which is based on 1m LIDAR contour data and are within an acceptable range for the purposes of developing a structure model (+/- 2m).

Drill depths are validated by the supervising geologist and are compared to the downhole geophysical logs for exact depth determination. The geophysical contractors which undertake the down hole geophysical logging comply with industry standard calibration techniques (tools are run in a calibration hole where log responses are known, any deviance is resolved prior to dispatching the tool for use on site). In some cases, coal seam intervals with less than 90% linear recovery have been used in the resource estimation have been used due to the consistency of the coal quality.

7.4. Geotechnical Data

Geotechnical samples of roof and floor rocks have been acquired from core in 143 holes. Floor samples were tested for UCS, moisture, density and slake durability and roof samples were tested for Young's Modulus and Poisson's Ratio / 2 x Sonic Velocity, Hoek 3 Stage Tri-Axial. The results samples are stored in GeoCore with the results of samples from historical holes stored within the Peabody shared drive.

Selected cored sections of HQ holes were logged with Acoustic Scanner for later geotechnical interpretation.

Sonic velocity logs have been acquired from many holes and these can be used to estimate rock strength using a correlation between laboratory derived UCS and the sonic logs.

Averages of rock mass properties utilised at the deposits are listed in Table 8 and Table 9 below.

Material	Unit Weight (kN/m ³)	Cohesion (kPa)	Friction Angle Ø°
Oxidised Coal	15	0	30
Coal	15	35	30
Fault Zone	24	0	15
HW Sedimentary Rock (Weathered Permian)	22	60	30
Sedimentary Rock (Permian)	24		
Carbonaceous Mudstone	22		
Quaternary	20	26	26
Yarrabee Tuff	24	5	17

Table 8. Moorvale South rock mass properties

Material	Unit Weight (kN/m ³)	Cohesion (kPa)	Friction Angle ϕ°
Soil (Tertiary sandy clay)	20	26	26
Soil Unsaturated (Tertiary)	20	50	30
Soil Saturated	20	15	30
Compacted Soil	20	60	30
Remoulded High Plasticity Clay	18	0	10
DW Sedimentary Rock	22	100	30
DW Sedimentary Rock – Blasted	22	40	30
SW Sedimentary Rock	24	150	35
SW Sedimentary Rock – Blasted	18	60	30
Weathered Sedimentary Rock	24	75	30
Weathered Sedimentary Rock - blasted	22	50	30
FR Sedimentary Rock	24	450	42
FR Sedimentary Rock – Blasted	22	100	30
Oxidised Coal	15	0	30
Friable Coal	15	30	35
Siltstone	24	150	35
Carbonaceous Mudstone	24	100	35
Softwall Weathered	24	28	18
DW Basalt	20	75	30
FR Basalt	25	750	45
Sheared Interface	24	0	15
Sheared Floor	24	0	15
Basal Shear	20	0	15
Sheared Lowwall Floor	20	0	15
Fault Zone	24	0	15
Ripped/Dozer Floor	22	23	25
Blasted/Cratered (Heaved) Floor	22	30	28
Dozed Floor Material	22	0	30
Pit Mud	20	0	18
Floor Material	25	350	35
Bedrock	27	200	45

Table 9. Coppabella & Moorvale rock mass properties

7.5. Hydrogeology

During exploration drilling ground water levels are routinely collected from drillers observations and geophysical logging tools. This is gathered by using an electronic dipmeter tool, or in the case of the geophysical logging is captured by the logging operator by analysing the density and gamma tools.

This data is stored with the drilling logs and stored within the geological database.

Various groundwater monitoring bores have been drilled across the CMJV deposits, designed to intersect mainly the Quaternary, Tertiary, and Permian formations.

The hydrostratigraphy across the CMJV comprises:

- Quaternary Alluvium (aquifer) - limited in extent to stream channels and floodplains, the Connors alluvial area in the east has greater potential for groundwater storage and sustainable yield than the Isaac alluvial area in the west;
- Tertiary Formations - Suttor Formation and Undifferentiated Sediments (aquifers and aquitards) - extends across the central and southern parts of the CMJV Area;
- Triassic Formations - Moolayember Formation (aquitard), Clematis Group (aquifer) and Rewan Group (aquitard) - upper formations are limited in extent to the east of the Sites, Rewan Group is regionally extensive in the west of the CMJV Area;
- Late Permian Blackwater Group formation - Rangal Coal Measures, Fort Cooper Coal Measures and Moranbah Coal Measures (coal seam aquifers and confining aquitards) - regionally extensive overburden and interburden with north-west trending coal seams of limited spatial extent sandwiched in-between; and
- Early to Late Permian Back Creek Group (aquitard and hydrogeological basement) - regionally extensive.

Groundwater flow within deeper aquifers (Triassic and Permian) is generally slow, moving from the margins to the central axis of the Bowen Basin, and is confined and isolated hydraulically from shallow aquifers through interbedded aquitards of the Triassic and Permian formations (where present). Locally at the Sites and other mine/CSG operations, steeper groundwater gradients into the open pits/CSG wells will occur due to seepage or depressurisation. Drilled data and water levels also indicate that the shallow and deeper aquifers may be hydraulically isolated.

Regionally extensive faulting is likely to compartmentalise hydrogeological strata with limited lateral hydraulic connectivity and continuity of piezometric levels in deeper strata through major fault zones.

At a smaller scale lateral and vertical groundwater flow is potentially controlled by faults to varying degrees. If faults act as barriers to groundwater flow locally, then groundwater level changes due to varying stresses exerted on the system locally or regionally may be less aerially extensive but locally (near stresses) more severe, whereas faults acting as conduits may produce the opposite. Conceptually faults may be both conduits and barriers.

Vertical hydraulic connectivity through confining beds is most likely where the confining units are relatively thin and the local formation pressures are relatively high.

7.6. Coal Seam Gas Testing

Sampling of contained gas has been conducted on 19 holes within the CMJV deposit.

Gas contents are estimated by containing the coal core sample within a canister immediately after retrieval from the core barrel. Gas is released from the coal as soon as the core is drilled and some gas will therefore be 'lost' during core retrieval before containment in the canister. An estimate of the 'lost' gas can be determined through measurement of the time since coring and the amount of gas released within the first few minutes after containment (Q1). The canister containing the core is then submitted to a laboratory to measure the amount of gas released after the measurement of Q1 (Q2). Sub-samples are then taken and crushed to measure the amount of gas retained in the coal after measurement of Q1 and Q2 (Q3). The sum of Q1, Q2 and Q3 provides an estimate of the amount of gas contained within the in-situ coal.

In some instances, the bore core is split after Q2 gas desorption testing has been completed and the bore core split submitted for coal quality testing to maximise data return from the same drill hole.

The majority of gas content testing has been conducted on the main Leichhardt Seam with only a few holes testing the Vermont seam package. Potential for gas make from the Vermont Seams into underground workings within the Leichhardt Lower Seam via faults and goafing. Isotherm testing has been carried out on a few Peabody holes with additional data provided from available Arrow holes. The testing is aimed at defining methane adsorption isotherm parameters.

Additional data on gas content and behaviour in the deposit is available through data sharing arrangements with coal seam gas explorers in the area.

7.7. Comments from Qualified Person(s)

It is the opinion of the qualified person that there is adequate exploration undertaken to provide data for the support mineral resources and reserves.

8. SAMPLE PREPARATION, ANALYSES AND SECURITY

8.1. Sampling Method

8.1.1. Sampling for Coal Quality

The sampling for coal quality analysis at CMJV follows an established internal site guideline to allow for consistency of sample technique and sample intervals. Historical sampling has often been undertaken on a somewhat different guideline that may not align with the current guideline.

CMJV requirements for coal quality core sampling are as follows:

- All coal is required to be sampled.
 - Normal Coal to be sampled separately (Non-heat affected coal with a RD less than 1.45, and high resistivity)
 - Heat Affected Coal to be sampled separately (Mild heat affected coal with a RD of 1.45 – 1.65, and low resistivity)
 - Cindered Coal to be sampled separately (Highly heat affect coal with RD greater than 1.65, and very low resistivity)
 - Intrusion to be sampled separately
- Coal is sampled based on ply intervals advised by the Project Geologist
- A 30-50cm seam roof and seam floor dilution sample is taken for all target seams
- Stone bands of 5cm or greater are sampled separately
- All fines must be collected during the sampling process (usually done with a scoop and small brush)

Coal sample sections begin and end at defined geological boundaries. In the field they are identified and designated before sampling begins. Stone bands may be sampled as part of a seam if less than 5cm. Stone bands greater than this are sampled separately from coal. Core loss must not be included in a sample. Where core loss exists, it will be the boundary separating two different samples (Figure 34).

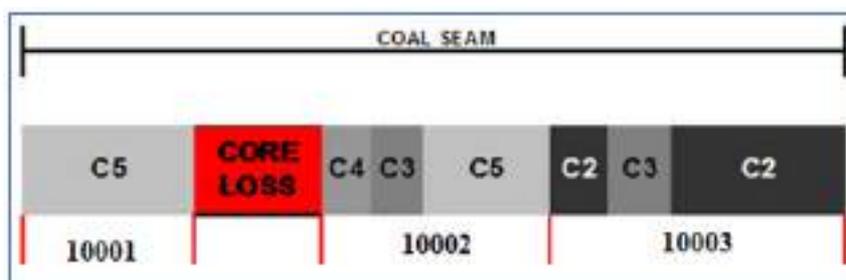


Figure 34. Schematic of no sampling core loss

All borecores are sampled by brightness profile, efforts are made to not sample across the Ply boundaries.

This is achieved by following the below instructions:

- As per the sampling procedure, sample sizes are not to exceed 50cm with the optimal size from 20 to 30cm as defined by brightness
- Stone bands greater than 5cm are to be sampled separately. Bands smaller than 5cm are to be included at the base of a sample
- Around the plie boundaries and transition for cindered – heat affected coal, samples are not to exceed 20cm in size (Figure 35)

Samples are not combined where there is doubt. "If in doubt sub-sample out!" Sub-samples combined later at the laboratory if necessary but incorrectly combined samples cannot be split, and the sample maybe disregarded.



Figure 35. Quality sampling example around intrusion

Samples are named in accordance with the sampling tickets provided for the project. These are usually a digit unique value and are used to identify samples in the lithology log as well as on the sample sheet.

After coal sample sections have been identified marked and photographed, each sample is double bagged in a plastic bag (Figure 36). Double bagging means collecting sample in one bag and then placing this bag into the second bag. The second bag is labelled with all relevant details including project, borehole ID, sample number and sampled depths. A sample ticket with relevant information is placed inside each bag before sealing the bag with Zip tie.

All samples collected are stored in shade while on site and moved to cool storage area at the end of every shift for storage pending dispatch.

Dispatch of samples occurs as soon as practicable (usually within 7 days) to the laboratory nominated. Laboratory address details and sample information is clearly marked such that the courier company can clearly recognize the details. Samples are prepared for dispatch so that they remain in suitable condition upon arrival at the laboratory.

A sample advice spreadsheet is generated in for each hole prior to dispatch of any samples to the preferred laboratory (Figure 37)

CHPP feed testing includes:

- Ash
- Total Moisture

CHPP product testing includes:

- Ash
- Phosphorous
- Total Sulphur
- Total Moisture
- Inherent Moisture
- Volatile Matter
- Crucible Swelling Number CSN (only at Moorvale CHPP)

8.1.3. Sampling for Rock Mechanics

At each of the sites, several boreholes have been drilled and sampled to gather data to support the development of Geotechnical Models. The holes and sampling performed has been done over several campaigns, and the sampling and data gathered has varied historically.

The recent sampling for geotechnical analysis at CMJV follows established internal site guidelines to allow for consistency of sample technique and sample intervals. Generally minimum sample sizes for mechanics testing is x3 the diameter of the core e.g. HQ core of 63mm = min sample length of 189mm.

Field sampling is supervised by the exploration geologist who ensures samples are appropriately labelled, bagged and packed ready for dispatch. Samples are transported using the established trucking companies and records of sample receipt and delivery are kept.

During the most recent borehole sample acquisition (at Moorvale South), boreholes were logged and photographed by a suitably qualified geotechnical engineer / engineering geologist in general agreement with Australian Standard 1726-2017. Rock samples were selected and wrapped in cling wrap and aluminium foil for transport to the NATA registered laboratory, TriLab Pty Ltd in Brisbane.

8.1.4. Sampling for Overburden

Sampling is conducted on an as required basis on the overburden for geochemical assessment. The testing program includes pH and electrical conductivity determination, acid base analysis and net acid generation testing. Sampling advice is provided by site environmental department or by consultants.

8.2. Laboratory Analyses

8.2.1. Coal Quality Analysis

Core samples for coal quality are crushed at the laboratory to pass 12.5 mm and split into 2 fractions; one quarter for proximate analysis, three quarters used for washability and clean coal composite testing. Pulps are retained and stored at the laboratory for additional assays and repeat testing where required. Splitting of the sample is done using riffle splitters under industry standards.

Coal quality analysis and testing is generally carried out in three stages:

Stage 1: Raw Coal Analysis - Individual coal samples or plies

Stage 2: Float/Sink Analysis - Individual coal plies or working section composites (combinations of coal plies where applicable)

Stage 3: Extended Analysis (Metallurgical and Marketing Analyses) - conducted on selected boreholes

Stage 3 results were reported on an air-dried basis (ad), dry (d) and dry ash free (daf) as required or appropriate.

Recent testing procedures for CMJV deposits are illustrated in figures 38 - 42 below:

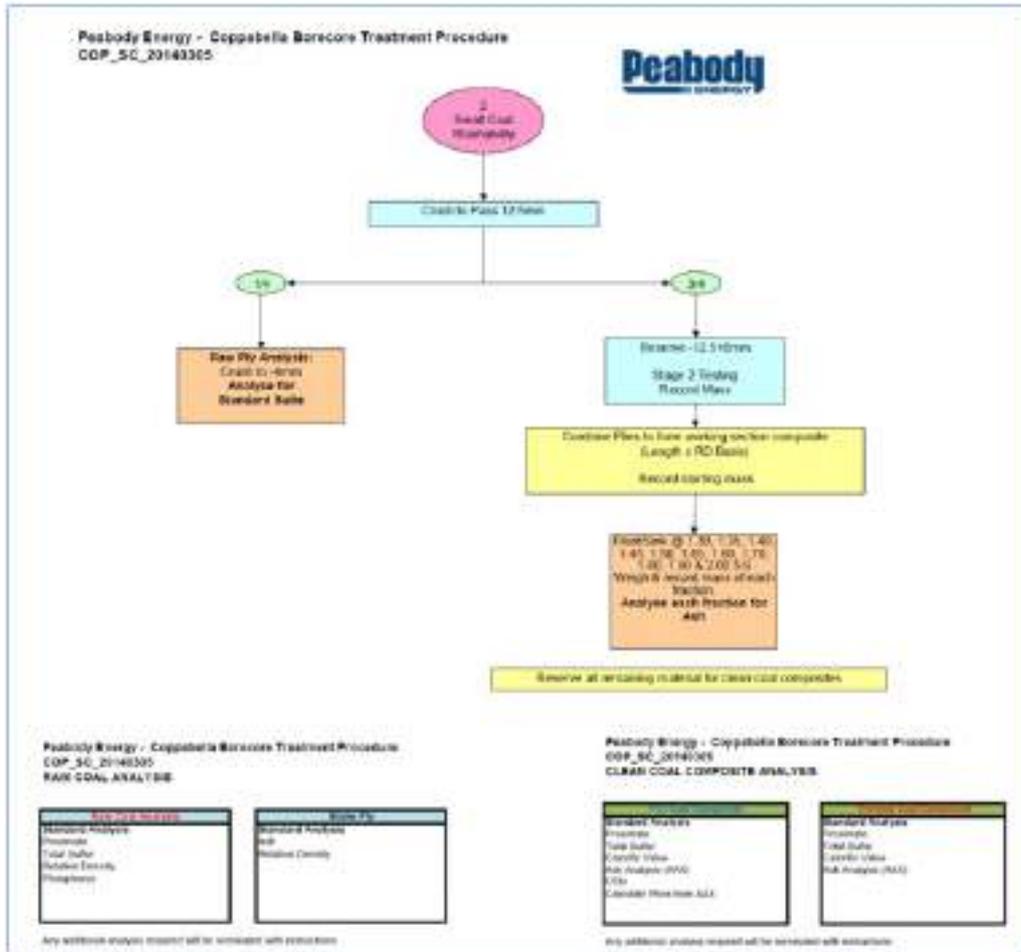


Figure 38. Coppabella Borecore Treatment Procedure COP_SC_20140305

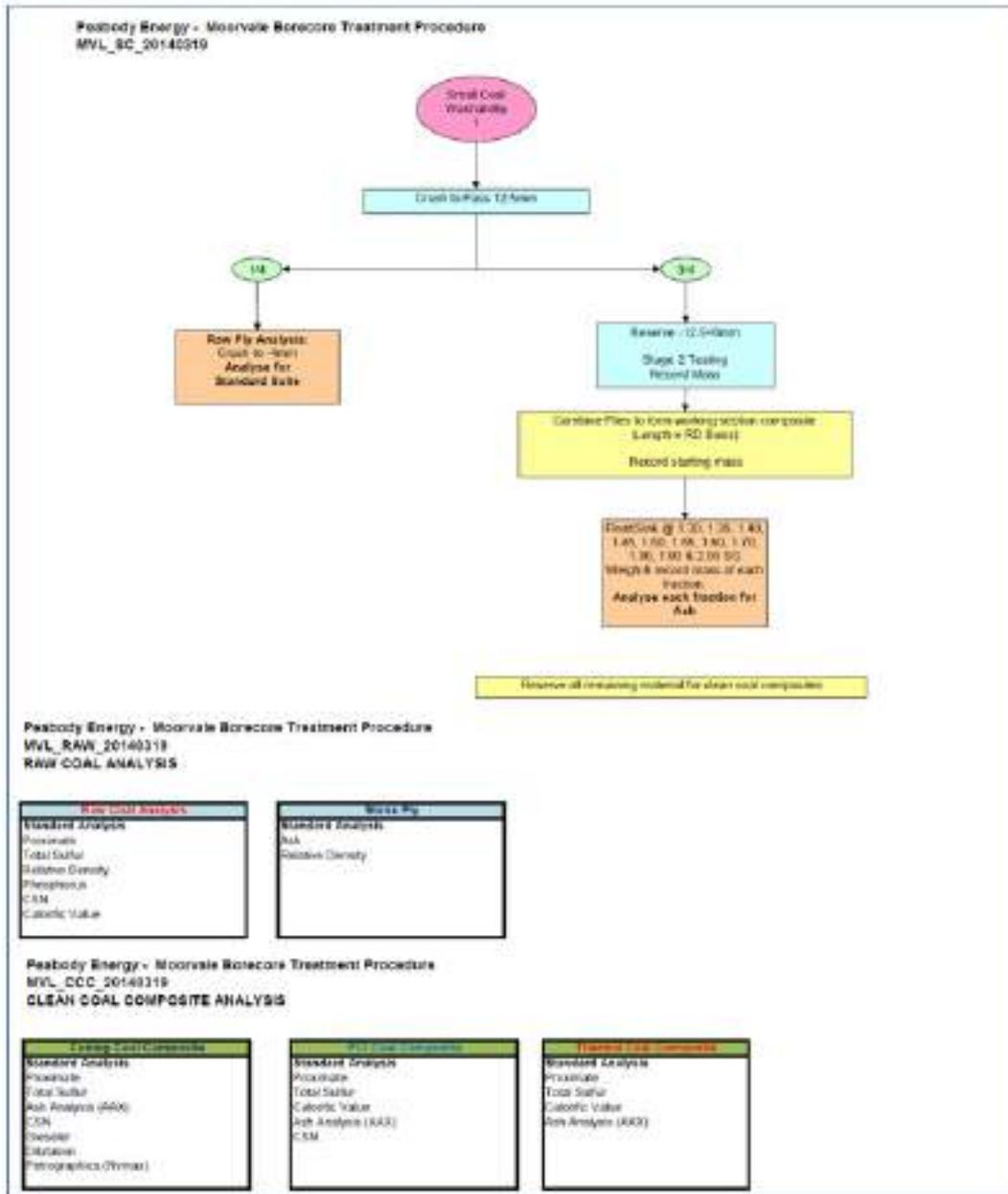


Figure 40. Moorvale Borecore Treatment Procedure MVL_SC_20140319

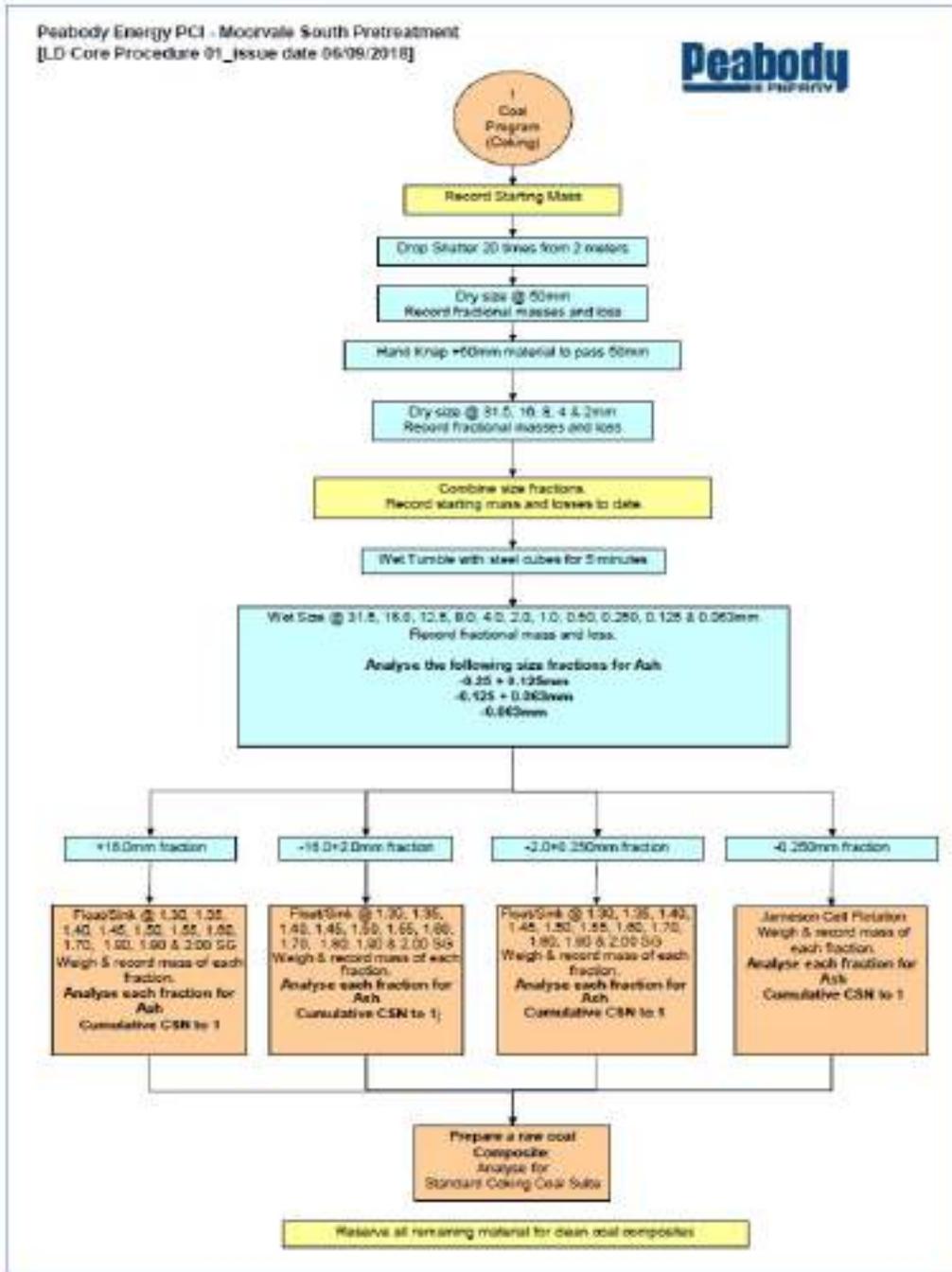


Figure 41. Moorsvale South Pre-treatment (LD Core Procedure 01)

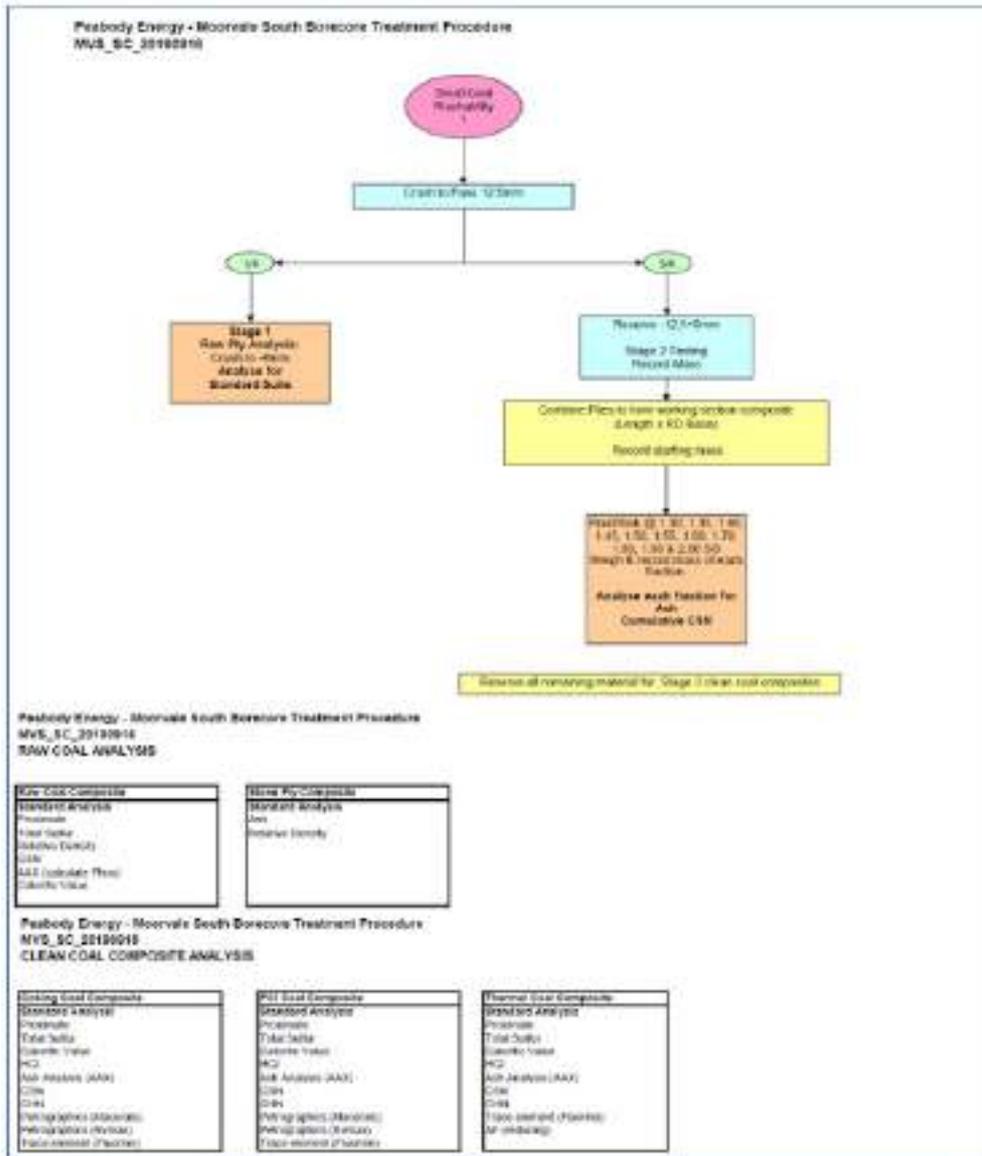


Figure 42. Moorvale South Borecore Treatment Procedure MVS_SC_20190916

Laboratory standards (ASTM D2013-D2013M standards)

All coal quality and geotechnical analysis techniques are per Australian Standards and completed at NATA accredited laboratories. The National Association of Testing Authorities, Australia (NATA) is Australia's national accreditation body for the accreditation of laboratories, inspection bodies, calibration services, producers of certified reference materials and proficiency testing scheme providers throughout Australia. It is also Australia's compliance monitoring authority for the OECD Principles of GLP.

Coal quality is expressed in SI units following Australian Standards.

These include AS1038.16 for acceptance and reporting of results, AS 4264.1 for sampling procedures, AS4264.4 for determination of precision and bias and the following standards for specific coal quality testing (Table 10);

NATA Accredited Tests		
Hard Coal Test	Abbreviation	Standard/Reference
Abrasion Index	AI	AS1038.19
Adiabatic Self Heating		AL035 (In-House)
Ash	A	AS1038.3
Ash Fusibility		AS1038.15
Carbon		AS1038.6.4
Carbonate Carbon	Cm	AS1038.23
Chlorine	C1	AS1038.8
Crucible Swelling Number	CSN	AS1038.12.1
Dilatometer		AS1038.12.3
Fixed Carbon	FC	AS1038.3
Float/Sink Analysis	F/S	AS4156.1
Forms of Sulphur	FOS [So, Sp, Ss]	AS1038.11
Gieseler		AS1038.12.4.1
Gray King Coke Type	GKCT	AS1038.12.2
Hardgrove Grindability Index	HGI	AS1038.20
Hydrogen	H	AS1038.6.4
Moisture (residual)	Mr	AS1038.3
Moisture Holding Capacity	MHC	AS1038.17
Nitrogen	N	AS1038.6.4
Oxygen	O	AS1038.16
Phosphorus	P	AS1038.14.3*
Relative Density	RD	AS1038.21.1.1
Relative Ignition Temperature	RIT	AL030 (In-House)
Size Analysis		AS3881
Gross Calorific Value	q	AS1038.5
Total Moisture	M	AS1038.1
Total Sulphur	S	AS1038.6.3.3
Volatile Matter	VM	AS1038.3
Ash Analysis		AS1038.14.3 *
Roga Index		ISO335
Caking Index		ISO15585
Hard Coal Test	Abbreviation	Standard/Reference
Proximate Analysis		AS1038.4
Note(s):		
1. Acceptance and reporting of results is in accordance with AS1038.16		

2. Sampling by ACIRL is in accordance with the following, AS4264.1 Sampling Procedures; AS4264.4 Determination of Precision and Bias		
3. All analyses reported to Air-Dried Basis unless otherwise indicated.		
*4. Ash Analysis performed at ACTest Newcastle laboratory (accreditation 15784/1422).		
Non Accredited Tests		
Test		Standard/Reference
Drop Shatter		AS2519
Durham Cone		AS1038.25
Froth Flotation		AS4156.2 and Client Specific Procedures
Mineral Matter		AS1038.22
Pre- Treatment		AS2519
Roadway Dusts		QLD Department of Mines and Energy – Quality of incompatible dust, sampling and analysis of roadway dust in underground coal mine – Coal Mining Safety Act 1999 Recognised Standard – No. 05, July 2003
Sapozhnikov		Journal of Mine Metals and Fuels India Oct 1978; GB/T 479-2000 Determination of plastometric indices of bituminous coal
Size Adjustment		AS2519

Table 10 - Relevant Laboratory Standards

8.2.2. Rock Mechanics Test

The geotechnical engineer provides the advice on the geotechnical analysis for each of the samples obtained.

For the last several years, tests have been performed at TriLabs Brisbane laboratory to appropriate Standards and included: UCS Tests, Multi-Stage Triaxial Strength Tests (at 100, 200, 300 & 500kPa confining pressures), Direct Shear Tests, and Brazilian Tensile Tests.

A summary of rock mass properties utilised by onsite geotechnical engineers is presented in section 7.4, Table 8 and Table 9.

8.2.3. Overburden Material Test

Sampling is conducted on an as required basis on the overburden for geochemical assessment. The testing program includes pH and electrical conductivity determination, acid base analysis and net acid generation testing. Sampling advice is provided by site environmental department or by consultants.

8.2.4. Density Determination

Laboratory densities are determined as per the relevant Australian Standard listed in Section 8.2.1 above.

8.2.5. Analytical Laboratories

Core samples acquired by Peabody were submitted to NATA accredited independent laboratories; namely ALS Richlands (formerly ACIRL), Bureau Veritas Australia and SGS Australia.

8.3. Sample Security

Field sampling is supervised by the site geologist who ensures samples are appropriately labelled, bagged and packed ready for dispatch. Samples are transported using the established courier companies and records of sample receipt and delivery are kept.

Laboratory results are compared to the field logging and downhole geophysics and any irregularities resolved before final validation and upload to the database.

Sample pulps are normally kept at the labs for one year so retesting can occur if required.

8.4. Comments from Qualified Person(s)

It is the opinion of the qualified person(s) responsible for this section that there are standards and procedures in place that are adequate for sample preparation, security and analytical testing.

9. DATA VERIFICATION

9.1. Data Verification Procedures

Verification of data gathered in the field takes place in several ways:

- Drill collar locations are recorded using a GPS at the time of drilling and verified against the planned coordinates. The locations surveyed by a licensed surveyor on a regular basis during the drill programs. Comparison between these 2 datasets allows a measure of location accuracy. Older data is checked by comparing collar elevation to the modelled topography grid created from LIDAR contour data which has a nominal vertical accuracy of 0.2 m in cleared areas.
- Geologist logs are reconciled to geophysical logs which have a higher depth precision than normal chip sample and core depths. General practice is to adjust seam depths and sample boundaries using the downhole density log to adjust depths. Generally geophysical tools used can include verticality, gamma, density, resistivity, temperature, sonic, magnetics and acoustic and optical scanners.
- Coal assay results from the NATA registered laboratory are compared with coal lithological logs and the downhole geophysical logs and any discrepancies investigated. Additional checks on assay results include reviewing the relationship between related parameters, such as raw ash and density and raw ash and specific energy. Sample results that do not match the predicted trends are investigated and re-assayed from a stored sample if necessary.

The validation process prior to geological modelling and resource generation involves the following steps:

- Exploration geologist validates all drill hole data following data acquisition and entry by the rig geologist,
- Coal technologist validates coal quality results,
- Project geologist validates all primary data (drill holes, geophysical surveys, ground mapping), coal quality results and external data
- Resource geologist validates all primary and coal quality data, mine operations data and any external data

Validation routines include, but are not limited to:

- Comparison of geology and geophysics in drill holes
- Cross sections of model vs drill holes and geophysical surveys
- Contours of seam thickness, midburden, roof and floor levels to identify anomalies
- Coal quality is compared to a synthetic quality report ran from the quality model, which uses surrounding data to interpolate the estimated quality at the drilled point.
- Surveyed locations are taken for every drilled location. Older data is checked by comparing collar elevation to the modelled topography grid and cross checked with legal description.
- Photographs of chip and core samples are reviewed when validating data.
- Reconciliation of geological model and boreholes against mined out areas
- Statistical review of geological and geotechnical data sets to highlight anomalies and outliers

Peabody's GeoCore database has built in functionality to allow the user to check drill hole location and elevation; geophysical interpretations; stratigraphic correlations and sample depth/thickness match to laboratory analysis. These data validation tools provide for a robust process to verify historical and newly acquired data in both a systematic and efficient manner. Peabody Australia uses an interface application called Task Manager which is used for data entry, data validation and report generation. This application has additional security measures to limit data entry errors and enforce coding and data formatting requirements.

Mine site visits are conducted by the Qualified Person(s) on a regular interval to validate the geological aspects of the exploration activities and active mining operations.

9.2. Limitations

There are no limitations to note.

9.3. Comments from Competent Person(s)

It is the opinion of the qualified person(s) responsible for this section that there are procedures and tools in place for adequate data verification.

10. COAL PROCESSING AND QUALITY TESTING

10.1. Coal Processing and Analytical Procedures

Coal quality estimates are representations of the quality parameters and although they can be considered accurate, they are not always precise due to variability in coal quality.

Coal quality models are estimates and may deviate from true values due to uncertainty in the estimation process. Variation from the true quality properties can be introduced through;

- Incomplete sampling – although intercepts with less than 90% recovery are generally excluded from the model, intervals with up to 10% missing core can be included and this may introduce some error if coal plies are of variable rank and hence different coal products are present
- Incomplete assay – variation in coal analysis procedures over the life of the project due to use of different testing procedures has resulted in some parameters not being tested consistently. An example is previous testing of stone bands contained within the seam were only analysed for ash and moisture; density and volatile matter has been estimated for these samples to complete the full seam section used for compositing
- Deposit specific relationships between coal quality parameters can be determined by constructing a line of best fit or regression equation. The more ash and stony bands in a coal seam, the less carbon, energy and volatile matter. Conversely, the purer the coal, the lower the density and ash constituents. These relationships are used as both checks against received assay results and to estimate missing assay values from incomplete sample results.
- Although rare, the sub-sampling and separation by density in washability analysis can result in insufficient material for detailed coal quality analysis in some fractions. Estimates are inserted to complete the washability tables in some cases.
- The interpolation algorithms used by the modelling software are by definition estimates. These may not account for local variation in properties between drillholes. The geostatistical analysis conducted during resource estimation provides a measure of this variability and determines the categorization of resources into Measured, Indicated and Inferred based on the distance between samples and the variation between seam parameters in these samples
- Reported coal quality is for the full seam/ply which may include non-coal intervals up to 0.30m in thickness, but makes no allowance for dilution or loss during the mining process
- Estimates of clean coal product quality are based on laboratory separations that will not always be exactly reflected in the products of coal processing plants on-site. An example is the measurement of coking and caking parameters which deteriorate with oxidation and are generally underestimated in the exploration samples due to the time delay and sample oxidation between drilling and analysis.

The above limitations are generally true for all resource estimations and are not limited to the CMJV. The variance introduced by these uncertainties is not considered to materially affect the gross coal quality estimates and further exploration will reduce the uncertainty to development and mining.

Estimates of potential product qualities were obtained from compositing washed laboratory results from exploration bore core into clean coal composites. Nominal working sections are used to reflect expected products.

In the case of Moorvale mine due to the limited ply washability data for future open cut mining it was deemed inappropriate to develop specific models for each ply. A universal model was required which incorporated existing working section washability data in conjunction with the ply washability data. Linear multi-variable analysis was used to predict yield and product quality. This was conducted by in-house coal quality specialists. Parameters required for modelling were; simulated product yields, simulated product ash, product volatile matter, and product phosphorus. The linear multivariable analysis equations would then be applied to the raw coal data at a ply level.

Coal Quality Report

Table 11, Table 12 and Table 13 show the average raw seam/ply qualities reported on an air-dried basis of the CMJV deposits.

Table 14 shows to the average simulated seam/ply product ash and yields reported on an air-dried basis of the CMJV deposits.

Deposit	Seam/Ply	% Raw Ash (a.d.)	% Vol. Matter (a.d.)	% Inherent Moisture (a.d.)	Relative Density (a.d.)	% Phos (a.d.)	% Total Sulphur (a.d.)
Coppabella	Leichardt Upper 1	17.8	10.7	1.7	1.56	0.096	0.26
	Leichardt Lower 1	13.9	11.4	1.7	1.49	0.076	0.24
	Leichardt Lower 2	11.6	11.6	1.7	1.47	0.081	0.24
	Leichardt Lower 3	12.2	11.5	1.7	1.46	0.104	0.25
	Leichardt Lower 4	14.1	10.9	1.8	1.51	0.114	0.29
	All Seams	13.9	11.2	1.7	1.50	0.094	0.26

Table 11. Average Seam Raw Coal Quality for Coppabella deposit (air-dried basis)

In the Coppabella deposit the Leichardt Upper seam is higher ash than the Leichardt Lower seam. The lower volatile matter of the Leichardt Upper and Leichardt Lower 4 seams is partially due to occurrence of the intrusive sills within the top and base of the coal seams at Coppabella that devolatilizes the coal seam.

Deposit	Seam/Ply	% Raw Ash (a.d.)	% Vol. Matter (a.d.)	% Inherent Moisture (a.d.)	Relative Density (a.d.)	% Phos (a.d.)	% Total Sulphur (a.d.)
Moorvale	Phillips	18.2	17.0	1.6	1.48	0.108	0.33
	Leichardt Upper 1	19.5	16.3	1.5	1.49	0.129	0.30
	Leichardt Upper 2	24.8	15.6	1.7	1.54	0.098	0.27
	Leichardt Lower 1 T	21.1	16.6	1.6	1.50	0.186	0.27
	Leichardt Lower 1 B	19.7	17.8	1.5	1.48	0.147	0.30
	Leichardt Lower 2	15.9	16.5	1.5	1.44	0.052	0.33
		All Seams	19.9	16.6	1.6	1.49	0.120

Table 12. Average Seam Raw Coal Quality for Moorvale deposit (air-dried basis)

Deposit	Seam/Ply	% Raw Ash (a.d.)	% Vol. Matter (a.d.)	% Inherent Moisture (a.d.)	Relative Density (a.d.)	% Pplus (a.d.)	% Total Sulphur (a.d.)
Moorvale South	Leichardt Lower 2 T	17.3	18.3	1.2	1.47	0.127	0.62
	Leichardt Lower 2 B	15.2	18.9	1.3	1.43	0.061	0.58
	Leichardt Lower 3	24.9	18.1	1.4	1.52	0.026	0.38
	Vermont Upper	14.4	17.5	1.3	1.42	0.038	0.33
	Vermont Lower 1	33.2	15.5	1.5	1.60	0.018	0.44
	All Seams	21.0	17.7	1.3	1.49	0.054	0.47

Table 13. Average Seam Raw Coal Quality for Moorvale South deposit (air-dried basis)

Deposit	Seam/Ply	Cumulative Float 1.60rd Qualities	
		% Ash (a.d.)	Yield % (a.d.)
Coppabella	Leichardt Upper 1	10.5	71.0
	Leichardt Lower 1	9.1	79.6
	Leichardt Lower 2	8.0	81.7
	Leichardt Lower 3	8.8	83.7
	Leichardt Lower 4	8.8	76.8
Coppabella	All Seams	9.0	78.6
Moorvale	Philips	11.7	81.8
	Leichardt Upper 1	12.1	80.0
	Leichardt Upper 2	13.9	72.7
	Leichardt Lower 1 T	13.0	76.4
	Leichardt Lower 1 B	12.3	79.9
	Leichardt Lower 2	10.8	85.3
Moorvale	All Seams	12.3	79.7
Moorvale South	Leichardt Lower 2 T	11.5	78.4
	Leichardt Lower 2 B	10.3	82.0
	Leichardt Lower 3	13.1	67.9
	Vermont Upper	8.8	82.5
	Vermont Lower 1	18.2	53.2
Moorvale South	All Seams	12.6	72.8

Table 14. CMJV Simulated Ash and Yield at Cumulative Float 1.60 rd

10.2. Analytical Laboratories

Laboratories are the same as the ones described in section 8.2.5.

10.3. Recovery Estimates

Generally, yields are determined from the testing of crushed coal at one size at various densities in a testing process known as float/sink analysis. This analysis is performed by the coal laboratories noted in section 8.2.5 of this report and performed to Australian Standard AS4156.1. Results are combined to represent cumulative float ash and yields through increasing densities at various cumulative fixed densities. This theoretical testing numbers may differ to actual yields that are the result of a variety of sized fractions and densities processed through the CHPP.

Simulated product yield modelling has been undertaken at the CMJV to assist with determining a better accuracy for the recovery of coal by standardizing washability, applying liberation and CHPP circuit segregation models and reconciling against CHPP actuals. This as undertaken by in-house coal quality specialists utilising specialist 3rd party software.

Intrusions present at the Coppabella and Moorvale South deposits can have negative effects on the yields of affect coal seams. As heat affected coals relative density is higher than that of non-heat affected coals, the yields can be lower. This is documented and reflected in the test results at Coppabella and Moorvale South, and used to inform the geological models.

10.4. Comments from Qualified Person(s)

It is the opinion of the Qualified Person(s) responsible for this section that there are sufficient amounts of data and processes in place to adequately predict coal quality estimates at the stated level of confidence for the deposits in the CMJV.

11. COAL RESOURCE ESTIMATES

11.1. Introduction

A coal resource is an occurrence of material of economic interest in the Earth's crust in such form, quality, and quantity that there are reasonable prospects for economic extraction. A coal resource is a reasonable estimate of tonnage, taking into account relevant factors such as quality, likely mining dimensions, location or continuity, that, with the assumed and justifiable technical and economic conditions, is likely to, in whole or in part, become economically extractable. It is not merely an inventory of all coal tonnage drilled or sampled.

Coal resources are sub-divided, in order of increasing geological confidence, into inferred, indicated and measured classifications.

11.2. Geologic Model and Interpretation

The CMJV resources have been modelled over several iterations. Separate geological models are generated for Coppabella, Moorvale, and Moorvale South. Each of these models consists of both a stratigraphic and coal quality model developed as grid surfaces using Maptek Vulcan software as is industry standard in the Bowen Basin.

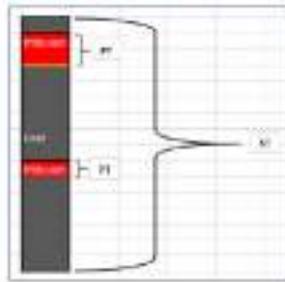
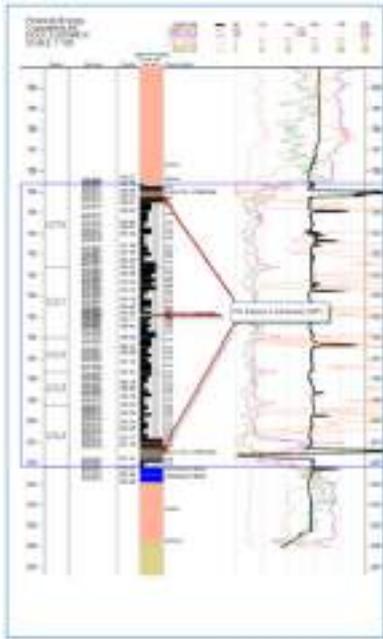
The models are created using the GDCALC module in Vulcan by using the Integrated Stratigraphic Modelling menu, an audit trail is created within the specification files used in grid generation. The modelling method is based on a hybrid method that utilises both a stacking seam and interburden thicknesses on a reference horizon, and design data from other sources to interpolate the seam structure.

Interpolation of the seam structure grids is based on a triangulation, with seam thickness interpolated using inverse distance squared. A base of weathering model was developed from the drillhole intersections and all final structure grids used to calculate coal tonnes were clipped to this base of weathering surface to ensure oxidised coal was excluded from the coal resource calculations. The structural grid outputs from the models include the structure of seam roof and floor, coal thickness, seam structure thickness, and in the case of Coppabella and Moorvale deposit seam intrusion percentage.

As the Coppabella and Moorvale south deposits contain intrusive sills and dykes within the target seams, an approach to estimate the intrusion was undertaken by calculating the intrusion percentage (waste percentage) within the seams by the following:

- The intruded section of the seam is assigned an in-seam parting code (IG) within drillhole database and the thickness of the intrusion within each ply is modelled.
- This is converted to a "waste percentage" grids per seam/ply by the Equation 1 - Waste (intrusion) percentage calculation.

This allows for the estimation of the net coal within intruded areas of the Coppabella and Moorvale South deposits.



$$WP = \left(\frac{PT}{ST} \right) * 100$$

WP = Waste Percentage
 PT = Parting thickness
 ST = Structural thickness

Equation 1 - Waste (intrusion) percentage calculation

Coal quality parameters were modelled in house by the coal quality specialist using third party specialist simulation software. Composites of borehole sample results where individual samples are combined to represent the ply or working section intersection. The initial coal quality sample list was then flagged where samples thickness didn't match sample depth. Samples were also flagged where either excessive recovery or loss of samples occurred (<90% or >110%). These flagged samples were set for exclusion.

Coal quality grids were developed based on inverse distance squared interpolation for Moorvale and Moorvale South, whereas Coppabella were developed based on kriging interpolation in Golden software surfer and the grids imported to Maptek Vulcan. Quality parameters modelled are listed in Table 15, Table 16, and Table 17. Qualities are modelled on an air-dried basis.

Raw Coal Quality	Product Coal Quality
Moisture % (ad)	Ash % at Cumulative Float 1.40, 1.50, 1.60, 1.65, 1.70, 1.75, 1.80, 1.85, 1.90
Ash % (ad)	Yield % at Cumulative Float 1.40, 1.50, 1.60, 1.65, 1.70, 1.75, 1.80, 1.85, 1.90
Volatile Matter % (ad)	Phosphorous % at Cumulative Float 1.40, 1.50, 1.60, 1.65, 1.70, 1.75, 1.80, 1.85, 1.90
Phosphorous % (ad)	Sulphur % at Cumulative Float 1.40, 1.50, 1.60, 1.65, 1.70, 1.75, 1.80, 1.85, 1.90
Relative Density g/cc (ad)	
Sulphur % (ad)	

Table 15. Coppabella modelled coal qualities

Raw Coal Quality	Product Coal Quality
Ash % (ad)	Ash % at Cumulative Float 1.40, 1.50, 1.60,1.70
Volatile Matter % (ad)	Yield % at Cumulative Float 1.40, 1.50, 1.60,1.70
Phosphorous % (ad)	Phosphorous % at Cumulative Float 1.40, 1.50, 1.60,1.70
Relative Density g/cc (ad)	
Sulphur % (ad)	
Specific Energy mj/Kg (ad)	
CSN (a.d.)	

Table 16. Moorvale modelled coal qualities

Raw Coal Quality	Product Coal Quality
Ash % (ad)	Ash % at Cumulative Float 1.40,1.45, 1.50, 1.55, 1.60,1.70
Volatile Matter % (ad)	Yield % at Cumulative Float 1.40,1.45, 1.50, 1.55, 1.60,1.70
Fixed Carbon % (ad)	Volatile Matter % at Cumulative Float 1.40,1.45, 1.50, 1.55, 1.60,1.70
Relative Density g/cc (ad)	Sulphur % at Cumulative Float 1.40,1.45, 1.50, 1.55, 1.60,1.70
Specific Energy mj/Kg (ad)	Phosphorous % at Cumulative Float 1.40,1.45, 1.50, 1.55, 1.60,1.70
CSN (a.d.)	CSN at Cumulative Float 1.40,1.45, 1.50, 1.55, 1.60,1.70

Table 17. Moorvale South modelled coal qualities

It is the opinion of the QP that the CMJV geological models adequately reflect the seam depth, thickness and quality parameters for the purposes of estimating contained coal resources to the specified confidence level.

11.3. Resource Classification

The resource classification used for CMJV encompasses the qualified person's confidence on the deposit. There were multiple factors used for the final analysis, including data quality, historic local and regional observations, operational history, as well as quantitative analysis.

- Measured resource has the highest level of confidence for the estimated quantity and quality based on the geological evidence and sampling. A set of criteria (Table 19) on the degree of uncertainty is assessed and the low degree of uncertainty normally corresponds to the category of Measured resource.
- Indicated resource has a lower level of confidence than the Measured resource, but a higher level of confidence than the Inferred resource. A set of criteria (Table 19) on the degree of uncertainty is assessed and the medium degree of uncertainty normally corresponds to the category of Indicated resource.
- Inferred resource has the lowest level of confidence. A set of criteria (Table 19) on the degree of uncertainty is assessed and the high degree of uncertainty normally corresponds to the category of Inferred resource.

Estimation of coal resources is based on drill hole intercepts that the OP determines meet the requirements of a Point of Observation (POB). For structural and coal quality POB's, the hole location must be surveyed, geologically logged and typically would have downhole geophysical logs (gamma and density as minimum). A coal quality POB must also have coal quality analyses of at least 90% of the interval (ash and density as a minimum). Intervals with less than 90% core recovery do not qualify as quality POBs unless otherwise deemed appropriate to be included by the QP.

The definition of a sample point as a POB provides reasonable confidence that the parameters represented by that sample are valid; accurately located, appropriate lithology and downhole geophysics collected, adequately sampled and assayed by a registered laboratory. The POB then becomes the basis for estimating the properties of the surrounding coal. Analysis of the variability between neighbouring POB's provides a measure of the distance that coal seam parameters can be extrapolated from a valid POB. This is done through geostatistical analysis based on precision tolerances from global estimation variance; also known as Drill Hole Spacing Analysis (DHSA). The DHSA method of resource classification is both valid and practical for coal deposits as compared to the more complex conditional simulation analysis.

To complete this study, the ArcMap 10.6 geostatistical extension was used to validate and view the normalcy of the input data and construct semi variograms. Once the semi variogram was plotted, the spherical model was fitted to the data using a calculated nugget, range and sill from the optimum model fit. This provides a mathematical function to explain the relationship between real-world values and distances between points. Then, the estimation variance was calculated for a range of test block sizes at varying sizes which in turn was converted to relative error at a 95% confidence. Lastly, the Resource classifications were defined based on relative error precision tolerances of 10%, 20%, 50% for Measured, Indicated and Inferred respectively. These precision tolerances were developed by Bertoli et al (2013) regarding the area of a five-year period. From this study the classification radii, based on the distance of the error tolerance, were used to create Resource classification polygons with individual modifications from supporting data as the QP determines.

The geostatistical analysis was conducted on the raw ash and the thickness variables taken from the points of observation. The most variable result (that results in a smaller spacing) of either the raw ash or thickness is used as a base to classify the resources before any individual modifications are made. In majority of analysis the raw ash was the most variable of parameters. Therefore, the raw ash radii were utilised to classify the resources.

DHSA classifications at Coppabella mine were domained based on the presence of intrusion within the seams. As the eastern side of Coppabella is often intruded this was selected as a separate domain for analysis. Resource classifications were assigned at Coppabella mine based on the Domain and individual seam.

DHSA classifications at Moorvale mine were undomained for analysis and carried out on individual plies. The smallest spacing of 75m from LL1B ply is due to this being one of the smallest plies (0.8m average) and therefore is greatly affected by minor changes in coal seam thickness. It is recommended to focus on the plies that make up the first 75% of the resource. This is the PHI, LL1T, & LL2. The minimum spacing of these 3 is chosen as the spacing for resource classification. The resource classification radii utilised for Moorvale mine resource classification are 170m measured, 330m indicated, and 760m inferred.

DHSA results were not used for the Moorvale South deposit, as a smaller dataset and north-south distribution of data points for Moorvale South was not optimal in the DHSA analysis. Therefore, resource classifications for Moorvale South are based on the experience and judgement of the QP. The approximate radii of influence for points of observation at Moorvale South is observed to be approximately; measured 250m, indicated 400m, and inferred 700m.

The Resource and Reserve estimates as of December 31, 2021 were calculated using the classification polygons from the geostatistical study with the drillhole spacing highlighted in bold text in Table 18.

Site	Seam	Parameter	Measured	Indicated	Inferred
Coppabella (Central and Western Domain)	Leichardt Upper	Coal Thickness	200	370	795
		Raw Ash	110	215	500
Coppabella (Central and Western Domain)	Leichardt Lower	Coal Thickness	340	610	1480
		Raw Ash	205	385	815
Coppabella (Eastern Domain)	Leichardt Upper	Coal Thickness	130	260	605
		Raw Ash	95	165	335
Coppabella (Eastern Domain)	Leichardt Lower	Coal Thickness	250	415	870
		Raw Ash	95	180	395
Moorvale	Phillips	Coal Thickness	260	430	845
		Raw Ash	205	370	765
	Leichardt Upper 1	Coal Thickness	195	325	610
		Raw Ash	100	185	405
	Leichardt Upper 2	Coal Thickness	105	210	515
		Raw Ash	160	275	540
	Leichardt Lower 1 T	Coal Thickness	200	390	915
		Raw Ash	195	365	800
	Leichardt Lower 1 B	Coal Thickness	185	350	795
		Raw Ash	75	155	380
	Leichardt Lower 2	Coal Thickness	210	405	945
		Raw Ash	170	330	760

Table 18. Radii (m) of influence from Points of Observation derived from Geostatistics

Source	Degree of Uncertainty		
	Low	Medium	High
Exploration	No significant issues. Protocols consistent with industry standards.	Historical information may not capture the array of information now standard. Used in model where more recent drilling validates results.	
Sampling method	Standard site operating procedure and guidelines	Sampling sections of coal have changed over time to now sample in more detail. If <90%, data not used. Quality trends across site is fairly consistent.	
Sample Prep/Analysis	On site, ASTM accredited and independent contracted lab - consistent with industry standards.	Increased uncertainty for older cores where sample preparation and testing procedures are not recorded. Checked with infill drilling with new core holes for comparison. Moorvale product simulation via linear multi-variable analysis and tested data against recent drill programs	
Quality Assurance/Quality Control	Sample prep and analysis procedures follow ASTM and meet current industry standards. Laboratory is NATA certified. Quality is retested to confirm anything that looks abnormal.		
Data Verification	Collar and survey are checked and corrected for minor inconsistencies. Holes with unresolved inconsistencies removed. Surveyed top of coal points are used to confirm drillhole structure and further define currently mined areas with minor structural variations.		
Database	Location, geological and analytical data in the database verified to the QP's satisfaction. Unverified or questionable data inactivated and not used.		
Geologic Modelling	Model is reconciled to production for quantity and quality on an annual basis.		
Density	Borecore sample density and inherent moisture tested extensively across sites.		
Quantitative analysis (Drillhole Spacing Analysis)	Coppabella Mine dominated due to presence of intrusion throughout eastern side of deposit. Ash is the main constraint from the Drillhole Spacing Analysis. Measured drillhole radii for each deposit highlighted within Table 18	Other quality has higher variability such as phosphorous. They are managed through blending. They are not limiting factors for the resources. Indicated drillhole radii for each deposit highlighted within Table 18	Inferred drillhole radii for each deposit highlighted within Table 18
Other Classification Criteria	Based on the QP's experience, a smaller dataset and north-south distribution of data points for Moorvale South was not optimal in the DHSA analysis. The drill hole spacing for Moorvale South is estimated based on the experience and judgement of the QP: < 250 m drillhole radii	< 400 m drillhole radii	drillhole radii < 700 m
Cut Off Criteria (Cut-off grade and metallurgic recovery)	A seam quality cut-off greater than 50% raw ash (air dried moisture basis) is excluded from resources	Product yields may be negatively affected by presence of intrusions. Stockpile blending and control implemented to control yield. Increased exploration drilling density in eastern side of Coppabella to support resource estimation.	
Mining Methods	Mature mining technology at existing operation.		
Costs	Long operating history with documented cost.		
Prices	Established market with long-time customers.		

Table 19. Degree of Uncertainty

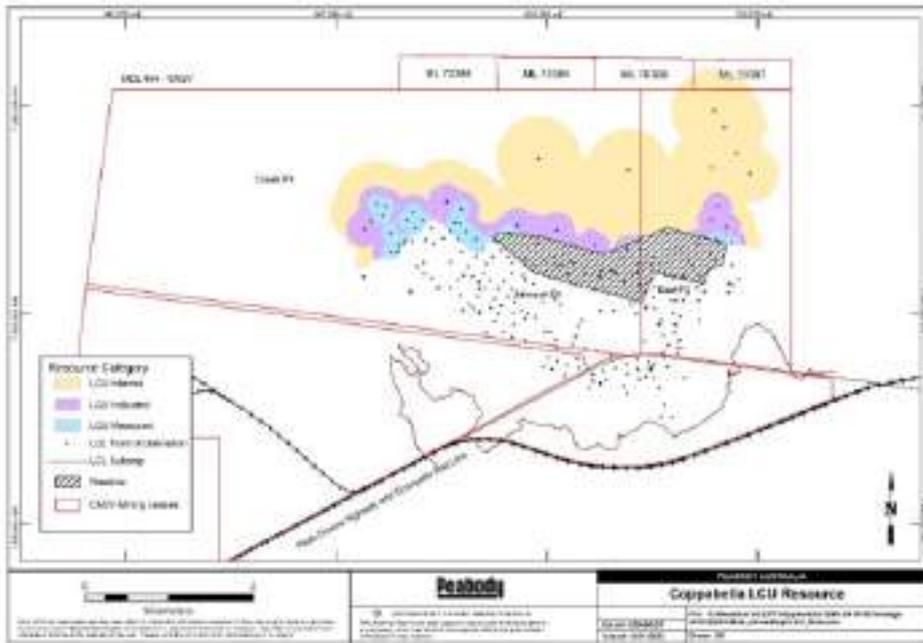


Figure 43. Coppabella Mine Resource Classifications - Leichardt Upper

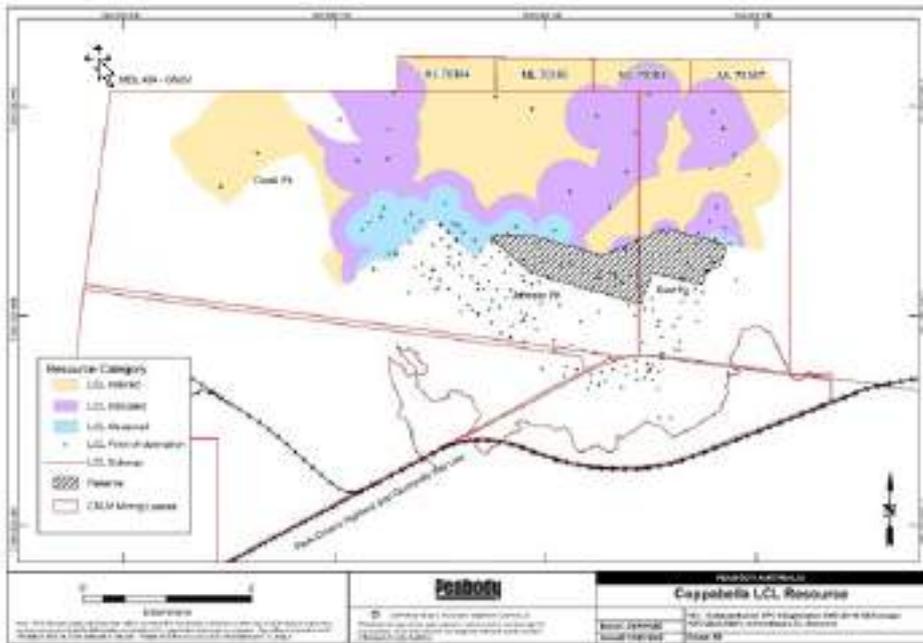


Figure 44. Coppabella Mine Resource Classifications - Leichardt Lower

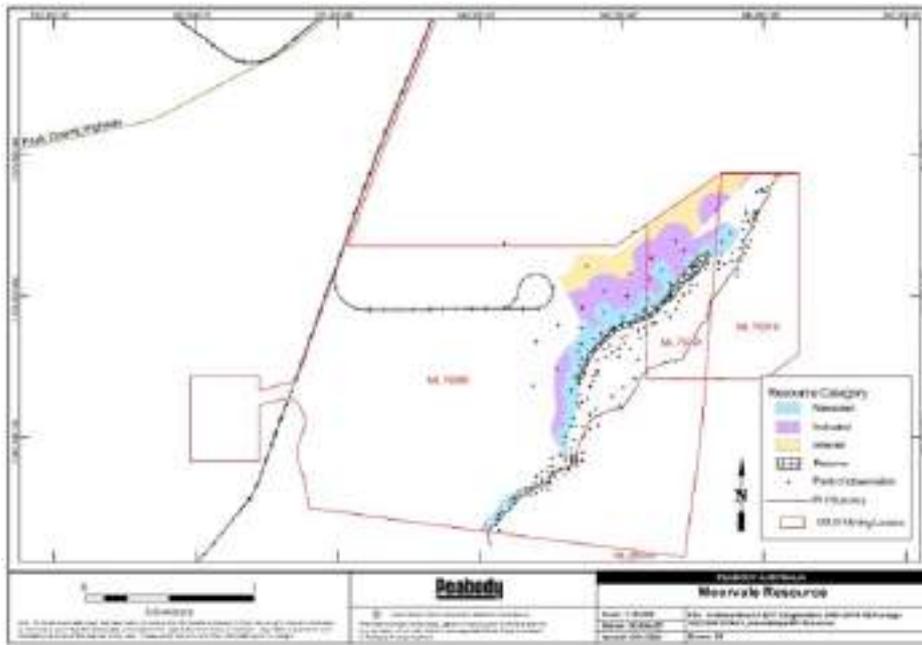


Figure 45. Moorvale Mine Resource Classifications

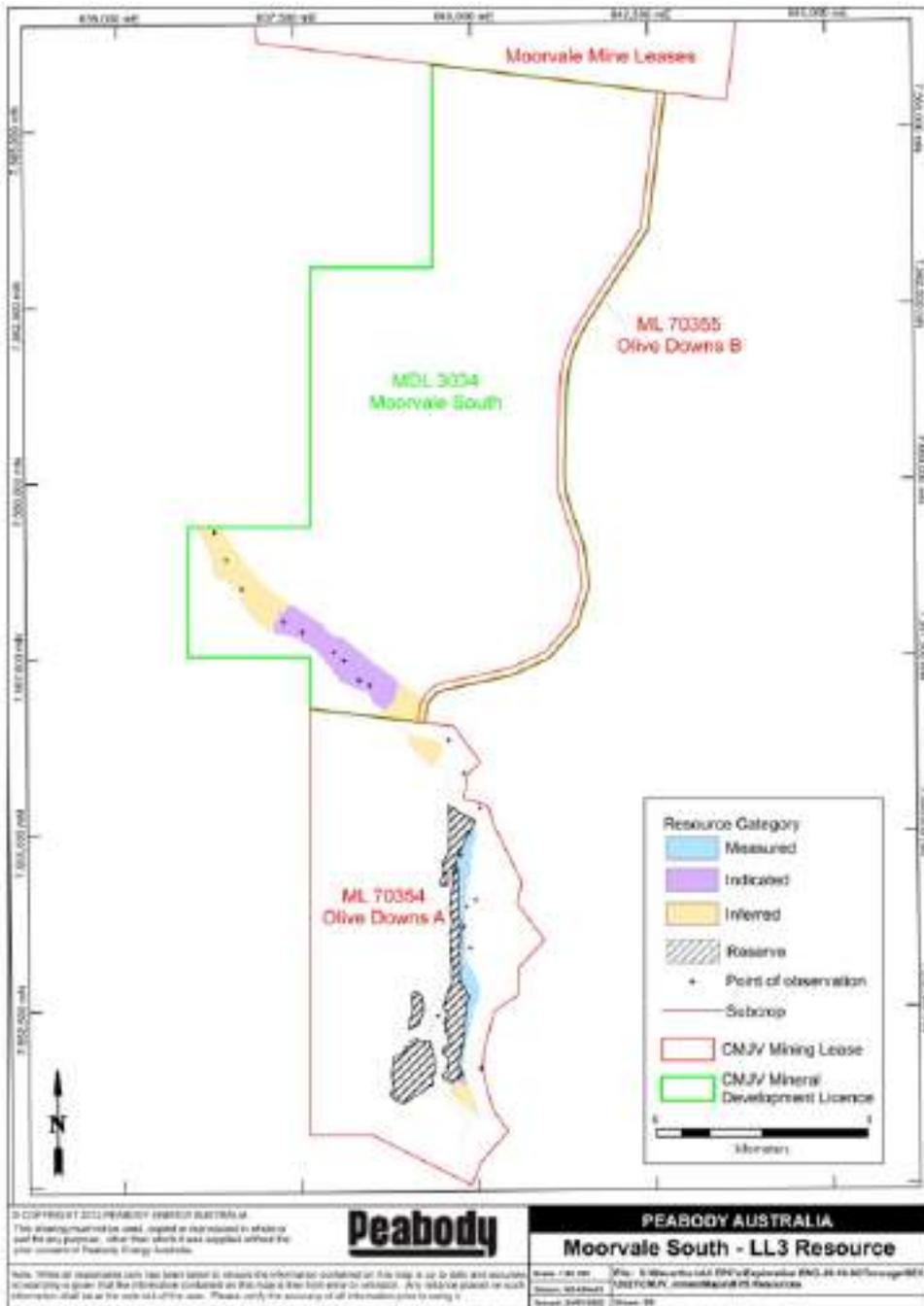


Figure 47. Moorvale South resource classifications – Leichardt Lower 3

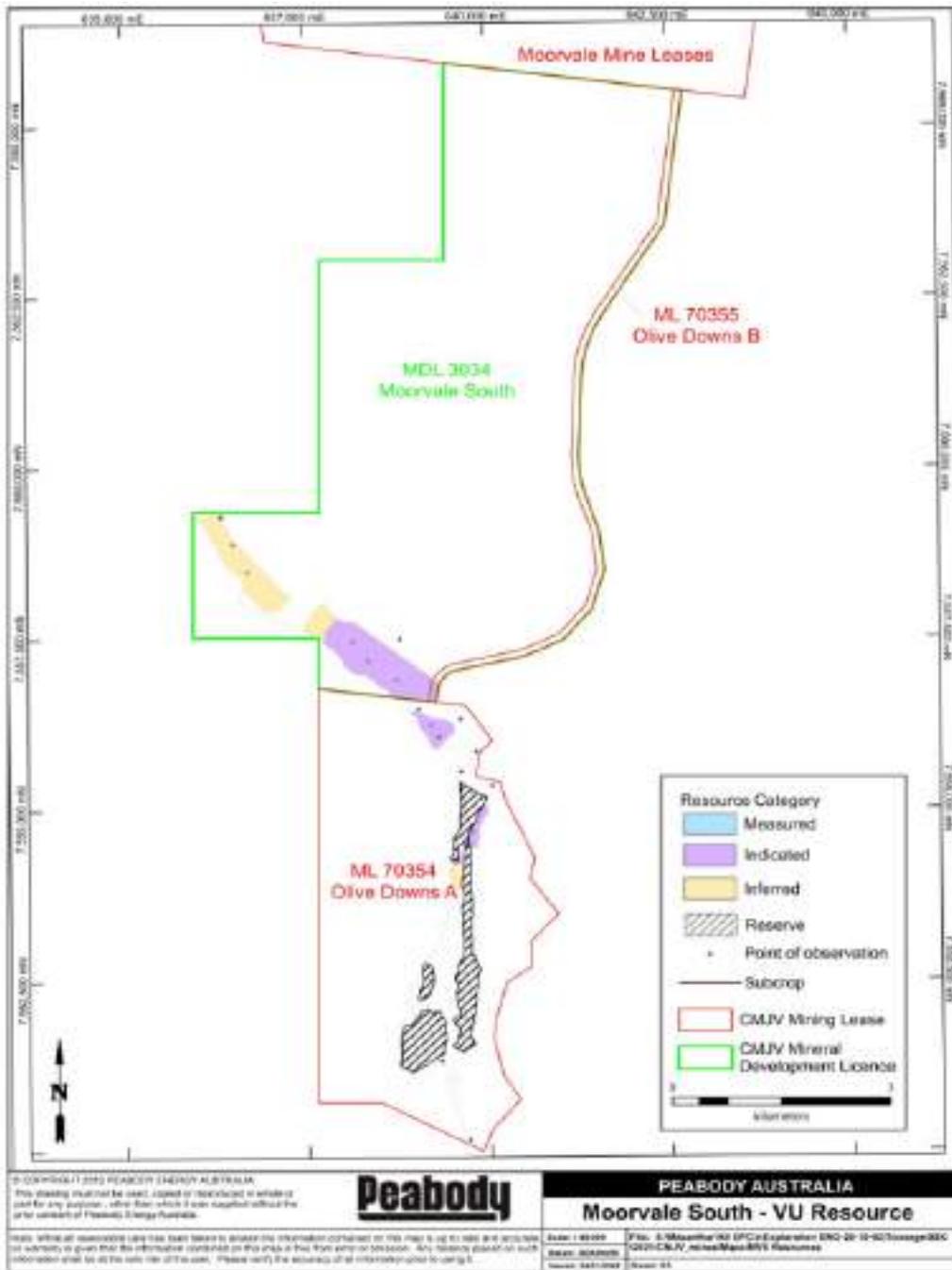


Figure 48. Moorvale South resource classifications - Vermont Upper

11.4. Coal Resource Estimates

Resources have been classified (Table 20) and reported in accordance with the Regulation S-K (Subpart 1300). Resources are classified into "Measured", "Indicated" and "Inferred" categories based on the distribution of borehole intersections and coal quality data. Estimation of the Coal Resources are mainly determined by geological criteria and property control boundaries along with the potential of current or future economic viability utilizing available mining technologies. The Coal Resource estimates for CMJV provided are on an insitu basis exclusive of these Coal Reserve estimates.

Coal resource estimates are based on the following:

- Constrained to lease boundaries
- Open cut resources are limited to the area defined by the Maptek Vulcan Pit Optimiser module (process discussed page 86) utilising a 50% increase (Revenue Factor 150% or RF150) on long term pricing expectations, except for Moorvale South MDL 3034 where open cut resources are limited to 150m depth of cover
- Minimum mining thickness of 0.3m for open cut
- Minimum mining thickness of 2m for underground resources
- Underground resources excluded in areas of seam dip exceeding 15 degrees
- Underground resources depth cut-off at 500m depth of cover, with exception of Moorvale Mine depth cut-off at 300m depth of cover
- A seam quality cut-off greater than 50% raw ash (air-dried moisture basis) is excluded from resources
- There are no yield cut-offs applied
- No weathered coal included
- Intrusive sills and dykes within seams are excluded from the resources
- Heat-affected coal is included in the resources

The in-situ density grid utilized to generate resource estimates was calculated from the relative density grids and inherent moisture grids using the Preston and Sanders formula assuming an in-situ moisture of 6% for Coppabella and Moorvale South deposits. An in-situ moisture of 5.7% was assumed for the Moorvale deposit which is based on knowledge of in-situ moisture from surrounding areas.

$$I.D. = \frac{RD * (100 - Mad)}{100 - Mis + RD * (Mis - Mad)}$$

Where I.D. = Preston Sanders In situ Density
 RD = RD (Lab density)
 Mad. = Inherent (air dried or Lab) Moisture
 Mis = In situ Moisture

Equation 2 - Preston and Sanders Formula

The CMJV contains a total resource estimate of 231.3 million tonnes, exclusive of reserves (Table 20).

11.5. Coal Resource Statement

Deposit	Seam	Measured					Indicated					Inferred					Total				
		Bitu Tonnes (millions)	Subst (a.d.)	SWM(a.d.)	Sphos (a.d.)	CSN	Bitu Tonnes (millions)	Subst (a.d.)	SWM(a.d.)	Sphos (a.d.)	CSN	Bitu Tonnes (millions)	Subst (a.d.)	SWM(a.d.)	Sphos (a.d.)	CSN	Bitu Tonnes (millions)	Subst (a.d.)	SWM(a.d.)	Sphos (a.d.)	CSN
Coppabella	Leichardt Uppers	1.9	22.1	12.2	0.137		4.7	22.8	10.4	0.131		25.0	19.9	10.8	0.092		29.6	20.5	10.8	0.097	
	Leichardt Lower	14.1	15.0	12.2	0.124		54.7	12.6	13.0	0.092		67.3	14.0	13.8	0.096		126.2	14.0	12.9	0.092	
	AV seams	16.1	15.8	13.1	0.114		59.4	14.3	12.8	0.094		90.3	15.5	12.3	0.088		165.8	15.2	12.5	0.098	
Moorvale	Phlips	4.0	16.5	17.1	0.106	2	1.8	16.3	17.1	0.129	3	-	-	-	-	-	5.8	16.4	17.1	0.113	2
	Leichardt Uppers	3.7	22.0	16.1	0.137	1	1.7	20.4	15.8	0.114	1	-	-	-	-	-	5.4	21.5	16.0	0.126	1
	Leichardt Lower	14.9	17.9	16.8	0.112	1	13.4	16.9	16.7	0.108	2	6.5	15.9	16.7	0.085	2	34.8	17.1	16.7	0.108	2
Moorvale	AV seams	22.6	18.2	16.7	0.112	2	16.9	17.2	16.7	0.107	2	6.9	15.9	16.7	0.085	2	46.0	17.9	16.7	0.106	2
Moorvale South ML	Leichardt Lower 2	3.8	16.5	18.5	-	3	0.2	12.5	18.1	-	2	0.2	19.7	19.3	-	2	3.2	16.5	18.5	-	2
	Leichardt Lower 3	0.9	20.6	18.0	-	4	-	-	-	-	-	0.2	18.1	18.2	-	6	1.0	27.0	18.0	-	4
	Vermont Upper	0.5	12.2	18.6	-	5	0.4	16.9	15.5	-	2	0.6	14.1	16.4	-	2	1.2	14.3	17.1	-	4
Moorvale South ML	AV seams	4.2	15.3	18.4	-	3	0.6	12.1	16.4	-	2	1.0	12.3	17.3	-	4	5.4	18.0	18.1	-	2
Moorvale South MDL	Leichardt Lower 2	-	-	-	-	-	5.7	19.7	18.4	-	1	3.9	17.1	17.6	-	2	9.6	18.6	18.1	-	2
	Leichardt Lower 3	-	-	-	-	-	0.7	17.1	19.2	-	7	0.6	21.7	17.8	-	6	1.3	19.3	18.6	-	6
	Vermont Upper	-	-	-	-	-	1.7	14.7	18.3	-	5	1.4	13.0	18.1	-	4	3.2	13.9	18.3	-	4
Moorvale South MDL	AV seams	-	-	-	-	-	8.1	18.4	18.5	-	2	5.9	16.6	17.7	-	2	14.1	17.6	18.2	-	2
CMJV Total		122.5					85.6					101.7					211.3				

Table 20. Coal Resources in Million tonnes at 100% basis (Exclusive of Reserves)

*Raw phosphorous not modelled for Moorvale South ML & MDL, raw CSN not modelled for Coppabella

11.6. Comments from Qualified Person(s)

Raw CSN has not been modelled or estimated for the Coppabella deposit as it is not considered a significant parameter for the PCI coal products produced at Coppabella mine. Raw phosphorous has not been modelled and estimated for Moorvale South deposits as phosphorous is tested in the clean coal composite stage of analysis. Simulated cumulative float density product qualities have been modelled for Moorvale South deposits that include Phosphorous. Cumulative float density qualities for all seams within the Moorvale South deposit phosphorous values range from 0.002% - 0.254% a.d., with an average of 0.056% a.d.

12. COAL RESERVE ESTIMATES

12.1. Introduction

A Coal Reserve is the economically mineable part of a Measured and/or Indicated Coal Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies as appropriate that include application of Modifying Factors. Modifying Factors include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social, and governmental factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified. Coal Reserves are sub-divided, in order of decreasing geological confidence, into Proven and Probable classifications.

Proven Coal Reserves - Reserves for which (a) quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes; grade and/or quality are computed from the results of detailed sampling and (b) the sites for inspection, sampling and measurement are spaced so closely and the geologic character is so well defined that size, shape, depth and mineral content of reserves are well-established. A Proven Coal Reserve can only result from a Measured Coal Resource.

Probable Coal Reserves - Reserves for which quantity and grade and/or quality are computed from information like that used for proven reserves, but the sites for inspection, sampling and measurement are farther apart or are otherwise less adequately spaced. The degree of assurance, although lower than that for proven reserves, is high enough to assume continuity between points of observation.

Although a Probable Coal Reserve is typically associated with Indicated Coal Resources, it can also result from a Measured Coal Resource when the application of modifying factors present a higher risk to conversion of that Resource to a Reserve.

12.2. Coal Reserves Estimates

12.2.1. Reserve Classification

Economic limits for the mine plans developed for SEC reserves were determined using the Pit Optimiser module from Maptek' s Vulcan software. The geological model was converted to a mining model by following process:

- Modelled Air-dried densities were converted to Insitu densities using Preston Sanders conversion.
- Any intrusive material contained within the coal seam that had been identified by the modelling geologist was converted to waste and removed from Insitu coal.
- All tonnes that had been classed as inferred were converted from coal to waste - consistent with requirements of §229.1302(e)(6)
- Mineable working sections were identified based on a minimum mining thickness, for both waste and coal, of 0.3m.
- Loss and dilution were then applied to the working sections.
- Product tonnes were then calculated by multiplying the clean coal component of the ROM tonnes by the imported modelled yield.
- A moisture adjustment from plant feed to product was then completed to report product tonnes at product moisture. All product qualities were reported on an air dried basis.

After completing the mining model process, revenue and costs were determined for each of the blocks in the block model by:

- Assuming revenues for products utilising long term benchmark pricing developed internally, but based on broker consensus, and adjusted for site/product specific qualities
- Mining costs were determined from historical activity costs for:
 - Drilling and Blasting of insitu waste material
 - Removal of pre-strip and overburden/interburden waste material by current excavator and shovel fleets

- At Coppabella, have assumed removal of the last 50m of waste above the coal by Dragline. Rehandle for the dragline was determined using curves that have been developed for the site's mid-term scheduling model.
- Mining of ROM coal and haulage to the ROM stockpile.
- Processing of ROM coal through the onsite Coal Handling and Preparation plant (CHPP) and loading of product coal onto trains.
- Allowances for overhead costs (site and off site) were accounted for
- Costs for rail haulage of the product coal to port and loading the product coal onto ships are also applied.
- Queensland Government royalties were applied based on the assumed price and using the parameters as defined in Queensland Public Ruling MRA001.2. (summarized in table below)

Average price per tonne for period	Rate	
Up to and including \$100	7%	
Over \$100 and up to and including \$150	First \$100	7%
	Balance	12.5%
More than \$150	First \$100	7%
	Next \$50	12.5%
	Balance	15%

Table 21. Qld Govt Royalty Rates

- Overall margin for each block was determined by the difference between revenue and costs.

After all the costs and revenues had been applied to the model it was then processed through the Vulcan Pit Optimiser module. An overall slope angle of 31 degrees for all blocks was assumed. (This slope angle aligned to current end wall designs being implemented at Coppabella). The pit optimiser then determined which coal blocks had a positive margin based on all of the input assumptions and generated an economic pit. These economic pits were then used as the basis for the pit shell designs used to develop mine plans to support the estimates of Reserves.

The LOM Plan projections and timing were developed by Peabody based on the estimated economic pit layouts to maximize economic coal recovery within the existing Mining Lease areas, while excluding resources considered to be 'Inferred'.

Mining models have been developed in SPRY software to apply modifying factors and develop schedules, utilizing design block volumes and quality information from geologic model grids developed in Vulcan software. The output schedule of coal production from this process was used in the economic cash flow analysis.

Key assumptions used within the mining models are:

	Coppabella	Moorvale	Moorvale South
Minimum Mining Thickness	0.30m	0.30m	0.30m
Inherent Moisture	As modelled	1.6%	As modelled
Insitu Moisture	6.0%	5.7%	6.0%
ROM Moisture	7.0%	6.1%	7.0%
Product Moisture	9.0%	9.5%	9.0%
Roof Loss	0.30m	4%	0.075m
Floor Loss	0.20m		0.075m
Edge Loss	1.5m		
Fault Loss Recovery Factor	92.2%		
Roof Dilution	0.10m	5%	0.075m
Floor Dilution	0.15m		0.075m
Edge Dilution	0.30m		
Dilution Density	2.4 t/bcm	2.1 t/bcm	2.2 t/bcm
Dilution Ash	80%	80%	80%
Dilution Yield	zero	zero	zero
Dilution Product Ash	Allowance made in CQ modelling	Allowance made in CQ modelling	Allowance made in CQ modelling

Table 22. Mining Model Assumptions

12.2.2. Mining Loss and Dilution

Loss and dilution assumptions are applied to the working sections as described in Table 22.

12.2.3. Coal Product Quality

Product Qualities are developed in the Coal Quality model, which simulates plant performance based on the laboratory washability results. Allowances are made for product degradation as a result of dilution during this modelling stage. The mining model also assumes dilution, but these dilution assumptions only impact the modelled ROM tonnes and overall yields.

Various wash plant density float points are outputs from the mine schedule, and a blending spreadsheet tool has been used to determine the final product coal types (e.g. LV 9.0% Ash PCI, LV 9.5% Ash PCI, LV 10.0% Ash PCI, Semi-Hard Coking Coal, Weak Coking Coal, 15% or 23% Ash Thermal) based on optimizing the expected margin per ROMt.

12.2.4. Reporting

Reserves are calculated utilizing the Mining Models developed in SPRY, with classification to Proven and Probable based on Resource classifications and review of Modifying Factors. Following the application of appropriate Modifying Factors, Measured Resources within the defined Mine Plan are converted directly to Proven Reserves and, likewise, Indicated Resources are converted to Probable Reserves. There are no Inferred Resources included in Reserves, or in the mine plan which supports the economic assessment of the Reserves.

12.3. Coal Reserves Statement

Peabody estimates a total of 32.9Mt of ROM Reserves for the CMJV opencut mines on a 100% ownership basis. Of the total ROM reserve, 21.9Mt was assigned to the Proven category directly from the Measured Resource portions. The remaining 11.0Mt of ROM reserve was assigned to the Probable category. The following Tables summarise the Reserves from the CMJV, including estimates for the reserve attributable to Peabody.

Site	Run of Mine Reserves	Quantity (Mtonnes) @100%	Quantity (Mtonnes) @73.3% Peabody Share	Ash (% arb)	As - Received Moisture (%)	Inherent Moisture (%)
Coppabella	Proven Coal Reserves	12.8	9.4	17.0	7.0	1.6
	Probable Coal Reserves	7.1	5.2	20.6	7.0	2.0
	Site Sub-Total	19.9	14.6	18.3	7.0	1.7
Moorvale	Proven Coal Reserves	2.5	1.9	20.4	6.1	1.6
	Probable Coal Reserves	0.0	0.0	-	-	-
	Site Sub-Total	2.5	1.9	20.4	6.1	1.6
Moorvale South	Proven Coal Reserves	6.6	4.8	21.6	7.0	1.5
	Probable Coal Reserves	3.9	2.9	18.4	7.0	1.4
	Site Sub-Total	10.5	7.7	20.4	7.0	1.5
CMJV TOTAL	Proven Coal Reserves	21.9	16.1	18.8	6.9	1.6
	Probable Coal Reserves	11.0	8.1	19.8	7.0	1.8
	TOTAL	32.9	24.1	19.1	6.9	1.6

Table 23. Run of Mine (ROM) Reserves Summary

The ROM Reserves are converted to Marketable Reserves through application of simulated plant yield and product data contained within the mining model scheduled results. The resulting Marketable Reserves are summarized below.

Site	Marketable Reserves	Quantity (Mtonnes)	Quantity (Mtonnes) @ 73.3% Peabody Share	Ash (% adb)	Phos (% adb)	Sulphur (% adb)	Volatile Matter (% adb)	As - Received Moisture (%)
Coppabella	Proven Coal Reserves	10.4	7.6	8.9	0.072	0.22	10.3	9.0
	Probable Coal Reserves	4.9	3.6	9.4	0.071	0.19	8.6	9.0
	Site Sub-Total	15.3	11.2	9.1	0.072	0.21	9.8	9.0
Moorvale	Proven Coal Reserves	2.0	1.4	11.8	0.121	0.28	16.2	9.5
	Probable Coal Reserves	0.0	0.0	-	-	-	-	-
	Site Sub-Total	2.0	1.4	11.8	0.121	0.28	16.2	9.5
Moorvale South	Proven Coal Reserves	4.4	3.3	11.0	0.059	0.41	18.4	9.0
	Probable Coal Reserves	2.8	2.0	9.7	0.062	0.39	17.4	9.0
	Site Sub-Total	7.2	5.3	10.5	0.060	0.40	18.0	9.0
CMJV TOTAL	Proven Coal Reserves	16.8	12.3	9.8	0.074	0.28	13.1	9.1
	Probable Coal Reserves	7.7	5.6	9.5	0.068	0.26	11.8	9.0
	TOTAL	24.4	17.9	9.7	0.072	0.27	12.7	9.0

Table 24. Marketable Reserves Summary

The following figures illustrate the Reserve classification for each of the properties, with grey shaded areas inside the green polygons representing Proven Reserves. Areas outside of the green polygons but within the orange polygons represent the Probable Reserve areas.

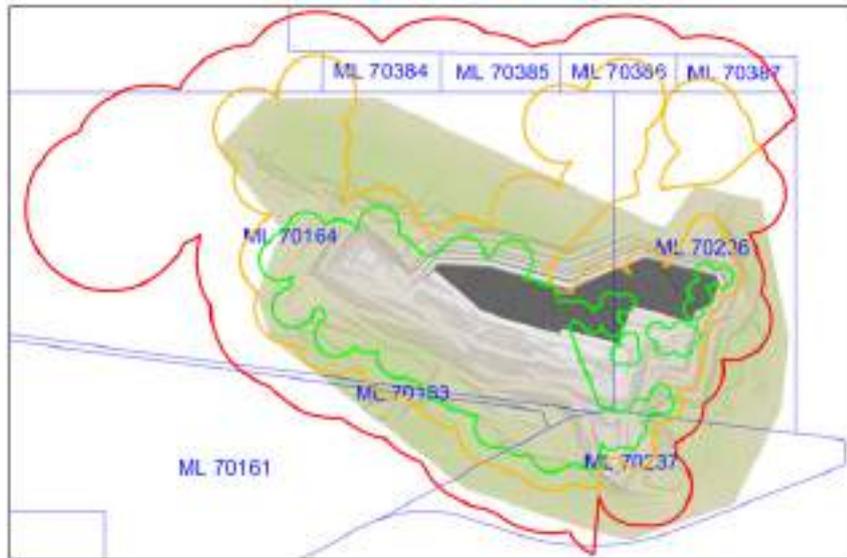


Figure 49. Coppabella Leichardt Lower Seam Reserve Classification

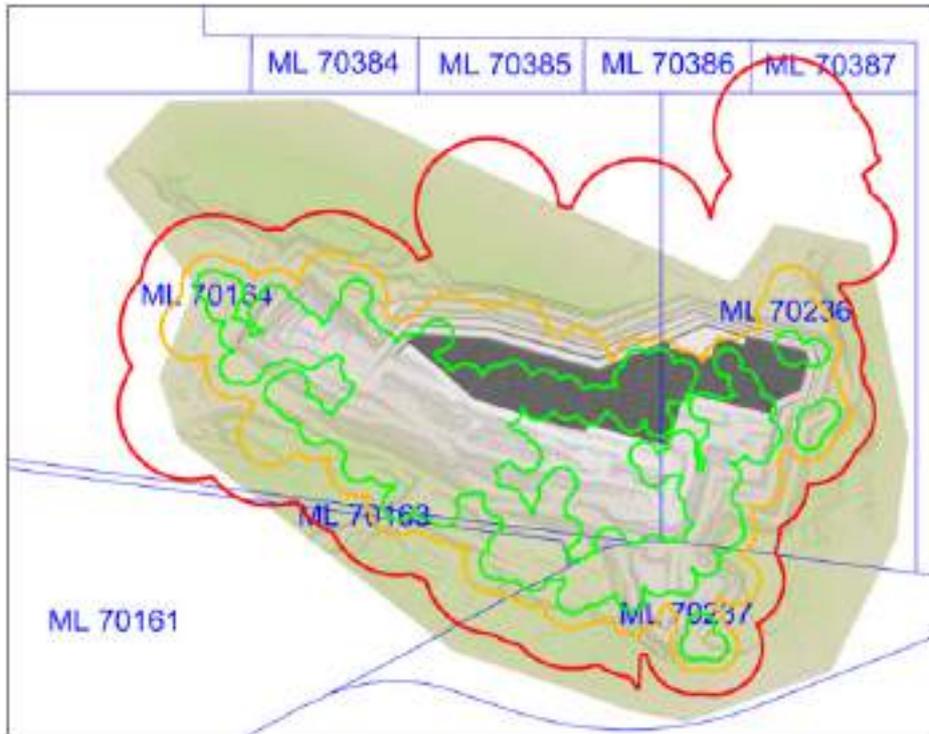


Figure 50. Coppabella Leichardt Upper Seam Reserve Classification



Figure 51. Moorvale Reserve Classification

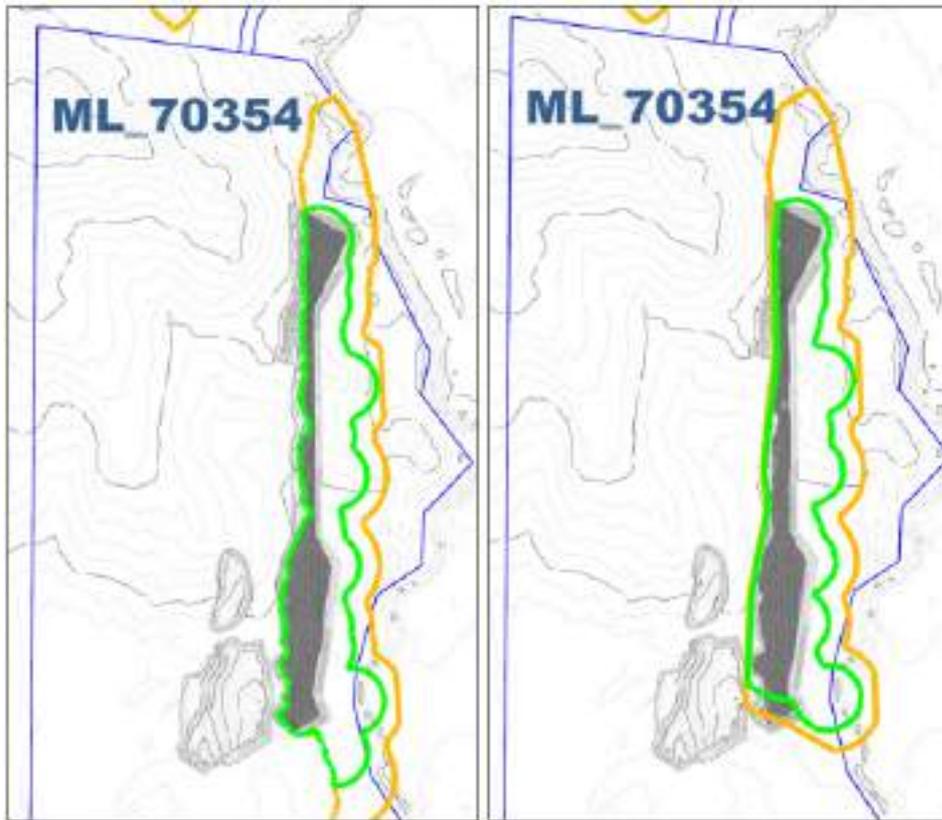


Figure 52. Moorvale South LL2 (left) and LL3 (right) Seam Reserve Classification

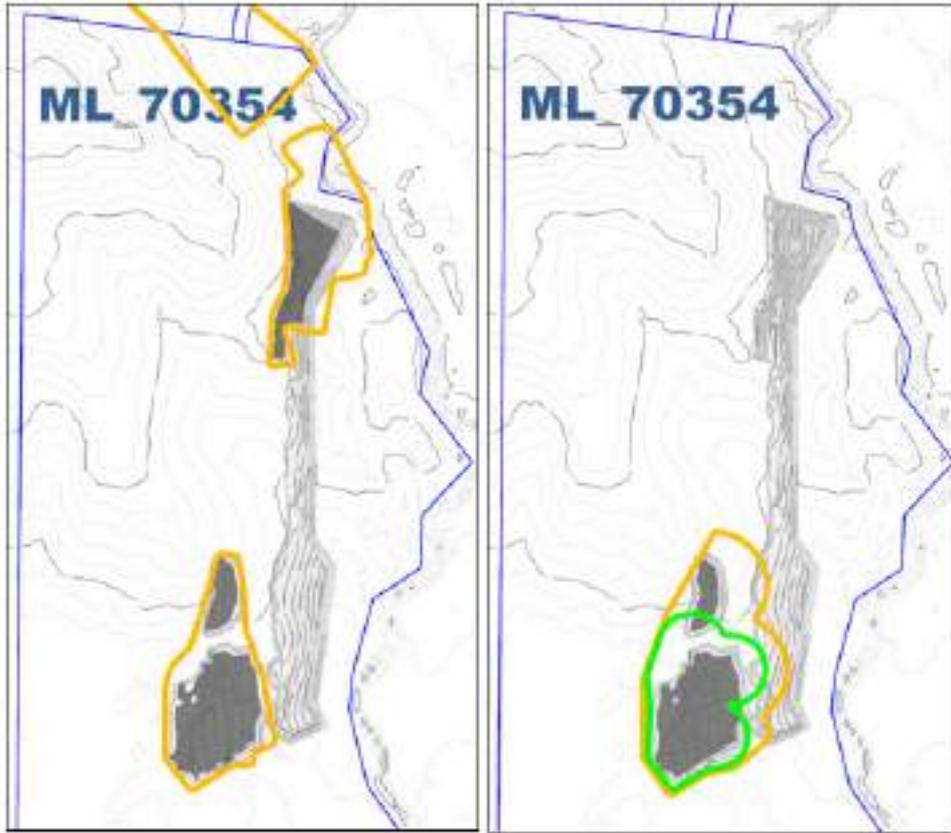


Figure 53. Moorvale South VU (left) and VL1 (right) Seam Reserve Classification

12.4. Comments from Qualified Person(s)

A basic assumption of this report is that the estimated Coal Reserves have a reasonable prospect for continued development under current foreseeable circumstances and assuming a reasonable outlook for all issues that may materially affect the reserve estimates.

Failure to achieve reasonable outcomes in the following areas could result in significant changes to reserves.

- The CMJV will continue to maintain sales at or above the forecasted market price.
- The CMJV will continue to satisfy obligations of mining and environmental permits to conduct operations to the currently defined ultimate pits.

Except as stated herein, the Qualified Person is not aware of any modifying factors that would be of sufficient magnitude to warrant excluding reserve tonnage below the current design limits.

13. MINING METHODS

13.1. Introduction

Conventional open cut mining methods are used at the CMJV Coal Mines.

Coppabella utilizes a dragline and two electric rope shovels to perform the majority of overburden waste removal, supplemented by diesel hydraulic excavators, which are also used to mine the coal. Moorvale and Moorvale South use diesel hydraulic excavators only. All mines utilize cast and dozer push operations where applicable.

13.2. Mine Design

13.2.1. Geotechnical Considerations

All Peabody Energy open-cut operations are required to have a geotechnical management system that provides a framework to assist relevant mining personnel (including contactors and consultants) relating to the application of sound ground control practices at their respective operations. A Geotechnical Hazard Management Plan (GHMP) is developed to ensure that Principal Hazards associated with geotechnical features of the mine environment are effectively managed.

Typical slope design parameters for excavations and dumps for the operating mines and projects of the CMJV are shown in the following sections. Local conditions may require variance to these parameters.

Excavated Slope Design Specifications

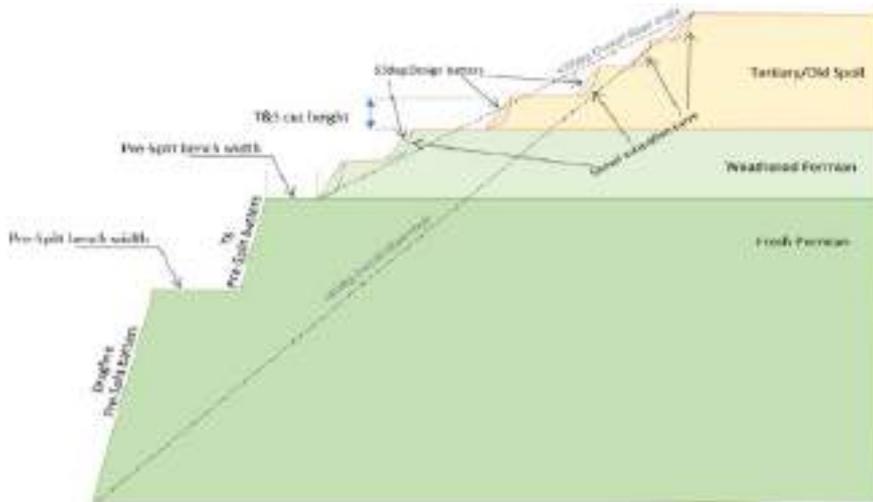


Figure 54. Typical Excavation Slope Design - Coppabella Mine

Pit Wall	Individual			Overall Slope Angle ⁽²⁾
	Individual Batter Height	Batter Angles		
		Weathered	Fresh	
Pre-Strip (Above base of weathering)	<40m	63°	63°	37°
Dragline Highwall	<67m ⁽³⁾	45°-70°	45°-70°	45°-70°
Dozer Highwall	<60m	45°	70°	42°
Endwalls	<40m ⁽³⁾	45°	45°-70°	45°

- (1) Material dependent. Refer to Geotechnical design check list.
- (2) Measured from floor of coal to low wall crest
- (3) Measured from floor of coal

Table 25. Slope Design specifications for excavations at Coppabella Mine

Pit wall	Batter angle (°)		Batter height (m)	Overall slope angle (°) toe to toe	Catch Bench width (m)
	Toe to crest				
	Weathered	Fresh			
F-pit highwall	63	70	<=60	<=50	20
C-pit highwall	63	70	<=60	<=50	20
G-pit highwall	63	70	<=60	<=50	20
Free dig batters	63			63	

Table 26. Slope Design specifications for excavations at Moorvale Mine

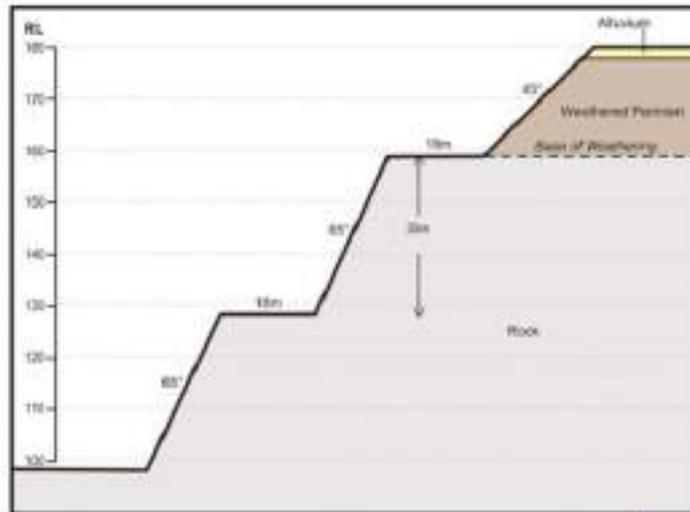


Figure 55. Typical Excavation Slope Design – Moorvale South

Dump Design Parameters and Recommendations

Dump design slopes for the CMJV mines are shown below. The typical pit floor at each of the mine locations exhibit low strength, so floor treatment (blasting or ripping) to disrupt potential failure planes is generally required. This is particularly true where the floors are steeply dipping.

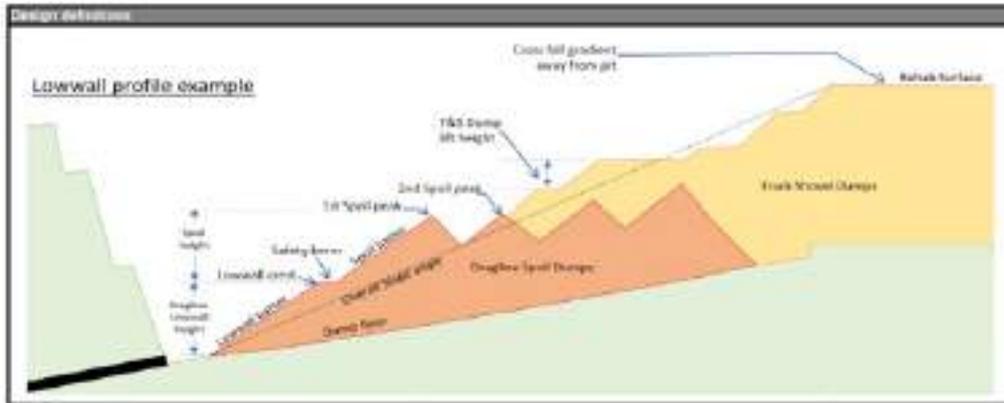


Figure 56. Typical Dump Slope Design - Coppabella Mine

Pit Wall	Individual Batter Height	Individual Batter Angles		Overall Slope Angle ⁽²⁾
		Weathered	Fresh	
Lowwall	<60m ⁽³⁾	37°	37°	25°
T&S Dumps	<40m ⁽¹⁾	37°	37°	25°

- (1) Material dependent. Refer to Geotechnical design check list.
- (2) Measured from floor of coal to low wall crest
- (3) Measured from floor of coal

Table 27. Dump Slope Design specifications for Coppabella Mine

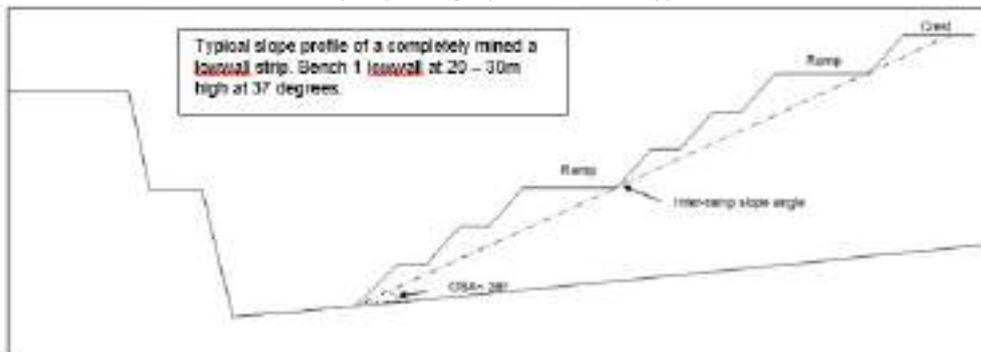


Figure 57. Typical Dump Slope Design - Moorvale Mine

Pit wall	Batter angle (°)		Batter height (m)	Overall slope angle (°) toe to toe
	Toe to crest			
	Weathered	Fresh		
F-pit lowwall C-pit lowwall	37	37		<=26
G-pit lowwall	37	37		<=26
F-pit spoil dump in-pit C-pit spoil dump in-pit	37	37	Up to 20	26
G-pit spoil dump in-pit	37	37	Up to 20	26

Table 28. Dump Slope Design specifications for Moorvale Mine

13.2.2. Hydrological Considerations

Operating mines within the CMJV are required to abide by conditions stated within the Environmental Authority (EA) issued for each site. At each of the CMJV's sites, surface water run-off that has been impacted by the activities of mining may only be released into the surrounding environment under certain prescribed conditions. To control the flow, each site has a surface water management plan, the general principles of which are as follows:

- The fullest separation possible of worked water, surface water and diverted runoff;
- Minimise the area and exposure time of surface disturbance that has the potential to create poor quality surface runoff, thus minimising the volume of worked water runoff;
- Collect and contain on site all potential worked water in dedicated worked water storages. The worked water storages will be used as the primary water source for the Coal Handling Preparation Plant (CHPP) and for dust suppression;
- Collect and treat any surface water runoff in a controlled manner in accordance with the site Erosion and Sediment Control Plan (ESCP);
- Minimise the potential for generation of "industrial" worked water. Examples include installing a roof over the bunded areas, use oil and water separators, or collect and contain the potentially contaminated water within the bunds and transfer it to the worked water storages, and
- Maximise the use of on-site water and thus minimise the need for importing external water. Allow for discharge of Worked Water and Stormwater under EA conditions, whilst preventing uncontrolled discharges, to minimise impacts to the receiving environment's water quality.
- Manage all regulated dams in accordance with the EA conditions, based on the regulated structure guidelines to minimise the risk of catastrophic failure.
- Final landforms developed to ensure partially water-filled residual voids act as groundwater sinks and are non-polluting.

Schematics illustrating the Water Management systems of each of the CMJV sites are included below:

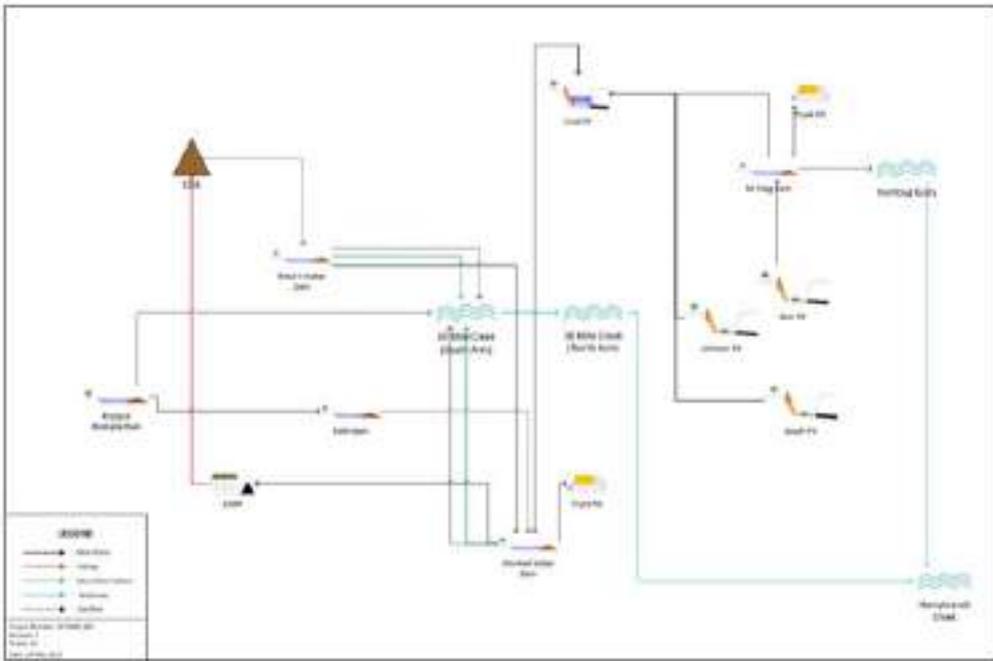


Figure 58. Coppabella Water Management Schematic

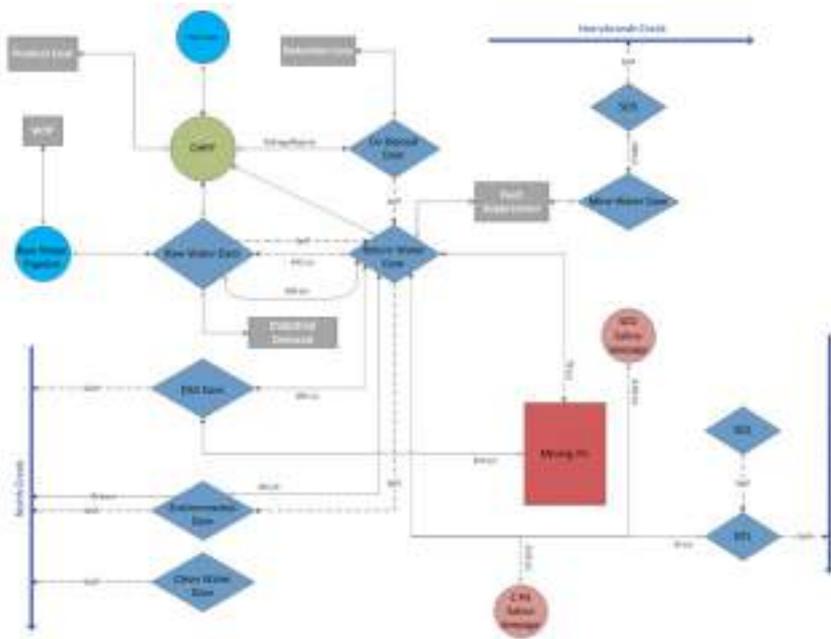


Figure 59. Moorvale Water Management Schematic

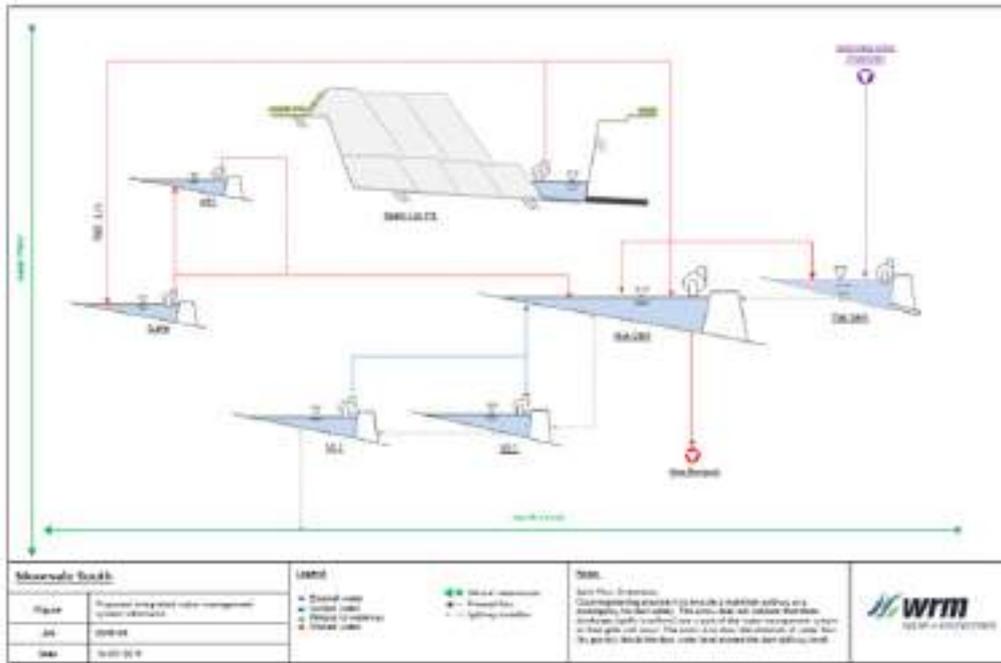


Figure 60. Moorvale South Water Management Schematic

Groundwater in the Bowen Basin is generally closely associated with the coal seams and, as a result, has high conductivity and high total dissolved solids due to the predominance of sodium, magnesium and chloride ions. The groundwater is suitable for industrial purposes. The quantity of groundwater typically does not cause disruption to mining operations in open cut pits.

13.3. Mine Plan

13.3.1. Mining Process

The general sequence of open cut mining is as follows:

1. Vegetation clearance and removal (including mulching).
2. Topsoil/subsoil stripping by scrapers and/or dozers with additional loading and haulage undertaken with excavators and truck. Stripped topsoil is used directly in progressive rehabilitation or is placed in stockpiles for later re-use.
3. Drilling and blasting of overburden, with some waste rock 'cast blast' into the adjacent mined-out strip.
4. In appropriate pit geometries, dozer pushing of blasted overburden into the adjacent mined-out strip to expose the target seam, or removal with excavator and haul truck. Coppabella also utilizes a dragline to expose the main target seam.
5. Where required, drilling and blasting plus ripping of coal/parting material.
6. Mining of exposed coal seams by excavator and loading into haul trucks for transport directly to the ROM dump hopper or ROM pads.
7. Interburden/parting material is then drilled and blasted, ripped, pushed or excavated and hauled to expose the underlying working coal sections.
8. Coarse rejects and tailings from the CHPP are selectively placed within mine voids, waste rock emplacements and approved co-disposal storage facilities.

9. Hauled overburden/interburden/parting material is placed within mine voids and associated waste rock emplacements to develop the final landform.
10. Progressive landform profiling and rehabilitation of mine voids and waste rock emplacements. In some areas, temporary rehabilitation is undertaken to stabilise landforms until further mining operations are carried out in the future.

ROM coal is either hauled directly to a ROM dump hopper and conveyed to the CHPP for processing, or delivered to ROM pads and later rehauled to the ROM dump hopper using a front end loader and trucks.

These mining methods have been used for many years to successfully recover coal at the Coppabella and Moorvale operations. There are no current plans to mine coal on the CMJV mining leases by underground methods, however this has been considered in the past and will continue to be evaluated in the future.

13.3.2. Production Schedule

Mine Schedules have been developed within SPRY software. The scheduling is based on mining operations that are performed utilizing 12 hours/shift, 2 shifts/day, 7 days/week as per current practice at the CMJV. The Time Usage Model (TUM) includes month by month allowances for changes in weather delays, which are reflective of historic rain, fog, and other weather-related interruptions experienced at each operation.

Similarly, known maintenance shutdowns are planned at specific times, with general availability applied where that level of planning isn't prepared. As a 'greenfield' site, Moorvale South has adopted a similar TUM to Moorvale, with allowances made for additional travel time anticipated.

Mining Loss, Dilution and Moisture adjustment factors have been previously described in Table 22.

The results of these plans are illustrated in the following Physicals charts. It should be noted that these plans don't necessarily represent the current planned Life of Mine for each of the sites, but have been prepared for the purpose of reporting Reserves according to rule SK-1300.

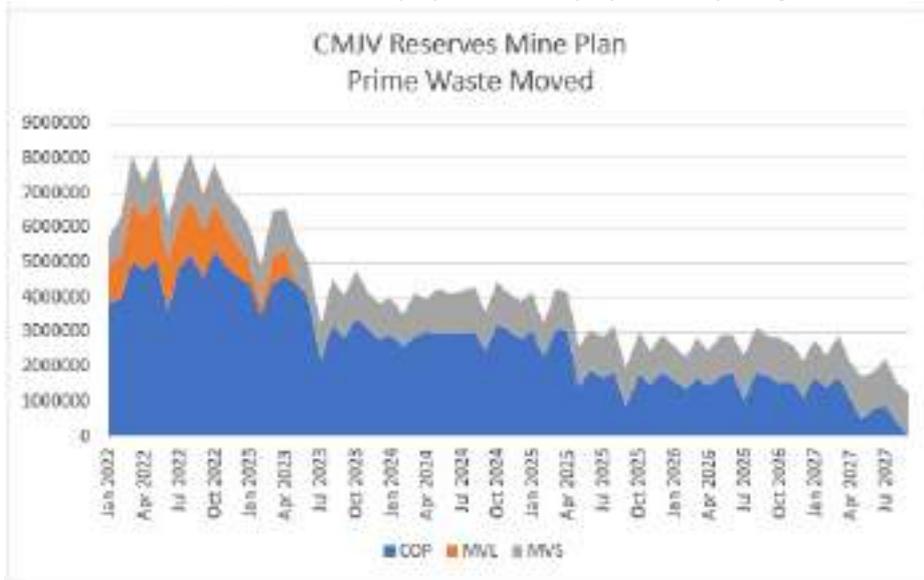


Figure 61. CMJV Reserves Plan Prime Waste Schedule Results

Prime waste movement is primarily driven by the amount of excavators operating, with short term peaks and troughs the result of cast blasting activity in the lower waste horizons at Coppabella and Moorvale.

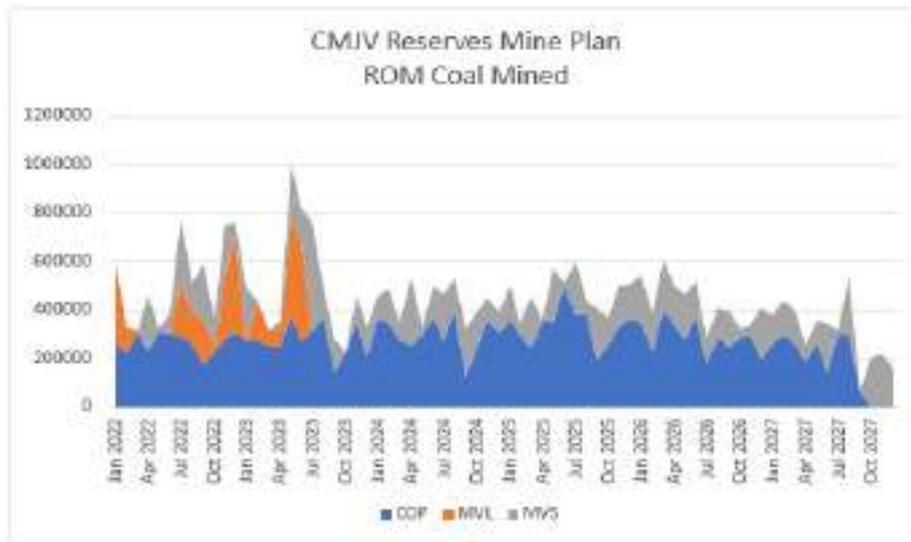


Figure 62. CMJV Reserves Plan ROM Coal Schedule Results

ROM Coal Mining remains relatively steady at Coppabella, which is a result of all coal being exposed by the dragline. The coal mining at Moorvale is very sporadic, driven by the depth of cover and multiple waste horizons that need to be removed before coal can be mined. To maintain a steadier stream for processing, and to satisfy coal quality blending requirements, coal is planned to be stockpiled at each site.

It should be noted that the plans developed for modelling the economics to support the estimates of Reserves were based on the Life of Mine Plans developed for Coppabella and Moorvale in mid-2021, using projected year-end face positions from a plan starting at the end of May 2021. The Reserve estimates stated in this report are based on actual face positions at the end of December, 2021. The difference between the projected and actual remaining Product Tonnes is -0.6Mt or ~2% of the total Reserve estimate. This difference is not considered to be material to the economic modelling supporting the estimate of Reserves for the CMJV.

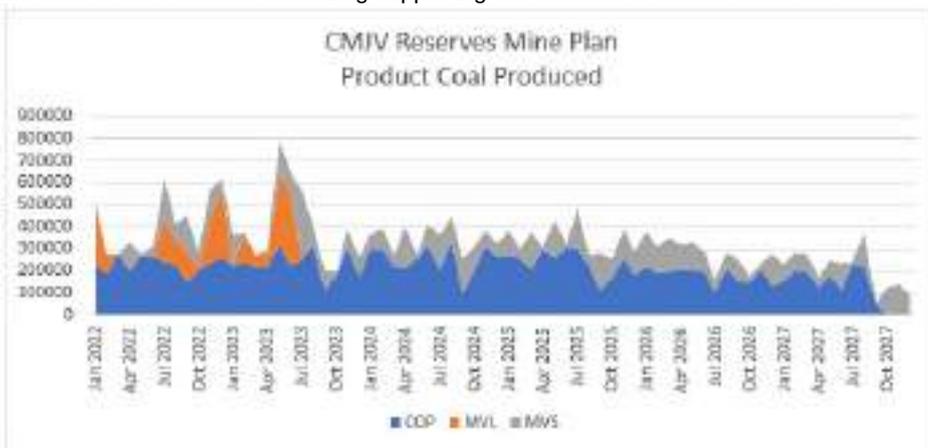


Figure 63. CMJV Reserves Plan Product Coal Schedule Results

The following images show the general sequence of mining at each of the CMJV sites for the mine plans supporting the Reserves estimated.

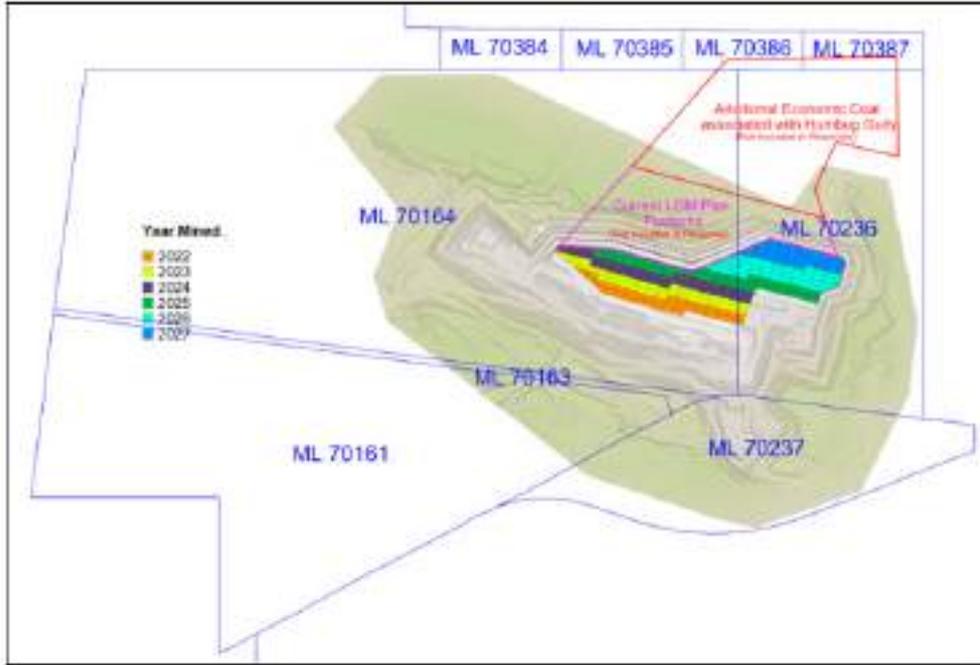


Figure 64. Coppabella Reserves Mining Sequence

Mining at Coppabella is currently planned to operate out of a single pit area progressing to the north.

The site's current LOM plan assumes mining through an area of lower geological confidence – this area is underneath an overburden dump placed when the mine commenced operations. Although 'sterilisation' drilling was done before the dump was placed, it focused primarily on structural geology, with only a few quality holes included in the program. These holes were generally sampled on intervals that don't allow the data to be included in the current coal quality model, which has reduced the geological confidence of this area to Inferred. As a result, in accordance with the requirements of SK-1300, an alternate mine plan excluding the Inferred quantities (by modelling them as waste) has been developed, resulting in the pit extents and sequence illustrated.

The site's current LOM plan is also limited by a small ephemeral stream known as Humbug Gully. Recent exploration has identified an opportunity to further progress the existing pit through this area, however some of the area remains classified as Inferred, and as a result, are not included in the current Reserves estimate.

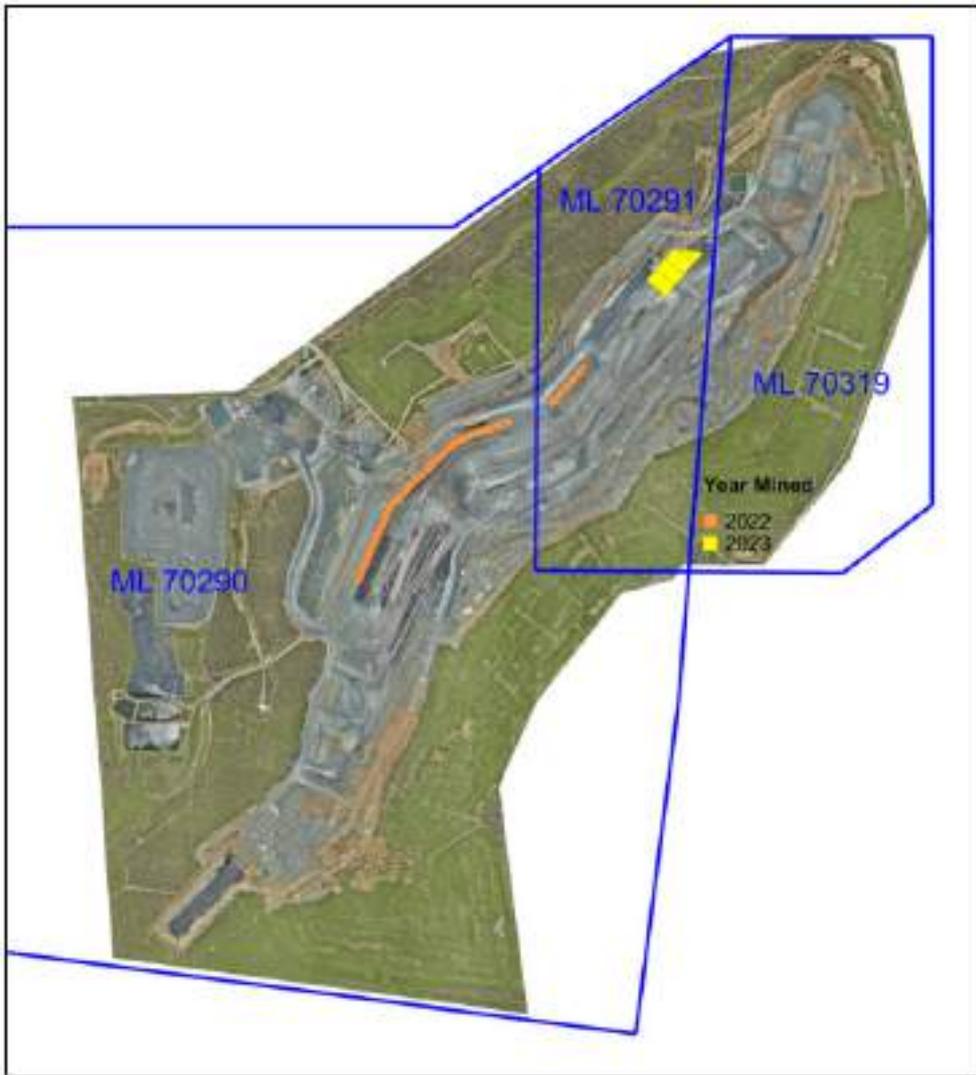


Figure 65. Moorvale Reserves Mining Sequence

The Moorvale Mine is approaching the limit of economic opencut reserves using long term forecast pricing. The current LOM plan completes the mining of the next Strip (Strip 10) as well as developing an area at the northern end of the pit which had been left to simplify operations around a significant fault (the Tanduvay fault) in that area. Previous Reserve estimates included an additional 2 strips (to Strip 12) – while short term price improvements may see additional strips mined from the existing opencut, these have not been included in the current Reserves estimate.

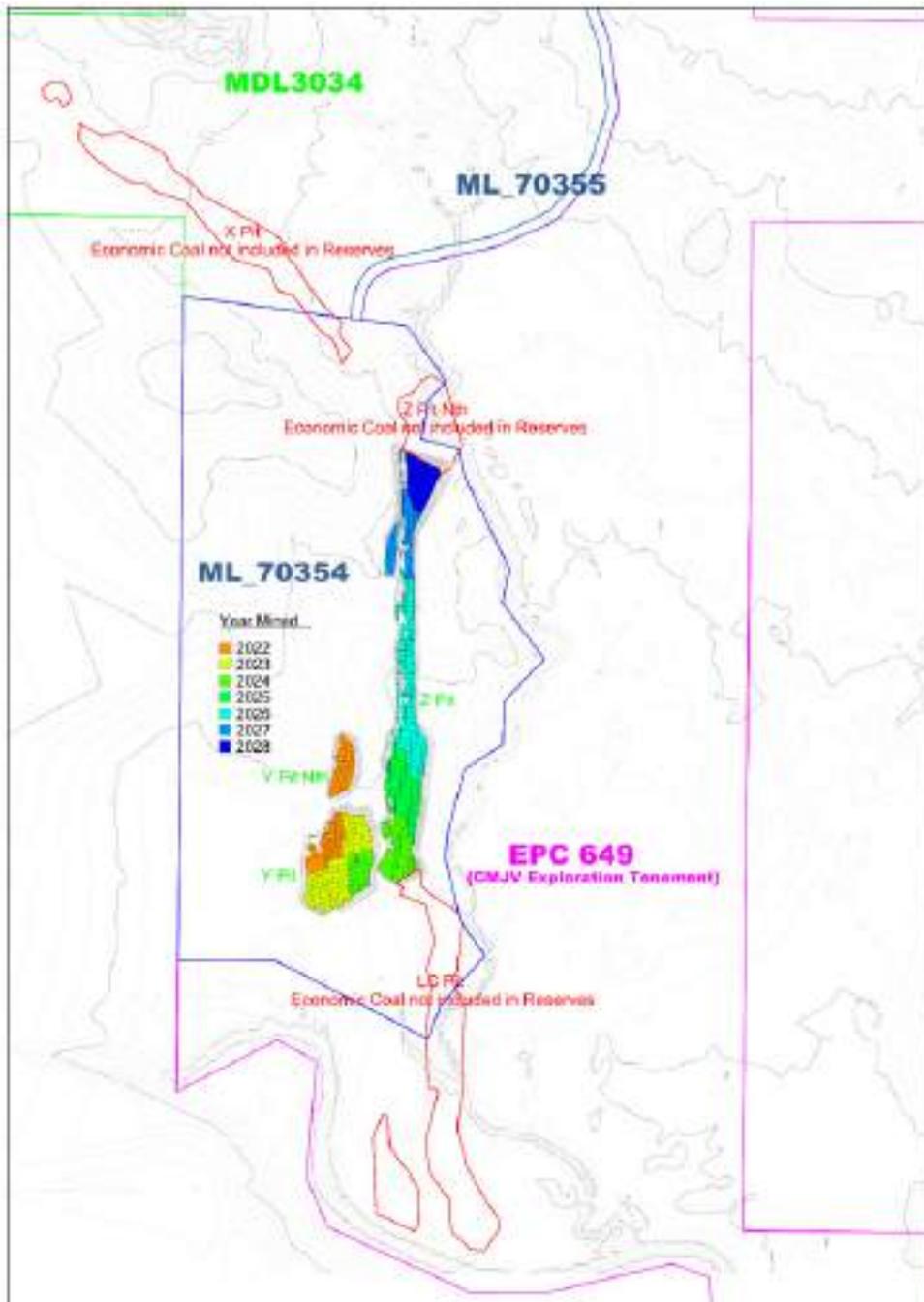


Figure 66. Moorvale South Reserves Mining Sequence

Moorvale South is currently under construction, with first coal mining planned in Q1 of 2022.

The current Reserve estimate consists of coal planned to be mined in the initial stages of the mine's development. Additional mining from X Pit to the north requires conversion of the Mineral Development Lease (MDL 3034) to a Mining Lease and planning for this development remains at a conceptual level. Similarly, mining from LC Pit and Z Pit North requires the conversion of the Exploration Permit (EPC 649) to a Mining Lease, as well as the development of levees / diversions of North Creek and levees adjacent to the Isaac River. Although detailed plans have previously been developed to mine the part of LC Pit which is within the ML, the Reserves estimate has excluded this coal, as the current proposed development of this area is combined with the rest of the LC Pit, where planning remains at a conceptual level.

13.4. Mining Equipment and Workforce

Peabody is utilizing the following mining equipment at CMJV. All major equipment required to deliver the plans supporting this Reserve estimate is currently controlled by the CMJV and is located at or near the mining properties.

	Coppabella	Moorvale	Moorvale South	Approx. Max Annual Prod'n Capacity
Dragline – Marlon 8200	DE01 57m ² bucket	--	--	15M BCM
P&H 4100PC Rope Shovel	SH02 64m ² bucket	--	--	18M BCM
P&H 4100C Rope Shovel	SH02 42m ² bucket	--	--	14M BCM
CAT 6060 Excavator	EX10 34m ² bucket	EX11, EX12 35m ² bucket	--	11M BCM X 3
Hitachi EX5500 Excavator	EX03 29m ² bucket	EX05 29m ² bucket	EX05 29m ² bucket	10M BCM X 2
Hitachi EX2000 Excavator	EX06 23m ² bucket	--	--	5M BCM
Liebherr R9400 Excavator	--	--	EX1006 24m ² bucket	5M BCM
Hitachi EX2500 Excavator	EX02 14m ² bucket	EX20 18m ² bucket	--	3.5M BCM X 2
Liebherr T282 360t Haul Truck	14 trucks (*4 trucks currently idle)	--	--	
Komatsu 836E 230t Haul Truck	--	13 trucks	3 trucks	

Hitachi EH4000 220t Haul Truck	7 trucks	-	3 trucks	
CAT MT4400 220t Haul Truck	-	-	3 trucks	
CAT 783 220t Haul Truck	-	-	3 trucks	
CAT 789 180t Haul Truck	5 Trucks (*2 trucks currently idle)	-	-	
Drills	2 x CAT DR6420 1 x DR750	2 x PV275	contract	
Dozers	5 x CAT D11 4 x CAT D10 2 x Rubber Tyre	1 x CAT D11 2 x CAT D10 1 x Rubber Tyre	2 x D10	
Graders	2 x CAT 24M 2 x CAT 16G 1 x CAT 825G	1 x CAT 16M	-	
Loaders	1 x CAT 993 1 x CAT 994	1 x CAT 993	-	

Table 29. Mining Equipment

The CMJV workforce is made up of a combination of Residential, Drive-In Drive-Out (DIDO) and Fly-In Fly-Out (FIFO) workers, the majority of which are DIDO, travelling in from cities on the Central Queensland coast. The DIDO and FIFO workforce are accommodated at the CMJV controlled 'Terowie Village', which offers work-camp style accommodation with messing and recreation facilities. This workforce sourcing model has become quite common in Central Queensland, and there are several accommodation camps available near to the CMJV's operations to house additional employees as required.

14. PROCESSING AND RECOVERY METHODS

14.1. Introduction

The CMJV operates two separate Coal Handling and Processing Plants (CHPPs). The Coppabella CHPP is located in the south-western corner of the Coppabella Mining Leases and is used to process coal from those leases. The Moorvale CHPP is located in the centre of the Moorvale Mining Leases and is used to process coal from both Moorvale and, from 2022 and beyond, Moorvale South. These CHPPs use similar methods to process the raw coal feed into coal products. These processes are illustrated in the simplified flowsheets in Figure 67 and Figure 68 and described below.

14.2. Coal Handling and Processing Plants

The CHPPs incorporate five key circuits for the treatment of the ROM coal, being:

- ROM circuit;
- dense medium circuit;
- spirals circuit;
- flotation circuit;
- and thickener circuit.

ROM circuit

ROM coal from the open cut pits at the CMJV Coal Mines is transported via internal haul roads for direct dumping to the ROM hopper, or rehandled from a main or satellite ROM pad to the dump hopper. A static grizzly prevents oversize lumps from entering the ROM bin. In some cases, where the ROM Coal includes significant volumes of intrusive material, ROM coal is pre-grizzled in the ROM stockpile yard area. The grizzly reject material will typically be rock from interburden or overburden dilution which will be trucked to active overburden dumps for burial.

ROM material is withdrawn from the ROM bin to a primary sizing crusher. The primary sizing crusher reduces the material to less than ~150mm and discharges to a conveyor that passes under a self-cleaning magnet before delivery to a secondary sizing crusher. The magnet removes any steel, such as components from ground engaging equipment, that may have contaminated the ROM coal. The secondary sizing crusher then reduces the material to a nominal size of less than 50mm. The crusher product is conveyed directly to the plant feed preparation wet screen.

At the plant feed preparation wet screen, the ROM coal is pulped with process water. The pulp is then de-slimed of particles less than 1.4mm.

From the screen, particles less than 1.4mm are directed to classifying cyclones in the spirals circuit. Screen oversize, larger than 1.4mm, are directed to the dense medium circuit.

Dense medium circuit

Dense medium refers to the prepared medium containing magnetite which is mixed with the plant feed preparation wet screen ROM coal to enhance the separation of coal and reject. Material larger than 1.4mm received from the plant feed preparation wet screen is discharged to a mixing box, where the material will combine with the prepared medium. A controlled ratio of medium and coal is pumped at a constant pressure to a single dense medium cyclone for separation of reject.

The sinks, which contain reject, from the dense medium cyclone pass over a static panel and onto a "flat" drain and rinse screen for draining and rinsing for medium recovery and reuse, before discharging the remaining material to the rejects conveyor for addition to the codisposal tank.

Floats, which contain the separated coal, from the dense medium cyclone pass over a combination of static panel and drain and rinse screens before discharging via a vibrating basket centrifuge to the product conveyor. Dilute medium arising from the reject and product drain and rinse screens is pumped to counter current magnetic separators. The magnetic separators recover magnetite and any misplaced coal for return to the process.

Spirals circuit

Material less than 1.4mm, received from the plant feed preparation wet screen, is pumped as slurry to a cluster of classifying cyclones. The fine cyclone overflow material gravitates directly to the flotation cells. Cyclone underflow reports to sieve bends for further sizing. Sieve bend oversize is pumped to the spiral banks, while underflow is pumped to the flotation cells. Spiral product is dewatered by dewatering cyclone and combined with flotation circuit product for discharge to the product bin. Spiral rejects are dewatered by a dewatering cyclone and then discharged to the codisposal tank.

Flotation circuit

Flotation cells receive material from the classifying cyclone overflow and the sieve bend underflow. Air and reagents are injected into the flotation cells to create a froth in which the fine coal will be liberated. Collector reagent is added at a metered rate to the flotation feed and frother reagent injected as required. Reagents are automatically pumped into the flotation cells at a set dosage, the rate of which can be adjusted manually as required. Flotation concentrate from the cell gravitates to a froth breaking pump which feeds a concentrate filter feed tank. Product concentrate is pumped from an agitated surge tank to a high speed vacuum disc filter for dewatering. Filter cake discharges to the product conveyor for transfer to the product coal bin. Flotation circuit tailings are pumped to the thickener.

Thickener circuit

Reject tails received from the flotation circuit are combined with flocculent, which assists settling, and discharged to a thickener. Thickener overflow water is recycled to the CHPP via a process water pump for reuse in the preparation process. Thickener underflow is pumped to the codisposal tank where it is combined with the reject materials from the dense medium and spirals circuits.

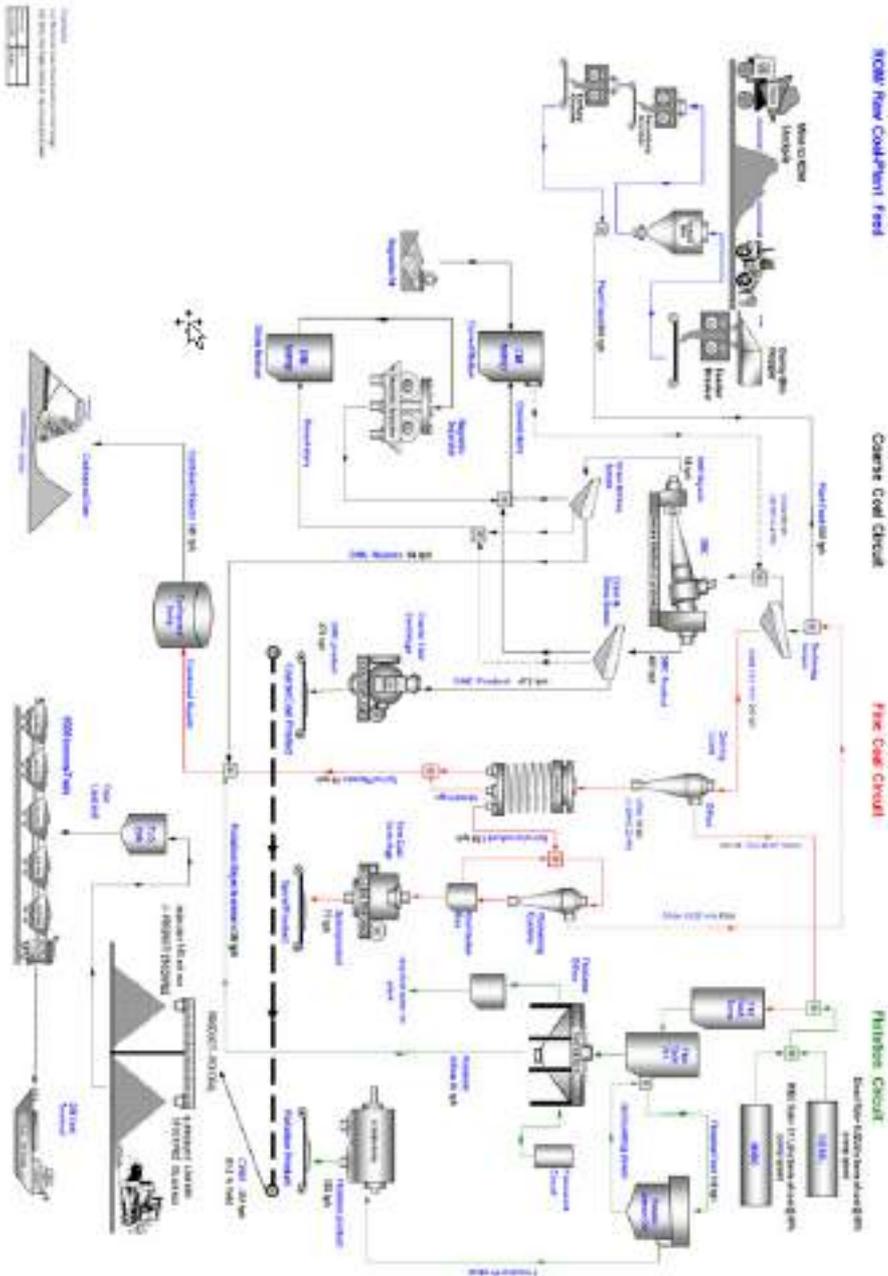


Figure 67. Coppabella Coal Handling and Loading Facilities Flowsheet.

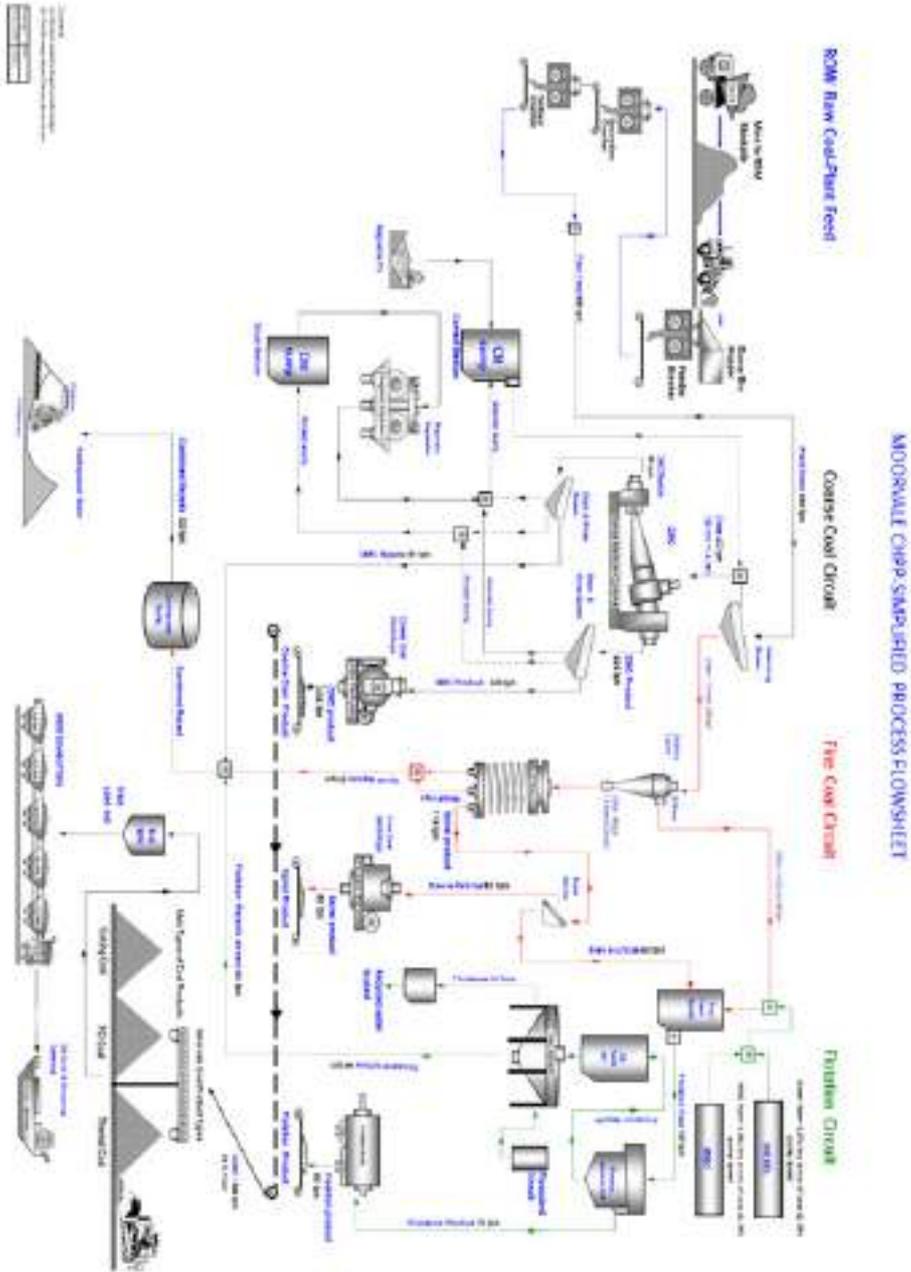


Figure 68. Moorvale Coal Handling and Loading Facilities Flowsheet.

Coal products from the CHPPs are conveyed to the product stockpiles according to the quality of the coal for subsequent reclaim and loading to trains.

The coal handling facilities at CMJV have been operational since each of the current mines started production, with upgrades made to allow for current production levels. The Coppabella facility has also had modifications to allow for high density medium which enables more efficient separation of some of the low ash, high density material from the Eastern part of the mine. Recently, both CHPPs have installed Somerset Solid Bowl Centrifuges, which capture a small amount of ultra-fine coal by further processing the discharge from the screen bowls at the end of the flotation circuit (Note: these recent additions are not featured on the process flowsheets shown above)

14.3. Plant Yield

The various plies mined at the CMJV exhibit different washing characteristics. These characteristics are all modelled and washing decisions are based on this modelling, as well as the specific market requirements at the time.

The efficiency of the plants are monitored to ensure high levels of carbon recovery. The facilities allow the mine to make processing decisions that optimize the value of the coal depending on the current market conditions and available feedstock.

14.4. Energy, Water, Process Material, Personnel Requirements

The coal handling facilities at the CMJV have been operational for many years at or above current production levels, which are not planned to be exceeded in the future.

The facilities are powered by existing power infrastructure, and water consumption is monitored and planned as part of the site Water Management Strategy.

15. INFRASTRUCTURE

All infrastructure required to mine coal at Coppabella and Moorvale is established, including access to power, water, roads, rail and port facilities. These sites also have well established office, warehouse and workshop facilities. Images of the centralised facilities at Coppabella and Moorvale are shown below.



Figure 69. Coppabella Site Facilities

Moorvale South requires the establishment of a small field office and workshop area and well as site water management facilities. An overland pipeline, following the connecting haulroad to Moorvale will be used to bring water to the Moorvale South site, and may also be used to move excess water to storage facilities at Moorvale. All major equipment maintenance will be conducted at the Moorvale facilities, and all ROM coal will be hauled to Moorvale for processing. Coal processing waste will be co-disposed (mixture of coarse and fine refuse) at the dedicated Co-Disposal Area (CDA) at Moorvale, or deposited into the Moorvale pit.

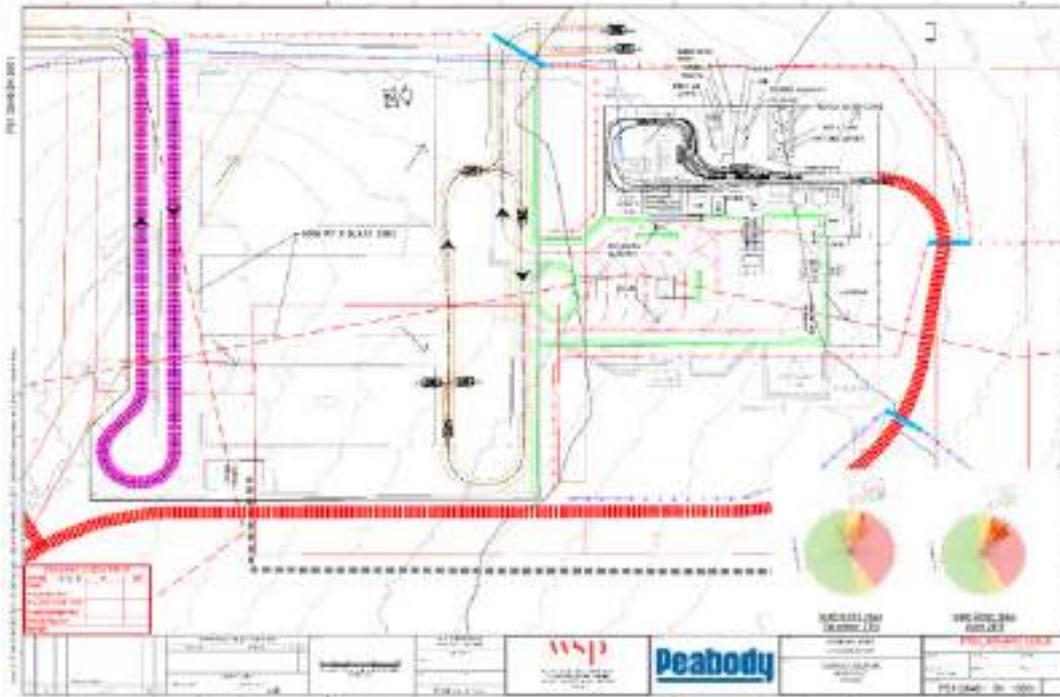


Figure 71. Proposed Moorvale South Mining Infrastructure Area (MIA) Layout

Administration and Ancillary Buildings

As shown in Figure 69 and Figure 70, the CMJV has numerous administration buildings, workshops and warehouses located at each of the active mines, with plans to develop additional facilities at Moorvale South. Additional temporary 'remote ready-line' and crib (lunchroom) facilities are also utilized across the sites. These facilities are adequate to support expected production.

Fuel Storage

The CMJV has several Fuel storage facilities across operational areas. These are summarized below:

- Coppabella
 - o Mining
 - 2 x 54kL Diesel Tanks
 - 2 x 55.8kL Diesel Tanks
 - 1 x 52kL Diesel Tank
 - 1 x 51.5kL Diesel Tank
 - 2 x 53.4kL Diesel Tank

- o 3 x 105kL Diesel Transtank
- o CHPP
 - o 1 x 61.9kL Diesel Transtank for refuelling equipment
 - o 1 x 16kL Diesel tank for use in CHPP process
- o Explosives Facility
 - o 1 x 27kL Diesel Transtank
- Moorvale
 - o Mining
 - o 2 x 150kL Diesel Tanks
 - o 2 x 50kL Diesel Tanks
 - o CHPP
 - o 1 x 56kL Diesel Tank for Stockpile Dozers
 - o 1 x 15kL Diesel tank for use in CHPP process
- Moorvale South (under construction)

Explosive Storage

Explosive storage facilities are managed under contract by Dyno. The facilities and storage capacities relevant to the CMJV are:

- Coppabella Facility (on-site):
 - o 2 x 50t Ammonium Nitrate
 - o 4 x 90t Emulsion Phase



Figure 72. Coppabella Explosives Facility (on-lease)

- Moorvale Dyno Facility (located ~1km north of ML70290 lease boundary)



Figure 73. Moorvale Explosives facility (off lease)

- Moorvale South (under development) plans to include an on-site reload facility

Roads

Coppabella and Moorvale mines have established all required roads for off-highway trucks and light vehicles to support daily operations. There is enough equipment, such as dozers, graders, water trucks, to continue to maintain and relocate those roads as needed for the current mine plan.

As a project under development, Moorvale South's road network is currently under construction.

Rail and Train Loadout

Coppabella and Moorvale both have installed Rail loops and loadouts (visible in Figures above) to load trains for product coal to be taken by rail to port facilities on the east coast. The CMJV maintains long term above and below rail contracts, as well as capacity agreements with Dalrymple Bay Coal Terminal (DBCT). Coal from Moorvale South will be handled through Moorvale's CHPP and loadout facilities.

Coal Storages

Each of the CMJV mines maintain multiple coal stockpiles to facilitate blending and ensure efficient mining operations. Both Coppabella and Moorvale keep Run of Mine (ROM) stockpiles in yard storage areas near the CHPP feed hopper. Coppabella also has an additional ROM storage area located to the East of the workshops.

Product Stockpiles are located between the washplant and the train loadout, with coal placed by overhead conveyor structures, and withdrawn through recovery valves to be conveyed to the train loadout. Stockpile dozers are used to push coal to and from the valves when required in order to create additional stockpile capacity, or to maintain high recovery rates when loading trains.

Moorvale South will have an onsite ROM stockpile pad with coal planned to be rehandled and hauled overland to Moorvale.

Spoil Piles

The CMJV mines have numerous Overburden stockpiles as well as Topsoil stockpiles around the sites. The main purpose of the stockpiles is for the development of a new pit.

The majority of these piles were placed strategically such that they do not have to be moved again, except in the cases where they are needed for final reclamation. An Out-of-Pit waste stockpile in advance of the main pit area at Coppabella is currently being removed, as it was originally placed on an area which was not planned to be mined. As prices have improved, this pile is now within the economic footprint of the mine.

Moorvale South will utilize Out-of-Pit stockpile capacity for initial overburden waste storage.

Topsoil piles may be placed strategically ahead of the pit or behind the pit in the backfill. These piles will be later excavated and placed on final graded ground.

Water Supply and Management

See Section 13.2.2.

Power Supply

Coppabella and Moorvale are connected to the Ergon grid via 66 kV powerlines. At Coppabella, an on-site reticulation network at 11kV has been established to distribute power to the CHPP and Mine Infrastructure Area, and beyond to shovel and dragline sub-stations. Moorvale's power demand is centered around the CHPP and Mine Infrastructure Area.

Power for remote ready-lines are typically provided by small on-site diesel generators where required.

The Moorvale South facility will be powered initially by 2 x 250kVA diesel generators with additional back-up capability.

Camp and Accommodation

The main camp facility for the CMJV is the Terowie Village located adjacent to the Moorvale Mine. Additional accommodations are available at several camps and towns within a reasonable distance of the mines.



Figure 74. Terowie Village Location

16. MARKET STUDIES

16.1. Introduction

The pricing information used to establish coal reserves has been derived from 3rd party index price forecasts combined with historic and existing sales information, to determine appropriate forward pricing on a mine-by-mine and product-by-product basis. In general, these price forecasts are based on a thorough analytical process utilizing detailed supply and demand models, global economic indicators, projected foreign exchange rates, analyses of price relationships among various commodities, competing fuels analyses, projected steel demand, analyses of supplier costs and other variables.

16.2. Product and Market

The CMJV mines supply a range of coal products into the Seaborne Metallurgical Coal Market. The majority of the coal sold by the CMJV is Low Volatile Pulverised Coal Injection (LV-PCI).

16.3. Market Outlook

The Market Outlook for the PCI coal generated by the CMJV remains relatively strong for several reasons including:

- Basic Oxygen Furnace (BOF) steel production expected to be dependent on PCI coal to reduce carbon emissions over the new decade as PCI use can reduce CO₂ emissions by up to 30% vs. 100% coke
- As well as decarbonization benefits, maximising PCI rates is best practice as it lowers steelmaker costs, improves steel output productivity and extends the life of capital-intensive coke ovens;
- India, the key driver of steel supply growth, has scope to increase PCI rates towards best practice demonstrated in Europe, North Asia;
- Significant sunk investment in PCI utilization technologies favour PCI coal as Blast Furnace (BF) fuel source;
- Ageing coke ovens in North Asia limiting both integrated and merchant supply of coke, increasing demand for BF alternative fuels such as PCI;
- Lower cost producers only face the threat of demand depletion from new technologies as new market entrants are unlikely due to limited availability of greenfield resources

Blended with Coppabella PCI, both Moorvale and Moorvale South PCI is acceptable as a LV PCI, but otherwise would be considered a mid-volatile, higher ash PCI.

The CMJV also generates a Weak Coking Coal (WCC) product from Moorvale and, with the development of Moorvale South, will also commence supply of a Semi-Hard Coking Coal (SHCC) product.

The demand for SHCC and WCC is mainly driven by the need/ desire to reduce the cost of the coke oven blend. Coke makers tend to seek coals like these once they have a blend of coals for the coke ovens that will produce a coke strength and or yield greater than required by the blast furnace. Traditional slot ovens will make coke of hot and cold strength that is more than is needed by most blast furnaces, if they use all PHCC and T2 HCC. A blend of all PHCC and T2 HCC would also be very expensive. Hence, they introduce as much SHCC, WCC or SSCC as they can to reach the coke cold and hot strength required by the BF.

Coke ovens with pre-treatment, particularly stamp charging, can use predominantly SHCC and WCC, with just very small proportions of HCC or PHCC. Many of the new steel plants and merchant coke plants built recently, and being planned, in India, have stamp charged coke ovens.

This represents good demand growth for SHCC and WCC. The Moorvale South SHCC product provides coke makers with a cheap high yielding coking coal that degrades rank much less, making it a better value proposition.

Should these market segments undergo unforeseen changes that reduces competition in the PCI sector, the Moorvale South WCC could easily be redirected to the mid vol PCI sector if the CSN is under 3, and ash under 10.5%. Alternatively, depending on Coppabella quality and

quantity available, it could be blended with Coppabella coal and supplied into the low vol PCI sector.

16.4. Material Contracts

Consistent with general coal mining industry in Australia, Peabody maintains a number of supply agreements for various required elements of their operations, including for fuel, electricity, tyres and equipment supply and maintenance. It also has commitments with Port and Rail service and infrastructure providers to enable its products to be brought to market.

In terms of sales, the CMJV has no long-term Coal Supply Agreements but have remained a consistent supplier to several key customers over many years.

17. ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

17.1. Environment Studies

All the CMJV sites have gone through an environmental and social impact assessment and a consultation process to obtain their permits to mine. To support these assessments comprehensive baseline studies of the local ecosystems, biodiversity, geology, soils, surface water, groundwater, land uses, heritage and other relevant site-specific studies have been conducted.

The CMJV complex is located in Central Queensland, within an established grazing, farming and coal mining region and is close to major infrastructure.

The region is in a sub-tropical climatic zone, which is characterized by high summer temperatures, warm dry winters and a distinct wet and dry season.

The regional landscape is characterized by a mosaic of cleared land, natural grasslands and savannah woodlands. Landscape connectivity in the region is predominantly provided by extant vegetation occurring along riparian corridors of waterway and river systems. These corridors provide wildlife movement opportunities.

At a catchment scale, the CMJV complex falls within a sub catchment of the Fitzroy Basin, which includes the major tributaries of the Isaac, Connors and Comet Rivers. At local scale there are several waterways and tributaries located within the CMJV complex area and its vicinity.

Topography for most of the area generally consists of undulating low rises with occasional hill features.

Groundwater resources are closely associated with the coal seams, and the shallow alluvium located along watercourses. Given the limited extent and depth of the alluvium, and the poor quality of the Tertiary and Permian aquifers, groundwater use in the vicinity of the CMJV complex is limited.

The CMJV sites have environmental management strategies in place to minimize environmental impacts and provide the strategic context for environmental management for each environmental value. At corporate level

Requirements and plans for waste and tailings disposal, site monitoring, water management during operations and after mine closure and mine closure include:

- Waste Management Plan (including Coal Waste Disposal);
- Water Management Plan (including a Site Water Balance)
- Erosion and Sediment Control Plan;
- Rehabilitation Management Plan;
- Mine Closure Plan; and
- Environmental Monitoring Program (including Surface Water and Groundwater monitoring).

17.2. Permitting

As of December 31, 2021, all required licenses and permits are in place for all current activities being conducted at the CMJV sites. These have been previously summarized in Table 1.

17.3. Social and Community Impact

The CMJV sites also have Cultural Heritage Management Plans and other agreements in place with the Traditional Owners of the land and Compensation Agreements with the directly affected landholders.

The CMJV is an active contributor to the local community, making regular donations to local charities and events and whenever possible procuring locally.

The CMJV has a range of communication methods in place which enables it to share information with the local community. These methods include:

- Site open days
- Phone calls and meetings with landholders
- Meetings with the Traditional Owners
- Meetings with the Isaac Regional Council

- The Peabody Energy website - <https://www.peabodyenergy.com> and
- Ad hoc Community Newsletters

The CMJV sites all have a Complaint Response Protocol to respond to all community concerns. Complaints and meetings with stakeholder are logged in the consultation management system, Consultation Manager.

17.4. Mine Reclamation and Closure

Mine reclamation is a vital part of the mining life cycle and the CMJV sites aim to commence restoration of the landscape as soon as land becomes available to create a safe, stable, non-polluting and sustainable landform that benefits generations to follow. Reclamation is undertaken on a progressive basis with consultation between the environmental, technical services and production teams. In any given year, land reclamation activities can vary due to production needs, mine development, weather conditions, or other unforeseen factors.

As part of each CMJV sites' annual financial reporting obligations, a review of Asset Retirement Obligations (ARO) is required to be undertaken. This review estimates the cost of reclaiming the 'active' parts of the mine, including works to remove mine infrastructure and otherwise meet the statutory relinquishment requirements for each mine. The estimate also includes allowances for 'post-closure' costs such as required monitoring, completion surveys, project management etc.

The current estimate for Asset Retirement Obligation at the CMJV is summarized below (in AUD):

	Coppabella	Moorvale and Moorvale South
Support Areas	\$64m	\$49m
Closure Costs	\$22m	\$23m
Ongoing Areas	\$6m	\$2m
TOTAL COSTS	\$92m	\$74m

Table 30. Asset Retirement Obligation Cost Summary

These estimates are captured in the Financial Models supporting the Reserve estimates.

In November 2018, the Queensland parliament passed into law the Mineral and Energy Resources (Financial Provisioning) Act (also known as MERFP). As a result of this law, all active mine sites are required to develop and submit for approval a Progressive Rehabilitation and Closure Plan (PRCP). Peabody has agreed a schedule to deliver these plans to the relevant authority by mid-2024. The main purposes of the PRC plan are to:

- require the holder of an Environmental Authority (EA) to plan for how and where activities will be carried out on land in a way that maximises the progressive rehabilitation of the land to a stable condition
- provide for the condition to which the holder must rehabilitate the land before the EA may be surrendered.

The EP Act requires that all areas disturbed within the relevant mining tenure must be rehabilitated to a Post-Mining Land Use (PMLU) or managed as a Non-Use Management Area (NUMA). Any undisturbed land within the relevant mining tenure must also be identified as a PMLU. NUMAs will only be considered appropriate where justified.

A PRC plan will consist of two parts:

1. Rehabilitation Planning part
2. PRCP schedule.

The Rehabilitation Planning part of the PRC plan must include the information as described below. The purpose of this section is to provide evidence and justification to support the development of the proposed PRCP schedule.

The content requirements for the Rehabilitation Planning part include, but are not limited to:

- general information about the site and operation
- information about community consultation
- analysis and justification of PMLUs and NUMAs
- justification of timeframes for land being available for rehabilitation and available for improvement
- details of the rehabilitation methodologies and techniques that will be used to develop rehabilitation milestones and management milestones and supporting documentation.

The PRCP schedule is approved by the administering authority and will include maps of final rehabilitation and closure outcomes for the site and tables of time-based milestones for achieving each PMLU and/or NUMA. The PRCP schedule consists of the following:

- rehabilitation and management milestones
- milestone criteria
- identification of PMLUs or NUMAs
- when land becomes available for rehabilitation and available for improvement
- rehabilitation areas and improvement areas
- milestone completion dates.

The administering authority may impose conditions on the approval that it considers necessary or desirable. The PRCP schedule operates separately to the EA. The EA authorises the carrying out of an environmentally relevant activity (ERA) and includes conditions to avoid, mitigate, or manage environmental harm that could occur during an activity. The PRCP schedule contains milestones and conditions that relate to the completion of progressive rehabilitation and mine closure. Both the EA and the PRCP schedule apply to the entire life of the mining activities, irrespective of when the underlying tenure expires.

17.5. Comments from Qualified Person(s)

In the opinion of the Qualified Person, the current approach to matters of environmental compliance, permitting and community impacts generally is sound, and doesn't present any current concerns with respect to the reporting of Resources or Reserves.

18. CAPITAL AND OPERATING COSTS

18.1. Introduction

The CMJV is an active operation with a long operating history at the two established mines of Coppabella and Moorvale. The LOM mine plans and financial models for these mines, as well as the emerging pit development at Moorvale South, have been developed and updated on a regular basis. The projected coal and waste volumes, and product quality are developed from detailed mine plans. The manpower requirements, operating costs and capital are estimated from the historic data and future mine plan requirements on regular basis.

18.2. Operating Costs

The cost estimates used to establish coal reserves are generally estimated according to internal processes that project future costs based on historical costs and expected future trends. The estimated costs include mining, processing, transportation, royalty, add-on tax and other mining-related costs. Peabody's estimated mining costs reflect projected changes in prices of consumable commodities (mainly diesel fuel, and explosives), labor costs, geological and mining conditions, targeted product qualities and other mining-related costs. Estimates for other sales-related costs (mainly transportation, royalty and add-on tax) are based on contractual prices or fixed rates.

Operating costs are projected based on historical operating costs and adjusted based on projected changes in staffing, hours worked, production, and productivity for mining areas in the LOM Plan. The LOM Plan operating cost projections are shown in the following charts:

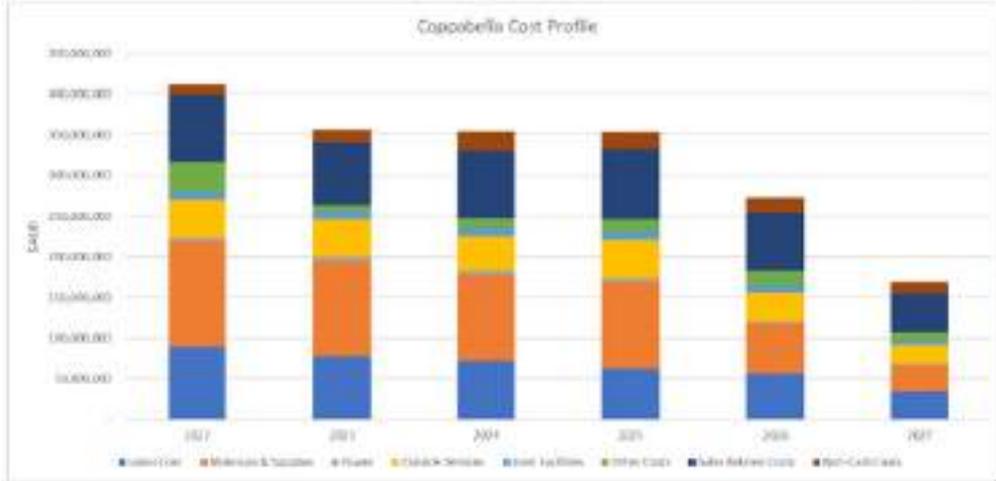


Figure 75. Operating Cost Profile - Coppabella



Figure 76. Operating Cost Profile - Moorvale (inc Mv/Sth)

These operating cost estimates are based on a substantial operating history, contain no contingency and are in the accuracy range of + - 15%.

18.3. Capital Expenditures

CMJV will require capital expenditures to deliver the plans as described. The capital expenditures in real AUD are shown in following table. The capital expenditures have been projected based on mining equipment and infrastructure requirements, with pricing based on current costs.

NOTE: The capital profile shown is only that required to deliver the quantities associated with the declared Reserves in this report. Additional capital is planned to be spent to facilitate further development of Resources, particularly at Coppabella and Moorvale South, as well as equipment and component capital associated with these expected life extension areas.

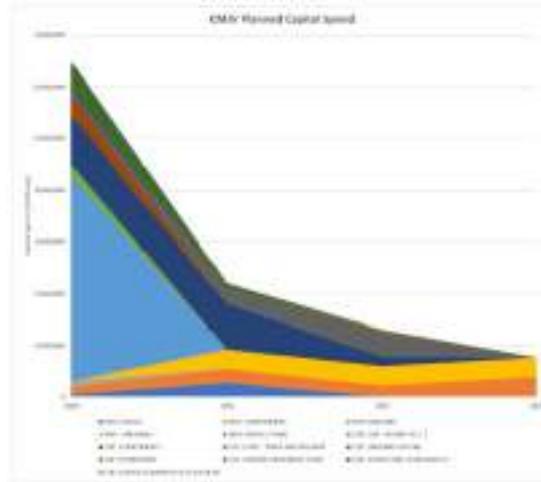


Figure 77. CMJV Capital Spend Profile

These capital cost estimates are based on a substantial operating history, contain no contingency and are in the accuracy range of + - 15%.

19. ECONOMIC ANALYSIS

19.1. Macro Economic Assumptions

As part of the Life of Mine Financial Modelling process, several economic assumptions are determined internally within Peabody's Corporate group. Key assumptions used for the current modelling are:

Inflation: From 2022-2026 2.1%
 Beyond 2026 2.5%

(Note: multiple inflation rates are developed for different cost inputs – the values presented above represent averages of modelled inflation)

Royalties/Levys: Queensland Royalty on Coal
 7-12.5% of Revenue (sliding scale described in Figure 10)
 Other standard government levies (including Research Levy) are included.

Tax: Australian Corporate Tax of 30%

Discount Rate: 10%

AUD:USD FX Rate: 2022 0.77
 2023 and beyond 0.73

Coal Prices:

Modelled Coal pricing is based on quality adjusted benchmark prices for the various products planned to be produced from each of the sites. Average Moorvale / MVS pricing is expected to be higher than Coppabella, due to a high percentage of Semi Hard Coking Coal expected to be produced from this site. Average Coppabella pricing is expected to be close to Broker Consensus LV PCI pricing as this coal represents the benchmark for that product.

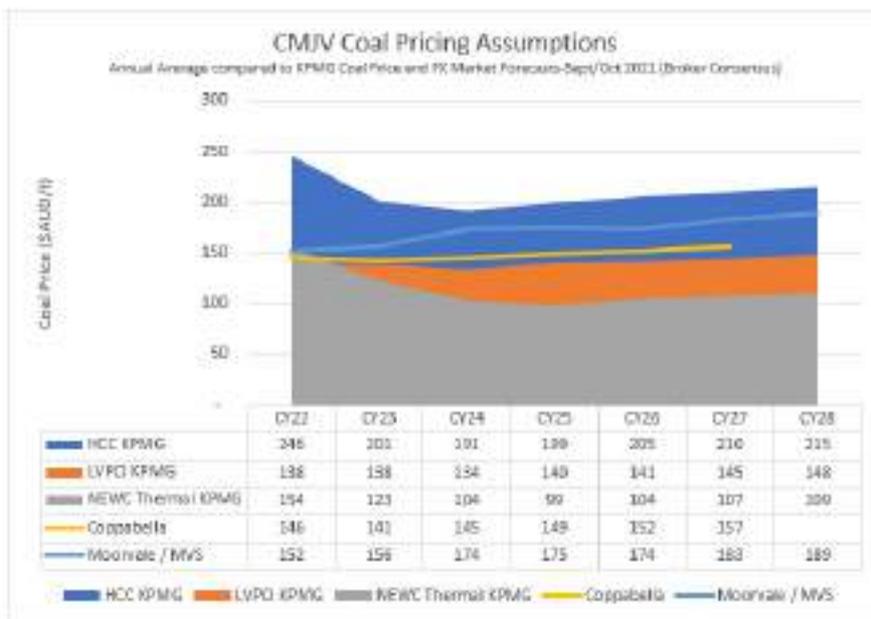


Figure 78. Projected Coal Prices compared to Broker Consensus

19.2. Cash Flow Model

The key results of the Financial Modelling are displayed below, with a summary of annual (undiscounted) cash flows, along with the economic viability metric of NPV at different discount

factors. Other economic measures such as IRR and Payback Period are of limited informative value due to the low capital required in an operating mine with strong cashflows

	2022	2023	2024	2025	2026	2027	Total
COPPABELLA LOM							
Cash Generated (Initial)	63,680,462	52,821,242	99,728,870	123,717,665	110,746,525	86,012,305	536,100,217
Income Tax	5,283,680	8,006,389	29,748,905	23,244,348	23,755,781	18,122,856	99,240,759
Working Capital	-	2,366,755	14,665,407	1,807,279	1,758,885	7,180,061	21,578,065
ARD/Mine Closure Expense	936,247	996,347	896,347	896,347	2,568,442	1,880,000	70,824,646
CapEx	22,255,087	12,823,855	1,330,284	-	-	-	40,399,038
Other Adjustments	-	-	-	-	-	-	-
Cash Flow	35,285,438	32,089,289	67,168,927	86,659,114	69,165,247	74,068,396	337,403,836
Cash Flow (Excludes)	35,285,438	67,132,644	134,900,571	223,390,738	316,540,990	393,413,529	1,374,003,836

Table 31. Coppabella LOM Projected Cashflow

	2022	2023	2024	2025	2026	2027	Total
MOORVALE LOM							
Cash Generated (Initial)	11,080,251	308,300,317	41,894,830	44,818,841	16,261,384	13,148,108	46,001,471
Saleable Metal	-	-	-	-	-	-	-
Processing Royalty	-	-	-	-	-	-	-
Income Tax	4,288,232	15,854,232	4,973,285	7,405,482	5,215,710	1,252,888	34,079,568
Working Capital	-	19,511,850	6,523,894	8,492	211,893	1,397,895	122,298
ARD/Mine Closure Expense	509,800	380,288	389,652	488,669	2,876,379	2,718,213	3,815,189
CapEx	4,131,528	9,445,189	6,286,080	6,884,781	-	-	87,883,721
Other Adjustments	-	-	-	-	-	-	-
Cash Flow	3,159,791	293,806,022	38,599,213	37,818,658	16,070,594	12,063,679	313,702,288
Cash Flow (Excludes)	3,159,791	308,198,261	44,884,294	46,304,147	17,152,145	13,461,572	313,702,288

Table 32. Moorvale LOM Projected Cashflow

NPV @ 10%	261,231,505
NPV @ 15%	230,593,484
NPV @ 20%	204,676,291

Table 33. Coppabella Value Metrics

NPV @ 10%	97,076,496
NPV @ 15%	86,145,796
NPV @ 20%	75,767,225

Table 34. Moorvale Value Metrics

These results show that CMJV exhibits strong projected cashflows throughout its planned life, which contribute to a high NPV10.

19.3. Sensitivity Analysis

A high-level sensitivity analysis of the impact of changes in Sales Price, Cost, Productivity and Capital has been completed in the Financial Model. Sensitivity to product grade has not been completed, but this would have a similar effect to price, or productivity in the event that yield is modified to maintain product specs. The results of this analysis are shown below. This analysis demonstrates the project value to be relatively robust, with positive NPVs reported across the range of values assessed. Of the parameters tested, Moorvale generates negative value only if costs are increased by ~\$15/t or productivity drops by ~10%.

SALE PRICE	\$ 5.00	\$ 15.00	\$ 30.00	\$ 5.00	\$ -	\$ (5.00)	\$ (10.00)	\$ (15.00)
NPV @ 10%	545,057,781	474,227,150	403,396,538	261,231,505	261,231,505	261,735,315	190,004,734	120,634,080
NPV @ 15%	479,967,834	417,158,250	354,650,065	230,593,484	230,593,484	229,633,066	167,124,811	104,635,126
NPV @ 20%	425,731,844	368,928,750	314,127,659	204,676,291	204,676,291	202,523,488	146,723,372	90,913,278
COST	\$ 3.000	\$ (25.000)	\$ (10.000)	\$ (5.000)	\$ -	\$ 5.000	\$ 10.000	\$ 15.000
NPV @ 10%	558,846,866	483,432,094	408,017,322	261,231,505	261,231,505	257,187,778	181,773,905	106,158,233
NPV @ 15%	488,938,736	422,927,029	357,512,257	230,593,484	230,593,484	228,781,846	161,400,119	96,018,221
NPV @ 20%	430,832,152	373,214,730	315,777,109	204,676,291	204,676,291	203,981,868	143,884,244	86,024,623
PRODUCTIVITY	3.53%	8.99%	6.66%	3.33%	0.00%	-3.33%	-6.66%	-9.99%
NPV @ 10%	540,294,933	471,051,218	401,808,502	261,231,505	261,231,505	263,322,930	194,079,936	124,836,940
NPV @ 15%	475,170,190	414,164,657	351,253,139	230,593,484	230,593,484	231,130,042	170,118,518	104,106,945
NPV @ 20%	421,499,842	367,108,282	312,736,921	204,676,291	204,676,291	203,934,200	149,542,940	95,131,489
CAPITAL	10.00%	-30.00%	-20.00%	-10.00%	0.00%	10.00%	20.00%	30.00%
NPV @ 10%	267,284,187	265,266,626	261,294,066	261,231,505	261,231,505	254,221,945	257,196,384	255,138,823
NPV @ 15%	236,634,586	234,628,025	232,607,185	230,593,484	230,593,484	228,579,783	236,566,385	234,552,362
NPV @ 20%	210,686,279	208,680,689	206,674,620	204,676,291	204,676,291	202,672,662	200,669,632	198,666,303

Table 35. Coppabella Financial Model Sensitivity

SALE PRICE	\$ 5.00	\$ 15.00	\$ 10.00	\$ 5.00	\$ -	\$ (5.00)	\$ (10.00)	\$ (15.00)
NPV @ 10%	257,859,425	215,982,572	174,105,719	97,076,498	90,352,013	48,475,169	6,590,307	
NPV @ 15%	228,315,436	191,328,360	154,341,284	86,145,796	80,367,131	43,300,055	6,392,979	
NPV @ 20%	203,026,580	169,843,230	138,859,884	75,767,225	70,691,188	37,604,837	4,528,488	
COST	\$ 5.000	\$ (15.000)	\$ (10.000)	\$ (5.000)	\$ -	\$ 5.000	\$ 10.000	\$ 15.000
NPV @ 10%	261,843,788	232,042,288	182,140,777	97,076,498	82,337,750	32,436,244	17,465,267	
NPV @ 15%	248,666,752	205,044,641	161,202,550	86,145,796	73,518,369	29,676,278	14,165,813	
NPV @ 20%	220,932,702	181,880,930	142,831,363	75,767,225	64,729,620	25,678,889	11,373,921	
PRODUCTIVITY	3.33%	9.99%	6.66%	3.33%	0.00%	-3.33%	-6.66%	-9.99%
NPV @ 10%	260,506,721	223,062,769	177,655,818	97,076,498	86,801,914	43,374,862	14,051,889	
NPV @ 15%	236,974,879	197,101,188	157,227,608	86,145,796	77,480,717	37,607,226	12,266,264	
NPV @ 20%	210,175,127	174,708,929	139,242,732	75,767,225	68,310,538	32,844,141	12,622,057	
CAPITAL	10.00%	-30.00%	-20.00%	-10.00%	0.00%	10.00%	20.00%	30.00%
NPV @ 10%	104,543,363	102,057,076	99,566,787	97,076,498	94,586,200	92,095,919	89,605,630	
NPV @ 15%	93,647,974	91,147,251	88,646,524	86,145,796	83,645,068	81,144,390	78,643,612	
NPV @ 20%	85,280,974	80,776,391	78,271,808	75,767,225	73,262,641	70,758,058	68,253,475	

Table 36. Moorvale Financial Model Sensitivity

20. ADJACENT PROPERTIES

The CMJV operations tenements (identified in the following Figure) are located within a belt of existing mines and exploration leases. Coppabella Mine Leases abut a South Walker Creek Mine Lease (ML70131) to the east and several CMJV owned MDL's (shaded green) in the north, south and west.

The Moorvale Mine Leases are similarly encompassed by CMJV EPC's (shaded blue) and MDL's with only the southwest corner laying adjacent to MDL495, which is owned by another JV that Peabody has a majority interest in.

Moorvale South has the CMJV's EPC649 on it's north, east and southern flanks, with EPC830 and EPC1949 to the west belonging to other coal companies.

The CMJV also owns 2 Mining Leases to the East of Moorvale / Moorvale South that are associated with the Codrilla Project – these are not included within this report.

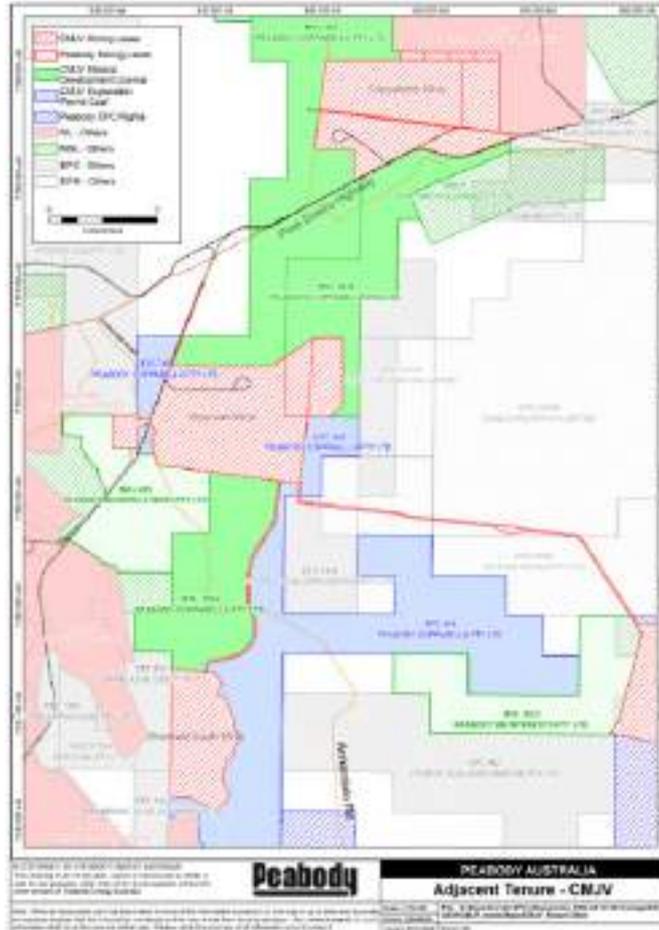


Figure 79. Adjacent Mining Tenements

No information from adjacent properties has been used in the preparation of this Resource and Reserve estimate.

21. OTHER RELEVANT DATA AND INFORMATION

Peabody reports greenhouse gas emissions from the CMJV mines according to the requirements of the National Greenhouse and Energy Reporting Act 2007. Fugitive gas emissions released from the mining of coal are reported based on a model developed in accordance with Method 1, utilizing state-based default methane emissions factors established by the Clean Energy Regulator. The CMJV mines have established baseline emissions under the safeguard mechanism, and are not anticipating any additional costs associated with exceedance of emissions targets with its current plans.

There is no additional relevant information or data to be discussed.

22. INTERPRETATION AND CONCLUSIONS

The ability of Peabody, or any coal company, to achieve production and financial projections is dependent on numerous factors. These factors primarily include site-specific geological conditions, the capabilities of management and mine personnel, level of success in acquiring reserves and surface properties, coal sales prices and market conditions, environmental issues, securing permits and bonds, and developing and operating mines in a safe and efficient manner. Unforeseen changes in legislation and new industry developments could substantially alter the performance of any mining company.

Coal mining is carried out in an environment where not all events are predictable. While an effective management team can identify known risks and take measures to manage and/or mitigate these risks, there is still the possibility of unexpected and unpredictable events occurring. It is not possible therefore to totally remove all risks or state with certainty that an event that may have a material impact on the operation of a coal mine will not occur.

22.1. Geology and Resources

It is the opinion of the Qualified Person that the exploration data reviewed for the CMJV is sufficient to reasonably interpret the geology of the area and to construct geological and coal quality models.

The Qualified Person has reviewed the available studies and geological data on file for CMJV and has the opinion that the exploration and geological work is thorough and conforms to reasonable standards. The results of the exploration and its interpretation have been consistent over time, lending confidence to the conclusions that have been reached. These include the following bulleted items.

- The geological models reasonably represent the drill hole and other data provided and are a reasonable interpretation of that data. The models are sufficient for use as the basis of Resource and Reserve estimates.

- Coal sampling procedures, sample preparation, sample analysis and sample security procedures are adequate, within industry standards and sufficient to ensure representative sampling results.

- Based on a review of historic performance and the forward projections the projected coal preparation plant yields are reasonable.

Further exploration programs will continue to add further understanding and confidence of the resources within the deposits of the CMJV.

22.2. Mining and Reserves

The CMJV operations of Coppabella and Moorvale have a solid operating history and a well developed understanding of the geology in order to determine Coal Resource and Reserve estimates and projected economic viability. The developing project of Moorvale South has been subjected to sufficient study to warrant its development. The data has been determined by the Qualified Persons to be adequate in quantity and reliability to support the Coal Resource and Reserve estimates in this Technical Report Summary.

The Coal Reserve estimates are 24.4 million marketable (product) tonnes of surface mineable Reserves, at the CMJV. These Reserves are economically mineable based on the historical mining, mine projections, historical and projected thermal coal sales prices, historical and projected operating costs, and capital expenditure projections for the Mine Plan developed for this Reserve Statement.

22.3. Environmental, Permitting and Social Considerations

As of December 31, 2021, all required licenses and permits are in place for all activities at the operation of the CMJV. Many of these permits require regular monitoring, reporting, and renewals – these activities are a normal undertaking in the business of mining within Queensland, AUSTRALIA.

Land reclamation is a vital part of the mining life cycle that is integrated with the mining process. The CMJV management is committed to being compliant with the Company's Environmental

policy and take responsibility for the environment, benefit our communities and restore the land for generations that follow. The historic performance on the reclamation activities and the projected future reclamation costs are supportive of the Reserve estimates at the CMJV.

22.4. Economic Analysis

The coal reserve estimates are supported by the Mine plans that have been prepared to be compliant with the requirements of Regulation S-K 1300.

These plans mine the defined Reserves within a 7 year period, during which time the combined operations are projected to produce 24 million tonnes of product with a total cost of \$3,340 million and a capital expenditure of \$108 million. The plan will produce \$450 million in positive total cash flow and ~\$358 million Net Present Value (NPV).

23. RECOMMENDATIONS

23.1. Geology and Resources

It is recommended that appropriate actions are undertaken to convert Inferred Resources in advance of mining at Coppabella to at least an Indicated level. Subsequent transfer of these Resources to Reserves is highly likely.

Future exploration work is required to further define the geological structure and coal quality of the resource areas at the Moorvale South deposit, with particular emphasis on defining the presence and effects of intrusives on the proportion of weak coking coal vs PCI coal products.

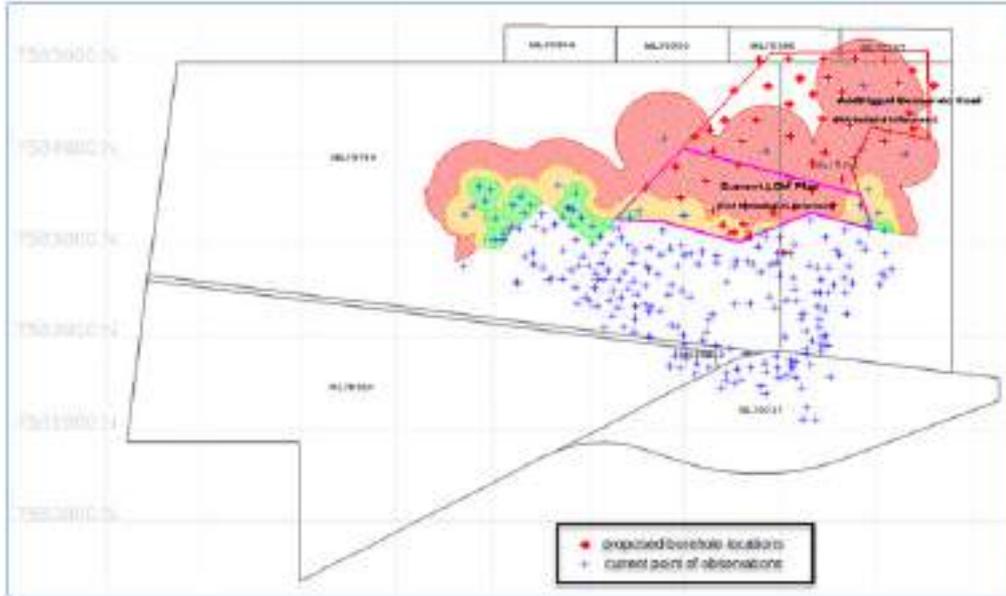


Figure 80. Drilling Component of Proposed Forward Work Program at Coppabella mine(LCU resource classifications overlaid)

23.2. Mining Processing and Reserves

The following recommendations are made with respect to Reserves:

Continue study works to facilitate the continuation of Coppabella mining into the north-eastern area of the mining leases (the 'Humbug Gully' area).

With increasing depths of the Moorvale deposit challenging the economics of continued Opencut mining, continue to evaluate opportunities to develop the remaining Resources at Moorvale through Underground mining methods.

Continue study work on additional Moorvale South Resources. Additional conversion to Reserves is highly likely, but subject to completion of Pre-Feasibility studies.

23.3. Environmental, Permitting and Social Considerations

With recent legislation changes in Queensland, all mine sites are required to submit Progressive Rehabilitation and Closure Plans over the course of the next two years. As these plans are developed, it is recommended that the potential impact on current and future Reserve estimates is assessed against the commitments required by these documents.

23.4. Economic Analysis

The ability of Peabody, or any coal company, to achieve production and financial projections is dependent on numerous factors. These factors primarily include site-specific geological

conditions, increasing strip ratio, the capabilities of management and mine personnel, level of success in acquiring reserves and surface properties, coal sales prices and market conditions, environmental issues, securing permit renewals and bonds, and developing and operating mines in a safe and efficient manner. Unforeseen changes in legislation and new industry developments could substantially alter the performance of any mining company. It is recommended that those factors should be assessed regularly according to the Company's internal control and material changes are to be reflected in the future reserve estimates.

24. REFERENCES

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Vulcan Software: <https://www.maptek.com/products/vulcan/>
 Australasian Joint Ore Reserves Committee (JORC) JORC: Mineral Resources and Ore Reserves

National Association of Testing Authorities, Australia (NATA) National Association of Testing Authorities, Australia - Home (nata.com.au)

GeoResGlobe (Qld Government): <https://georesglobe.information.qld.gov.au/>

25. RELIANCE ON INFORMATION PROVIDED BY THE REGISTRANT

This technical report summary has been prepared by Qualified Persons who are employees of the registrant. In their specific areas of expertise, these Qualified persons have contributed to the appropriate sections of this report. These Qualified Persons have also relied on the information provided by the Company for property control, marketing, material contracts, environmental studies, permitting and macro-economic assumptions as stated in Section 3.2, Section 16, Section 17, and Section 19. As the mines have been in operation for many years, the Company has considerable experience in those areas. The Qualified Persons have taken all appropriate steps, in their professional opinion, to ensure that the above information from the Company is sound.