



**Warrior Met Coal, Inc.
Mine No. 4
Year End 2022 Reserve Analysis
Technical Report Summary**

February 10, 2023

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Statement of Use and Preparation

This Technical Report Summary (*TRS*) was prepared for the sole use of **Warrior Met Coal, Inc. (Warrior Met)** and its affiliated and subsidiary companies and advisors. Copies or references to information in this report may not be used without the written permission of Warrior.

The report provides a statement of coal resources and coal reserves for Warrior Met, as defined under the **United States Securities and Exchange Commission (SEC)**.

The statement is based on information provided by Warrior Met and reviewed by various professionals within **Marshall Miller & Associates, Inc. (MM&A)**.

MM&A professionals who contributed to the drafting of this report meet the definition of *Qualified Persons (QPs)*, consistent with the requirements of the SEC.

The information in this TRS related to coal resources and reserves is based on, and fairly represents, information compiled by the QPs. At the time of reporting, MM&A's QPs have sufficient experience relevant to the style of mineralization and type of deposit under consideration and to the activity they are undertaking to qualify as a QP as defined by the SEC.

Certain information set forth in this report contains "forward-looking information", including production, productivity, operating costs, capital costs, sales prices, and other assumptions. These statements are not guarantees of future performance and undue reliance should not be placed on them. The assumptions used to develop the forward-looking information and the risks that could cause the actual results to differ materially are detailed in the body of this report.

MM&A hereby consents: (i) to the use of the information contained in this report dated December 31, 2022, relating to estimates of coal resources and coal reserves controlled by Warrior Met, (ii) to the use of MM&A's name, any quotation from or summarization of this TRS in Warrior Met's SEC filings, and (iii) to the filing of this TRS as an exhibit to Warrior Met's SEC filings.

This report was prepared by:

Qualified Person: /s/ Marshall Miller & Associates, Inc.

February 10, 2023



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1 Executive Summary

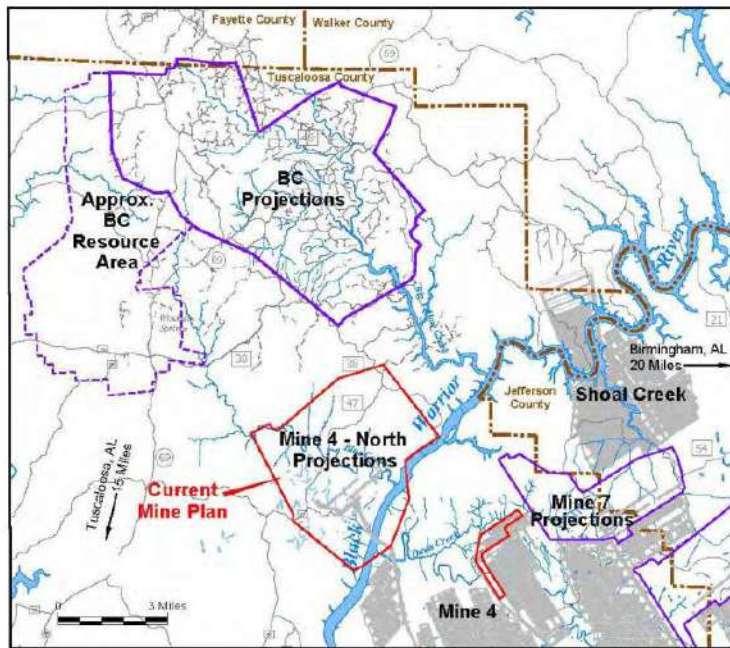
1.1 Property Description

Warrior Met Coal, Inc. (*Warrior Met*) authorized Marshall Miller & Associates, Inc. (*MM&A*) to prepare this Technical Report Summary (*TRS*) of its controlled coal reserves, located at its Mine No. 4 property in Tuscaloosa County, Alabama (the *Property*). The report provides a statement of coal resources and coal reserves for Warrior Met, as defined under the **United States Securities and Exchange Commission (SEC)** standards.

Coal resources and coal reserves are herein reported in metric units of measurement and are rounded to millions of tonnes (*Mt*).

The Mine No. 4 Complex is located in Tuscaloosa County in central Alabama. The Property is approximately 20 miles east of the town of Tuscaloosa, Alabama and 30 miles southwest of Birmingham, Alabama. The nearest major population centers are Tuscaloosa and Birmingham (see *Figure 1-1*). The Property, inclusive of depleted mine works and future reserve areas, is composed of approximately 46,000 total acres. Of the 46,000 acres, approximately 7,200 are associated with future mining areas. Future mining areas include approximately 6,100 acres of leased mineral holdings and approximately 1,000 acres of uncontrolled mineral holdings. Subject to Warrior Met's exercising its renewal rights thereunder, all the leases expire upon exhaustion of the relevant coal reserves, which is expected to occur in 2045 based upon the mine plan presented in this TRS. This TRS does not consider significant contiguous uncontrolled tonnages which Warrior Met may pursue in the future. As such, the reserve exhaustion date presented in this TRS is subject to extension should Warrior increase its coal reserves via acquisition of contiguous properties.

Figure 1-1: Warrior Met Mine No. 4 Complex Property Location Map



1.2 Ownership

The Property was formerly controlled by **Jim Walter Resources (Walter)**, the predecessor company of Warrior Met. Warrior Met acquired its mineral rights for the Mine No. 4 property in 2016 through purchase of the **Walter Energy (Walter)**-owned coal assets located in Alabama, following Walter's bankruptcy in 2015. In addition to the Mine No. 4 assets, Warrior Met also acquired various other significant assets, including the **Mine No. 7** and **Blue Creek (BC)** properties.

Reserves and resources associated with these adjacent properties are not included in this report but are issued under separate cover. *Figure 1-1* outlines the location of the Property in relation to Warrior's adjacent properties.

1.3 Geology

Operations at the Mine No. 4 Complex extract the Mary Lee and Blue Creek coal beds by longwall mining methods. Strata of economic interest for this TRS belong to the Pennsylvanian-age Mary Lee Coal Group or Zone (see *Figure 1-3*), and the subject seams are the principal coal seams of interest within that formation for the present evaluation. High-angle normal faults located within the Property have

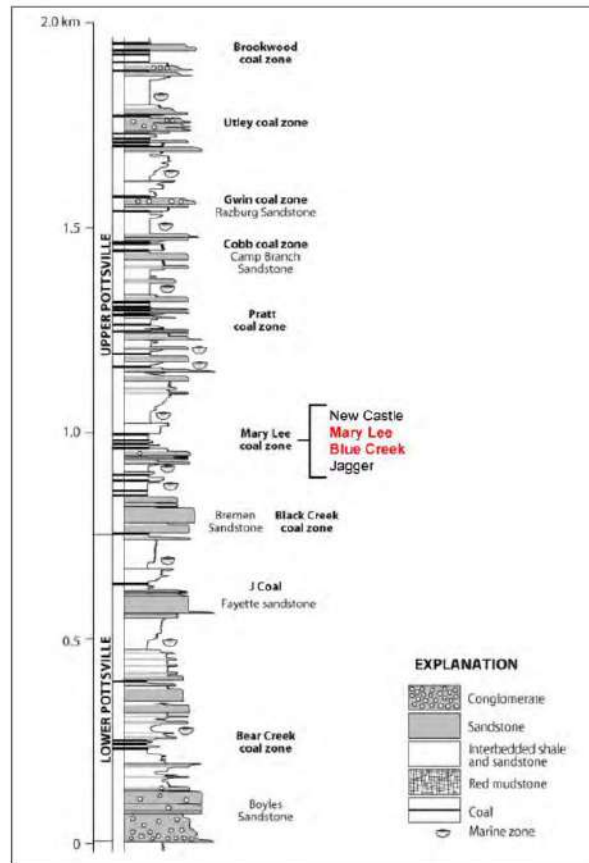


a direct impact upon mine layout and design. Due to the high value of this coal, it has been extensively mined in the region.

Warrior Met reports that current market placement at Mine No. 4 is generally an average of the Premium Low-Volatile Indices (*PLV*) and the Mid-Volatile Indices (*MV*), this average will be referenced as Premium Low–Mid-Vol Average (*PLMV*). Mine projections suggest that Warrior Met will continue to produce coal in the current “East” district for less than one year before transitioning to the western reserve areas.

As development activities continue to transition to the “North” district and the longwall mines out the “East” district, coal produced from Mine No. 4 will likely incur an increase in volatile matter. Based on regional trends and laboratory data, volatile matter contents for the subject coals in the western area will gradually edge upward. Since the potential exists for pricing to change as the volatiles vary in future areas as they are developed, MM&A, with support from Warrior Met, has used the *PLMV* as a basis for pricing.

Figure 1-2: Generalized Stratigraphic Column of Warrior Basin Sequence with Mary Lee Coal Zone Highlighted in red (after Pashin, 2005)



1.4 Exploration Status

Since as early as 1916, the Property has been extensively explored by means of: continuous coring and analytic testing; rotary drilling, and ongoing development associated with coalbed methane (CBM) production; by downhole geophysical logging of gas wells; and by in-seam channel sampling during mining. The majority of the data was acquired or generated by previous owners of the Property but has been supplemented by exploration drilling conducted by Warrior Met over the past 6 years (as recently as 2022). These sources comprise the primary data used in the evaluation of the coal resources and coal reserves identified on the Property. MM&A examined the data available for the evaluation



and incorporated all pertinent information into this TRS. Where data appeared to be anomalous or not representative, that data was excluded (or not honored) from the digital databases and subsequent processing by MM&A.

1.5 Operations and Development

Due to its coal reserve and seam characteristics, the Property utilizes longwall mining methods with continuous miner units to support the longwall production unit.

Run-of-mine coal is transported to the surface via a skip system which transports coal to the surface vertically. Adjacent to the skip shaft is a service shaft for the transportation of workers, supplies and equipment to the coal mine. Warrior Met is nearing the completion of a new portal site, closer to active faces and future mining reserve areas, which is currently being utilized in a partial capacity prior to serving longwall needs. Bleeder shafts are installed at each longwall district.

Run-of-mine coal is processed in a preparation plant with a capacity of 1,300 raw tons-per-hour (1,180 tonnes/hour). In 2022, the operation produced an average product with the following quality characteristics (dry basis): Ash, 10.18%; Sulfur, 0.76%, Volatile Matter, 27.06%. Typical moisture contents for Warrior Met's shipments are in the 10-percent range.

In typical years, the mine produces approximately 2 million tonnes (Mt) of coal annually and employs around 400 workers.

1.6 Mineral Resource

A coal resource estimate was prepared as of December 31, 2022, for the Property, summarized in *Table 1-1*. Resources presented in *Table 1-1* represent those resources associated with mine planning and reserves. Resources are presented *inclusive* of coal reserves, not in addition to coal reserves. Resources represent in-place coal tonnages *exclusive* of the interburden, but inclusive of any high-ash material resident within the Mary Lee and Blue Creek coal seams. As such, in-situ tonnages and quality as presented in *Table 1-1* reflect the inclusion of high-ash material which is ultimately removed after mining during coal preparation.

Table 1-1: Coal Resources Summary as of December 31, 2022

Seam	Coal Resource (Dry Tonnes, In Situ, Mt)				Resource Quality (Dry)		
	Measured	Indicated	Inferred	Total	Ash%	Sulfur%	VM%
Mary Lee	17.0	0.3	0.0	17.2	-	-	-
Blue Creek	44.0	0.6	0.0	44.5	-	-	-
Grand Total	60.9	0.8	0.0	61.8	16.5	0.9	28

Note: Resource tonnes are inclusive of reserve tonnes since they include the in-situ tonnes from which recoverable coal reserves are derived.

Note 2: Coal resources are reported on a dry basis, inclusive of high-ash partings which are ultimately removed during coal preparation. Surface moisture and inherent moisture are excluded.

Totals may not add due to rounding.

1.7 Mineral Reserve

Resource modeling and estimates are used as the basis for the Property's reserve calculation and is based on a reasonable Pre-Feasibility level, life-of-mine (*LOM*) mine plan and practical recovery factors. Proven and probable coal reserves were derived from the defined in-situ coal resource considering relevant processing, economic (including technical estimates of capital, revenue and cost), marketing, legal, environmental, socioeconomic, and regulatory factors. The proven and probable coal reserves on the Property are summarized below in *Table 1-2*.

Table 1-2: Coal Reserve Summary as of December 31, 2022

Seam	Demonstrated Coal Reserves (Wet Tonnes, Washed or Direct Shipped, Mt)					Quality (Dry Basis)		
	By Reliability Category			By Control Type		Ash%	Sulfur%	VM%
	Proven	Probable	Total	Owned	Leased			
Mary Lee	11.3	0.2	11.5	0.0	11.5	-	-	-
Blue Creek	27.4	0.4	27.8	0.0	27.8	-	-	-
Total	38.7	0.5	39.2	0.0	39.2	10.2	0.8	30

Note 1: Marketable reserve tonnes are reported on a moist basis, including a combination of surface and inherent moisture. The combination of surface and inherent moisture is modeled at 10-percent, comparable to Warrior Met's current product moisture. Actual product moisture is dependent upon multiple geological factors, operational factors, and product contract specifications. Totals may not add due to rounding.

In summary, the Property includes a total of 39.2 Mt (moist basis) of marketable coal reserves as of December 31, 2022. Of that total, 99 percent are proven, and 1 percent are probable. All the reserves are leased and are considered suitable for the metallurgical coal market.

1.8 Capital Summary

MM&A assumes that major equipment rebuilds occur in a timely manner over the course of each machine's remaining operating life. Based on detailed studies of similar mines and with guidance from Warrior Met, MM&A has used a value of \$11.00 per saleable tonne mined for sustaining capital. This closely approximates Warrior Met's history, increased by 16% to reflect recent inflation trends. Project capital is assumed to be subject to stand-alone economic analysis prior to expenditure so it has not been included in this study. To reflect typical spending patterns, sustaining capital is reduced to 25% in the penultimate year of production and eliminated in the final year.

1.9 Operating Costs

MM&A used a combination of historical information and detailed operating cost estimates from a recent study of a similar property in the region. Where necessary, operating costs were adjusted to reflect differences between this mine and the studied mine. Hourly labor rates and salaries were based upon regional information and expectations. Fringe-benefit costs were developed for vacation and holidays, federal and state unemployment insurance, retirement, workers' compensation and pneumoconiosis, casualty and life insurance, healthcare, and bonuses. A cost factor for mine supplies



was developed that relates expenditures to mine advance rates for roof-control costs. Other mine-supply costs are typically related to factors such as feet of section advance, ROM tonnes mined, and days worked. Other factors were developed for maintenance and repair costs, rentals, mine power, outside services and other direct mining costs.

Utilizing this process costs were calculated at 2022 levels, then to reflect recent inflation trends multipliers were applied to each category. *Table 1-3* provides the inflation factors used to escalate the costs from 2022 to 2023.

Table 1-3: Inflation Factors

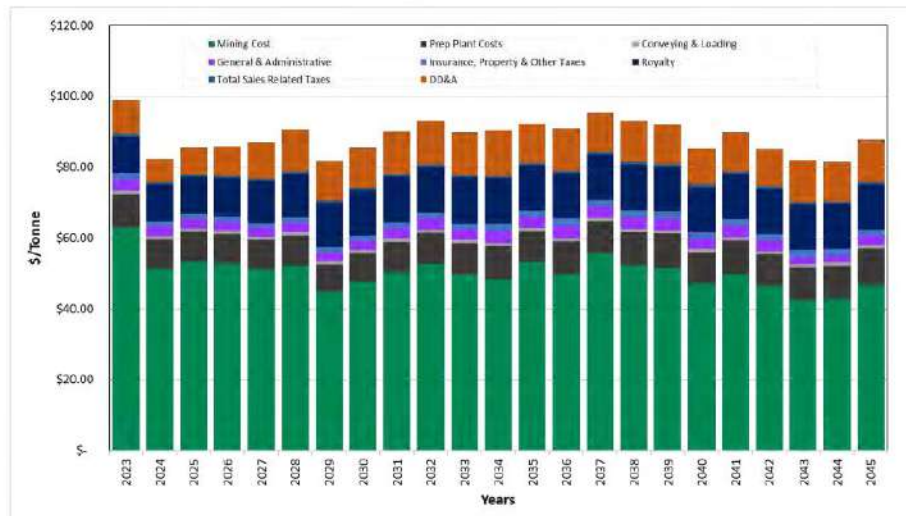
Multipliers	
Labor	3.0%
Benefits	3.0%
Fuel & Lube	100.0%
Parts	14.5%
Surface Contractors	17.5%
Capital	16.0%

Operating costs factors were also developed for the coal preparation plant processing, refuse handling, and coal loading. These were also subject to the multipliers in *Table 1-3*.

Property taxes and insurance and bonding were estimated based on history. Appropriate royalty rates were assigned for production from leased coal lands, and sales related taxes were calculated for state severance taxes, the federal black lung excise tax, and federal and state reclamation fees.

A summary of the operating costs for the Property is provided in *Figure 1-3*.

Figure 1-3: OPEX



*The LOM model and associated economic analysis is intended to prove the economic viability of the subject coal tonnage, allowing controlled tons to be classified as "reserve". The development of costs incorporates a combination of Warrior Met's historical performance and MM&A's knowledge of mine productivity and cost structures for comparable operations.

1.10 Economic Evaluation

The pre-feasibility financial model prepared for this TRS was developed to test the economic viability of the coal resource area. The results of this financial model are not intended to represent a bankable feasibility study, required for financing of any current or future mining operations contemplated for the Warrior Met property, but are intended to establish the economic viability of the estimated coal reserves. Economic models include non-controlled tons which are expected to be acquired by Warrior Met. Cash flows are simulated on an annual basis based on projected production from the coal reserves. The discounted cash flow analysis presented herein is based on an effective date of January 1, 2023.

On an un-levered basis, the NPV of the real cash flow after taxes represents the Enterprise Value of the Property. The cash flow, excluding debt service, is calculated by subtracting direct and indirect operating expenses and capital expenditures from revenue. Direct costs include labor, operating supplies, maintenance and repairs, facilities costs for materials handling, coal preparation, refuse disposal, coal loading, reclamation and general and administrative costs. Indirect costs include statutory and legally agreed upon fees related to direct extraction of the mineral. The indirect costs are the Federal black lung tax, Federal and State reclamation taxes, property taxes, coal production royalties, and income taxes.

Table 1-4 shows LOM tonnage, P&L, and EBITDA for Mine No. 4.

Table 1-4: Life-of-Mine Tonnage, P&L before Tax, and EBITDA

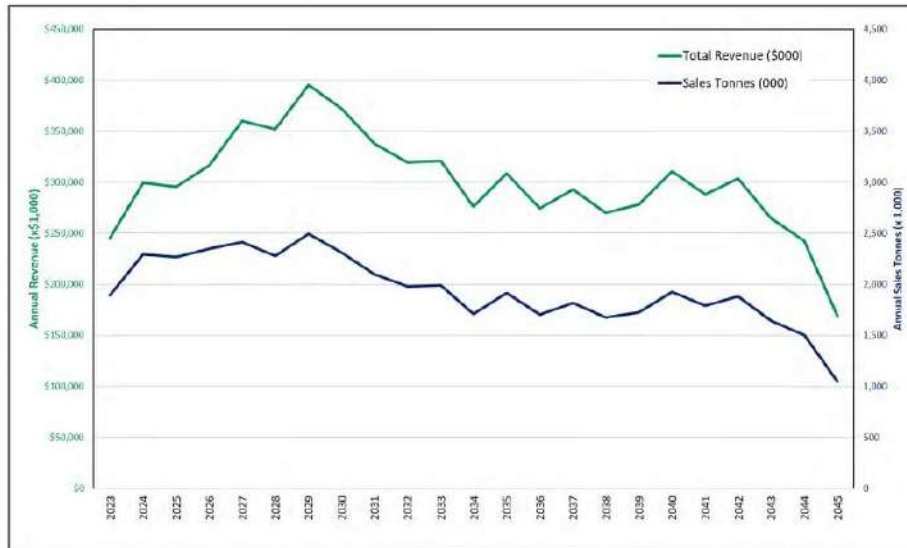
Mine #4	Tonnes (000)	Pre-Tax P&L (\$000)	P&L per Tonne	EBITDA (\$000)	EBITDA per Tonne
	44,700	\$2,936,114	\$65.69	\$3,416,521	\$76.44

Note 1: The LOM model includes a small portion of tonnage contained within adverse tracts which are not included in reserve estimates.
 Note 2: The LOM model and associated economic analysis is intended to prove the economic viability of the subject coal tonnage, allowing controlled tons to be classified as "reserve". The exercise should not be construed to represent a valuation of Warrior Met's holdings. Long-term cash flows incorporate forward-looking market projections which are expected to vary over time based upon historic volatility of coal markets. The development of costs incorporates a combination of Warrior Met's historical performance and MM&A's knowledge of mine productivity and cost structures for comparable operations.

As shown in Table 1-4, Mine No. 4 shows positive EBITDA over the LOM. Overall, the Warrior Met consolidated operation shows positive LOM P&L and EBITDA of \$2.9 billion and \$3.4 billion, respectively.

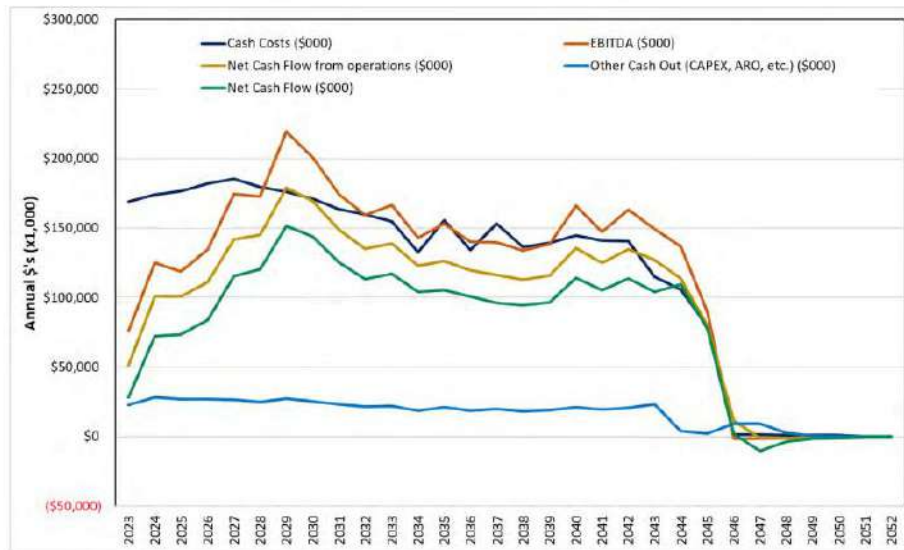
Warrior Met's Mine No. 4 annual production and revenue are shown in Figure 1-4 and the Mine's after-tax cash flow summary in constant dollars, excluding debt service, is shown in Figure 1-5 below.

Figure 1-4: Mine 4 Production and Revenue



Note 1: The LOM model includes a small portion of tonnage contained within adverse tracts which are not included in reserve estimates.
 Note 2: The LOM model and associated economic analysis is intended to prove the economic viability of the subject coal tonnage, allowing controlled tons to be classified as "reserve". The exercise should not be construed to represent a valuation of Warrior Met's holdings. Long-term cash flows incorporate forward-looking market projections which are expected to vary over time based upon historic volatility of coal markets. The development of costs incorporates a combination of Warrior Met's historical performance and MM&A's knowledge of mine productivity and cost structures for comparable operations.

Figure 1-5: After-tax Cash Flow Summary (000)



Note 1: The LOM model includes a small portion of tonnage contained within adverse tracts which are not included in reserve estimates.

Note 2: The LOM model and associated economic analysis is intended to prove the economic viability of the subject coal tonnage, allowing controlled tons to be classified as "reserve". The exercise should not be construed to represent a valuation of Warrior Met's holdings. Long-term cash flows incorporate forward-looking market projections which are expected to vary over time based upon historic volatility of coal markets. The development of costs incorporates a combination of Warrior Met's historical performance and MMSA's knowledge of mine productivity and cost structures for comparable operations.

Consolidated cash flows are driven by annual sales tonnage, which average approximately 2.0 million tonnes per year until dropping in 2045, the final year. Projected consolidated revenue averages just over \$306 million per year, excluding the final year. Revenue totals \$6.9 billion for the property's life.

Consolidated cash flow from the operation is positive throughout the projected operating period, with the exception of post-production years, due to end-of-mine reclamation spending. Consolidated cash flow from the operation totals \$2.86 billion over the mine life. Capital expenditures total \$468 million over the property's life.

1.10.1 Cash Flow Analysis

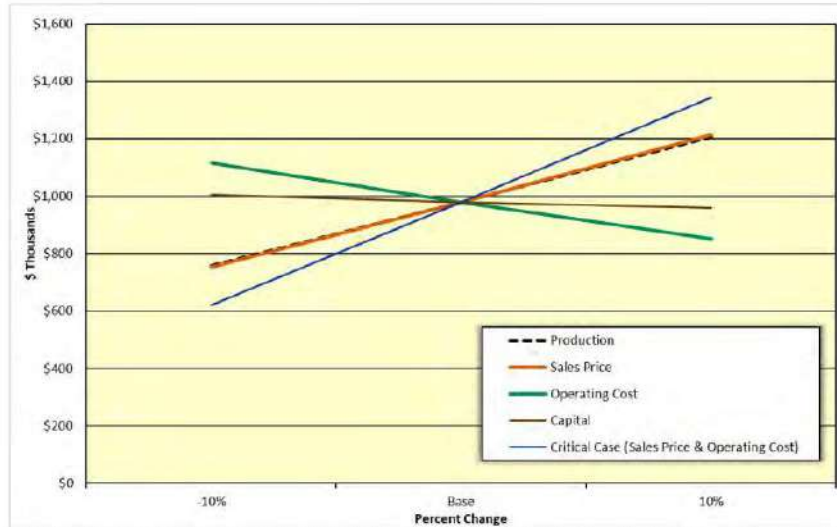
Cash flow after tax, but before debt service, generated over the life of the property was discounted to NPV at a 9% discount rate, which represents Warrior's typical WACC. On an un-levered basis, the NPV of the property cash flows represents the Enterprise Value of the property and amounts to \$979 million. The pre-feasibility financial model prepared for the TRS was developed to test the economic viability of each coal resource area. The NPV estimate was made for the purpose of confirming the economics for classification of coal reserves and not for purposes of valuing Warrior Met or its Mine No. 4 assets. The

mine plan was not optimized, and actual results of the operation may be different, but in all cases, the mine production plan assumes the property is under competent management.

1.10.2 Sensitivity Analysis

Sensitivity of the NPV results to changes in the key drivers is presented in *Figure 1-6*. The sensitivity study shows the NPV at the 9% discount rate when Base Case sales prices, operating costs, production, plant yield and capital costs are increased and decreased +/- 10%. A critical case combining Sales price and operating cost was also done reflecting the combined effect of plus 10% operating cost with -10% sales price to -10% operating cost and +10% sales price.

Figure 1-6: Sensitivity of NPV



Note: The LOM model and associated economic analysis is intended to prove the economic viability of the subject coal tonnage, allowing controlled tons to be classified as "reserve". The exercise should not be construed to represent a valuation of Warrior Met's holdings.

1.11 Permitting

Warrior Met has obtained all mining and discharge permits to operate its mine and processing, loadout, or related support facilities. MM&A is unaware of any obvious or current Warrior Met permitting issues that are expected to prevent the issuance of future permits. Future permits will be required to secure additional fine and coarse refuse capacities. Mine No. 4, along with all coal producers, is subject to a level of uncertainty regarding future clean water permits due to **United States Environmental Protection Agency (EPA)** involvement with state programs.



1.12 Conclusion and Recommendations

Sufficient data has been obtained through various exploration and sampling programs and mining operations to support the geological interpretations of seam structure and thickness for coal horizons situated on the Mine No. 4 property. The data are of sufficient quantity and reliability to reasonably support the coal resource and coal reserve estimates in this TRS.

The geological data and preliminary feasibility study, which consider the mining plan, revenue, and operating and capital cost estimates are sufficient to support the classification of coal reserves provided herein.

This geologic evaluation conducted in conjunction with the preliminary feasibility study concludes that the 39.2 Mt of marketable underground coal reserves identified on the Property are economically mineable under reasonable expectations of future market prices for metallurgical coal products, estimated operation costs, and capital expenditures.

2 Introduction

2.1 Registrant and Terms of Reference

This report was prepared for the sole use of **Warrior Met Coal, Inc.** and its affiliated and subsidiary companies and advisors. The report provides a statement of coal resources and coal reserves for Warrior Met, as defined under the **United States Securities and Exchange Commission (SEC)** standards.

The report provides a statement of coal reserves for Warrior Met. Exploration results and resource calculations were used as the basis for the mine planning and the preliminary feasibility study completed to determine the extent and viability of the reserve.

Coal resources and coal reserves are herein reported in metric units of measurement and are rounded to millions of metric tonnes (*Mt*).

2.2 Information Sources

The technical report is based on information provided by Warrior Met and reviewed by MM&A's professionals, including geologists, mining engineers, civil engineers, and environmental scientists. MM&A's professionals hold professional registrations and memberships which qualify them as Qualified Persons in accordance with SEC guidelines. Sources of data and information are listed below in *Table 2-1*:



Table 2-1: Information Provided to MM&A by Warrior Met

Category	Information Provided by Warrior Met	Report Section
Geological	Geologic data including digital databases and original source data including geologist logs, driller's logs, geophysical logs.	9.1
Coal Quality	Database of coal quality information supplemented with original source laboratory sheets where available.	10.1
Mining	Historical productivities and manpower projections.	13
Coal Preparation	Flow Sheet descriptions information related to coal processing.	14
Costs	Historical and budgetary operating cost information used to derive cost drivers for reserve financial modeling	18

Note: While the sources of data listed in Table 2-1 are not exhaustive, they represent a significant portion of information which supports this TRS. MM&A reviewed the provided data and found it to be reasonable prior to incorporating it into the TRS. The TRS contains "forward-looking information" including forecasts of productivity and annual coal production, operating and capital cost estimates, coals sales price forecasts, the assumption that Warrior Met will continue to acquire necessary permits, and other assumptions. The TRS statements and conclusions are not a guarantee of future performance and undue reliance should not be placed on them. The ability of Warrior Met to recover the estimated coal reserves is dependent on multiple factors beyond the control of MM&A including, but not limited to geologic factors, mining conditions, regulatory approvals, and changes in regulations. In all cases, the plans assume the Property is under competent management.

Warrior Met engaged MM&A to conduct a coal reserve evaluation of the Mine No. 4 coal property as of December 31, 2022. For the evaluation, the following tasks were to be completed:

- > Process the information supporting the estimation of coal resources and reserves into geological models;
- > Develop life-of-reserve mine (LOM) plans and financial model;
- > Hold discussions with Warrior Met company management; and
- > Prepare and issue a Technical Report Summary providing a statement of coal reserves which would include:
 - A description of the mines and facilities.
 - A description of the evaluation process.
 - An estimation of coal resources and reserves with compliance elements as stated under the new SEC Guidelines which became effective for the first fiscal year that commenced on or after January 1, 2022.

2.3 Personal Inspections

MM&A is well acquainted with the Mine No. 4 property, having provided a variety of services in recent years. Qualified Persons involved in this TRS have conducted multiple site visits since Warrior's acquisition of the Walter assets.

2.4 Updates to Previous TRS

This TRS reflects an update to a TRS, published in early 2022 to reflect resources and reserves as of December 31, 2021. Material revisions reflected in this TRS include:



1. Pre-feasibility level financial model updates to reflect inflationary driven cost (operating and capital) increases;
2. Updated market analysis; and
3. Incorporation of exploration drilling information and mine channel samples obtained in calendar year 2022 and subsequent updates to geological models.

3 Property Description

3.1 Location

The Property is located in Tuscaloosa County in central Alabama, approximately 20 miles east of the city of Tuscaloosa and 30 miles southwest of the city of Birmingham in the southern region of the US. *Figure 1-1* displays the Property's location.

Adjoined on the east by Mine No. 7, Mine No. 4 reserve areas are located in two principal areas in relation to the Black Warrior River, which serves as a surface boundary between them:

- > East Reserves are located east of the Black Warrior River, where mining is nearing completion.
- > North Reserves are located west of the Black Warrior River, where underground access from the East has been driven beneath the river. A new portal site has been developed west of the Black Warrior River to support mining of remaining reserves through exhaustion.

3.2 Titles, Claims or Leases

MM&A has not carried out a separate title verification for the coal property and has not verified leases, deeds, surveys or other property control instruments pertinent to the subject resources. Warrior Met has represented to MM&A that it controls the mining rights to the reserves as shown on its property maps, and MM&A has accepted these as being a true and accurate depiction of the mineral rights controlled by Warrior Met.

3.3 Mineral Rights

Warrior Met, through its acquisition of the Walter's assets in 2016, acquired mineral rights for the Mine No. 4 property. At the time of purchase, this acquisition also notably included Mine No. 7 and BC Properties. Currently, Warrior Met has mineral rights on approximately 7,200 acres associated with the remaining resource and controls the surface rights where facilities are located. Life-of-mine plans reported herein require the acquisition of approximately 1,000 acres of additional mineral control.

It is of important note that tracts categorized as "owned" represent those in which Warrior Met owns a percentage of tract's mineral rights. In addition to Warrior Met, other parties and entities own various



portions of the “owned” tracts mineral rights. Additionally, the “leased” category includes those tracts in which Warrior Met leases a percentage of the tract’s mineral rights.

By assignment, as part of the Study, MM&A has not completed a review of the major leases. Due to confidentiality, only general facts related to the major leases are noted.

The majority of the coal leases have an identical initial term of 20 years from the date of execution with an additional 20-year lease term extension. A portion of the coal leases have 10-year term extensions. Certain leases have performance terms related to mining execution.

The leases can be extended so long as mining operations are being conducted on the leased premises. The leases are then held by a series of earned production royalty payments. The annual minimum royalty is reduced by the amount of earned production royalty paid on mined coal. All annual minimum royalty payments are recoupable against any earned royalty due under the coal leases on a lease-by-lease basis. The royalty rates for Mine No. 4 are estimated to be 8.0% of the sales revenue FOB the mine after deduction of all transportation and loading costs between the mine and the vessel. By assignment, MM&A has not independently verified property boundaries specific to each lease; however, MM&A has reviewed Warrior Met-supplied boundary mapping.

3.4 Encumbrances

No Title Encumbrances are known. By assignment, MM&A did not complete a query related to Title Encumbrances.

3.5 Other Risks

There is always risk involved in property control. Warrior Met has had their legal teams examine the deeds and title control in order to minimize the risk. Historically, property control has not posed any challenges related to Mine No. 4’s operations. A significant portion of uncontrolled tracts which must be obtained by Warrior Met in order to execute the mine plan presented herein are owned by the Federal Government’s **Bureau of Land Management (BLM)**. Regionally, operators (including Warrior Met’s predecessors) have experienced a successful track record of obtaining mining rights to BLM properties. Warrior actively pursues uncontrolled properties critical for short and long term mine planning.



4 Accessibility, Climate, Local Resources, Infrastructure and Physiography

4.1 Topography, Elevation, and Vegetation

The Property is located in the physiographic region of central Alabama within the Black Warrior Basin (BWB) region of the US. The area is rugged upland of moderate topography with more than 200 feet of relief adjacent to major streams.

The property east of the Black Warrior River is dissected by streams that flow to the west and eventually to the Black Warrior River. Two major drainage basins lie east of the Black Warrior River and consist of Davis Creek and its tributaries towards the northern boundary and Pegues Creek and its tributaries towards the southern boundary.

The property west of the Black Warrior River is dissected by Blue Creek and its tributaries which flow to the east and eventually to The Black Warrior River.

The upland topographic features are controlled by lithology, with large flat surfaces formed by underlying sandstone with steeper slopes formed by weathered shale and siltstones. Maximum relief within the Property is approximately 525 feet with elevation ranging from 185 feet above mean sea level (MSL) along banks of the Black Warrior River to 710 feet along the top of the flat ridges.

4.2 Access and Transport

General access to the Property complex is very good via State Route 59 (Lock 17 Road). Lock 17 Road is a well maintained, paved, two-lane road with Interstate access in close proximity to the south. Interstates 59 and 20 are approximately 12 miles to the south with Tuscaloosa about 15 miles to the west and Birmingham about 40 miles to the east.

Access to the preparation and coal handling facilities, as well as the supply yard at the mine slope is directly off of Lock 17 Road, which runs south to north through the Property. The deep mine's portal and shaft facilities lie along an unimproved road approximately one-half mile off of Lock 17 Road. All of the facilities are in close proximity to high quality, public roads and lie within 2 miles of each other. A multitude of coalbed methane (CBM) and gas well roads bisect the Property providing exceptional surface access to areas overlying the mineral boundaries.

Rail transport for the mine sites utilizes a rail line that is located on the east side of the Property southwest of the intersection of Lock 17 Road and Davis Road. River transport is available approximately 4 miles to the west of the plant facilities on the Black Warrior River.

Coal is being shipped into the seaborne metallurgical markets. As part of a commercial real estate transaction with Alabama State Port Authority in 2014, Warrior Met secured expansion capacity of the McDuffie Terminal to accommodate planned production.



4.3 Proximity to Population Centers

The Property lies in close proximity to two large population centers. The city of Tuscaloosa lies approximately 20 miles west and Birmingham lies about 30 miles northeast of the mine sites. The Tuscaloosa and Birmingham metropolitan areas have populations of approximately 235 thousand and 1.1 million respectively (as of 2022). Both areas have large industrial and manufacturing bases with employers such as Honda, Michelin and Mercedes-Benz having production facilities in the area. The city of Birmingham is home to the Birmingham-Shuttlesworth International Airport which handles close to 3-million passengers annually.

4.4 Climate and Length of Operating Season

The typical climate in this portion of Alabama is rather humid but temperate. The average annual temperature is 66 degrees Fahrenheit. The climate is hot during the summer when temperatures are typically in the 90-degree Fahrenheit range and cool during the winter when temperatures are typically in the upper 40-degree Fahrenheit range. The warmest month is generally July, and the coldest month is generally January. Alabama receives on average 56 inches of rainfall per year. The area is somewhat prone to severe thunderstorms resulting in occasional tornado activity and the inland effects of seasonal hurricanes. Seasonal variations in climate typically do not affect underground mining in the area, however, weather events could potentially impact the efficiency of surface and preparation plant operations on a very limited basis.

4.5 Infrastructure

Infrastructure in the area surrounding the Property is very diverse, well established and robust due to the large populations and current industrial activity in the surrounding metropolitan areas of Birmingham and Tuscaloosa. All of the primary infrastructure that the mine needs to operate (power, water, transportation/roads) is available with reasonable access requirements.

Below is a list of the regional infrastructure near the Mine No. 4 operation:

Electrical Power	The immediate area contains numerous coal-fired power plants producing base-load electricity. Major transmission and distribution lines are located within the area of interest. Alabama Power is the local utility which provides electricity for the Property.
Water and Sewer	Water is sourced from local municipalities and various freshwater pumps.
Roads	The area is serviced by an extensive network of well-maintained, federal, state and county highways in close proximity to the mine site.



Railroads	A major commercial railroad is located along the edge of the area. Contractual requirements dictate that the railroad is utilized to transport a significant portion of saleable production.
Barge	A barge facility on the Black Warrior River is also utilized to transport coal to port facilities for seaborne export shipments.
Airports	Birmingham-Shuttlesworth International Airport is located approximately 30 miles to the east.
Mining Service Providers, Equipment Manufacturers and Supply Companies	The Property is well serviced by major mining equipment manufacturers, rebuild facilities, and mine supply vendors. Specialized mining service providers including slope, shaft, and preparation plant construction companies are located in the immediate area.
Hospitals – Ambulance, Med Flights	There are numerous fully functioning hospitals (including major trauma centers) within a 50-mile radius of the area. The area is serviced by a network of public and private ambulance and helicopter medical flight providers.
Emergency Services – Fire, Police	There are numerous fire departments and emergency medical service (EMS) providers within a 50-mile radius of the mine sites. The area is well serviced by a large network of federal, state and local law enforcement agencies with central dispatch and communications systems, including emergency 911 services.
Schools	The region has a well-developed public education network consisting of federal, state and local government-backed schools as well as privately funded schools. These include elementary, middle, and high schools, as well as technical and vocational schools.
College/University	The region contains numerous colleges and universities as well as well-established mining universities and training centers. Namely, the University of Alabama is located in the city of Tuscaloosa and offers scientific and engineering degrees.

5 History

5.1 Previous Operation

Mine No. 4 was opened by Walter in 1974. Following the bankruptcy of Walter in 2015, Warrior Met acquired the assets of Walter in 2016.



5.2 Previous Exploration

The Property has been extensively explored as early as 1916 and as recently as 2022 by subsurface drilling efforts carried out by numerous entities, the majority of which were completed prior to acquisition by Warrior Met including: **Tennessee Coal, Iron & Railroad Company; U.S. Steel; The Pittsburgh & Midway (P&M) Coal Mining Company/Chevron;** and Walter. The majority of the drilling was accomplished by means of conventional core hole exploration and air rotary drilling with geophysical logging for CBM wells.

6 Geological Setting, Mineralization and Deposit

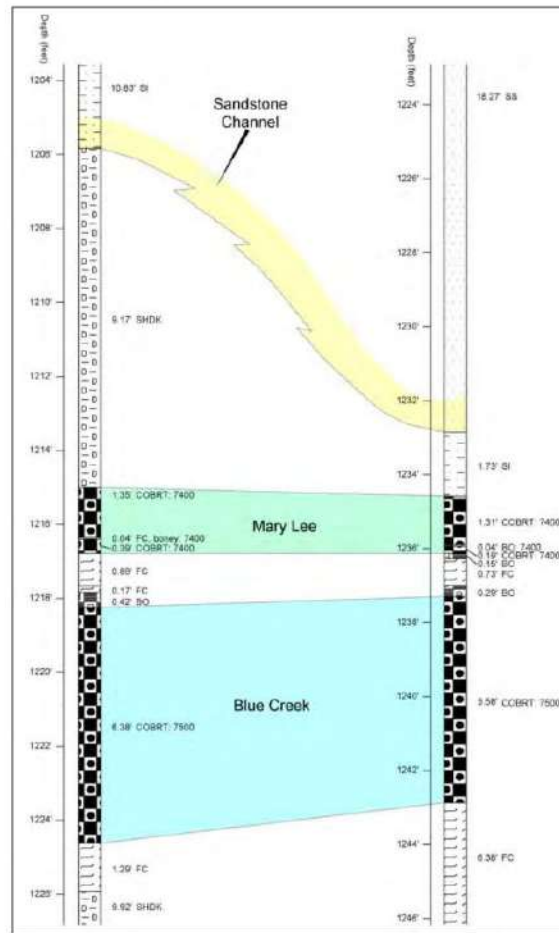
6.1 Regional, Local and Property Geology

The Black Warrior coal basin (*BWB*), which encompasses the subject Property, is a foreland basin covering approximately 23,000 square miles (59,570 square kilometers) of northwestern and central Alabama. The basin extends approximately 230 miles from west to east and 188 miles from north to south. The *BWB* lies within the Cumberland Plateau portion of the Appalachian Highlands and contains Pennsylvanian System (300 million years) sedimentary coal-bearing strata of the Upper Pottsville Formation. Metallurgical coal deposits in northern Alabama are divided into three coal fields; the Black Warrior, the Cahaba, and the Coosa, of which the Black Warrior is the largest in both size and productivity.

Of the coal groups within the *BWB*, historically the most dominant is the Mary Lee group (see *Figure 6-1*). This sequence is “tagged” or identified with a 4-digit numeric system that typically includes the following strata (in descending stratigraphic order):

- > 7200 / 7300 – New Castle (typically present as Upper and Lower benches), 30 to 50 feet above the Mary Lee seam
- > 7400 – Mary Lee seam
- > 7450 – Middleman (rock parting)
- > 7480 – Rider seam (not always present) – included as part of the Middleman
- > 7490 – Parting between the Rider and Blue Creek seams (not always present) – included as part of the Middleman
- > 7500 – Blue Creek seam
- > 7600 – Jagger seam, where present, typically a few feet to tens of feet below the Blue Creek; however, may locally become part of the mineable section with the overlying Blue Creek seam.

Figure 6-1: Geologic Column of the Mary Lee – Blue Creek Sequence



The BWB is bound by the Alabama Valley and Ridge, Highland Rim, and East Gulf Coastal Plain physiographic provinces. The southwestern and southeastern margins of the basin are terminated by frontal thrust faulting of the Ouachita and Appalachian orogeny. The basin has regionally southwestward dipping strata that are overlain by Cretaceous and Tertiary age deposits.

The major structural feature within the basin is the Sequatchie anticline, which trends northeast to southwest between the Arkadelphia and Coalburg synclines. Structurally, coal horizons are typically



characterized as gently dipping to the southwest and contain minor folds. However, the regional trend has locally been significantly modified by the presence of a prominent structural feature referred to as the Wiley Dome (with relief of several hundreds of feet), which is present to the northwest of the Mine No. 4 reserves, and adjacent to the BC property.

Faulting is widespread across the basin with high-angle, scissor-type normal faults and fault grabens common, which are typically (but not exclusively) oriented in a southeast to northwest alignment. Vertical displacement typically varies from only a few feet to as much as 350 feet. Exploration programs by Warrior Met attempt to pinpoint exact fault locations and displacements prior to mineral extraction in a given mining district. At times, non-detected faults have deemed panels unmineable. Such instances are rare, and Warrior Met mitigates such risks by maintaining favorable longwall panel float times.

6.2 Mineralization

Regional coal rank in the BWB generally ranges from a low-volatile coal in the southeastern portion of the basin to a high-volatile coal to the northwest. Due to the value of the Mary Lee and Blue Creek seams in the metallurgical coking coal market at the Mine No. 4 operation (and adjoining mines) to the south and east of the Property, the subject coal seams have been extensively mined in the region. Laboratory data for the Property on a dry, clean coal basis indicates an average volatile matter (VM) content of approximately 31% in the northwestern area; whereas, the eastern portion of the Property has a VM content of approximately 27%.

6.3 Coal Rank

6.3.1 ASTM Method for Defining Coal Rank

The principal parameters examined in the ASTM method for the determination of rank include (but are not limited to) the following: Fixed Carbon (FC), Volatile Matter (VM), Ash, Sulfur, and Calorific content (typically in Btu/lb.), as well as Moisture content. (It should be noted that sulfur trioxide (SO₃) in coal ash, if analyzed, can also be factored in; however, this data is typically unavailable.

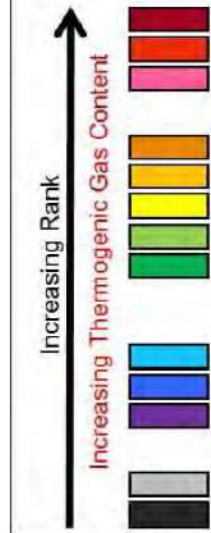
As shown below, results of regional trends indicate that coals ranging from Low volatile to High volatile Bituminous coal rank are found in the region, according to ASTM criteria:

- > **Low Volatile Bituminous**, or LV_{ASTM} (VM greater than or equal to 14% and less than 22% on a *dry*-mineral-matter-free basis, or *DMMF*)
- > **Medium Volatile Bituminous**, or MV_{ASTM} (VM greater than or equal to 22% and less than 31% on a *dry*-mineral-matter-free basis, or *DMMF*)
- > **High Volatile A Bituminous**, or HVA_{ASTM} (VM greater than 31% on a *dry*-mineral-matter-free basis, or *DMMF*, and calorific content greater than or equal to 14,000 Btu/lb. on a *moist*-mineral-matter-free basis)

- > **High Volatile B Bituminous**, or HVB_{ASTM} (greater than or equal to 13,000 and less than 14,000 Btu/lb.)

Furthermore, utilizing ASTM criteria, coal rank for the coals sampled on the Property range from Medium Volatile to High Volatile bituminous.

Figure 6-2: Classification of Coals by Rank (as per ASTM Standard D 388)

Class/Group	Fixed Carbon Limits (DMMF) %		Volatile Matter Limits (DMMF) %		Gross Calorific Value Limits (Moist ^o MMF) Btu/lb	
	= or >	Less Than	= or >	Less Than	= or >	Less Than
						
I. Anthracitic						
Meta-anthracite	98	...	...	...	2	...
Anthracite	92	98	2	8	...	...
Semianthracite ^o	86	92	8	14	...	...
II. Bituminous						
Low volatile	78	86	14	22	...	...
Medium volatile	69	78	22	31	...	...
High volatile A	...	69	31	...	14,000	...
High volatile B	...	...	...	...	13,000	14,000
High volatile C	...	...	...	...	11,500	13,000
...	...	...	...	...	10,500	11,500
III. Subbituminous						
Subbituminous A	...	...	...	...	10,500	11,500
Subbituminous B	...	...	...	...	9,500	10,500
Subbituminous C	...	...	...	...	8,300	9,500
IV. Lignitic						
Lignite A	...	...	...	...	8,300 ^o	8,300
Lignite B	...	...	...	...	...	6,300

6.3.2 Coal Quality Parameters Associated with Market-based Coal Rank

It is important to note that market-based parameters are significantly different from definitions defined by ASTM for coal rank. ASTM rank is *not* defined by favorability in the marketplace. Coal quality parameters analyzed to define the market-based coal rank typically include, but are not limited to:

- > Volatile Matter% (dry basis)
- > Ash% (dry basis)
- > Sulfur% (dry basis)
- > Fluidity (ddpm)
- > Vitrinoid Reflectance%



> Moisture%

Moreover, ASTM rank should *not* vary with time. However, as market conditions and requirements change, the levels (of ash, sulfur, etc.) considered to be “favorable”, “fair”, or “unfavorable” *will* vary over time. Furthermore, many coals will meet the requirements for one parameter (ash, sulfur, fluidity, etc.), fall short on another, and exceed the guideline on other parameters. It then becomes a matter of judgement as to where the coal should be placed. Ultimately, various coke makers will value a particular coal differently, depending on the quality of the other coals in their blend and the coke specifications they have to meet. Determination of the market rank of the Property coals is beyond the scope of this investigation.

6.3.2.1 Warrior Met Market Placement

Warrior Met reports that current market placement at Mine No. 4 is generally an average of the Premium Low-Volatile Indices (PLV) and the Mid-Volatile Indices (MV), this average will be referenced as Premium Low–Mid-Vol Average (PLMV). Mine projections suggest that Warrior Met will continue to produce coal in the current “East” district for less than one year before transitioning to the western reserve areas. .

As development activities continue to transition to the “North” district and the longwall mines out the “East” district, coal produced from Mine No. 4 will likely incur an increase in volatile matter. Based on regional trends and laboratory data, volatile matter contents for the subject coals in the western area will gradually edge upward. Although the potential exists for pricing to change as the volatiles vary in future areas as they are developed, MM&A, with support from Warrior Met, has used the PLMV as a basis for pricing.

6.4 Deposits

Sediments of the Upper Pottsville Mary Lee coal zone are Lower Pennsylvanian in age and comprised of cyclic sequences that include sandstone, siltstone, shale, and coal. Located within the middle of the Black Warrior Basin stratigraphic sequence, the Mary Lee and Blue Creek horizon is situated below drainage throughout the Property and is accessed by shafts.

The lithologic variability of the Mary Lee – Blue Creek sequence and enclosing strata is illustrated on *Figure 6-3*, as discussed below:

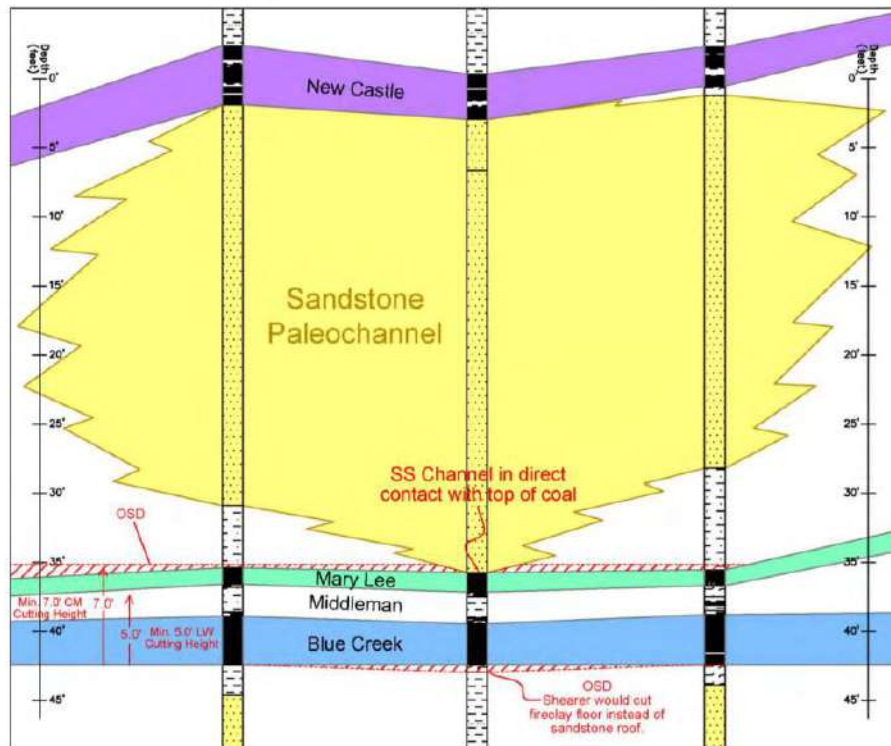
- > The New Castle seam is present approximately 20 to 50 feet above the Mary Lee seam.
- > Lithologic composition of the roof strata varies throughout the Property but consists primarily of a coarsening-upward sequence of shale or sandy shale, with occasional sandstone channels located within the immediate or main roof of the Mary Lee seam.
- > In areas where sandstone occupies the immediate roof of the Mary Lee seam, seam scouring may locally occur. Where sandstone channels are present within 4 to 6 feet above the Mary Lee (roof



bolt horizon), there is potential for increased drawrock conditions and roof instability beneath the sandstone/shale contact.

- > Areas where the combined thickness of the Mary Lee – Blue Creek horizon is less than a minimum continuous miner cutting height (7.0 feet) are shown, which as a result, roof (and/or floor) strata are expected to be excavated as out-of-seam dilution (*OSD*).
- > Thickness and composition (shale, carbonaceous shale, fireclay, and sandy shale) of the stratum comprising the Middleman is variable.
- > Areas where the thickness of the Blue Creek horizon is less than a minimum longwall cutting height (5.0 feet) are rare; only along the northern edge of the North area.
- > Compositional variability and thickness of the floor strata of the Blue Creek seam in a fining-upward sequence varying from: very soft, thick fireclay within the immediate floor, to sandy fireclay, shale, sandy shale, and finally sandstone within the first three feet below the seam. Fireclay varies in thickness, from less than a foot to more than 10 feet. Due to inherently high clay content, this stratum is typically moisture-sensitive and may degrade when exposed to water accumulation on the mine floor.

Figure 6-3: Mine No. 4 Stratigraphic Relationships



6.4.1 Mineable Seam Thickness Configurations

The mineable seam configuration of Mine No. 4 consists of the Mary Lee, Middleman, and Blue Creek seams, also referred to as “twin seam” mining, with the following thickness ranges.

- > The Mary Lee averages approximately 1.3-feet throughout the mine plan area. *Detailed seam mapping exhibits are retained in MM&A’s files but are not included with this report.*
- > Between the two seams, the “Middleman” parting averages around 1.6-feet; the parting generally thickens to the southeast.
- > The Blue Creek seam, which typically represents the better metallurgical quality than the overlying Mary Lee seam, typically averages around 3.5-feet (*Detailed seam mapping exhibits are retained in MM&A’s files but are not included with this report.*)



- > The combined thickness of the Mary Lee through Blue Creek interval ranges from 5.0 to 10.0 feet, averaging approximately 6-feet (*Detailed seam mapping exhibits are retained in MM&A's files but are not included with this report*) across the mine plan area.

As noted from prior studies on the Property, the Blue Creek seam is subject to somewhat more erratic thickness variation than the overlying Mary Lee seam. Reasons for this are not entirely clear, but may be the result of channel incision, differential compaction, presence of contemporaneous ("growth") faults, or other paleographic factors present during or subsequent to deposition of the Blue Creek paleoswamp.

7 Exploration

7.1 Nature and Extent of Exploration

Exploration information has largely been collected, analyzed, and summarized by personnel from previous owners of the Property, Warrior Met, and their consultants. Vertical drilling has been the main method of collecting exploration information along with in-seam samples since the seam does not outcrop within or near the Property. Spacing and quantity of exploratory drill holes is generally sufficient to define the coal resource within the Property.

Initial exploration on the Property was entirely by drilling to collect data for delineation of coal and CBM resources. As a general practice, continuous core hole exploration is visually logged by a driller or professional geologist, whereas CBM holes are geophysically logged. Geophysical information from CBM wells was obtained from the **Geological Survey of Alabama Oil and Gas Board (GSA)** which were interpreted by Warrior Met's predecessor to define seam thickness and elevation.

7.1.1 Summary of Exploration Data

MM&A was provided with the core hole records (with 12 additional core holes drilled in 2022), or summary information from geophysical logs, as summarized below. Summaries of data related to these holes were initially provided to MM&A in the form of Microsoft® Excel spreadsheets:

- > Total number of holes: 375 drill holes utilized for mapping purposes
- > Total footage: 708,000 feet
- > Hole depths: ranging from 1,148 feet to 2,469 feet, averaging 1,888 feet.
- > Depth to top of Mary Lee seam: ranging from 1,140 feet to 1,900 feet, averaging 1,590 feet
- > An additional group of drilling records was identified and categorized as "not honored" for various reasons, and as such were ignored for mapping purposes:
 - possessing poor or suspect core recovery; or



- thickness impacted by the influence of tectonic faulting; or
- seam thickness information was interpreted from older vintage and/or lower resolution geophysical logs.

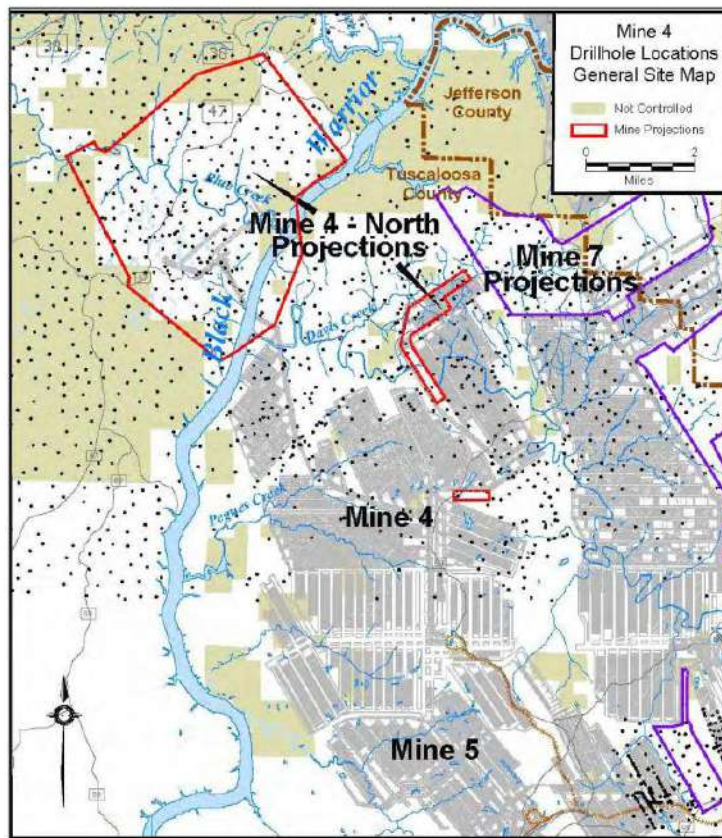
Much of the coal quality information provided to MM&A consisted of previously summarized data in the form of Microsoft® Excel spreadsheets in an Adobe® PDF (PDF) format. Where available, scanned copies of coal quality sheets and summary reports were also provided. The most recent drill hole quality data from the 2022 exploration program was derived from activity in the northern portions of the reserve area.

Extensive exploration in the form of subsurface drilling has been carried out on the Property by numerous entities, most of whose efforts were completed prior to acquisition by Warrior Met. Diamond core, rotary, and CBM drilling are the three primary types of exploration on the Property. Data for correlation and mining conditions are derived from core descriptions and geophysical logging (e-logging). The location of the drilling is shown on the maps included within this report.

The concentration of exploration varies across the Property, with the future underground mining areas having acceptable drill hole distributions for resource and reserve modeling. Drilling on the Property is typically sufficient for delineation of potential underground mineable benches. Mapping of future mining conditions is derived from data compiled from a variety of past and present exploration programs, but projections and assumptions can be made within a reasonable degree of certainty.

Due to the long history of exploration by various parties on the Property, a wide variety of survey techniques exist for documentation of data point locations. Many of the older exploration drill holes appear to have been located by survey. However, some holes appear to have been approximately located using USGS topography maps or other methods which are less accurate. *Figure 7-1* displays the location of drillholes for the property.

Figure 7-1: Drill Hole Location Map



7.2 Non-Drilling Procedures and Parameters

Some analyses, such as rheological and petrographic properties, and sulfur types, are not as prevalent as others in the testing done on samples recovered by drilling. To supplement the information database, samples have been collected from mine stockpiles and either truck or train shipment samples. Additionally, Warrior Met conducts regular channel sampling in its active underground works as a means of predicting coal quality and tonnages. Channel samples are generally obtained in headgate and tailgate development sections prior to longwall mining.



7.3 Drilling Procedures

Core drilling methods utilize NX-size ($2\frac{1}{8}$ inch) or similar-sized core cylinders to recover core samples, which can be used to delineate geologic characteristics, and for coal quality testing and geotechnical logging. In addition to the core holes, rotary drilled holes also exist on most of the Property. Data for the rotary drilled holes are mainly derived from downhole geophysical logs, which are used to interpret coal and rock thickness and depth since logging of the drill cuttings is not reliable. CBM holes are always logged geophysically, and the resulting interpreted data are incorporated into the geological model. Exploratory drilling generally requires drilling to depths from 1,140 to 1,900 feet to penetrate the target coal seams on the Property.

A wide variety of core-logging techniques exist for the Property. For many of the core holes, the primary data source is a generalized lithology description by the driller, which may be supplemented by a more detailed core log completed by a geologist. These drilling logs were provided to MM&A as a geological database. MM&A geologists were not involved in the production of original core logs but did perform a basic check of information within the provided database.

7.4 Hydrology

Mine No. 4 is an active mine and Warrior Met reports that it has experienced minimal hydrologic concerns or material issues. Notably, the operation recently completed development under the Black Warrior River to access its northern reserve areas. Future mining is projected to occur in areas exhibiting similar hydrogeological conditions as past mining including stream undermining, undermining of aquifers and mining through hydraulically fractured (frac'd) coalbed methane wells. Based upon the successful history of the operation with regards to hydrogeological features, MM&A assumes that the operation will not be hindered by such issues in the future.

7.5 Geotechnical Data

The general mining plan for this underground mine was developed by Warrior Met. Section layouts, pillar sizes, and panel dimensions largely mimic what Warrior Met has recently utilized in its active sections. Depths of cover should not significantly change over the life of the operation in comparison to current and historic values. Warrior Met and its predecessor have successfully mined adjacent to and through faults without significant geotechnical issues. MM&A does not anticipate that geotechnical issues will significantly hinder development or longwall mining activity for the mine plan presented in this TRS.



8 Sample Preparation Analyses and Security

8.1 Prior to Sending to the Lab

Most of the coal samples have been obtained from the Property by subsurface exploration using core drilling techniques. The protocol for preparing and testing the samples has varied over time and is not well documented for the older holes drilled on the Property. Typical core-drilling sampling methods for coal in the United States involves drilling through the seam, removing the core from the barrel, describing the lithology, wrapping the sample in a sealed plastic sleeve and placing it lengthwise into a covered core box, and carefully marking hole ID and depth intervals on each box and lid, allowing the core to be delivered to a laboratory in correct stratigraphic order, and with original moisture content. This process has been the norm for both historical and ongoing exploration activities at the Property.

This work is typically performed by the supervising driller, geologist, or company personnel. Samples are most often delivered to the company by the driller after each shift or acquired by company personnel or representatives. Most of the coal core samples were obtained by previous or current operators on the Property. MM&A did not participate in the collection, sampling, and analysis of the core samples. However, it is reasonable to assume, given the consistency of quality from previous operators, that these samples were generally collected and processed under industry best practices. This assumption is based on MM&A's familiarity with the operating companies and the companies used to perform the analyses.

8.2 Lab Procedures

Coal-quality testing has been performed over many years by operating companies using different laboratories and testing regimens. Some of the samples have raw analyses and washabilities on the full seam (with coal and rock parting layers co-mingled) and are mainly useful for characterizing the coal quality for projected production from underground mining. Other samples have coal and rock analyzed separately, the results of which can be manipulated to forecast underground mining quality. Care has been taken to use only those analyses that are representative of the coal quality parameters for the appropriate mining type for each sample.

Standard procedure upon receipt of core samples by the testing laboratory is to: 1) log the depth and thickness of the sample; then 2) perform testing as specified by a representative of the operating company. Each sample is then analyzed in accordance with procedures defined under **American Society for Testing and Materials (ASTM)** standards including, but not limited to washability (ASTM D4371); ash (ASTM D3174); sulfur (ASTM D4239); Btu/lb. (ASTM D5865); volatile matter (ASTM D3175); Free Swell Index (FSI) (ASTM D720). While not confirmed by MM&A, it is assumed that best practices and ASTM (or equivalent standards at the time of testing) were utilized in laboratory quality testing.

9 Data Verification

9.1 Procedures of Qualified Person

MM&A reviewed the Warrior Met supplied digital geologic database. The database consists of data records, which include drill hole information for holes that lie within and adjacent to the Property and records for supplemental underground coal seam thickness measurements. Upon completion of the database verification, copies of each entry were printed on a test case basis, and cross referenced to the original document for verification. Once the initial integrity of the database was established, stratigraphic columnar sections were generated using cross-sectional analysis to establish or confirm coal-seam correlations. Geophysical logs were used wherever available to assist in confirming the seam correlation and to verify proper seam thickness measurements and recovery of coal samples.

After establishing and/or verifying proper seam correlation, seam data-control maps and geological cross-sections were generated and again used to verify seam correlations and data integrity. Once the database was fully vetted, seam thickness, base-of-seam elevation, roof and floor lithology, and overburden maps were independently generated for use in the mine planning process.

9.2 Limitations

As with any exploration program, localized anomalies cannot always be discovered. The greater the density of the samples taken, the less the risk. Once an area is identified as being of interest for inclusion in the mine plan, additional samples are taken to help reduce the risk in those specific areas. In general, provision is made in the mine planning portion of the study to allow for localized anomalies that are typically classed more as a nuisance than a hinderance.

9.3 Opinion of Qualified Person

Sufficient data have been obtained through various exploration and sampling programs and mining operations to support the geological interpretations of seam structure and thickness for coal horizons situated on the Property. The data are of sufficient quantity and reliability to reasonably support the coal resource and coal reserve estimates in this TRS.

10 Mineral Processing and Metallurgical Testing

10.1 Testing Procedures

Separate tabulations have been compiled for basic chemical analyses (both raw and washed quality), petrographic data, rheological data and chlorine, ash, ultimate and sulfur analysis. The latter two data types are not as prevalent and have been supplemented by samples collected from mine stockpiles and either truck- or train-shipment samples.



Available coal-quality data were tabulated by resource area in a Microsoft® EXCEL workbook and the details of that work are maintained on file at the offices of Warrior Met and MM&A. These tables also provide basic statistical analyses of the coal quality data sets, including average value; maximum and minimum values; and the number of samples available to represent each quality parameter of the seam. Coal samples that were deemed by MM&A geologists to be unrepresentative were not used for statistical analysis of coal quality, as documented in the tabulations. A representative group of drill hole samples from the Property were then checked against the original drill laboratory reports to verify accuracy and correctness.

The amount and areal extent of coal sampling for geological data is generally sufficient to represent the quality characteristics of the coal horizons and allow for proper market placement of the subject coal seams. For some of the coal deposits there are considerable laboratory data from core samples that are representative of full extent of the resource area; and for others there are more limited data to represent the resource area. For example, in the active operation with considerable previous mining, there may be limited quality data within some of the remaining resource areas; however, in those cases the core sampling data can be supplemented with operational data from mining and shipped quality samples representative of the resource area.

MM&A extrapolated exploration-based quality information, generally summarized at a 1.50 or 1.55 float gravity, to determine yields which would correspond to a 10.2-ash product (dry basis). MM&A conducted plant simulations based upon Warrior Met's processing plant circuitry to determine yields that would be practically achievable for a 10.2-ash product specification. MM&A utilized its regional knowledge of the Mary Lee and Blue Creek horizons and its processing expertise gained from projects completed for Warrior Met, including typical washability (multiple gravities) and sizing information. Organic efficiencies were considered to account for misplaced coal and reject material. After considering typical processing inefficiencies, in general, the 1.50 float yield data obtained from exploration data roughly corresponds to a 10.2-ash product. In some areas, yields were further reduced from those obtained by 1.50 float averages to produce a 10.2-ash product.

10.2 Relationship of Tests to the Whole

The extensive sampling and testing procedures typically followed in the coal industry result in an excellent correlation between samples and marketable product. As shipped analyses of the coal from the Property were reviewed to verify that the coal quality and characteristics were as expected. The Property has a long history of saleable production within the mid-volatile metallurgical markets, which is expected to change to high-volatile placement as development and longwall mining continue in the North reserve area. Degradation of coking coal characteristics over time is not anticipated to be an issue.



10.3 Lab Information

Currently, samples are analyzed at a company-operated coal-testing laboratory located in Brookwood, Alabama. MM&A assumes that it operates in accordance with procedures defined under ASTM standards including, but not limited to:

- > *ASTM D 4371* – Test Method for Determining Washability Characteristics of Coal
- > *ASTM D 3174* – Method for Ash in the Analysis Sample of Coal and Coke
- > *ASTM D 5865* – Test Method for Gross Calorific Value of Coal and Coke
- > *ASTM D 3175* – Test Method for Volatile Matter in the Analysis Sample of Coal and Coke
- > *ASTM D 720* – Test Method for Free-Swelling Index (*FSI*) of Coal
- > *ASTM D 5515* - Test Method for Determination of the Swelling Properties of Bituminous Coal Using a Dilatometer (Arnu)
- > *ASTM D 2639* – Test Method for Plastic Properties of Coal (Gieseler)
- > *ASTM D 1857* - Standard Test Method for Fusibility of Coal and Coke Ash
- > *ASTM D 2798* – Microscopical Determination of the Reflectance of Vitrinite in a Polished Specimen of Coal

MM&A was not able to confirm that exact ASTM standards were used on older coal quality samples. Consistency in coal quality data suggests that similar parameters were likely utilized for quality analysis.

10.4 Relevant Results

No critical factors have been found that would adversely affect the recovery of the reserve. Any quality issues that occur, either localized or generally, are accounted for in the marketing study done for this TRS.

11 Mineral Resource Estimates

MM&A independently created a geologic model to define the coal resources at the Property. Coal resources were estimated as of December 31, 2022. Resources are reported **inclusive** of coal reserves for Mine No. 4. Resources presented herein are utilized for mine planning purposes, and subsequently, reserve estimates. Resources are **not** reported in addition to coal reserves. There are **no** resources **exclusive** of reserves included in this TRS. Due to constraints imposed by differences in coal quality testing methodology, resources represent in-place coal tonnages and in-place coal quality, exclusive of the interburden between the Mary Lee and Blue Creek seams (a.k.a. *Middleman*). Ash bands and partings within the Mary Lee and Blue Creek horizons are included in tonnage and quality projections for the property's resource. Pertinent definitions related to mineral resources are shown below.

- > **Mineral Resource** is 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.
- > **Inferred Mineral Resource** is that part of a mineral resource for which 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. Because an inferred mineral resource has the lowest level of geological confidence of all mineral resources, which prevents the application of the modifying factors in a manner useful for evaluation of economic viability, an inferred mineral resource may not be considered when assessing the economic viability of a mining project and may not be converted to a mineral reserve. No inferred mineral resources are considered as part of this exercise.
- > **Indicated Mineral Resource** is that part of a mineral resource for which 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. Because an indicated mineral resource has a lower level of confidence than the level of confidence of a measured mineral resource, an indicated mineral resource may only be converted to a probable mineral reserve.
- > **Measured Mineral Resource** is that part of a mineral resource for which 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, as defined in this section, in sufficient detail to support detailed mine planning and final evaluation of the economic viability of the deposit. Because a measured mineral resource has a higher level of confidence than the level of confidence of either an indicated mineral resource or an inferred mineral resource, a measured mineral resource may be converted to a proven mineral reserve or to a probable mineral reserve.

11.1 Assumptions, Parameters and Methodology

Geological data was imported into Carlson Mining[®] (formerly SurvCADD[®]) geological modelling software in the form of Microsoft[®] Excel files incorporating drill hole collars, seam and thickness picks, bottom seam elevations and raw and washed coal quality. These data files were validated prior to importing into the software. Once imported, a geologic model was created, reviewed and verified with a key element being a gridded model of coal seam thickness. Resource tonnes were estimated by using the



seam thickness grid based on each valid point of observation and by defining resource confidence arcs around the points of observation. Points of observation for Measured and Indicated confidence arcs were defined for all valid drill holes that intersected the seam using standards deemed acceptable by MM&A based on a detailed geologic evaluation and a statistical analysis of all drill holes within the projected reserve areas as described in *Section 11.1.1*. The geological evaluation incorporated an analysis of seam thickness related to depositional environments, adjacent roof and floor lithologies, and structural influences.

After validating coal seam data and establishing correlations, the thickness and elevation for seams of economic interest were used to generate a geologic model. Due to the relative structural simplicity of the deposits and the reasonable continuity of the tabular coal beds, the principal geological interpretation necessary to define the geometry of the coal deposits is the proper modeling of their thickness and elevation. Both coal thickness and quality data are deemed by MM&A to be reasonably sufficient within the resource areas. Therefore, there is a reasonable level of confidence in the geologic interpretations required for coal resource determination based on the available data and the techniques applied to the data.

Table 11-1 below provides the geological mapping and coal tonnage estimation criteria used for the coal resource and reserve evaluation. These cut-off parameters have been developed by MM&A based on its experience with the Warrior Met property and are typical of mining operations in the Black Warrior coal basin. This experience includes technical and economic evaluations of numerous properties in the region for the purposes of determining the economic viability of the subject coal reserves.

Table 11-1: General Reserve and Resource Criteria

Item	Parameters	Technical Notes & Exceptions*
• General Reserve Criteria		
Reserve Classification	Reserve and Resource	
Reliability Categories	Reserve (Proven and Probable) Resource (Measured and Indicated)	Measured Resources and Proven Reserves Only Considered if located with 0.75 miles of a quality location or 0.25 miles of an active mining section. Further, Measured Resources and Proven Reserves Must be Located with 0.25 miles of a point of observation or active section.
Effective Date of Resource Estimate	December 31, 2022	Coal resources were updated for depletion based on information from Warrior Met. Effective date for coal resources is as of December 31, 2022.
Effective Date of Reserve Estimate	December 31, 2022	Coal reserves were updated for depletion based on information from Warrior Met. Effective date for coal reserves is as of December 31, 2022.
Seam Density	Variable, dependent upon seam characteristics (based on available drill hole quality).	
• Underground-Mineable Criteria		
Map Thickness	Total seam thickness	
Minimum Seam Thickness	4.5 Feet	
Minimum Mining Thickness	5.0 Feet for Longwall 7.0 Feet for Continuous Mining	
Minimum In-Seam Wash Recovery	Accounted for in seam thickness cutoffs. Minimum Annual Wash Recovery (inclusive of dilution) of approximately 30%. LOM Average = 47%.	



Item	Parameters	Technical Notes & Exceptions*
Wash Recovery Applied to Coal Reserves	Based on average yield for drill holes within reserve area and simulated plant models to produce a 10.2-percent ash product.	
Out-of-Seam Dilution Thickness for Run-of-Mine Tonnes Applied to Coal Reserves	Minimum of 3 inches or delta between mining height and total seam (Mary Lee + Blue Creek + Middleman) height.	2.3 SG used for dilution tonnage estimate
Mine Barrier	Not Applicable – Reserves Not Adjacent to Abandoned Works	
CBM Wells	CBM Wells Assumed to be Plugged Ahead of Mining and Mined Through. No reserve/resource reductions considered.	
Adjustments Applied to Coal Reserves	10 percent moisture increase	

Note: Exceptions for application of these criteria to reserve estimation are made as warranted and demonstrated by either actual mining experience or detailed data that allows for empirical evaluation of mining conditions. Final classification of coal reserve is made based on the pre-feasibility evaluation.

11.1.1 Geostatistical Analysis for Classification

MM&A completed a geostatistical analysis on the Blue Creek’s supporting drill holes within the reserve boundaries to determine the applicability of the common United States classification system for measured and indicated coal resources. Warrior Met’s exploration dataset is unique in that a significant portion of data is sourced from geophysical logs associated with coalbed methane wells. Commonly, geophysical data from some of the earlier-vintage gas well log exhibits (with low-resolution definition) allow identification of coal seams but hinder one’s ability to accurately define precise coal thicknesses and in-seam parting thickness measurements. As such, geological modeling of the subject coal seams excluded low-resolution geophysical thickness interpretations from gas wells; however, seam thicknesses which were derived from higher resolution geophysical logs were utilized. The geostatistical analysis presented herein only includes information utilized for resource and reserve modeling.

Historically, the United States has assumed that coal within 0.25 miles of a point of observation represents a measured resource whereas coal between 0.25 miles and 0.75 miles from a point of observation is classified as indicated. Inferred resources are commonly assumed to be located between 0.75 miles and 3 miles from a point of observation. Per SEC regulations, only measured and indicated resources may be considered for reserve classification, respectively as proven and probable reserves.

MM&A performed a geostatistical analysis of the Warrior Met data set using the Drill Hole Spacing Analysis (DHSA) method. This method attempts to quantify the uncertainty of applying a measurement from a central location to increasingly larger square blocks and provides recommendations for determining the distances between drill holes for measured, indicated, and inferred resources.

To perform DHSA the data set was processed to remove any erroneous data points, clustered data points, as well as directional trends. This was achieved through the use of histograms, as seen in *Figure 11-1*, color coded scatter plots showing the geospatial positioning of the borings, *Figure 11-2*, and trend analysis.

Figure 11-1: Histogram of the Total Seam Thickness for the Mary Lee and Blue Creek Seams Present in the Mine-4 Complex

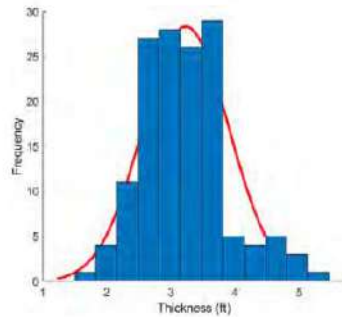
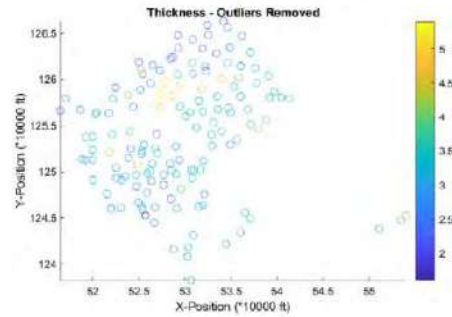
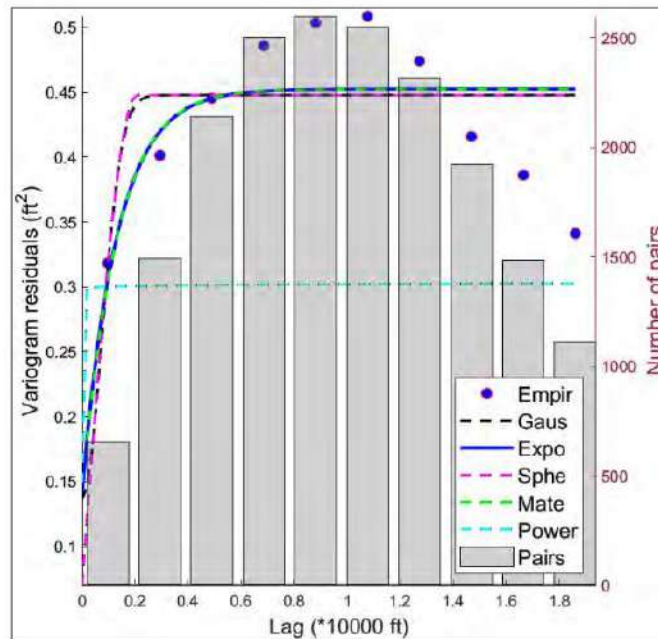


Figure 11-2: Scatter plot of the Total Seam Thickness for the Mary Lee and Blue Creek Seams Present in the Mine-4 Complex



Following the completion of data processing, a variogram of the data set was created, *Figure 11-3*. The variogram plots average square difference against the separation distance between the data pairs. The separation distance is broken up into separate bins defined by a uniform lag distance (e.g., for a lag distance of 499 feet the bins would be 0 – 499 feet, 502 – 1,000 feet, etc.). Each pair of data points that are less than one lag distance apart are reported in the first bin. If the data pair is further apart than one lag distance but less than two lag distances apart, then the variance is reported in the second bin. The numerical average for differences reported for each bin is then plotted on the variogram. Care was taken to define the lag distance in such a way as to not overestimate any nugget effect present in the data set. Lastly, modeled equations, often spherical, gaussian, or exponential, are applied to the variogram in order to represent the data set across a continuous spectrum.

Figure 11-3: Variogram of the Total Seam Thickness for the Mary Lee and Blue Creek Seams Present in the Mine-4 Complex



The estimation variance is then calculated using information from the modeled variogram as well as charts published by Journel and Huijbregts (1978). This value estimates the variance from applying a single central measurement to increasingly larger square blocks. Care was taken to ensure any nugget effect present was added back into the data. This process was repeated for each test block size.

The final step of the process is to calculate the global estimation variance. In this step the number square blocks that would fit inside the selected study area is determined for each block size that was investigated in the previous step. The estimation variance is then divided by the number of blocks that would fit inside the study area for each test block size. Following this determination, the data is then transformed back to represent the relative error in the 95th-percentile range.

Figure 11-4 shows the results of the DHSA performed on the Blue Creek seam data for Mine No. 4. DHSA provides hole to hole spacing values, these distances need to be converted to radius from a central point in order to compare to the historical standards. A summary of the radius data is shown in Table 11-2. DHSA prescribes measured, indicated, and inferred drill hole spacings be determined at the 10-percent, 20-percent, and 50-percent levels of relative error, respectively.

Figure 11-4: Result of DHSA for the Mary Lee and Blue Creek Seams Present in the Mine-4 Complex

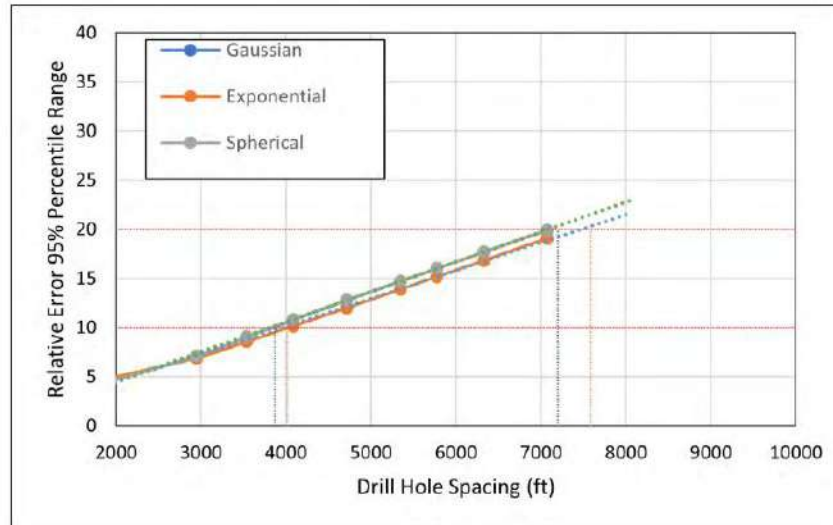


Table 11-2: DHSA Results Summary for Radius from a Central Point

Model:	Measured Radial Distance (10% Relative Error)	Indicated Radial Distance (20% Relative Error)	Inferred Radial Distance (50% Relative Error)
	(mi)	(mi)	(mi)
Gaussian:	0.37	0.68	1.63
Spherical:	0.37	0.68	1.63
Exponential:	0.38	0.72	1.73

Comparing the results of the DHSA to the historical standards, it is evident that the historical standards are more conservative than even the most conservative DHSA model with regards to determining measured resources. The Gaussian and Spherical models recommend using a radius of 0.37 miles for measured resources compared to the historical value of 0.25 miles. With respect to indicated resources the DHSA falls in line closely with the historical standards. The Gaussian and Spherical models recommend using a radius of 0.68 miles, while the Exponential model recommends a radius of 0.72 miles. These values align closely with the historical radius of 0.75 miles. These results have led the QP's to report the data following the historical classification standards, rather than use the results of the DHSA.

11.1.1.1 Additional Commentary on Measured and Indicated Breakdowns

As previously mentioned, Warrior Met's exploration dataset is unique in that it includes data derived from low-resolution and higher-resolution geophysical logs. Although the low-resolution data is not used for geological modeling to support resource and reserve calculations, it is valuable to confirm the



presence or absence of the subject coal beds. To account for the unique combination of data available for geological modeling and reserve definitions, the following assumptions have been made by the report authors to derive Measured and Indicated resource (and subsequently, Proven and Probable reserve) criteria.

1. Coal tonnes must be located within ¼ mile (3,960-feet) of an exploration drillhole with quality information **or** ¼ mile (1,320 feet) from active mine workings to be considered for “Measured” (and “Proven”) status. Coal tonnes located outside of this ¼ mile buffer are only considered for “Indicated” (and “Probable”) status.
2. Once applying a ¼ mile (3,960-feet) buffer to quality-based data and mine works, coal tonnes must be located with ¼ mile of **any** point of observation to have “Measured” (and “Proven”) status, including gas wells.
3. “Indicated” (and “Probable”) tonnes represent those tonnes located within the ¼-mile buffer from quality-based information yet are located between ¼ and ¼ mile from any point of observation, including gas wells.
4. “Indicated” (and “Probable”) tonnes also reflect those tons located outside of the ¼-mile buffer from quality-based points **and** are located within ¼ mile from any point of observation.
5. Inferred tonnes are not applicable to this exercise, as all tonnes meet the aforementioned “Measured” and “Indicated” criteria.

11.2 Qualified Person’s Estimates

Mineral resources, representing in-situ coal in which a portion of reserves are derived, are presented below. Based on the work described and detailed modelling of the areas considering all the parameters defined, a coal resource estimate, summarized in *Table 11-3*, was prepared as of December 31, 2022, for property controlled by Warrior Met. Resources are presented **inclusive** of coal reserves, not in addition to coal reserves. Resources represent in-place coal tonnages **exclusive** of interburden, but inclusive of any high-ash partings within the Mary Lee and Blue Creek coal seams. As such, in-situ tonnages and quality as presented in *Table 1-1* reflect the inclusion of high-ash partings which are ultimately removed after mining during coal preparation.

Table 11-3: Coal Resources Summary as of December 31, 2022

Seam	Coal Resource (Dry Tonnes, In Situ, Mt)				Resource Quality (Dry)		
	Measured	Indicated	Inferred	Total	Ash%	Sulfur%	VM%
Mary Lee	17.0	0.3	0.0	17.2	-	-	-
Blue Creek	44.0	0.6	0.0	44.5	-	-	-
Grand Total	60.9	0.8	0.0	61.8	16.5	0.9	28

Note: Resource tonnes are inclusive of reserve tonnes since they include the in-situ tonnes from which recoverable coal reserves are derived.

Note 2: Coal resources are reported on a dry basis, inclusive of high-ash partings which are ultimately removed during coal preparation. Surface moisture and inherent moisture are excluded.

Totals may not add due to rounding.

12 Mineral Reserve Estimates

12.1 Assumptions, Parameters and Methodology

Coal Reserves are classified as *proven* or *probable* considering “modifying factors” including mining, metallurgical, economic, marketing, legal, environmental, social, and governmental factors.

- > **Mineral Reserve** is an estimate of tonnage and grade or quality of indicated and measured mineral resources that, in the opinion of the qualified person, 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.
- > **Proven Coal Reserves** are the economically mineable part of a measured coal resource, adjusted for diluting materials and allowances for losses when the material is mined. It is based on appropriate assessment and studies in consideration of and adjusted for reasonably assumed modifying factors. These assessments demonstrate that extraction could be reasonably justified at the time of reporting.
- > **Probable Coal Reserves** are the economically mineable part of an indicated coal resource, and in some circumstances a measured coal resource, adjusted for diluting materials and allowances for losses when the material is mined. It is based on appropriate assessment and studies in consideration of and adjusted for reasonably assumed modifying factors. These assessments demonstrate that extraction could be reasonably justified at the time of reporting.

Upon completion of delineation and calculation of coal resources, MM&A generated a LOM plan for the Property based upon LOM Projections provided by Warrior Met. The footprint of the LOM plan is shown on the resource maps in *Figure 7-1*. The mine plan was generated based on the forecasted mine plans and permit plans provided by Warrior Met with modifications by MM&A where necessary due to current property control limits, modifications to geologic mapping, or other factors determined during the evaluation.

Carlson Mining software was used to generate the LOM plan for Mine No. 4. The mine plan was sequenced based on productivity schedules provided by Warrior Met. MM&A judged the productivity estimates and plans to be reasonable based on experience and current industry practice and Warrior Met’s historical performance at Mine No. 4.

At Mine No. 4, a minimum mining height of 5-feet was used for longwall mining methods and 7-feet for continuous mining methods. For coal seams thinner than the assigned mining height, the difference between the coal seam height and assigned mining height consists of OSD. Mine recovery generally varies between 30 and 40 percent for continuous mining panels, and 100 percent for longwall. Plant



recovery is a function of in-seam recovery, OSD and adjustments to produce a 10.2-ash product. Typical entry width is 20 feet.

Raw, ROM production data outputs from LOM plan sequencing were processed into Microsoft® EXCEL spreadsheets and summarized on an annual basis for processing into the economic model. Average seam densities were estimated to determine raw coal tonnes produced from the LOM plan. Average mine recovery and wash recovery factors were applied to determine coal reserve tonnes.

Coal reserve tonnes in this evaluation are reported at a 10.0-percent moisture and represent the saleable product from the Property.

Pricing data as provided by Warrior Met is described in *Section 16.2*. The pricing data assumes an FOB Railcar or barge price of approximately \$129 per metric tonne for calendar year 2022. The price gradually increases to approximately \$161 per metric tonne through 2030 where it is assumed to stay constant through the depletion of the reserves.

The coal resource mapping and estimation process, described in the report, was used as a basis for the coal reserve estimate. Proven and probable coal reserves were derived from the defined coal resource considering relevant processing, economic (including technical estimates of capital, revenue, and cost), marketing, legal, environmental, socio-economic, and regulatory factors and are presented on a moist, recoverable basis.

As is customary in the US, the categories for proven and probable coal reserves are based on the distances from valid points of measurement as determined by the QP for the area under consideration. For this evaluation, measured resource, which may convert to a proven reserve, is based on a 0.25-mile radius from a valid point of observation.

Points of observation include exploration drill holes, degas holes, and mine measurements which have been fully vetted and processed into a geologic model. The geologic model is based on seam depositional modeling, the interrelationship of overlying and underlying strata on seam mineability, seam thickness trends, the impact of seam structure (i.e., faulting), intra-seam characteristics, etc. Once the geologic model was completed, a statistical analysis, described in *Section 11.1.1* was conducted and a 0.25-mile radius from a valid point of observation was selected to define Measured Resources.

Likewise, the distance between 0.25 and 0.75 of a mile radius was selected to define Indicated Resources. Indicated Resources may convert to Probable Reserves.

There are no Inferred Resources (greater than a 0.75-mile radius from a valid point of observation) at Mine No. 4.

12.2 Qualified Person’s Estimates

Reserve tonnage estimates provided herein report coal reserves derived from the in-situ resource tonnes presented in *Table 11-3*, and not in addition to coal resources. Proven and probable coal reserves were derived from the defined coal resource considering relevant mining, processing, infrastructure, economic (including estimates of capital, revenue, and cost), marketing, legal, environmental, socio-economic and regulatory factors. The coal reserves, as shown in *Table 12-1*, are based on a technical evaluation of the geology and a preliminary feasibility study of the coal deposits. The extent to which the coal reserves may be affected by any known environmental, permitting, legal, title, socio-economic, marketing, political, or other relevant issues has been reviewed rigorously. Similarly, the extent to which the estimates of coal reserves may be materially affected by mining, metallurgical, infrastructure and other relevant factors has also been considered.

Table 12-1: Coal Reserve Summary as of December 31, 2022

Seam	Demonstrated Coal Reserves (Wet Tonnes, Washed or Direct Shipped, Mt)					Quality (Dry Basis)		
	By Reliability Category			By Control Type		Ash%	Sulfur%	VM%
	Proven	Probable	Total	Owned	Leased			
Mary Lee	11.3	0.2	11.5	0.0	11.5	-	-	-
Blue Creek	27.4	0.4	27.8	0.0	27.8	-	-	-
Total	38.7	0.5	39.2	0.0	39.2	10.2	0.8	30

Note 1: Marketable reserve tonnes are reported on a moist basis, including a combination of surface and inherent moisture. The combination of surface and inherent moisture is modeled at 10-percent, comparable to Warrior Met’s current product moisture. Actual product moisture is dependent upon multiple geological factors, operational factors, and product contract specifications. Totals may not add due to rounding.

As shown below, coal shipments during 2022 (primarily from the eastern portion of the Property) exhibited a weight-averaged quality very similar to quality projected from core samples (refer to *Table 12-1* above).

- > *Moisture content: 9.7%*
- > *Ash content: 10.2% (db)*
- > *Sulfur content: 0.8% (db)*
- > *VM content: 27% (db)*

The results of this TRS define an estimated 39.2 Mt of proven and probable marketable coal reserves. Of that total, 99 percent are proven, and 1 percent are probable. All of the Mine No. 4 reserves are leased and are considered suitable for the metallurgical coal market, and all of the reserves are assigned.



12.3 Qualified Person's Opinion

The estimate of coal reserves was determined in accordance with SEC standards.

The LOM mining plan for Mine No. 4 was prepared to the level of preliminary feasibility. Mine projections were prepared with a timing schedule to match production with coal seam characteristics. Production timing was carried out from current locations to depletion of the coal reserve area. Coal reserve estimates could be materially affected by the risk factors described in *Section 22.2*.

Based on the preliminary feasibility study and the attendant economic review, MM&A believes this is a fair and accurate estimation of Mine No. 4 coal reserves.

13 Mining Methods

13.1 Geotechnical and Hydrologic Issues

The mining plan for Mine No. 4 was developed by Warrior Met and modified by MM&A to fit property constraints. Mine geometry, including pillar sizing and panel sizing is typical of ranges currently utilized by Warrior Met in its active operations. Mine recoveries in engineering mining projections are typical of those currently achieved by Warrior Met. MM&A does not anticipate insurmountable challenges with regards to geotechnical issue at the operations based upon 1) Warrior's (and predecessor's) historic success in high resource recovery; 2) Consistent geological criteria in future mining areas and 3) ongoing exploration programs to mitigate risks related to geological and geotechnical (fault) issues.

Pillar stability was tested by MM&A using the *Analysis of Coal Pillar Stability (ACPS)* program that was developed by the **National Institute for Occupational Safety and Health (NIOSH)**. MM&A reviewed the results from the ACPS analysis and considered them in the development of the LOM plan.

Hydrology has not been a material issue of concern at Mine No. 4. Mining of future reserves is projected to occur in areas which exhibit similar hydrogeological characteristics as those formerly mined areas.

13.2 Production Rates

Mine No. 4 is a single longwall operation which is supported by continuous mining units. The mine plan and productivity expectations reflect historical performance and efforts have been made to adjust the plan to reflect future conditions. MM&A is confident that the mine plan is reasonably representative to provide an accurate estimation of coal reserves. Mine development and operation have not been optimized within the TRS. Rather, the plan is developed at the Pre-Feasibility level to gain a realistic estimate of potential operational and capital costs to demonstrate the economic viability of the subject reserves.



Productivity for continuous mining sections and continuous miner sections reflect typical rates incurred in the region. At steady state, the mine produces approximately 2 million clean tonnes per year with variations attributed to changes in clean coal thickness.

Carlson Mining software was used by MM&A to generate the mine plan for the underground mineable coal seams. The mine plan was sequenced based on productivity schedules provided by Warrior Met, which were based on historically achieved productivity levels. All production forecasting ties assumed production rates to geological models as constructed by MM&A's team of geologists and mining engineers.

13.3 Mining Related Requirements

Although the continuous miner sections are significantly more expensive to operate on a cost-per-tonne basis, they are necessary to open up areas of the mine by developing main entries and gate roads in preparation for the longwall. At steady state, the LOM plan included in this TRS requires two to three continuous mining support sections until the last few years of mining.

13.4 Required Equipment and Personnel

Mine No. 4, along with Mine No. 7, are currently Warrior Met's only longwall operations. The longwall shearing machine is used for extraction of coal at the production face. A chain conveyor is used to remove coal from the longwall face for discharge onto the conveyor belt which then ultimately delivers it to the skip systems. Development for the longwall is conducted by the extraction of coal from the production faces using continuous miners and haulage using shuttle cars to a feeder-breaker located at the tail of the section conveyor belt. The feeder-breaker crushes large pieces of coal and rock and regulates coal feed onto the mine conveyor. Roof-bolting machines are used to support the roof on the development sections of the longwall mine. Roof-bolting machines are used to install roof bolts, and battery scoops are available to clean the mine entries and assist in delivery of mine supplies to work areas. Other supplemental equipment such as personnel carriers, supply vehicles, etc., are also used daily.

Mine conveyors typically range in width up to 6 feet. Multiple belt flights are arranged in series to deliver raw coal to the underground storage. Along the main and sub-main entries and panels, a travel way is provided for personnel and materials by rubber-tired equipment or on rail. A skip system is used to transport ROM coal from the underground storage bunker to the surface where the coal may be sampled, crushed and washed in the preparation plant and stockpiled to await shipment.

Surface ventilation fans are installed as needed to provide a sufficient volume of air to ventilate production sections, coal haulage and transport entries, battery charging stations, and transformers in accordance with approved plans. High-voltage cables deliver power throughout the mine where transformers reduce voltage for specific equipment requirements. *The Mine Improvement and New Emergency Response Act of 2006 (MINER Act)* requires that carbon monoxide detection systems be



installed along mine conveyor belts and that electronic two-way tracking and communications systems be installed throughout the underground mine. Water is required to control dust at production sections and along conveyor belts, and to cool electric motors. Water is available from nearby sources and is distributed within the mine by pipelines as required. At a steady state, the mine is projected to employ approximately 400 employees.

14 Processing and Recovery Methods

14.1 Description of Flowsheet

Warrior Met currently operates a coal preparation plant at the Property. The Mine No. 4 Plant operates at a feed rate of approximately 1,180 raw tonnes per hour (*tph*). Coarse material is washed in a heavy media vessel, the intermediate-size material is washed in heavy media cyclones. Fine material is washed using reflux classifiers, and ultrafine material is cleaned by froth flotation. These processes are supported by the requisite screens, centrifuges, vacuum filters, sumps, pumps, and distribution systems. Processes and equipment are typical of those used in the coal industry and are in use in nearly all plants in the Black Warrior Basin. Warrior's No. 4 Plant includes an ultrafine coal cleaning technology, namely that developed by **Somerset**, for additional recovery of coal fines.

14.2 Requirements for Energy, Water, Material and Personnel

Personnel have historically been sourced from the surrounding communities in Tuscaloosa, Jefferson and Bibb Counties, and have proven to be adequate in numbers to operate the mine. As mining is common in the surrounding areas, the workforce is generally familiar with mining practices, and many are experienced miners.

The Mine No. 4 Complex has sources of water, power, personnel, and supplies readily available for use. Water is sourced locally by a combination of municipal and freshwater sources. Electricity is sourced from Alabama Power. The service industry in the areas surrounding the mine complex has historically provided supplies, equipment repairs and fabrication, etc.

15 Infrastructure

The Warrior Met-owned Mine No. 4 Preparation Plant services the mine via skip system which transports extracted coal from an underground bunker to the surface facility. A nearby rail line and the Black Warrior River serve as the primary means of transport from the mine.

As an active operation, the necessary support infrastructure for Mine No. 4 is in place. In addition to the plant and loadout, there are also portal facilities, including personnel access to the mine and ventilation fans. A photo of the existing facilities is *Figure 15-1*.

Additionally, Warrior Met is nearing the completion of a new portal for access to its northern reserve areas west of the Black Warrior River. This portal is currently being used to support continuous miner development. The new portal includes a 40-ton hoist for supplies and equipment. Water and emulsion systems at the portal are currently being constructed and will be completed ahead of longwall mining in west of the Black Warrior River.

Figure 15-1: Mine No. 4 Surface Facilities



16 Market Studies

16.1 Market Description

The quality characteristics for the subject coal resources and coal reserves have been reviewed in detail by MM&A. The drill hole data was utilized to develop average coal quality characteristics for the mine site.

Current typical quality specifications for the Mine No. 4 products are as shown in *Table 16-1*. This information was provided by Warrior Met and reflects average shipment quality for 2022.

Table 16-1: 2022 Average Product Quality

	Mine No. 4
Moisture (%)	9.69%
Ash (% dry basis)	10.18%
Sulfur (% dry basis)	0.79%
Volatile Matter (% dry basis)	27.06%

All of the mine's production serves the metallurgical markets. The metallurgical coal is currently generally marketed as a mid-volatile product and is priced in accordance with a combination of low-volatile and mid-volatile price indices. As the mine progresses into the North reserve area, volatiles are expected to increase. For the purpose of this study, the average of mid- and low-vol pricing has been used as a basis for forward looking revenue projections.

16.2 Price Forecasts

Warrior Met provided MM&A with price forecasts based on the latest forecast indices through 2030. Pricing was held constant beyond that date. Due to the projected increase in volatile percentages over time, an average of Low and Mid Volatile pricing was used for Mine 4 referenced as PLMV. For the purpose of this study, 98 percent of the PLMV was used. To develop the Price received FOB the Barge or Railcar, transportation and loading were backed out of the FOB vessel price. The adjusted pricing is detailed in *Table 16-2*.

Although most of the coal is shipped to the port by rail, historically some is barged. For the market pricing it has been assumed that 93% of the coal will go by rail and 7% by barge. Barge pricing and Port handling and loading costs remain constant, but Rail costs increase as Sales pricing increases plus an added premium once pricing is above \$175/tonne FOB the Vessel.

Table 16-2: Adjusted Pricing (per tonne)

	LOM	2023	2024	2025	2026	2027
Price FOB Vessel	\$179.30	\$152.00	\$153.00	\$153.00	\$158.00	\$174.00
Transportation & Loading	\$25.08	\$22.54	\$22.64	\$22.64	\$23.17	\$24.87
Revenue FOB Railcar or Barge	\$154.21	\$129.46	\$130.36	\$130.36	\$134.83	\$149.13
	2028	2029	2030	2031	2032	2033
Barge & Loading	\$180.00	\$184.00	\$187.00	\$187.00	\$187.00	\$187.00
Transportation & Loading	\$25.30	\$25.56	\$25.76	\$25.76	\$25.76	\$25.76
Revenue FOB Railcar or Barge	\$154.70	\$158.44	\$161.24	\$161.24	\$161.24	\$161.24
	2034	2035	2036	2037	2038	2039
FOB Barge	\$187.00	\$187.00	\$187.00	\$187.00	\$187.00	\$187.00
Transportation & Loading	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76
Revenue FOB Railcar or Barge	\$161.24	\$161.24	\$161.24	\$161.24	\$161.24	\$161.24



	2040	2041	2042	2043	2044	2045
Pricing	\$187.00	\$187.00	\$187.00	\$187.00	\$187.00	\$187.00
Transportation & Loading	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76	\$25.76
Revenue FOB Railcar or Barge	\$161.24	\$161.24	\$161.24	\$161.24	\$161.24	\$161.24

Note: Actual realized sales revenues in January 2023 for Mine No. 4 indicate more favorable prices than those reflected in the table above as incorporated in financial modeling. While not fully indicative of 2023, it is noted that current market conditions suggest some potential conservatism in prices estimated for this calendar year, pending continued favorable market conditions.

16.3 Contract Requirements

Some contracts are necessary for successful marketing of the coal. For Mine No. 4, since all mining, preparation and marketing is done in-house, the remaining contracts required are:

- > **Transportation** – The mine’s contracts with the railroad and transportation companies for barges on the Black Warrior River to transport the coal to either the domestic customers or to the Mobile export terminal for overseas shipment.
- > **Handling** – Contracts for loading vessels for export sales are necessary. These are typically handled by annual negotiations based on projected shipments.
- > **Sales** – Sales contracts are a mix of spot and contract sales.

17 Environmental Studies, Permitting and Plans, Negotiations or Agreements with Local Individuals

17.1 Results of Studies

MM&A has not conducted environmental based services or studies for Warrior Met. Permitting activities are managed internally by Warrior Met.

17.2 Requirements and Plans for Waste Disposal

Based on data provided by Warrior Met, the current Mine No.4 coarse refuse disposal sites have a remaining capacity of 15-million cubic yards as currently designed, which would provide approximately 17 years of capacity at 2022 production rates. Warrior Met has submitted an expansion to the existing coarse refuse disposal site which is currently under review with regulatory agencies. This new expansion is anticipated to provide an additional 5.5-million cubic yards of volume, which equates to an estimated 6 years at 2022 production rates.

Additionally, Warrior Met reports that current active and permitted fines disposal sites have a cumulative remaining capacity of 1,300 acre-foot, equivalent to 5 years at 2022 production rates. A new 1,300-acre-foot fine refuse disposal facility has been designed and is currently under review within multiple regulatory agencies. This new facility is anticipated to be approved in 2023 and should provide 3.5 years of additional fine refuse storage capacity. Warrior Met has also identified additional future



fine refuse areas with a total of 3,200 acre-foot, which could potentially add an additional 10 years of capacity.

17.3 Permit Requirements and Status

All mining operations are subject to federal and state laws and must obtain permits to operate mines, coal preparation and related facilities, haul roads, and other incidental surface disturbances necessary for mining to occur. Permits generally require that the permittee post a performance bond in an amount established by the regulatory program to provide assurance that any disturbance or liability created during mining operations is properly restored to an approved post-mining land use and that all regulations and requirements of the permits are fully satisfied before the bond is returned to the permittee. Significant penalties exist for any permittee who fails to meet the obligations of the permits including cessation of mining operations, which can lead to potential forfeiture of the bond. Any company, and its directors, owners and officers, which are subject to bond forfeiture can be denied future permits under the program.¹

New permits or permit revisions will occasionally be necessary to facilitate the expansion or addition of new mining areas on the property, such as amendments to existing permits and new permits for mining of reserve areas. Exploration permits are also required. Property under lease includes provisions for exploration among the terms of the lease. New or modified mining permits are subject to a public advertisement process and comment period, and the public is provided an opportunity to raise objections to any proposed mining operation. MM&A is not aware of any specific prohibition of mining on the subject property and given sufficient time and planning, Warrior Met should be able to secure new permits to maintain its active mining operation within the context of current regulations. Necessary permits are in place to support current production on the Property. Portions of the Property are located near local communities.

Warrior Met has obtained all mining and discharge permits to operate the mine and processing, loadout, or related facilities. MM&A is unaware of any obvious or current Warrior Met permitting issues that are expected to prevent the issuance of future permits. Mine No. 4, along with all coal producers, are subject to a level of uncertainty regarding future clean water permits due to **United States Environmental Protection Agency (EPA)** involvement with state programs.

Future permitting activities will be required from additional refuse expansion as summarized in the preceding report section. A portion of these permits are underway, but additional permitting will be required to secure ample refuse storage capacity to mine and process all future reserves on the property.

The active mining permits currently held by Warrior Met are shown in *Table 17-1*.

¹ Monitored under the Applicant Violator System (AVS) by the Federal Office of Surface Mining.



Table 17-1: Mine No. 4 Mining Permits

Facility Name	Issuing Agency	Permit No.	Permit Type	Approval Date	Expiration Date
Mine No. 4	ADECA	1225	Water Withdrawal Permit (WWP)	Annual Report	
Mine No. 4	ASMC	P-3260	Mining		3/1/2023
Mine No. 4	ADEM	AL0026590	NPDES - Individual Permit		7/31/2024
Mine No. 4 (Cassidy Portal)	ADEM	ALR10BCXI	NPDES -- General Construction	3/26/2021	3/31/2026
Mine No. 4	ACOE	AL90-01938-V	LOP	5/6/2011	Unknown

17.4 Local Plans, Negotiations or Agreements

The workforce at Mine No. 4 is represented by the **United Mine Workers of America (UMWA)**. As of the effective date of this report, the unionized labor force at Mine No. 4 is on strike. This TRS makes no attempt to estimate the remaining duration of the strike, as MM&A is not privy to the status of negotiations between the UMWA and Warrior Met. Production rates and schedules expressed in this TRS are generalized and are intended to reflect reasonable expectations of performance through the utilization of a well-trained workforce.

17.5 Mine Closure Plans

Applicable regulations require that mines be properly closed, and reclamation commenced immediately upon abandonment. In general, site reclamation includes removal of structures, backfilling, regrading, and revegetation of disturbed areas. Sediment control is required during the establishment of vegetation, and bond release generally requires a minimum five-year period of site maintenance, water sampling, and sediment control following mine completion and rough grading. For most mines, unless special issues arise, reclamation and monitoring costs continue for about 7 years after cessation of production. Reclamation of underground mines includes closure and sealing of mine openings such as portals and shafts in addition to the items listed above.

Estimated costs for mine closure, including water quality monitoring during site reclamation, are included in the financial model. As with all mining companies, an accretion calculation is performed annually so the necessary Asset Retirement Obligations (ARO) can be shown as a liability on the balance sheet.

Costs have been included for closure of some existing facilities prior to exhaustion of the mine. As Bleeder shafts are no longer needed, they are sealed and as refuse disposal areas are filled and replaced, reclamation is done. The costs for this non-ARO reclamation work have been accrued on a per tonne basis in the model.

17.6 Qualified Person's Opinion

Mine No. 4 is an operating facility; all necessary permits for current production have been obtained. MM&A knows of no reason that any permit revisions that may be required cannot be obtained.



Estimated expenditures for site closure and reclamation are included in the financial model for this site.

18 Capital and Operating Costs

18.1 Capital Cost Estimate

The production sequence selected for a property must consider the proximity of each reserve area to coal preparation plants, river docks and railroad loading points, along with suitability of production equipment to coal seam conditions. Future needs were accounted for by utilizing a \$/tonne estimate for future mining.

MM&A assumes that major equipment rebuilds occur in a timely manner over the course of each machine's remaining operating life. Based on detailed studies of similar mines and with guidance from Warrior Met, MM&A has used a value of \$11.00 per saleable tonne mined for sustaining capital. This closely approximates Warrior Met's history, increased by 16% to reflect recent inflation trends. Project capital is assumed to be subject to stand-alone economic analysis prior to expenditure so it has not been included in this study. To reflect typical spending patterns, sustaining capital is reduced to 25% in the penultimate year of production and eliminated in the final year.

For the purpose of calculating tax liability, it is necessary to forecast Depreciation. Sustaining Capital as it is purchased has been assumed to have an average depreciable life of 5 years. The current Asset inventory is assumed to depreciate on a decreasing basis by 2026.

18.2 Operating Cost Estimate

MM&A used a combination of historical information and detailed operating cost estimates from a recent study of a similar property in the region. Where necessary, operating costs were adjusted to reflect differences between this mine and the studied mine. Hourly labor rates and salaries were based upon regional information and expectations. Fringe-benefit costs were developed for vacation and holidays, federal and state unemployment insurance, retirement, workers' compensation and pneumoconiosis, casualty and life insurance, healthcare, and bonuses. A cost factor for mine supplies was developed that relates expenditures to mine advance rates for roof-control costs. Other mine-supply costs are typically related to factors such as feet of section advance, ROM tonnes mined, and days worked. Other factors were developed for maintenance and repair costs, rentals, mine power, outside services and other direct mining costs.

Utilizing this process costs were calculated at 2022 levels, then to reflect recent inflation trends multipliers were applied to each category. *Table 18-1* provides the inflation factors used to escalate the costs from 2022 to 2023.



Table 18-1: Inflation Factors

Multipliers	
Labor	3.0%
Benefits	3.0%
Fuel & Lube	100.0%
Parts	14.5%
Surface Contractors	17.5%
Capital	16.0%

Operating costs factors were also developed for the coal preparation plant processing, refuse handling, and coal loading. These were also subject to the multipliers in *Table 18-1*.

Property taxes and insurance and bonding were estimated based on history. Appropriate royalty rates were assigned for production from leased coal lands, and sales related taxes were calculated for state severance taxes, the federal black lung excise tax, and federal and state reclamation fees.

Mandated sales related costs such as black lung excise tax are summarized in *Table 18-2*.

Table 18-2: Estimated Coal Production Taxes and Sales Costs

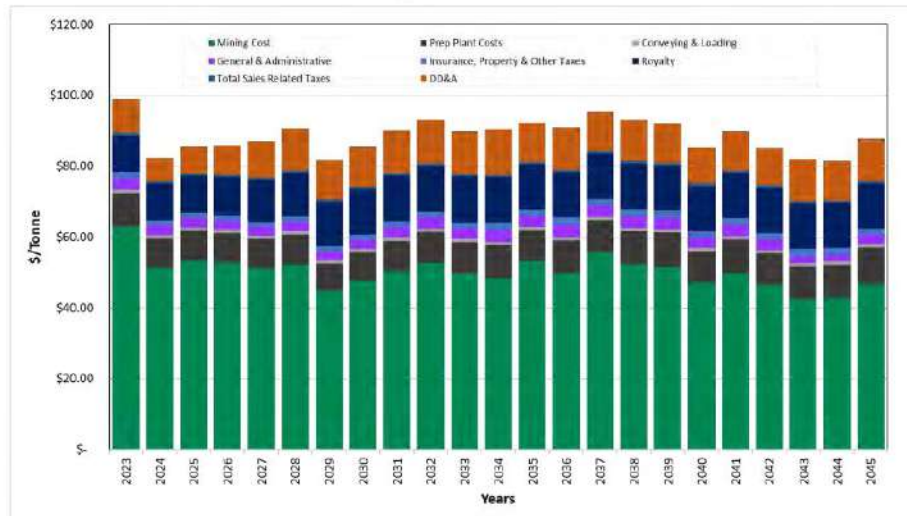
Description of Tax or Sales Cost	Basis of Assessment	Cost
Federal Black Lung Excise Tax - Underground	Per Tonne	\$1.21
Federal Reclamation Fees – Underground	Per Tonne (Moisture Adjusted)	\$0.123
Alabama Severance Tax	Per Tonne (Moisture Adjusted)	\$0.344
Royalties	Percentage of Revenue (FOB Mine)	8%

Notes:

1. Federal black lung excise tax is paid only on coal sold domestically. MM&A assumed 15% of total coal sales to be domestic in the economic analysis discussed below.

A summary of the projected operating costs is shown in *Figure 18-1*.

Figure 18-1: OPEX



*The LOM model and associated economic analysis is intended to prove the economic viability of the subject coal tonnage, allowing controlled tons to be classified as "reserve". The development of costs incorporates a combination of Warrior Met's historical performance and MM&A's knowledge of mine productivity and cost structures for comparable operations.

19 Economic Analysis

19.1 Assumptions, Parameters and Methods

A pre-feasibility LOM plan was prepared by MM&A for the Mine No. 4 operation. MM&A prepared mine projections and production timing forecasts based on coal seam characteristics. Production timing was carried out to depletion (exhaustion) of the coal reserve areas, which is projected for the year 2045.

The mine plan, productivity expectations and cost estimates generally reflect historical performance by Warrior Met and efforts have been made to adjust plans and costs to reflect future conditions. MM&A is confident that the mine plan and financial model are reasonably representative to provide an accurate estimation of coal reserves.

A capital forecast was developed by MM&A for mine development, infrastructure, and on-going capital requirements for the life of the mine. Staffing levels were prepared, and operating costs estimated by MM&A. MM&A utilized historical cost data provided by Warrior Met and its own knowledge and experience to estimate direct and indirect operating costs.



The preliminary feasibility financial model, prepared for this TRS, was developed to test the economic viability of the coal reserve areas. Economic models include non-controlled tons which are expected to be acquired by Warrior Met. The results of this financial model are not intended to represent a bankable feasibility study, required for financing of any current or future mining operations, but are intended to prove the economic viability of the estimated coal reserves. All costs and prices are based on 2023 constant United States dollars.

On an unlevered basis, the NPV of the real cash flows after taxes was estimated for the purpose of classifying coal reserves. The cash flows, excluding debt service, are calculated by subtracting direct and indirect operating expenses and capital expenditures from revenue. Direct costs include labor, operating supplies, maintenance and repairs, facilities costs for materials handling, coal preparation, refuse disposal, coal loading, sampling and analysis services, reclamation and general and administrative costs. Indirect costs include statutory and legally agreed upon fees related to direct extraction of the mineral. The indirect costs are the federal black lung tax, federal reclamation taxes, property taxes, local transportation prior to delivery at rail or barge loading sites, coal production royalties, sales and use taxes, income taxes and State severance taxes. Warrior Met's historical costs provided a useful reference for MM&A's cost estimates.

Sales revenue is based on the metallurgical coal price information provided to MM&A by Warrior Met, based on the Platt's forecast average of Low and Mid Volatile Coals.

Projected debt service is excluded from the P&L and cash flow model to determine enterprise value.

The financial model expresses coal sales prices, operating costs, and capital expenditures in current day dollars without adjustment for inflation. Capital expenditures and reclamation costs are included based on estimates for the mine by year.

Warrior Met will pay royalties for the various current and projected operations. The royalty rates vary by mining method and location. The royalty rates for Mine No. 4 are estimated to be 8.0% of the sales revenue FOB the mine after deduction of all transportation and loading costs between the mine and the vessel.

The projection model also includes consolidated income tax calculations at the Warrior Met level, incorporating federal and state income taxes with an overall effective rate of 19%. To the extent the mine generates net operating losses for tax purposes, the losses are assumed offset other corporate taxable income. The term "cash flows" is used in this report refer to after tax cash flows.

Consolidated cash flows are driven by annual sales tonnage, which average approximately 2.0 million tonnes per year until dropping in 2045, the final year. Projected consolidated revenue averages just over \$306 million per year, excluding the final year. Revenue totals \$6.9 billion for the property's life.



Consolidated cash flow from the operation is positive throughout the projected operating period, with the exception of post-production years, due to end-of-mine reclamation spending. Consolidated cash flow from the operation totals \$2.86 billion over the mine life. Capital expenditures total \$468 million over the property's life.

19.2 Results

The pre-feasibility financial model, prepared by MM&A for this TRS, was developed to test the economic viability of each coal resource area. The results of this financial model are not intended to represent a bankable feasibility study, as may be required for financing of any current or future mining operations contemplated but are intended to prove the economic viability of the estimated coal reserves. Optimization of the LOM plan was outside the scope of the engagement.

Table 19-1 shows LOM tonnage, P&L, and EBITDA for Mine No. 4.

Table 19-1: Life-of-Mine Tonnage, P&L before Tax, and EBITDA

	Tonnes (000)	Pre-Tax P&L (\$000)	P&L per Tonne	EBITDA (\$000)	EBITDA per Tonne
Mine #4	44,700	\$2,936,114	\$65.69	\$3,416,521	\$76.44

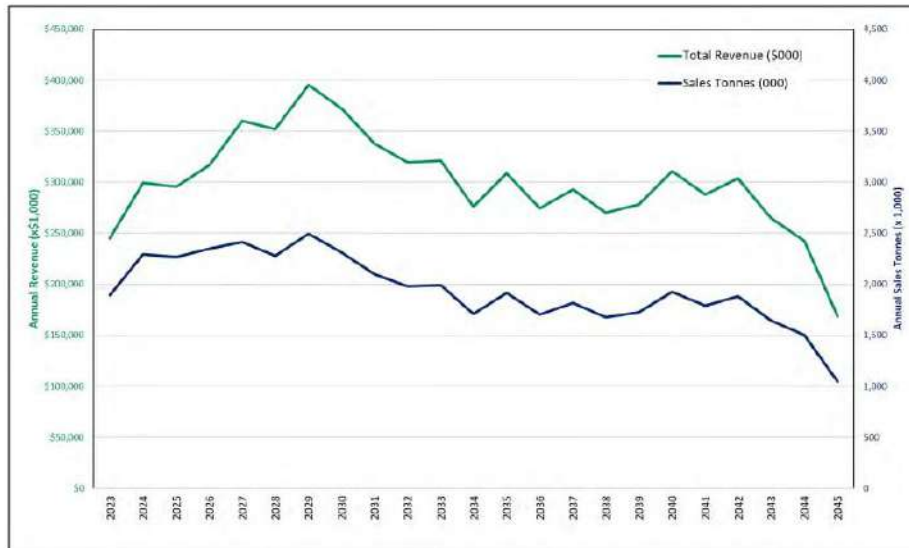
Note 1: The LOM model includes a small portion of tonnage contained within adverse tracts which are not included in reserve estimates.
Note 2: The LOM model and associated economic analysis is intended to prove the economic viability of the subject coal tonnage, allowing controlled tons to be classified as "reserve". The exercise should not be construed to represent a valuation of Warrior Met's holdings. Long-term cash flows incorporate forward-looking market projections which are expected to vary over time based upon historic volatility of coal markets. The development of costs incorporates a combination of Warrior Met's historical performance and MM&A's knowledge of mine productivity and cost structures for comparable operations.

As shown in Table 19-1, Mine No. 4 shows positive EBITDA over the LOM. Overall, the Warrior Met consolidated operation shows positive LOM P&L and EBITDA of \$2.9 billion and \$3.4 billion, respectively.

Warrior Met's Mine No. 4 annual production and revenue are shown in Figure 19.1 and the Mine's after-tax cash flow summary in constant dollars, excluding debt service, is shown in Figure 19-2 below.

The NPV is estimated to be \$979 million at discount rate of 9%, which represents Warrior's typical WACC.

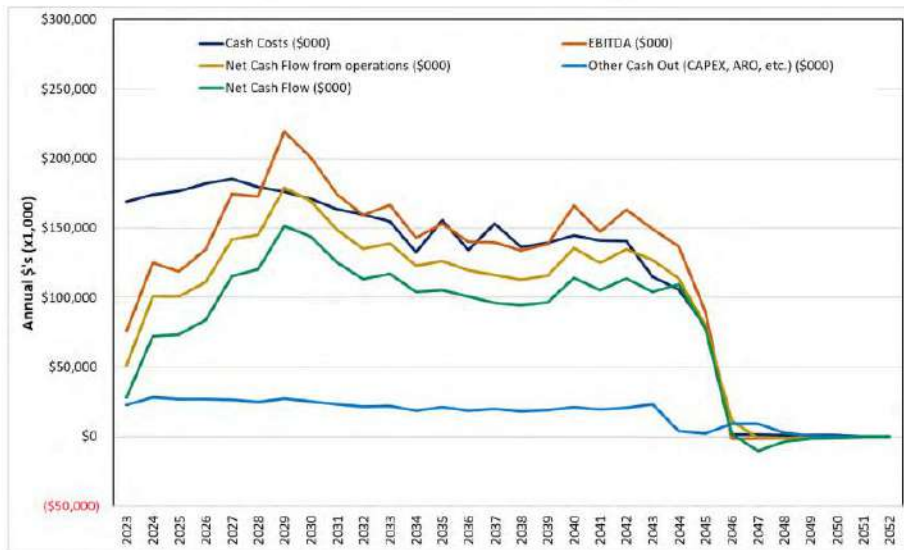
Figure 19-1: Mine 4 Production and Revenue



Note 1: The LOM model includes a small portion of tonnage contained within adverse tracts which are not included in reserve estimates.

Note 2: The LOM model and associated economic analysis is intended to prove the economic viability of the subject coal tonnage, allowing controlled tons to be classified as "reserve". The exercise should not be construed to represent a valuation of Warrior Met's holdings. Long-term cash flows incorporate forward-looking market projections which are expected to vary over time based upon historic volatility of coal markets. The development of costs incorporates a combination of Warrior Met's historical performance and MM&A's knowledge of mine productivity and cost structures for comparable operations.

Figure 19-2: After-tax Cash Flow Summary (000)



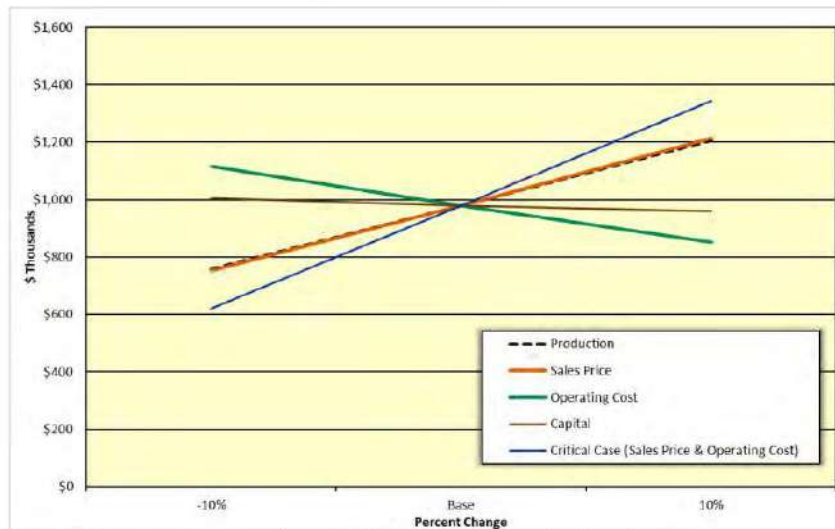
Note 1: The LOM model includes a small portion of tonnage contained within adverse tracts which are not included in reserve estimates.

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19.3 Sensitivity

Sensitivity of the NPV results to changes in the key drivers is presented in *Figure 19-3*. The sensitivity study shows the NPV at the 9% discount rate when base case sales prices, operating costs, and capital costs are increased and decreased within a +/- 10% range.

Figure 19-3: Sensitivity of NPV



Note: The LOM model and associated economic analysis is intended to prove the economic viability of the subject coal tonnage, allowing controlled tons to be classified as "reserve". The exercise should not be construed to represent a valuation of Warrior Met's holdings.

20 Adjacent Properties

20.1 Information Used

Warrior Met's Mine No. 7 is located immediately adjacent (east) of Mine No. 4, and Warrior Met's BC property is located to the North of Mine No. 4. Exploration databases encompass all three of these holdings and serve as the basis for geological modeling.

21 Other Relevant Data and Information

MM&A has performed various technical studies of the Property over the past decade. MM&A utilized this former work as the basis of an updated study which meets those standards set forth by the SEC. Additionally, MM&A has a longstanding history of various geological and mining-based studies in the Black Warrior Basin, with specific projects conducted for Warrior Met in several adjacent areas to the Property during due diligence activities. This experience was utilized in the development of this TRS.

22 Interpretation and Conclusions

22.1 Conclusion

Sufficient data have been obtained through various exploration and sampling programs and mining operations to support the geological interpretations of seam structure and thickness for coal horizons situated on the Property. The data is of sufficient quantity and reliability to reasonably support the coal resource and coal reserve estimates in this TRS.

The geological data and preliminary feasibility study, which consider mining plans, revenue, and operating and capital cost estimates are sufficient to support the classification of coal reserves provided herein.

This geologic evaluation conducted conjunction with the preliminary feasibility study is sufficient to conclude that the 39.2 Mt of marketable underground coal reserves identified on the Property are economically mineable under reasonable expectations of market prices for metallurgical coal products, estimated operation costs, and capital expenditures.

22.2 Risk Factors

Risks have been identified for operational, technical and administrative subjects addressed in the Pre-Feasibility Study. A risk matrix has been constructed to present the risk levels for all the risk factors identified and quantified in the risk assessment process.

The purpose of the characterization of the risk components is to inform the stakeholders of key aspects of the Warrior Met property that can be impacted by events whose consequences can affect the success of the venture. The significance of an impacted aspect of the operation is directly related to both the probability of occurrence and the severity of the consequences. The initial risk for a risk factor is herein defined as the risk level after the potential impact of the risk factor is addressed by competent and prudent management utilizing control measures readily available. Residual risk for a risk factor is herein defined as the risk level following application of special mitigation measures if management determines that the initial risk level is unacceptable. Initial risk and residual risk can be quantified numerically, derived by the product of values assigned to probability and consequence ranging from very low risk to very high risk.

The probability and consequence parameters are subjective numerical estimates made by practiced mine engineers and managers. Both are assigned values from 1 to 5 for which the value 1 represents the lowest probability and least consequence, and the value 5 represents the highest probability and greatest consequence. The products, which define the Risk Level, are classified from very low to very high.

Risk Level Table (R = P x C)

Risk Level (R)
Very Low (1 to 2)
Low (3 to 5)
Moderate (6 to 11)
High (12 to 19)
Very High (20 to 25)

Risk aspects identified and evaluated during this assignment total 12. No residual risks are rated Very High. Two (2) residual risks are rated High. Four (4) of the risk aspects could be associated with Moderate residual risk. Six (6) of the risk aspects were attributed Low or Very Low residual risks.

22.2.1 Governing Assumptions

The listing of the aspects is not presumed to be exhaustive. Instead that listing is presented based on the experiences of the contributors to the TRS.

1. The probability and consequence ratings are subjectively assigned, and it is assumed that this subjectivity reasonably reflects the condition of the active and projected mine operations.
2. The control measures shown in the matrices presented in this chapter are not exhaustive. They represent a condensed collection of activities that the author of the risk assessment section has observed to be effective in coal mining scenarios.
3. Mitigation measures listed for each risk factor of the operation are not exhaustive. The measures listed, however, have been observed by the author to be effective.
4. The monetary values used in ranking the consequences are generally accepted quantities for the coal mining industry.

22.2.2 Limitations

The risk assessment proposed in this report is subject to the limitations of the information currently collected, tested, and interpreted at the time of the writing of the report.

22.2.3 Methodology

The numerical quantities (i.e., risk levels) attributable to either “initial” or “residual” risks are derived by the product of values assigned to probability and consequence ranging from very low risk to very high risk.

$$R = P \times C$$

Where: R = Risk Level
P = Probability of Occurrence
C = Consequence of Occurrence



The Probability (P) and Consequence (C) parameters recited in the formula are subjective numerical estimates made by practiced mine engineers and managers. Both P and C are assigned integer values ranging from 1 to 5 for which the value 1 represents the lowest probability and least consequence, and the value 5 represents the highest probability and greatest consequence. The products ($R = P \times C$) which define the Risk Level, are thereafter classified from very low to very high.

Risk Level Table

Risk Level (R)
Very Low (1 to 2)
Low (3 to 5)
Moderate (6 to 11)
High (12 to 19)
Very High (20 to 25)

Very high initial risks are considered to be unacceptable and require corrective action well in advance of development. In short, measures must be applied to reduce very high initial risks to a tolerable level.

As shown and discussed above, after taking into account the operational, technical, and administrative actions that have been applied or are available for action when required, the residual risk can be determined. The residual risk provides a basis for the management team to determine if the residual risk level is acceptable or tolerable. If the risk level is determined to be unacceptable, further actions should be considered to reduce the residual risk to acceptable or tolerable levels to provide justification for continuation of the operation.

22.2.4 Development of the Risk Matrix

Risks have been identified for the technical, operational, and administrative subjects addressed in the TRS.



22.2.4.1 Probability Level Table

Table 22-1: Probability Level Table

Category	Probability Level (P)		
1	Remote	Not likely to occur except in exceptional circumstances.	<10%
2	Unlikely	Not likely to occur; small in degree.	10 - 30%
3	Possible	Capable of occurring.	30 - 60%
4	Likely	High chance of occurring in most circumstances.	60 - 90%
5	Almost Certain	Event is expected under most circumstances; impossible to avoid.	>90%

The lowest rated probability of occurrence is assigned the value of 1 and described as remote, with a likelihood of occurrence of less than 2 percent. Increasing values are assigned to each higher probability of occurrence, culminating with the value of 5 assigned to incidents considered to be almost certain to occur.

22.2.4.2 Consequence Level Table

Table 22-2 lists the consequence levels.

Table 22-2: Consequence Level Table

Correlation of Events in Key Elements of the Program to Event Severity Category							
Category	Severity of the Event	Financial Impact of the Event	Unplanned Loss of Production (Impact on Commercial Operations)	Events Impacting on the Environment	Events Affecting the Program's Social and Community Relations	Resultant Regulatory / Sovereign Risk	Events Affecting Occupational Health & Safety
1	Insignificant	< USD \$0.5 million	≤ 12 hours	Insignificant loss of habitat; no irreversible effects on water, soil and the environment.	Occasional nuisance impact on travel.	-	Event recurrence avoided by corrective action through established procedures (Engineering, guarding, training).
2	Minor	USD \$0.5 million to \$2.0 million	≤ 1 day	No significant change to species populations; short-term reversible perturbation to ecosystem function.	Persistent nuisance impact on travel. Transient adverse media coverage.	-	First aid – lost time. Event recurrence avoided by corrective action through established procedures.
3	Moderate	USD \$2.0 million to \$10.0 million	≤ 1 week	Appreciable change to species population; medium-term (≤10 years) detriment to ecosystem function.	Measurable impact on travel and water/air quality. Significant adverse media coverage / transient public outrage.	Uncertainty securing or retaining essential approval / license. Change to regulations (tax; bonds; standards).	Medical Treatment – permanent incapacitation Avoiding event recurrence requires modification to established corrective action procedures.
4	Major	USD \$10.0 million to \$50.0 million	1 to 2 weeks	Change to species population threatening viability; long-term (>10 years) detriment to ecosystem function.	Long-term, serious impact on travel and use of water resources; degradation of air quality; sustained and effective public opposition.	Suspension / long-delay in securing essential approval / license. Change to laws (tax; bonds; standards).	Fatality. Avoiding event recurrence requires modification to established corrective action procedures and staff retraining.
5	Critical	>USD \$50.0 million	>1 month	Species extinction; irreversible damage to ecosystem function.	Loss of social license.	Withdraw / failure to secure essential approval / license.	Multiple fatalities. Avoiding event recurrence requires major overhaul of policies and procedures.



The lowest rated consequence is assigned the value of 1 and is described as Insignificant Consequence parameters include non-reportable safety incidents with zero days lost accidents, no environmental damage, loss of production or systems for less than one week and cost of less than USD \$0.5 million. Increasing values are assigned to each higher consequence, culminating with the value of 5 assigned to critical consequences, the parameters of which include multiple-fatality accidents, major environmental damage, and loss of production or systems for longer than six months and cost of greater than USD \$50.0 million.

Composite Risk Matrix $R = P \times C$ and Color-Code Convention

The risk level, defined as the product of probability of occurrence and consequence, ranges in value from 1 (lowest possible risk) to 25 (maximum risk level). The values are color-coded to facilitate identification of the highest risk aspects.

Table 22-3: Risk Matrix

P x C = R		Consequence (C)				
		Insignificant	Minor	Moderate	Major	Critical
		1	2	3	4	5
Probability Level (P)	Remote	1	2	3	4	5
	Unlikely	2	4	6	8	10
	Possible	3	6	9	12	15
	Likely	4	8	12	16	20
	Almost Certain	5	10	15	20	25

22.2.5 Categorization of Risk Levels and Color Code Convention

Very high risks are considered to be unacceptable and require corrective action. Risk reduction measures must be applied to reduce very high risks to a tolerable level.

22.2.6 Description of the Coal Property

The Mine No. 4 Complex is located in Tuscaloosa County, Alabama and operates a longwall section with supporting continuous mining sections. The operation is projected to continue in the present mode until reserves are depleted in 2045.

22.2.7 Summary of Residual Risk Ratings

Each risk factor is numbered, and a risk level for each is determined by multiplying the assigned probability by the assigned consequence. The risk levels are plotted on a risk matrix to provide a composite view of the Warrior Met risk profile. The average risk level is 6.4, which is defined as Moderate.

Table 22-4: Risk Assessment Matrix

Consequence	Critical	>\$50 MM	8,9					
	Major	\$10-50MM				6		
	Moderate	\$2-10 MM	1	4	3	11		
	Minor	\$0.5-\$2 MM	7, 2		12	5		
	Low	<\$0.5 MM			10			
			<10% Remote	10-30% Unlikely	30-60% Possible	60-90% Likely	>90% Almost Certain	

22.2.8 Risk Factors

A high-level approach is utilized to characterize risk factors that are generally similar across a number of active and proposed mining operations in the region. Risk factors that are unique to a specific operation or are particularly noteworthy are addressed individually.

22.2.8.1 Geological and Coal Resource

Coal mining is accompanied by risk that, despite exploration efforts, mining areas will be encountered where geological conditions render extraction of the resource to be uneconomic (such as faulting), or coal quality characteristics that may disqualify the product for sale into target markets.

Offsetting the geological and coal resource risk are the massive size of the controlled property which allows large areas to be mined in the preferred mine areas sufficiently away from areas where coal quality and/or mineability may be less favorable. This flexibility, combined with the extensive work done to define the reserve, reduces the risk at Mine No. 4 below that of other mine properties.

Table 22-5: Geological and Coal Resource Risk Assessment (Risks 1 and 2)

Aspect	Impact	Control Measures	Initial Risk Level			Mitigation Measures	Residual Risk Level		
			P	C	R		P	C	R
Recoverable coal tonnes recognized to be significantly less than previously estimated.	Reserve base is adequate to serve market commitments and respond to opportunities for many years. Local adverse conditions may increase frequency and cost of production unit relocations.	Previous and ongoing exploration and extensive regional mining history provide a high level of confidence of coal seam correlation, continuity of the coal seams, and coal resource tonnes.	2	3	6	Optimize mine plan to increase resource recovery; develop mine plan to provide readily available alternate mining locations to sustain expected production level.	1	3	3
Coal quality locally proves to be lower than initially projected.	If uncontrolled, production and sale of coal that is out of specification can result in rejection of deliveries, cancellation of coal sales agreements and damage to reputation.	Exploration and vast experience and history in local coal seams provide confidence in coal quality; limited excursions can be managed with careful product segregation and blending.	2	3	6	Develop mine plan to provide readily available alternate mining locations to sustain expected production level; modify coal sales agreements to reflect coal quality. Conduct additional drilling to lower risk associated with quality concerns in suspect areas.	1	2	2

22.2.8.2 Environmental

Water quality and other permit requirements are subject to modification and such changes could have a material impact on the capability of the operator to meet modified standards or to receive new permits and modifications to existing permits. Permit protests may result in delays or denials to permit applications.

Environmental standards and permit requirements have evolved significantly over the past 50 years and to-date, mining operators and regulatory bodies have been able to adapt successfully to evolving environmental requirements.

Table 22-6: Environmental (Risks 3 and 4)

Aspect	Impact	Control Measures	Initial Risk Level			Mitigation Measures	Residual Risk Level		
			P	C	R		P	C	R
Environmental performance standards are modified in the future.	Delays in receiving new permits and modifications to existing permits; cost of testing and treatment of water and soils	Work with regulatory agencies to understand and influence final standards; implement testing, treatment and other actions to comply with new standards.	3	4	12	Modify mining and reclamation plans to improve compliance with new standards while reducing cost of compliance.	3	3	9
New permits and permit modifications are increasingly delayed or denied.	Interruption of production and delayed implementation of replacement production from new mining areas.	Comply quickly with testing, treatment and other actions required; continue excellent compliance performance within existing permits.	2	4	8	Establish and maintain close and constructive working relationships with regulatory agencies, local communities and community action groups. Prepare and submit permits well in advance of needs.	2	3	6

22.2.8.3 Regulatory Requirements

Federal and state health and safety regulatory agencies occasionally amend mine laws and regulations. The impact is industry wide. Mining operators and regulatory agencies have been able to adapt successfully to evolving health and safety requirements.

Table 22-7: Regulatory Requirements (Risk 5)

Aspect	Impact	Control Measures	Initial Risk Level			Mitigation Measures	Residual Risk Level		
			P	C	R		P	C	R
Federal and state mine safety and health regulatory agencies amend mine laws and regulations.	Cost of training, materials, supplies and equipment; modification of mine examination and production procedures, modification of mining plans.	Participate in hearings and workshops when possible to facilitate understanding and implementation; work cooperatively with agencies and employees to facilitate implementation of new laws and regulations.	4	3	12	Familiarity and experience with new laws and regulations results in reduced impact to operations and productivity and improved supplies and equipment options.	4	2	8

22.2.8.4 Market and Transportation

Most of the current and future production is expected to be directed to domestic and international metallurgical markets. Historically the metallurgical markets have been cyclical and highly volatile.

Table 22-8: Market (Risk 6)

Aspect	Impact	Control Measures	Initial Risk Level			Mitigation Measures	Residual Risk Level		
			P	C	R		P	C	R
Volatile coal prices drop precipitously.	Loss of revenue adversely affects profitability; reduced cash flow may disrupt capital expenditures plan.	Cost control measures implemented; capital spending deferred.	4	5	20	High-cost operations closed, and employees temporarily furloughed.	4	4	16

Occasional delay or interruption of rail, river and terminals service may be expected. The operator can possibly minimize the impact of delays by being a preferred customer by fulfilling shipment obligations promptly and maintaining close working relationships. Multiple shipment means (rail and barge) help minimize this risk.



Table 22-9: Transportation (Risk 7)

Aspect	Impact	Control Measures	Initial Risk Level			Mitigation Measures	Residual Risk Level		
			P	C	R		P	C	R
Rail or river transport is delayed; storage and shipping access at river and ocean terminals is not available.	Fulfillment of coal sales agreements delayed; limited coal storage at mines may increase cost of rehandling; production may be temporarily idled.	Provide adequate storage capacity at mines; coordinate continuously with railroad and shipping companies to respond quickly and effectively to changing circumstances.	2	3	6	Provide back-up storage facility along with personnel, equipment and rehandle plan to sustain production and fulfill sales obligations timely. Utilize multiple methods of transportation (rail & barge)	1	2	2

22.2.8.5 Mining Plan

Occupational health and safety risks are inherent in mining operations. Comprehensive training and retraining programs, internal safety audits and examinations, regular mine inspections, safety meetings, along with support of trained fire brigades and mine-rescue teams are among activities that greatly reduce accident risks. Employee health-monitoring programs coupled with dust and noise monitoring and abatement reduce health risks to miners.

As underground mines are developed and extended, observation of geological, hydrogeological and geotechnical conditions leads to modification of mine plans and procedures to enable safe work within the mine environment.

Highlighted below are selected examples of safety and external factors relevant to Warrior Met operations.

22.2.8.5.1 Methane Management

Coalbed methane is present in coal operations below drainage. Often the methane concentration in shallow coal seams is at such low levels that it can be readily managed with frequent testing and monitoring, vigilance, and routine mine ventilation. Very high methane concentrations may be present at greater depths, as experienced in the Mary Lee and Blue Creek seams at the Mine No. 4 Complex in Alabama. High methane concentrations may require degasification of the coal seams to assure safe mining. Mine No. 4 has operated safely for many years in one of the most intense methane environments in the United States through careful management of coal seam methane via multiple practices. These practices include degasification ahead of mining, gob degasification and mine-ventilation procedures. Additionally, Warrior Met reports that it utilizes combustion units on gob wells to reduce methane emissions. Warrior Met captures a significant amount of gob gas which is sold directly or upgraded to saleable quality through the use of a gas processing facility. These capturing practices eliminate a portion of the operation’s direct methane emissions via the combustion of methane and the generation of pipeline quality gas.

Table 22-10: Methane Management (Risk 8)

Aspect	Impact	Control Measures	Initial Risk Level			Mitigation Measures	Residual Risk Level		
			P	C	R		P	C	R
Methane hazard is present in mines operating below drainage.	Injury or loss of life; possible ignition of gas and mine explosion; potential loss of mine and equipment temporarily or permanently; additional mine fan, mine power, ventilation, monitoring and examination requirements.	Low to moderate levels can be managed with frequent examinations, testing and monitoring within the mine ventilation system. Excellent rock dust maintenance minimizes explosion propagation risk should an ignition occur.	2	5	10	Very high-level methane concentrations may require coal seam degasification and gob degasification if longwall or pillar extraction methods are employed.	1	5	5

22.2.8.5.2 Mine Fires

Mine fires, once common at mine operations, are rare today. Most active coal miners have not encountered a mine fire. Vastly improved mine power and equipment electrical systems, along with safe mine practices, reduce mine fire risks. Crew training and fire brigade support and training improve response for containment and control if a fire occurs. Spontaneous combustion within coal mines, which is the source of most fires that occur today, is not expected to occur at Mine No. 4.

Table 22-11: Mine Fires (Risk 9)

Aspect	Impact	Control Measures	Initial Risk Level			Mitigation Measures	Residual Risk Level		
			P	C	R		P	C	R
Mine fire at underground or operation.	Injury or loss of life; potential loss of mine temporarily or permanently; damage to equipment and mine infrastructure.	Inspection and maintenance of mine power, equipment and mine infrastructure; good housekeeping; frequent examination of conveyor belt entries; prompt removal of accumulations of combustible materials.	1	5	5	If spontaneous combustion conditions are present, enhanced monitoring and examination procedures will be implemented; mine design will incorporate features to facilitate isolation, containment and extinguishment of spontaneous combustion locations.	1	5	5

22.2.8.5.3 Availability of Supplies and Equipment

The industry has periodically experienced difficulty receiving timely delivery of mine supplies and equipment. Availability issues often accompanied boom periods for coal demand. Any future delivery of supplies and equipment delays are expected to be temporary with limited impact on production.



Table 22-12: Availability of Supplies and Equipment (Risk 10)

Aspect	Impact	Control Measures	Initial Risk Level			Mitigation Measures	Residual Risk Level		
			P	C	R		P	C	R
Disruption of availability for supplies and equipment.	Temporary interruption of production.	Force majeure provision in coal sales agreements to limit liability for delayed or lost sales.	3	2	6	Work closely with customers to assure delayed coal delivery rather than cancelled sales; monitor external conditions and increase inventory of critical supplies; accelerate delivery of equipment when possible.	3	1	3

22.2.8.5.4 Labor

Work stoppage due to labor protests are considered unlikely and are accompanied by limited impact should it occur. Excellent employee relations and communications limit the exposure to outside protesters. Loss of supervisors and skilled employees to retirement is inevitable; the impact can be lessened with succession planning and training and training and mentorship of new employees.

Table 22-13: Labor – Work Stoppage (Risk 11)

Aspect	Impact	Control Measures	Initial Risk Level			Mitigation Measures	Residual Risk Level		
			P	C	R		P	C	R
Work stoppage due to strikes, slowdowns or secondary boycott activity.	Loss of production and coal sales; damaged customer and employee relations; reputation loss.	Maintain excellent employee relations and communications; maintain frequent customer communications. Train salary employees for hourly tasks in case of long-term strike.	4	4	16	Develop plan for employee communications and legal support to minimize impact of secondary boycott activities.	4	3	12

Table 22-14: Labor – Retirement (Risk 12)

Aspect	Impact	Control Measures	Initial Risk Level			Mitigation Measures	Residual Risk Level		
			P	C	R		P	C	R
Retirement of supervisors and skilled employees.	Loss of leadership and critical skills to sustain high levels of safety, maintenance and productivity.	Monitor demographics closely and maintain communications with employees who are approaching retirement age; maintain employee selection and training programs.	3	3	9	Maintain selection of candidates and implementation of in-house or third-party training for electricians and mechanics; develop employee mentoring program.	3	2	6



23 Recommendations

Warrior Met is continuing to work both internally and with outside assistance to further define their resource base and to optimize the LOM plan. MM&A recommends continued exploration to better define thickness, mineability and quality trends. Continued lease and property acquisition is recommended to further increase the coal reserve base and potentially increase the LOM plan.

24 References

1. Various sources of geological information, including a digital exploration database, coal quality laboratory information, drillers' and geologists' logs, and geophysical logs.
2. Various engineering, permitting and mine plans as presented to MM&A by Warrior Met.
3. Various previous engineering and reserve reports conducted on behalf of Warrior Met by MM&A.
4. Publicly available information from various State and Federal agencies.
5. Various mapping information obtained via the public domain.

25 Reliance on Information Provided by Registrant

The qualified persons responsible for the development of this TRS have relied upon information provide by Warrior Met, including:

1. **Marketing Information**, including sales forecasts coal and transportation costs.
2. **Legal Matters**, including mineral and surface-based land and tenure.
3. **Environmental Matters**, including permit status and refuse disposal plans and associated volumes.

APPENDIX

A

RESERVE TABLE



Warrior Met Coal, LLC

Mines #4 Evaluation

Underground Mineable Reserves as of December 31, 2022

Appendix A - Table 1 (Metric Tonnes)



Moisture	30%	Washed recoverable tons shown on 10.0% moisture basis
Preparation Plant Efficiency	100%	Included in Wash Recovery*

Mine #4	Seam	Tons/ Acre-ft.	Wash Recovery*	Resource Thickness		Resource Acres			In Place Tonnes			Clean, Moist, Demonstrated Tonnes		
				Measured	Indicated	Measured	Indicated	Total	Measured	Indicated	Total	Proven	Probable	Total
Area 5 East (Leased)														
Continuous Mining	ML + BC	1,930	78.91%	5.30	0.00	222	0	222	2,059,637	0	2,059,637	101,125	0	101,125
Longwall Mining	ML + BC	1,930	78.91%									1,472,445	0	1,472,445
Total				5.30	0.00				2,059,637	0	2,059,637	1,573,570	0	1,573,570
Area 5 North (Leased)														
Continuous Mining	ML	1,930	83.75%	1.35	1.59	6,986	90	7,076	16,457,443	251,154	16,708,597	1,488,958	22,738	1,511,696
Longwall Mining	ML	1,930	83.75%									9,405,220	146,077	9,551,296
Continuous Mining	BC	1,930	78.51%	3.47	3.66	6,986	90	7,076	42,409,792	579,274	42,989,066	3,623,555	52,994	3,676,549
Longwall Mining	BC	1,930	78.51%									22,618,765	317,368	22,936,133
Total				4.81	5.24				58,867,235	830,428	59,697,663	37,136,499	539,177	37,675,675
Adverse														
Continuous Mining	ML	1,930	83.75%	1.33	1.35	1,238	40	1,278	2,891,815	93,767	2,985,582	344,836	6,428	351,264
Longwall Mining	ML	1,930	83.75%									1,436,637	59,959	1,496,597
Continuous Mining	BC	1,930	78.51%	2.74	2.42	1,238	40	1,278	5,943,604	168,319	6,111,923	675,820	11,062	686,882
Longwall Mining	BC	1,930	78.51%									2,840,804	103,154	2,943,958
Total				4.08	3.76				8,835,419	262,086	9,097,505	5,298,097	180,604	5,478,701
Grand Total														
Continuous Mining - ML+BC						222	0	222	2,059,637	0	2,059,637	101,125	0	101,125
Longwall Mining - ML+BC												1,472,445	0	1,472,445
Continuous Mining - ML_Only						6,986	90	7,076	16,457,443	251,154	16,708,597	1,488,958	22,738	1,511,696
Longwall Mining - ML_Only												9,405,220	146,077	9,551,296
Continuous Mining - BC_Only						6,986	90	7,076	42,409,792	579,274	42,989,066	3,623,555	52,994	3,676,549
Longwall Mining - BC_Only												22,618,765	317,368	22,936,133
Total									60,926,871	830,428	61,757,299	38,710,069	539,177	39,249,245
Owned									0	0	0	0	0	0
Leased									60,926,871	830,428	61,757,299	38,710,069	539,177	39,249,245
Total									60,926,871	830,428	61,757,299	38,710,069	539,177	39,249,245
Adverse														
									8,835,419	262,086	9,097,505	5,298,097	180,604	5,478,701

*Average total seam thickness by mine

Definitions: Total seam is the thickness of coal and non-coal partings from the top to the base of the seam, excluding the middleman.

Wash recovery is estimated via a plant simulation utilizing multi-gravity data available to target a 10.2% ash product, from exploration data and MM&A's experience in the subject coal horizons.

APPENDIX

B

MARKET MEMORANDUM PROVIDED BY WARRIOR MET



Key price expectations (nominal US dollars)															
Price	Description	Basis	Q1 2022 average	Q2 2022	Q3 2022	Q4 2022	2022	2023	2024	2025	2026	2027	2028	2029	2030
MCC1	Low vol PHCC	FOB Australia	412	303	234	180	281	159	160	160	165	182	188	192	195
MCC1	Upside case			403	284	230	230	179	170	170	175	192	198	202	205
MCC1	Downside case			293	224	170	172	149	150	150	155	172	178	182	185
MCC2	Mid vol PHCC	FOB Australia	416	306	238	184	285	153	154	154	159	176	182	186	189
MCC3	2nd tier HCC	FOB Australia	368	270	209	161	251	139	140	140	145	162	168	172	175
MCC4	Low vol PHCC	CFR China	375	326	254	194	287	174	175	175	180	197	203	207	210
MCC5	Mid vol PHCC	CFR China	370	321	249	191	282	168	169	169	174	191	197	201	204
MCC6	2nd tier HCC	CFR China	353	305	237	182	268	159	160	160	165	182	188	192	195
MCC7	US high vol B	FOB USEC	340	273	220	165	249	134	135	135	140	157	163	167	170
MCC8	US high vol A	FOB USEC	377	300	241	176	273	150	151	151	156	173	179	183	186
MCC9	US mid vol	FOB USEC	370	298	236	177	270	151	152	152	157	174	180	184	187
MCC10	US low vol	FOB USEC	362	297	231	174	278	153	154	154	159	176	182	186	189
	Australian low-vol PCI	FOB Australia	289	207	160	133	196	118	118	118	122	132	136	138	140
	Australian SSCC	FOB Australia	251	188	145	124	179	111	113	113	118	128	133	135	137
	Coke Rizhao	FOB China	521	427	366	318	407	299	300	300	305	320	325	329	331

Note: This modeling is based on Chinese restrictions on Australian coal continuing through the end of 2022, an earlier or later end will meaningfully change our outlook, with higher CFR and lower FOB prices. PHCC = Prime hard coking coal, HCC = Hard coking coal, PCI = Pulverized coal injection, SSCC = best-in-class coking coal, quarterly prices are quarterly averages, including current quarter.