

**TURQUOISE HILL RESOURCES LTD.**

**Annual Information Form**

For the year ended  
December 31, 2021

Dated March 2, 2022

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## PRESENTATION OF INFORMATION

Unless otherwise noted, the information contained in this annual information form ("AIF") is given as at or for the year ended December 31, 2021. All references to the "Corporation" and to "Turquoise Hill" herein refer to Turquoise Hill Resources Ltd. and, where the context so requires, includes its subsidiaries.

### SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements made in this AIF, including statements relating to matters that are not historical facts and statements of the Corporation's beliefs, intentions and expectations about developments, results and events which will or may occur in the future, constitute "forward-looking information" within the meaning of applicable Canadian securities legislation and "forward-looking statements" within the meaning of the "safe harbor" provisions of the United States ("U.S.") Private Securities Litigation Reform Act of 1995. Forward-looking statements and information relate to future events or future performance, reflect current expectations or beliefs regarding future events and are typically identified by words such as "anticipate", "believe", "could", "estimate", "expect", "intend", "likely", "may", "plan", "seek", "should", "will" and similar expressions suggesting future outcomes or statements regarding an outlook. These include, but are not limited to, statements and information regarding: the nature of the Corporation's ongoing relationship and interaction with, the Government of Mongolia with respect to the continued operation and development of Oyu Tolgoi as and when the GoM Agreements (as hereinafter defined) are implemented along with the implementation of Resolution 103 (as hereinafter defined); the continuation of undercutting in accordance with the mine plan and design; the actual timing of first sustainable production as well as the lifting of restrictions by the Government of Mongolia on the ability of Oyu Tolgoi LLC to incur any additional indebtedness; the implementation and successful execution of the updated funding plan that is the subject of the A&R HoA (as hereinafter defined), as such agreement may be further amended or restated, and the amount of any additional future funding gap to complete the Oyu Tolgoi project and the availability and amount of potential sources of additional funding required therefor, all as contemplated by the A&R HoA, as well as potential delays in the ability of the Corporation and Oyu Tolgoi LLC to proceed with the funding elements contemplated by the A&R HoA ; liquidity, funding sources and funding requirements in general, in particular until sustainable first production is achieved, including the Corporation's ability to reach agreement with project finance lenders on the re-profiling of existing debt payments in line with current cash flow projections, as well as the Corporation (or a wholly-owned subsidiary) and Oyu Tolgoi LLC entering into a pre-paid copper concentrate sale arrangement; the availability and amount of potential sources of additional funding, including the short-term secured advance to be provided by Rio Tinto to the Corporation under the A&R HoA; the amount by which a successful re-profiling of the Corporation's existing debt would reduce the Corporation's currently projected funding requirements; the Corporation's ability to conduct one or more equity offerings as contemplated by the A&R HoA in light of future and then prevailing market conditions; the expectations set out in the 2020 OTTR (as hereinafter defined); the timing and amount of future production and potential production delays; statements in respect of the impacts of any delays on achieving first sustainable production and on the Corporation's cash flows; expected copper and gold grades; the merits of the class action complaints filed against the Corporation in October 2020 and January 2021, respectively; the merits of the defence and counterclaim filed by the Government of Mongolia in the international tax arbitration brought by Oyu Tolgoi LLC and the likelihood of the parties being able to amicably resolve the ongoing tax issues; the timing of studies, announcements and analyses; the status of underground development, including any slowdown of work; the causes of the increase in costs and schedule extension of the underground development; the mine design for Panel 0 of Hugo North Lift 1 and the related cost and production schedule implications; the

re-design studies for Panels 1 and 2 of Hugo North Lift 1 and the possible outcomes, content and timing thereof; expectations regarding the possible recovery of ore in the two structural pillars, to the north and south of Panel 0; the possible progression of a SOPP (as hereinafter defined) and related amendments to the PSFA (as hereinafter defined), as amended, as well as power purchase agreements and extensions thereto; finalization of an agreement with IMPIC on extension of the current power import arrangements; the timing of construction and commissioning of the potential SOPP; sources of interim power; the continuing impact of COVID-19, including any restrictions imposed by health or governmental authorities relating thereto on the Corporation's business, operations and financial condition, as well as delays and the development cost impacts of delays caused by the COVID-19 pandemic; the Corporation's ability to operate sustainably, its community relations and its social licence to operate in Mongolia; capital and operating cost estimates; mill and concentrator throughput; anticipated business activities, planned expenditures, corporate strategies, and other statements that are not historical facts.

Forward-looking statements and information are made based upon certain assumptions and other important factors that, if untrue, could cause the actual results, performance or achievements of the Corporation to be materially different from future results, performance or achievements expressed or implied by such statements or information. There can be no assurance that such statements or information will prove to be accurate. Such statements and information are based on numerous assumptions regarding present and future business strategies, local and global economic conditions, and the environment in which the Corporation will operate in the future, including the price of copper, gold and silver; projected gold, copper and silver grades; anticipated capital and operating costs; anticipated future production and cash flows; the anticipated location of certain infrastructure in Hugo North Lift 1 and sequence of mining within and across panel boundaries; the nature of the Corporation's ongoing relationship and interaction with the Government of Mongolia with respect to the continued operation and development of Oyu Tolgoi as and when the GoM Agreements are implemented along with the implementation of Resolution 103; the continuation of undercutting in accordance with the mine plan and design; the actual timing of first sustainable production as well as the lifting of restrictions by the Government of Mongolia on the ability of Oyu Tolgoi LLC to incur any additional indebtedness; the availability and timing of required governmental and other approvals for the construction of the SOPP; the ability of the Government of Mongolia to finance and procure the SOPP within the timeframes anticipated in the PSFA, as amended, subject to ongoing discussions relating to a standstill period; finalization of an agreement with IMPIC on an extension of the current power import arrangements; the eventual pre-payment arrangement between the Corporation (or a wholly-owned subsidiary) and Oyu Tolgoi LLC; the implementation and successful execution of the updated funding plan that is the subject of the A&R HoA, as such agreement may be further amended and restated; the Corporation's ability to operate sustainably, its community relations and its social licence to operate in Mongolia; and the amount of any additional future funding gap to complete the Oyu Tolgoi project and the availability and amount of potential sources of additional funding required therefor.

Certain important factors that could cause actual results, performance or achievements to differ materially from those in the forward-looking statements and information include, among others: copper, gold and silver price volatility; discrepancies between actual and estimated production; mineral reserves and resources and metallurgical recoveries; development plans for processing resources; public health crises such as COVID-19; matters relating to proposed exploration or expansion; mining operational and development risks, including geotechnical risks and ground conditions; litigation risks, including the outcome of the class action complaints filed against the Corporation; the outcome of the international arbitration proceedings, including the likelihood of the parties being able to amicably resolve the

ongoing tax issues; regulatory restrictions (including environmental regulatory restrictions and liability); Oyu Tolgoi LLC or the Government of Mongolia's ability to deliver a domestic power source for the Oyu Tolgoi project within the required contractual time frame; the Corporation's ability to operate sustainably, its community relations, and its social licence to operate in Mongolia; activities, actions or assessments, including tax assessments, by governmental authorities; events or circumstances (including public health crises strikes, blockades or similar events outside of the Corporation's control) that may affect the Corporation's ability to deliver its products in a timely manner; currency fluctuations; the speculative nature of mineral exploration; the global economic climate; global climate change; dilution; share price volatility; competition; loss of key employees; cyber security incidents; additional funding requirements, including in respect of the development or construction of a long-term domestic power supply for the Oyu Tolgoi project; capital and operating costs, including with respect to the development of additional deposits and processing facilities; defective title to mineral claims or property; and human rights requirements. Although the Corporation has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements and information, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. All such forward-looking statements and information are based on certain assumptions and analyses made by the Corporation's management in light of their experience and perception of historical trends, current conditions and expected future developments, as well as other factors management believes are reasonable and appropriate in the circumstances. These statements, however, are subject to a variety of risks and uncertainties and other factors that could cause actual events or results to differ materially from those projected in the forward-looking statements or information.

With respect to specific forward-looking information concerning the continued operation and development of the Oyu Tolgoi project, the Corporation has based its assumptions and analyses on certain factors which are inherently uncertain. Uncertainties and assumptions include, among others: the nature of the Corporation's ongoing relationship and interaction with the Government of Mongolia with respect to the continued operation and development of Oyu Tolgoi as and when the GoM Agreements are implemented along with the implementation of Resolution 103; the continuation of undercutting in accordance with the mine plan and design; the approval or non-approval by the Oyu Tolgoi LLC board of directors of any future necessary additional investment, and the likely consequences on the timing and overall economic value of the Oyu Tolgoi project, including slowdown on the underground development and significant delays to first sustainable production; the timing and cost of the construction and expansion of mining and processing facilities; the timing and availability of a long-term domestic power source (or the availability of financing for the Corporation or the Government of Mongolia to construct such a source) for Oyu Tolgoi; the implementation and successful execution of the updated funding plan that is the subject of the A&R HoA, as such agreement may be further amended or restated, and the amount of any additional future funding gap to complete the Oyu Tolgoi project and the availability and amount of potential sources of additional funding required therefor; the eventual pre-payment arrangement between the Corporation (or a wholly-owned subsidiary) and Oyu Tolgoi LLC; the potential impact of COVID-19, including any restrictions imposed by health and governmental authorities relating thereto, as well as the development cost impacts of delays caused by the COVID-19 pandemic; the Corporation's ability to operate sustainably, its community relations and its social licence to operate in Mongolia; the impact of changes in, changes in interpretation to or changes in enforcement of, laws, regulations and government practices in Mongolia; the availability and cost of skilled labour and transportation; the obtaining of (and the terms and timing of obtaining) necessary environmental and other government approvals, consents and permits; delays and the costs which would result from delays,

including delays caused by COVID-19 restrictions and impacts and related factors, in the development of the underground mine (which could significantly exceed the costs projected in the 2020 OTTR); projected copper, gold and silver prices and their market demand; and production estimates and the anticipated yearly production of copper, gold and silver at Oyu Tolgoi.

The cost, timing and complexities of mine construction and development are increased by the remote location of a property such as Oyu Tolgoi. It is common in mining operations and in the development or expansion of existing facilities to experience unexpected problems and delays during development, construction and mine start-up. Additionally, although Oyu Tolgoi has achieved commercial production, there is no assurance that future development activities will result in profitable mining operations.

This AIF also contains references to estimates of mineral reserves and mineral resources. The estimation of reserves and resources is inherently uncertain and involves subjective judgments about many relevant factors. The mineral resource estimates contained in this AIF are exclusive of mineral reserves. Further, mineral resources that are not mineral reserves do not have demonstrated economic viability. The accuracy of any such estimates is a function of the quantity and quality of available data, and of the assumptions made and judgments used in engineering and geological interpretation (including future production from Oyu Tolgoi, the anticipated tonnages and grades that will be achieved or the indicated level of recovery that will be realised), which may prove to be unreliable. There can be no assurance that these estimates will be accurate or that such mineral reserves and mineral resources can be mined or processed profitably. Such estimates are, in large part, based on the following:

- Interpretations of geological data obtained from drill holes and other sampling techniques. Large scale mineral continuity and character of the deposits can be improved with additional drilling and sampling; actual mineralization or formations may be different from those predicted. It may also take many years from the initial phase of drilling before production is possible, and during that time the economic feasibility of exploiting a deposit may change. Reserve and resource estimates are materially dependent on prevailing metal prices and the cost of recovering and processing minerals at the individual mine sites. Market fluctuations in the price of metals or increases in the costs to recover metals or the actual recovery percentage of the metal(s) from the Corporation's mining projects may render mining of mineral reserves uneconomic and affect the Corporation's operations in a materially adverse manner. Moreover, various short-term operating factors may cause a mining operation to be unprofitable in any particular accounting period;
- Assumptions relating to commodity prices and exchange rates during the expected life of production, mineralization of the area to be mined, the projected cost of mining, and the results of additional planned development work. Actual future production rates and amounts, revenues, taxes, operating expenses, environmental and regulatory compliance expenditures, development expenditures, and recovery rates may vary substantially from those assumed in the estimates. Any significant change in these assumptions, including changes that result from variances between projected and actual results, could result in material downward revision to current estimates;
- Assumptions relating to projected future metal prices. The Corporation uses prices reflecting market pricing projections in the financial modelling for Oyu Tolgoi which are subjective in nature. It should be expected that actual prices will be different than the prices used for such modelling (either higher or lower), and the differences could be significant; and

- Assumptions relating to the costs and availability of treatment and refining services for the metals mined from Oyu Tolgoi, which require arrangements with third parties and involve the potential for fluctuating costs to transport the metals and fluctuating costs and availability of refining services. These costs can be significantly impacted by a variety of industry-specific as well as regional and global economic factors (including, among others, those which affect commodity prices). Many of these factors are beyond the Corporation's control.

In addition, see "Cautionary Note to U.S. Investors" in this respect.

Readers are cautioned not to place undue reliance on forward-looking information or statements. By their nature, forward-looking statements involve numerous assumptions, inherent risks and uncertainties, both general and specific, which contribute to the possibility that the predicted outcomes will not occur. Events or circumstances could cause the Corporation's actual results to differ materially from those estimated or projected and expressed in, or implied by, these forward-looking statements. Important factors that could cause actual results to differ from these forward-looking statements are included in the "Risk Factors" section of this AIF.

Readers are further cautioned that the list of factors enumerated in the "Risk Factors" section of this AIF that may affect future results is not exhaustive. When relying on the Corporation's forward-looking statements and information to make decisions with respect to the Corporation, investors and others should carefully consider the foregoing factors and other uncertainties and potential events. Furthermore, the forward-looking statements and information contained in this AIF are made as of the date of this document and the Corporation does not undertake any obligation to update or to revise any of the included forward-looking statements or information, whether as a result of new information, future events or otherwise, except as required by applicable law. The forward-looking statements and information contained in this AIF are expressly qualified by this cautionary statement.

## **CAUTIONARY NOTE TO U.S. INVESTORS**

This AIF has been prepared in accordance with the requirements of Canadian securities laws, which differ from the requirements of U.S. securities laws. Unless otherwise indicated, all reserve and resource estimates included in this AIF have been prepared in accordance with Canadian NI 43-101, and the CIM (Canadian Institute of Mining, Metallurgy and Petroleum) Definition Standards for Mineral Resources and Mineral Reserves adopted by CIM Council on May 19, 2014 (the "CIM Definition Standards"). NI 43-101 is a rule developed by the Canadian Securities Authorities that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. NI 43-101 differs significantly from the disclosure requirements of the SEC generally applicable to U.S. companies. For example, the terms "mineral reserve", "proven mineral reserve", "probable mineral reserve", "mineral resource", "measured mineral resource", "indicated mineral resource", and "inferred mineral resource" are defined in NI 43-101. These definitions differ from the definitions in the disclosure requirements promulgated by the SEC. Accordingly, information concerning mineral deposits set forth herein may not be comparable with information made public by companies that report in accordance with SEC disclosure requirements.



## INTERPRETATION INFORMATION

### Currency and Exchange Rates

In this AIF, all dollar amounts are quoted in U.S. dollars unless otherwise indicated. References to "\$" and "US\$" are to U.S. dollars and, references to "C\$" are to Canadian dollars and references to "A\$" are to Australian dollars.

The Bank of Canada daily exchange rates for the conversion of one U.S. dollar into Canadian dollars were as follows during the indicated periods:

(Stated in C\$)

	<b>Year Ended December 31,</b>	
	<b>2021</b>	<b>2020</b>
End of period	1.2678	1.2732
High for the period	1.2942	1.4496
Low for the period	1.2040	1.2718
Average for the period	1.2535	1.3415

The Bank of Canada daily exchange rate on March 1, 2022 for the conversion of U.S. dollars into Canadian dollars was \$1.00 equals C\$1.2708 (one Canadian dollar on that date equalled \$0.7869).

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## Definitions

In this AIF, unless there is something in the subject matter or context inconsistent therewith, the following terms have the meanings assigned to them below. Other capitalised terms used in this AIF and defined elsewhere in the text of this AIF shall have the definitions assigned to such terms elsewhere in this AIF and, unless otherwise indicated, shall have such meaning throughout this AIF. Certain other scientific and technical terms and abbreviations used in this AIF are defined under the section heading "Interpretation Information – Glossary of Technical Terms and Abbreviations".

<b>"2020 OTTR"</b>	means the technical report titled "Oyu Tolgoi 2020 Technical Report" prepared in accordance with the requirements of NI 43-101 by M. Thomas (FAusIMM) and R. Carlson (MAIG RPGeo) of AMC Consultants Pty Ltd and J. Dudley (FAusIMM) (Chief Operating Officer, Turquoise Hill) and R. Kolkert (FAusIMM) (Director, Resources & Exploration of Turquoise Hill) with an effective date of June 30, 2020.
<b>"A&amp;R HoA"</b>	means the Amended and Restated Heads of Agreement dated as of January 24, 2022 between the Corporation and RTIH.
<b>"ARSHA"</b>	means the Amended and Restated Shareholders' Agreement dated June 8, 2011 among Oyu Tolgoi LLC, THR Oyu Tolgoi Ltd. (formerly Ivanhoe Oyu Tolgoi (BVI) Ltd.), Oyu Tolgoi Netherlands B.V. and Erdenes MGL LLC.
<b>"Board of Directors"</b>	means the board of directors of the Corporation, as constituted from time to time.
<b>"Canadian Securities Authorities"</b>	means the securities commissions or similar securities regulatory authorities in the various provinces and territories of Canada.
<b>"Commercial Production"</b>	means the first day of the month following the month in which regular shipments to customers first occurred after achievement of 70% of planned concentrator throughput for a continuous period of 30 days, based on design capacity at that stage of construction for Oyu Tolgoi, and was achieved in September 2013.
<b>"Common Shares"</b>	means common shares in the capital of the Corporation.
<b>"Definitive Estimate"</b>	means the confirmatory analysis of the underground project costs and schedule contained in MSS20.
<b>"Entrée Earn-in Agreement"</b>	means the equity participation and earn-in agreement dated October 15, 2004, as amended on November 9, 2004, between Entrée and the Corporation.
<b>"Entrée"</b>	means Entrée Resources Ltd., formerly known as Entrée Gold Inc.
<b>"Entrée Joint Venture"</b>	means the joint venture between Oyu Tolgoi LLC and Entrée contemplated by the Entrée Earn-in Agreement in respect of a portion of the Hugo North Extension in which (i) Oyu Tolgoi LLC holds an 80% interest and Entrée holds a 20% interest in minerals below 560 m, and (ii) Oyu Tolgoi LLC holds a 70% interest and Entrée holds a 30% interest in minerals above 560 m.

<b>"Erdenes"</b>	means either Erdenes MGL LLC or Erdenes Oyu Tolgoi LLC, as the context requires, each a company owned by the Government of Mongolia.
<b>"Government of Mongolia"</b>	means the political apparatus of Mongolia at the local, regional and/or national levels, as the context requires.
<b>"Heruga"</b>	means the Heruga mineral deposit of Oyu Tolgoi.
<b>"Hugo Dummett Deposits"</b>	means collectively, the Hugo North and the Hugo South mineral deposits of Oyu Tolgoi, including the Hugo North Extension zone.
<b>"Hugo North"</b>	means the Hugo North mineral deposit of Oyu Tolgoi.
<b>"Hugo North Extension"</b>	means the Hugo North Extension zone of Oyu Tolgoi, representing the extension of the Hugo Dummett Deposits into the area that is the subject of the Entrée Joint Venture.
<b>"Hugo South"</b>	means the Hugo South mineral deposit of Oyu Tolgoi.
<b>"IMPIC"</b>	means the Inner Mongolia Power International Corporation.
<b>"Investment Agreement"</b>	means the Investment Agreement dated October 6, 2009 among the Government of Mongolia, Oyu Tolgoi LLC, the Corporation and RTIH in respect of Oyu Tolgoi.
<b>"LIBOR"</b>	means the London Interbank Offered Rate, the rate charged by one bank to another for lending money.
<b>"MD&amp;A"</b>	means the Corporation's Management's Discussion and Analysis of Financial Condition and Results of Operations for the year ended December 31, 2021.
<b>"MSS16"<sup>1</sup></b>	means the statutory study prepared by Oyu Tolgoi LLC in accordance with Mongolian laws in March 2015, as subsequently updated by Oyu Tolgoi LLC with the Mongolian Minerals Council in August 2015 and completed in May 2016.
<b>"MSS20"<sup>2</sup></b>	means the 2020 statutory study required pursuant to, and prepared by Oyu Tolgoi LLC in accordance with Mongolian laws and filed with the Mongolian Minerals Council in 2021.
<b>"NI 43-101"</b>	means National Instrument 43-101 – <i>Standards of Disclosure for Mineral Projects</i> .
<b>"NPTG"</b>	means the National Power Transmission Grid of Mongolia.
<b>"NSR"</b>	means net smelter return.
<b>"NYSE"</b>	means the New York Stock Exchange.

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<sup>1</sup> Note to readers: This was previously referred to as the 2016 Feasibility Study. MSS16 is neither a "feasibility study" within the meaning of NI 43-101 nor as defined under the CIM Definition Standards.

<sup>2</sup> Note to readers: This was previously referred to as OTFS20. MSS20 is neither a "feasibility study" within the meaning of NI 43-101 nor as defined under the CIM Definition Standards.

<b>"Oyu Tolgoi LLC"</b>	means Oyu Tolgoi LLC, formerly Ivanhoe Mines Mongolia Inc. LLC.
<b>"Oyu Tolgoi"</b>	means the Corporation's copper and gold project located in the Southern Gobi region of Mongolia, which is being developed by Oyu Tolgoi LLC, and consists of a series of deposits containing copper, gold, silver and molybdenum, including the Oyu open pit mine and/or underground development, as the context requires.
<b>"Oyu Tolgoi Project Financing"</b>	means project financing for the development of Oyu Tolgoi.
<b>"Oyu Tolgoi Shareholder Holdcos"</b>	means THR Oyu Tolgoi Ltd. (formerly Ivanhoe Oyu Tolgoi (BVI) Ltd.) and Oyu Tolgoi Netherlands B.V., the two indirect, wholly-owned subsidiaries through which the Corporation holds its interest in Oyu Tolgoi LLC.
<b>"Oyut"</b>	means the open pit mineral deposit at Oyu Tolgoi.
<b>"Preferred Shares"</b>	means preferred shares in the capital of the Corporation.
<b>"Project Finance Facility"</b>	means the \$4.4 billion project signed by Oyu Tolgoi LLC in December 2015 to support the underground development programme. The Project Finance Facility was provided by a syndicate of international financial institutions and export credit agencies representing the governments of Canada, the U.S. and Australia, along with fifteen commercial banks.
<b>"PSCA"</b>	means the Power Sector Cooperation Agreement entered into by Oyu Tolgoi LLC and the Government of Mongolia in August 2014 for the exploration of a Tavan Tolgoi-based independent power producer.
<b>"PSFA"</b>	means the Power Source Framework Agreement entered into in December 2018 between Oyu Tolgoi LLC and the Government of Mongolia which initially provided a binding framework and pathway forward for the construction of the TTPP Project, as amended on June 18, 2020, to prioritise at such time progression of a SOPP.
<b>"Resolution 92"</b>	means a resolution passed by the Parliament of Mongolia in November 2019 mandating the Government of Mongolia to take necessary measures to ensure the benefits to Mongolia of Oyu Tolgoi, including comprehensive measures to improve the implementation of the Investment Agreement.
<b>"Resolution 103"</b>	means a resolution passed by the Parliament of Mongolia in December 2021 to resolve the outstanding issues among the Corporation, Rio Tinto and the Government of Mongolia in relation to the implementation of Resolution 92.
<b>"Rio Tinto"</b>	means, collectively, Rio Tinto plc and its affiliates or, where appropriate, one of its affiliates, excluding the Turquoise Hill Group.
<b>"RTIH"</b>	means Rio Tinto International Holdings Limited, a corporation incorporated under the laws of England and Wales and a member of Rio Tinto, and where the context requires, also refers to its subsidiaries, 46117 Yukon Inc. and 535630 Yukon Inc.
<b>"RTSEA"</b>	means Rio Tinto South East Asia Limited, an affiliate of RTIH.
<b>"SEC"</b>	means the United States Securities and Exchange Commission.

<b>"SOPP"</b>	means a state-owned power plant.
<b>"TTPP Project"</b>	means the Tavan Tolgoi Power Plant project.
<b>"Turquoise Hill Group"</b>	means, collectively, Turquoise Hill and its subsidiaries or a group of subsidiaries, as the context requires.
<b>"TSX"</b>	means the Toronto Stock Exchange.
<b>"UDP"</b>	means the Oyu Tolgoi Underground Mine Development and Financing Plan dated May 18, 2015 among the Government of Mongolia, Erdenes, Turquoise Hill, THR Oyu Tolgoi Ltd., Oyu Tolgoi Netherlands B.V., RTIH and Oyu Tolgoi LLC.
<b>"YBCA"</b>	means the <i>Business Corporations Act</i> (Yukon).

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### Conversion Factors

For ease of reference, the following conversion factors are provided:

<b>Imperial Measure</b>	<b>=</b>	<b>Metric Unit</b>	<b>Metric Unit</b>	<b>=</b>	<b>Imperial Measure</b>
2.471 acres		1 ha	0.405 ha		1 acre
3.280 feet		1 m	0.305 m		1 foot
0.621 miles		1 km	1.609 km		1 mile
0.032 ounces (troy)		1 gram	31.104 grams		1 ounce (troy)
2.205 pounds		1 kilogram	0.454 kilograms		1 pound
1.102 tons (short)		1 tonne	0.907 tonnes		1 ton (short)
0.029 ounces (troy)/ton		1 gram/tonne	34.286 grams/tonne		1 ounce (troy)/ton

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### Glossary of Technical Terms and Abbreviations

Certain scientific and technical terms and abbreviations used in this AIF are defined in the glossary of technical terms and abbreviations attached as Schedule B to this AIF.

## CORPORATE STRUCTURE

### Name, Address and Incorporation

The Corporation was incorporated under the *Company Act* (British Columbia) on January 25, 1994 under the name 463212 B.C. Ltd. In February 1994, the Corporation changed its name to Indochina Goldfields Ltd. In March 1994, the Corporation increased its authorised capital from 10,000 Common Shares to 100,000,000 Common Shares and created 100,000,000 Preferred Shares. In February 1995, the Corporation was continued under the YBCA. In July 1997, the Corporation increased its authorised capital to an unlimited number of Common Shares and an unlimited number of Preferred Shares. In June 1999, the Corporation changed its name to "Ivanhoe Mines Ltd.". In August 2012, the Corporation changed its name to "Turquoise Hill Resources Ltd.".

The Corporation's head office is located at 1 Place Ville-Marie, Suite 3680, Montréal, Québec, H3B 3P2. The Corporation's registered office is located at 300 - 204 Black Street, Whitehorse, Yukon, Canada, Y1A 2M9.

### Inter-Corporate Relationships

The following sets forth, as of the date of this AIF, the name, jurisdiction of incorporation and the voting equity ownership interest of the Corporation in each of the subsidiaries through which the Corporation ultimately owns its interest in Oyu Tolgoi LLC. These subsidiaries are presented in descending order according to the chain of voting equity ownership. Accordingly, the first subsidiary presented in each group is owned directly by the Corporation and the voting equity ownership interest of the Corporation in that subsidiary is shown in the right hand column opposite its name and jurisdiction of incorporation. The voting equity ownership interest shown in respect of each other subsidiary is, except as otherwise indicated, that of the subsidiary listed immediately above it. The Corporation's 66% voting equity ownership in Oyu Tolgoi LLC, which owns Oyu Tolgoi, the Corporation's only material property as of the date of this AIF, is held between two groups of subsidiaries.

#### *Oyu Tolgoi LLC Group One Subsidiaries*

<b><u>Name of Subsidiary</u></b>	<b><u>Jurisdiction of Incorporation</u></b>	<b><u>Voting Equity Ownership Interest</u></b>
THR Delaware Holdings, LLC	Delaware	100%
THR Aruba Holdings LLC A.V.V. (formerly Ivanhoe Mines Aruba Holdings LLC A.V.V.)	Aruba	100%
THR Oyu Tolgoi Ltd. (formerly Ivanhoe Oyu Tolgoi (BVI) Ltd.)	British Virgin Islands	100%
Oyu Tolgoi LLC	Mongolia	0.1%

### *Oyu Tolgoi LLC Group Two Subsidiaries*

<b><u>Name of Subsidiary</u></b>	<b><u>Jurisdiction of Incorporation</u></b>	<b><u>Voting Equity Ownership Interest</u></b>
THR Mines (BC) Ltd. (formerly Ivanhoe OT Mines Ltd.)	British Columbia	100%
Turquoise Hill Netherlands Coöperatief U.A.	Netherlands	100%
Oyu Tolgoi Netherlands B.V.	Netherlands	100%
Oyu Tolgoi LLC	Mongolia	65.9%

Additional direct and indirect subsidiaries of the Corporation (i) holding, individually, 10% or less, and in the aggregate, 20% or less of the Corporation's consolidated assets, and (ii) generating, individually, 10% or less, and in the aggregate, 20% or less of the Corporation's consolidated sales and operating revenues, in each case, as at and for the year ended December 31, 2021, have been omitted.

## **GENERAL DEVELOPMENT OF THE BUSINESS**

### **Overview**

Turquoise Hill is an international mining company focused on the operation and further development of the Oyu Tolgoi copper-gold mine in southern Mongolia, which is the Corporation's principal and only material mineral resource property. Oyu Tolgoi is held through a 66% interest in Oyu Tolgoi LLC; the remaining 34% interest is held by Erdenes.

### **Three Year History**

#### **2019**

During the fourth quarter of 2018, the Corporation announced that it had carried out its own review of the previously announced Rio Tinto schedule and cost re-forecast for the project that had concluded a delay to sustainable first production was expected from the first quarter of 2021 to the end of the third quarter of 2021. The Corporation's review, with the assistance of the Corporation's independent Qualified Person and mining consultant, OreWin Pty Ltd, found that project cost was expected to remain within the \$5.3 billion budget but that it was likely there would be further delays to individual activities and that this would result in additional delays to sustainable first production.

In March 2019, the Corporation announced that the Corporation's independent review found that the following key risks were developing:

- Shaft 2 equipping delays were due to lower than expected productivity in steel and electrical installation as well as increased quality assurance measures. It was likely the completion date would move beyond the first quarter of 2019 and impact overall underground development rate increases.
- There had been delays to development progress and productivities in key areas. Even though lateral development had experienced consistent overall progress, development of some critical areas, such as the footprint, Primary Crusher 1 system, Shaft 2 and Shaft 5, had been impacted by delays and, with the exception of Shaft 5, were critical path items for the project schedule.

- The Corporation's review indicated that in some areas there was a delay to the critical path from scope growth in mass excavation and additional ground support due to unexpectedly adverse geotechnical conditions. Although the ground support quantities and installation times were less (but not materially less) than planned in MSS16, and ground support quantities were reported as lower than planned, some types of ground support had reduced installation times.

At that time, the Corporation announced that further delays on the Shaft 2 fit-out were expected to contribute to an overall schedule delay to sustainable first production beyond the end of the third quarter of 2021 and that Rio Tinto was studying relocating the ore passes on the footprint and this may modify the initiation sequence within Panel 0.

In March 2019, the Parliamentary press office announced that the report of the Parliamentary Working Group, consisting of 13 Members of Parliament and which was appointed in March 2018 to review the implementation of the Investment Agreement (the "Working Group"), had been submitted to the National Security Council (President, Prime Minister and Speaker of the Parliament).

In April 2019, the Corporation announced that Rio Tinto, as project manager, had advised that the fit-out and commissioning work on Shaft 2 (the main production and services shaft) was expected to be completed by the end of October 2019 and that the Corporation would review the cause and impact of this further delay to Shaft 2.

In May 2019, the Corporation provided an update on the Working Group report. On May 3, 2019, a summary of the Working Group report was received by Oyu Tolgoi and on May 6, 2019, Oyu Tolgoi provided the Economic Standing Committee of the Parliament with a written response to the summary of the Working Group report. As an outcome of the hearing, a new working group of nine Members of Parliament was established to take the Working Group report and draft resolutions directing the Cabinet on recommendations related to Oyu Tolgoi.

In June 2019, the Corporation announced the appointment of Jo-Anne Dudley as Chief Operating Officer, effective June 3, 2019.

In July 2019, the Corporation provided an update on underground development and announced that Turquoise Hill, in conjunction with Rio Tinto, was continuing to review mine design options for the completion of the underground development of the Oyu Tolgoi mine and assess the impact on overall cost and schedule for the underground development. To address stability risks associated with components of the existing mine design, a number of mine design options were under consideration to determine the final design of Panel 0, and this work was then anticipated to continue into early 2020. Based on these options, preliminary estimates indicated that the MSS16 key project milestone of sustainable production could be delayed by 16 to 30 months. This range included contingency of up to eight months reflecting the unexpected and challenging geotechnical issues, complexities in the construction of Shaft 2, and reflected the detailed work still required to reach a more precise estimate. Additionally, the development capital spend for Oyu Tolgoi was expected to increase by \$1.2 to \$1.9 billion over the \$5.3 billion previously disclosed.

In July 2019, the Corporation announced that it expected to need incremental financing to sustain its underground development beyond 2020. Important variables impacting the ultimate amount of additional financing required included: the amount of incremental underground development capital needed, timing of sustainable first production and its resulting cash flows, timing of principal repayments drawn on the project finance facility and the amount of cash flow that can be generated from open-pit operations.



In November 2019, the Corporation announced that a decision had been made to retain a mid-access drive only on the apex level of the mine design of Panel 0. The Corporation also announced that it had put forward a proposal to Rio Tinto as to how best to source the incremental funding necessary to progress underground development over and above its available liquidity which would provide the necessary funds into the first quarter of 2021.

In November 2019, the Corporation announced the completion of the construction of Shaft 2 and that it had entered the final stages of commissioning.

In November 2019, the Corporation provided an update on the Administrative Court proceedings in Mongolia. Early reports suggested that the Administrative Court of first instance had upheld claims by the Darkhan Mongol Nagoon Negdel Non-Governmental Organization that due process was not followed by the Government of Mongolia in finalising the UDP, although the Court's formal written ruling had yet to be released. The Corporation strongly refutes any suggestion that the UDP or any of the foundational Oyu Tolgoi agreements are illegal. Adherence to the principles of the Investment Agreement, ARSHA and the UDP has allowed for the development of the Oyu Tolgoi mine in a manner that has given rise to significant long-term benefits to the people of Mongolia.

Following receipt of the Working Group report by Oyu Tolgoi on May 3, 2019, and provision by Oyu Tolgoi LLC of a written response thereto to the Economic Standing Committee of Parliament on May 6, 2019, a new working group of nine Members of Parliament was established to take the Working Group report and draft resolutions directing the Cabinet on recommendations related to Oyu Tolgoi. Upon completion of such review, a resolution was submitted to the Economic Standing Committee, and subsequently passed in a plenary session of the Parliament of Mongolia on November 21, 2019, as Resolution 92. Resolution 92 was published on December 6, 2019 and included resolutions to take comprehensive measures to improve the implementation of the Investment Agreement and the ARSHA, to improve the UDP and to explore and resolve options to have a product sharing arrangement or swap Mongolia's equity holding of 34 per cent for a special royalty.

## *2020*

In February 2020, the Corporation announced the submission of the Mongolian statutory study for the TTPP Project to the Government of Mongolia by Oyu Tolgoi LLC. See "Agreements with the Government of Mongolia – Investment Agreement – Power Supply".

In February 2020, the Corporation announced that Oyu Tolgoi LLC was unable to reach a resolution of its dispute with the Mongolian Tax Authority with respect to its tax assessment, and was proceeding with the initiation of a formal international arbitration proceeding in accordance with the dispute resolution provisions of the Investment Agreement and the UDP. See "Legal Proceedings".

In February 2020, Shaft 2 was fully commissioned.

In March 2020, the Corporation announced that following the first positive test for COVID-19 in Mongolia, and increasing restrictions imposed by the Government of Mongolia on flights in and out of the country and on the movement of goods and people within and across its borders, it had established the Oyu Tolgoi Business Resiliency Team to take a considered and risk-based approach to managing the Corporation's response to the COVID-19 pandemic, but that there would nonetheless be a slowdown on the underground project, the full impact of which was unknown.

In April 2020, the Corporation announced that the unprecedented circumstances of COVID-19 had impacted underground development of Oyu Tolgoi by restricting access for teams from Oyu Tolgoi LLC, Rio Tinto and construction partners from reaching the project. As a result, Shafts 3 and 4 of Oyu Tolgoi

were placed on care and maintenance until expert service providers could return to site to complete technical commissioning of specialised equipment and commence sinking activities. Work had also slowed on some critical underground material handling infrastructure, in particular the construction of primary crusher one, which had been reduced to day shift activity only, and payload and speed of Shaft 2 were reduced to prolong the ability to use the hoist until specialised personnel could reach Oyu Tolgoi to perform rectification work. Additionally, Oyu Tolgoi LLC notified its project lenders that the COVID-19 pandemic constituted a force majeure event under its project finance facilities, which had the effect of extending the June 30, 2028 project longstop date under those facilities for the duration of the force majeure, and certain suppliers of Oyu Tolgoi declared force majeure on their contracts, although this did not have a material adverse impact on the business.

In June 2020, the Corporation announced that the Government of Mongolia and Oyu Tolgoi LLC reached an agreement to amend the PSFA to reflect joint prioritisation and progression of a SOPP funded and constructed by the Government of Mongolia, in accordance with agreed milestones. See "General Development of the Business – Agreements with the Government of Mongolia – Investment Agreement – Power Supply".

In May 2020, the Corporation announced that the updated Panel 0 mine design was approved. The approved design was based on a block cave method and includes two pillars, one to the north and one to the south of Panel 0. As a result of the updated design, the anticipated delay to the MSS16 key project milestone of sustainable production previously announced in July 2019 was at the time updated to 25 months (with a range of 21 to 29 months) and the anticipated cost overruns were updated to an increase in development capital cost of \$1.5 billion (with a range of \$1.3 to \$1.8 billion), subject to any additional scheduling delays or increases in capital costs arising from the impacts of the COVID-19 pandemic, which could also reduce the available contingency in the estimates.

In July 2020, the Corporation announced that the MSS20 incorporating the new mine design for Hugo North Lift 1 Panel 0 was delivered to the Government of Mongolia. The new design reduces the Mineral Reserve estimate for the Hugo North underground mine due to the inclusion of the two structural pillars, one to the north and one to the south of Panel 0, to protect ore handling infrastructure. The manager of Oyu Tolgoi advised that part of the ore contained in these pillars may be recoverable at a later stage following additional studies which are currently underway, but that pending the completion of this work in 2021, the material contained in the pillars has been converted from Mineral Reserves to Mineral Resources. MSS20 was submitted to the Government of Mongolia to comply with local regulatory requirements and the 2020 OTTR was filed in August 2020, updating the Oyu Tolgoi Technical Report dated October 14, 2016 to reflect the changes arising from MSS20. The 2020 OTTR does not reflect the impacts of the COVID-19 pandemic.

In July 2020, the Corporation announced that Oyu Tolgoi LLC had advised the Corporation that the Mongolian Anti-Corruption Authority investigation had been concluded and the first instance criminal court had sentenced certain former government officials.

In September 2020, the Corporation announced that it had signed a non-binding Memorandum of Understanding ("MOU") with Rio Tinto plc concerning the funding of Oyu Tolgoi.

In October 2020, the Corporation announced that it had received an independent consultant's report with respect to the delay and cost overruns at Oyu Tolgoi announced in July 2019, which the Corporation's management and the independent members of the Board of Directors were reviewing with their advisors. The Corporation subsequently announced that it supported Oyu Tolgoi LLC's decision to

establish a special board committee (the "OT Special Committee") mandated to conduct an independent review of the causes of the cost overruns and schedule delays to Oyu Tolgoi underground development.

In December 2020, the Corporation announced the completion and delivery by Rio Tinto of the Definitive Estimate review, which refined the analysis contained in MSS20. The Definitive Estimate confirmed a revised base case project development capital cost estimate of \$6.75 billion, forecast sustainable first production to occur in October 2022, and increased the Hugo North Mineral Reserves by 10Mt, 0.18Mt contained copper and 0.07Moz contained gold. There was ongoing engagement with Erdenes regarding the Definitive Estimate to enable its further consideration by the board of directors of Oyu Tolgoi LLC, which engagement included investigation of the causes in the increase in cost and schedule extension to the underground development of Oyu Tolgoi during the period between MSS16 and the Definitive Estimate by the OT Special Committee comprised of two representatives of Erdenes and two representatives of the Corporation. A group of consultants called "The Independent Consulting Group" ("ICG") was hired to conduct the review on behalf of the OT Special Committee. See "Description of the Business – Oyu Tolgoi Project – Mineral Reserves".

In December 2020, the Corporation announced that Oyu Tolgoi LLC had received and was evaluating a tax assessment for approximately \$228 million cash tax from the Mongolian Tax Authority relating to an audit on taxes imposed and paid by Oyu Tolgoi LLC between 2016 and 2018. Most of the matters raised in respect of the \$228 million cash tax assessment for the 2016 to 2018 years are of a similar nature to the matters that, in February 2020, were referred to international arbitration for the 2013 to 2015 years, as described above. The Mongolian Tax Authority also made a \$1.5 billion adjustment to the balance of Oyu Tolgoi LLC's carried forward tax losses. The adjustments were to disallow or defer certain tax deductions claimed in the 2016 to 2018 years. The relevant losses are not currently scheduled to be utilised in the near term. See "Legal Proceedings".

## *2021*

In January 2021, the Corporation announced that the Government of Mongolia had advised Rio Tinto that it was dissatisfied with the results of the Definitive Estimate announced in December 2020 and was concerned that the significant increase in the development costs of Oyu Tolgoi had eroded the economic benefits anticipated therefrom. The Government of Mongolia expressed its intention to initiate discussions with respect to the termination and replacement of the UDP. The Corporation expressed its commitment to engaging with the Government of Mongolia and Rio Tinto to address the UDP and revisit the sharing of economic benefits arising from Oyu Tolgoi in the context of agreeing on a comprehensive financing plan and addressing the other issues raised.

In January 2021, the Corporation announced that Rio Tinto had publicly announced criteria it considered needed to be met before Oyu Tolgoi could begin caving operations by commencement of the undercutting process, then scheduled for June 2021. Turquoise Hill engaged with Rio Tinto and Erdenes to address and agree on the undercut milestones, with the joint objective of preserving the timeline for project completion.

In January 2021, the Corporation announced that Oyu Tolgoi LLC had completed its evaluation of the claim received for approximately \$228 million from the Mongolian Tax Authority as announced in December 2020, including a reduction of Oyu Tolgoi LLC's carried-forward tax losses by approximately \$1.5 billion. As many of the matters raised in the tax assessment of the Mongolian Tax Authority for the 2016 to 2018 years are of a similar nature to those raised in the tax assessment for the 2013 to 2015 years which had been referred for international arbitration, Oyu Tolgoi LLC gave notice of its intention to apply to the UNCITRAL tribunal to amend its statement of claim to include the issues raised in the tax

assessment for the 2016 to 2018 years. In February 2021, Oyu Tolgoi LLC's application to include these matters was accepted. See "Legal Proceedings".

In February 2021, a new parliamentary working group was established to monitor the implementation of Resolution 92. The parliamentary working group monitored and provided support to the government working group in discussions with Turquoise Hill and Rio Tinto.

In February 2021, Oyu Tolgoi LLC received notices of payment totalling US\$230 million relating to amounts disputed under an audit on taxes imposed and paid by Oyu Tolgoi LLC between 2016 and 2018. In March 2021, Oyu Tolgoi LLC received notices of payment totalling US\$126 million relating to amounts disputed under an audit on taxes imposed and paid between 2013 and 2015. Under article 43.3 of the Mongolian General Tax Law, the amounts were due and paid by Oyu Tolgoi LLC within 10 business days from the date of the notices of payment. Under the same legislation, the Corporation is entitled to a refund in the event of a favorable decision from the relevant dispute resolution authorities. See "Legal Proceedings".

In March 2021, the Corporation announced the resignation of its Chief Executive Officer, Ulf Quellmann, effective March 3, 2021, and the appointment of Steve Thibeault as Interim Chief Executive Officer. Mr. Quellmann also resigned as a director of the Corporation.

In March 2021, the Corporation announced that Oyu Tolgoi LLC had declared force majeure in connection with customer contracts for concentrate as a result of Oyu Tolgoi shipments of concentrate to its Chinese customers being suspended due to COVID-19 health and safety precautions related to Chinese-Mongolian border crossings. In April 2021, the Corporation announced Oyu Tolgoi had partially resumed its cross-border concentrate shipments into China and was evaluating multiple contingencies to address the force majeure situation, including an alternative shipping route via Ulaanbaatar. In July 2021, the Corporation announced the force majeure would remain in place until sufficiently sustained volumes of convoys crossing the border would become possible again so as to ensure Oyu Tolgoi's ability to meet its ongoing commitments to customers and to return on-site concentrate inventory to target levels.

Effective April 9, 2021, the Corporation and Rio Tinto entered into a binding Heads of Agreement (the "2021 HoA") to provide an updated funding plan for the completion of the Oyu Tolgoi project designed to address the then estimated remaining funding requirement of approximately \$2.3 billion. The 2021 HoA replaced the MOU that Rio Tinto and Turquoise Hill previously entered into in September 2020.

In May 2021, the Corporation announced that the Government of Mongolia had filed its statement of defence together with a counterclaim ("Defence and Counterclaim") in relation to the previously-disclosed international tax arbitration proceeding brought by Oyu Tolgoi LLC against the Government of Mongolia in February 2020. See "General Development of the Business – Three Year History – 2020". Although not a party to that arbitration, the Defence and Counterclaim included a request that the arbitral tribunal add both the Corporation and a member of Rio Tinto as parties to the tax arbitration. As part of the counterclaim, the Government of Mongolia made assertions surrounding previously-reported allegations of historical improper payments made to Mongolian officials and sought unquantified damages. Also, in the event Oyu Tolgoi LLC's tax claims are not dismissed in their entirety, the Government of Mongolia was seeking in the counterclaim an alternative declaration that the Investment Agreement is void. In January 2022, the Corporation announced that following a hearing, the arbitral tribunal issued a ruling deciding that the Corporation would not be added as a party to the arbitration. On February 11, 2022, at the request of the parties to the tax arbitration, the arbitral tribunal issued an

order suspending the tax arbitration for six months (until August 11, 2022) or until the tribunal receives notice from Oyu Tolgoi LLC or the Government of Mongolia to terminate the order. See "Legal Proceedings".

In July 2021, the Corporation announced that the underground development progress was significantly impacted during the second quarter of 2021 by the COVID-19 constraints on site and in Mongolia, including restrictions on movement of international expertise. Despite such constraints, the Corporation announced that Material Handling System 1 was greater than 90% complete and that all development and technical readiness activities pertaining to the initiation of the undercut were met or were on track to being met. However, the Corporation announced that it, along with Rio Tinto, was continuing to engage with various Mongolian governmental bodies with a view to resolving outstanding non-technical undercut issues. The Corporation warned that any significant delay to the initiation of the undercut would have a material impact on project schedule, including the timing of sustainable production for Panel 0, as well as the timing and quantum of underground capital expenditure, which would materially adversely impact the timing of expected cash flows from the Oyu Tolgoi underground project thereby increasing the amount of the Corporation's incremental funding requirement.

In July 2021, the Corporation announced that, in light of the cumulative and ongoing impacts of COVID-19, delayed commitments resulting from non-approval of the Definitive Estimate budget by the Oyu Tolgoi LLC board of directors and outstanding non-technical issues relating to the undercut decision, it expected that there would be further impacts on overall project cost and schedule.

In August 2021, the Corporation announced that ICG had submitted its report to the OT Special Committee, which report raised certain questions in relation to the project management process and suggested that changes in geotechnical parameters did not contribute significantly to the increase in cost and schedule extension. The Corporation announced that it was conducting a detailed review of the report in collaboration with the board of directors of Oyu Tolgoi LLC and would seek a number of clarifications and supporting detailed explanations for certain of the broad conclusions the report contained.

In October 2021, the Corporation announced that, given the cumulative and ongoing impacts of COVID-19, continued delayed commitments resulting from the Definitive Estimate not yet having received the support of all directors of the board of directors of Oyu Tolgoi LLC, as well as the outstanding unresolved non-technical undercut issues, including the support of all Oyu Tolgoi LLC board directors to increase the underground development capital investment and to commence discussions with the project finance lenders, obtaining outstanding required regulatory approvals and agreeing on a pathway to meet Oyu Tolgoi LLC's long-term power requirements, it expected sustainable production for Panel 0 to be delayed until at least January 2023. The Corporation also announced that Oyu Tolgoi had advised that a 9-month delay on Shafts 3 and 4 was forecast which, in combination with the reduced underground development progress, would result in delays to the start of Panel 2.

In October 2021, the Corporation announced that COVID-19 restrictions had adversely impacted both open pit operations and underground development progress, which, through the end of the third quarter of 2021, had resulted in a cumulative increase of \$140 million to the estimate of underground development capital included in the Definitive Estimate.

In October 2021, the Corporation announced that previously disclosed underground delays and open-pit metal deferrals had caused an increase in the Corporation's base case estimated incremental funding requirement to \$3.6 billion.

In October 2021, the Corporation announced that the updated Resources and Reserves was approved by the Minerals Council of Mongolia in September 2021, and the updated MSS20 would be submitted for assessment once the Resources and Reserves registration process progressed further.

In November 2021, and as part of its third quarter 2021 financial disclosures and filings, the Corporation elaborated that it then expected sustainable production for Panel 0 to be delayed to the first half of 2023, broadly in line with the then forecast 6-month delay to undercut commencement, and that the previously announced 9-month delay on Shafts 3 and 4, in combination with the COVID-related reduced underground development progress and expected changes to mining scope, would result in delays to the start of Panel 2 by approximately 14-16 months compared to the Definitive Estimate, and to the start of Panel 1 by approximately 11 months compared to the Definitive Estimate.

In November 2021, the Corporation announced that in light of the progress made in the ongoing negotiations between the Government of Mongolia, Rio Tinto and the Corporation, the board of directors of Oyu Tolgoi LLC had approved a bridging budget of \$75 million to continue to progress critical activities in the Oyu Tolgoi underground mine development project. At the time, the Corporation anticipated that the approved increase would be sufficient to sustain work on the development of the Oyu Tolgoi underground mine up to mid January 2022.

In December 2021, the Corporation announced that the Corporation and Rio Tinto made a joint offer to the Government of Mongolia which aimed to reset the relationship and allow all parties to move forward together. The offer included, among other elements, a proposal to forgive and write-off the entirety of the approximately \$2.3 billion carry account owing by Erdenes to the Corporation and termination of the UDP on a go-forward basis.

### ***2022 to Date***

On January 24, 2022, the Corporation announced that it had reached a mutual understanding for a renewed partnership with the Government of Mongolia, and that the board of directors of Oyu Tolgoi LLC had unanimously approved the commencement of the undercut in the ensuing days. As part of the resolution of outstanding issues relating to the development of the Oyu Tolgoi underground project and the entering into of key agreements with the Government of Mongolia (the "GoM Agreements"), the Corporation agreed to waive in full the \$2.4 billion carry account loan of Erdenes. The parties also agreed to improve cooperation with Erdenes in monitoring the Oyu Tolgoi underground development and enhancing environmental, social and governance ("ESG") matters. The Corporation also announced that it had entered into the A&R HoA, a binding agreement which delineates a comprehensive funding arrangement to address the Corporation's estimated base case incremental funding requirement which, prior to giving effect to the funding elements contemplated by the A&R HoA, was estimated to be \$3.4 billion as at December 31, 2021. The GoM Agreements relate to the write-off of the carry account loan, the improved cooperation with Erdenes in monitoring the Oyu Tolgoi underground development and enhancing ESG matters, the approval of an electricity supply agreement ("ESA") to provide Oyu Tolgoi with a long-term source of power from the Mongolian grid on terms fully agreed with the Government of Mongolia, and the establishment of a funding structure at Oyu Tolgoi that does not incur additional

loan financing prior to sustainable production for Panel 0 (expected in the first half of 2023). The GoM Agreements are considered to address and satisfy, pursuant to Resolution 103, the implementation of a majority of the measures set out in Resolution 92. The Corporation stated that it was continuing to work with the Government of Mongolia and Rio Tinto to finalise the remaining outstanding measures of Resolution 103, namely the formal termination of the UDP and resolution of the outstanding Oyu Tolgoi LLC tax arbitration. See "General Development of the Business – Agreements with the Rio Tinto – A&R HoA".

Following progress in negotiations with the Government of Mongolia, all undercut readiness criteria were achieved on January 24, 2022, and undercutting began on January 25, 2022.

On March 1, 2022, Oyu Tolgoi LLC notified the Corporation that it received a letter from the Mongolian Anti-Corruption Authority requesting certain documents and information relating to an investigation regarding the underground construction work.

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## Agreements with Rio Tinto

In 2006, the Corporation identified RTIH as a strategic investor to support the development of Oyu Tolgoi. The parties have entered into a series of agreements since 2006 pursuant to which RTIH has provided equity and debt financing to fund the ongoing development of Oyu Tolgoi and operations of the Corporation. Since 2006, RTIH, together with other Rio Tinto affiliates, has acquired Common Shares representing a 50.8% majority ownership interest in Turquoise Hill, and is responsible for the day-to-day operational management and development of Oyu Tolgoi.

### *Private Placement Agreement*

In October 2006, Turquoise Hill and RTIH entered into a private placement agreement (as amended, the "Private Placement Agreement"), which provided for the initial equity investment by RTIH in the Corporation, by way of two tranches, the first of which closed in October 2006 and the second of which closed in October 2009. RTIH was also granted pre-emptive rights entitling it to participate, subject to certain specific exceptions, in future issuances of Common Shares on a basis sufficient to maintain its percentage shareholding interest in the Corporation on economic terms equivalent to those upon which any such Common Shares are issued to third parties. RTIH's pre-emptive rights remain in effect. RTIH and the Corporation also agreed to establish a committee through which RTIH and the Corporation consult with one another in good faith and use reasonable efforts to reach a consensus with respect to the objectives, procedures, methods and actions to be taken in furtherance of the development, operation and management of Oyu Tolgoi (the "Technical Committee"). The Technical Committee consists of two members appointed by RTIH, two members appointed by the Corporation and a chair appointed by RTIH. The foregoing is a summary only and is qualified in its entirety by reference to the Private Placement Agreement, a copy of which has been filed with the Canadian Securities Authorities on SEDAR at [www.sedar.com](http://www.sedar.com).

### *2010 HoA*

In December 2010, Turquoise Hill and RTIH entered into a heads of agreement (as amended, the "2010 HoA"), whereby Turquoise Hill and RTIH agreed to, among other things, RTIH's support and full participation in a rights offering which was completed by the Corporation in February 2011, the financing and management of Oyu Tolgoi, replacing or amending certain contractual obligations under the Private Placement Agreement and acting together diligently and in good faith to negotiate the Oyu Tolgoi

Project Financing. The Corporation and RTIH further agreed to cause three nominees from each of the Corporation and RTIH to be appointed as directors of Oyu Tolgoi LLC reserved for the Oyu Tolgoi Shareholder Holdcos under the ARSHA. These nominees must exercise their voting rights under the ARSHA in accordance with instructions given by an operating committee (the "Operating Committee") which is comprised of two nominees from each of the Corporation and RTIH, with a RTIH nominee serving as chairman. All decisions of the Operating Committee, other than decisions in respect of certain defined special matters, require a majority vote of the members with a casting vote of the chair in the case of a tie. Decisions in respect of "special matters", such "special matters" being set out in the 2010 HoA, require a unanimous vote of the members of the Operating Committee. RTIH was also granted the right to appoint an affiliate to manage Oyu Tolgoi pursuant to the terms of a management agreement. The foregoing is a summary of certain terms of such agreement only and is qualified in its entirety by reference to the 2010 HoA, a copy of which has been filed with the Canadian Securities Authorities on SEDAR at [www.sedar.com](http://www.sedar.com).

### ***2012 MoA***

In April 2012, the Corporation, RTIH and RTSEA entered into a memorandum of agreement, which was subsequently amended in May 2012 (as amended, the "2012 MoA"). The 2012 MoA contemplated, among other things, RTIH's support and full participation in a rights offering which was completed by the Corporation in July 2012, a comprehensive financing plan intended to address the total funding needs of the Corporation, with a primary focus on Oyu Tolgoi Project Financing, certain matters relating to the management of the Corporation, and certain amendments to the 2010 HoA.

In accordance with the terms of the 2010 HoA, under the 2012 MoA, RTIH and the Corporation agreed to continue to act together diligently and in good faith to negotiate Oyu Tolgoi Project Financing, on terms acceptable to the Corporation, RTIH, and the board of directors of Oyu Tolgoi LLC, each acting reasonably. It was further agreed that designated RTIH personnel, as determined by the Rio Tinto Treasurer, would act as lead negotiator in connection with Oyu Tolgoi Project Financing and have the exclusive authority to direct all aspects of the negotiation of the day-to-day management of Oyu Tolgoi Project Financing. Provided that Oyu Tolgoi Project Financing was made available on terms reasonably satisfactory to RTIH and RTIH was reasonably satisfied at the Oyu Tolgoi Project Financing closing date that Oyu Tolgoi (including a power plant) was fully financed (including a reasonable provision for contingencies), it was agreed that a RTIH affiliate would enter into a completion support agreement with the Corporation, pursuant to which such affiliate would agree to provide a completion support guarantee to the lenders of Oyu Tolgoi Project Financing.

In consideration for providing completion support, an annual fee equal to 2.5% of the amounts drawn under the Project Finance Facility is payable to Rio Tinto by the Turquoise Hill Group (the "Completion Support Undertaking"). The annual completion support fee will apply to funding used for facility fees and taxes at the initial drawdown, as well as amounts used to fund development of Oyu Tolgoi. The obligation to pay the completion support fee will terminate on the date Rio Tinto's completion support obligations to the Oyu Tolgoi Project Financing lenders terminate.

The foregoing is a summary of certain terms of such agreement only and is qualified in its entirety by reference to the 2012 MoA, a copy of which has been filed with the Canadian Securities Authorities on SEDAR at [www.sedar.com](http://www.sedar.com).

### ***2013 MoA***

In August 2013, the Corporation, RTIH and RTSEA entered into a memorandum of agreement, which was subsequently amended in November 2013 (as amended, the "2013 MoA"). Under the 2013 MoA, the



Corporation, RTIH and RTSEA agreed to the key terms and conditions of a rights offering, which was completed by the Corporation in January 2014 (the "2013 Rights Offering"). They also reaffirmed their agreement to act together diligently and in good faith to negotiate Oyu Tolgoi Project Financing. The foregoing is a summary of certain terms of such agreement only and is qualified in its entirety by reference to the 2013 MoA, a copy of which has been filed with the Canadian Securities Authorities on SEDAR at [www.sedar.com](http://www.sedar.com).

### ***A&R HoA***

On January 24, 2022, the Corporation and Rio Tinto announced that, in connection with the GoM Agreements, they had amended and restated the 2021 HoA to provide a further updated funding plan for the completion of the Oyu Tolgoi underground project in Mongolia. The A&R HoA replaces and supersedes the 2021 HoA, is binding, and delineates a comprehensive funding arrangement to address the Corporation's estimated incremental funding requirements. Key elements of the A&R HoA include: pursuing the rescheduling of principal repayments of existing debt ("Re-profiling") to potentially reduce the base case funding requirement by up to \$1.7 billion; seeking to raise up to \$500 million of Senior Supplemental Debt ("SSD"); Rio Tinto committing to provide a co-lending facility, incremental to the Re-profiling and the SSD, of up to \$750 million to be made available once sustainable production is achieved (the "Co-Lending Facility"); Rio Tinto committing to provide a short-term bridge financing directly to the Corporation by way of one or more secured advances up to a maximum of \$300 million, which would be available during the debt funding restriction period identified in Resolution 103 and would be indirectly repaid out of the proceeds of the Co-Lending Facility; and the Corporation agreeing to conduct an equity offering in a form of its choosing of at least \$650 million (including a Rio Tinto pro rata participation) by no later than August 31, 2022. Further, the A&R HoA provides that, if necessary, the Corporation could be required to raise up to a total of \$1.5 billion (less the amount raised in the initial equity offering) via equity in a form of its choosing.

In addition, in connection with the Corporation's negotiations with Rio Tinto with respect to the GoM Agreements and the A&R HoA, a special committee of the Board comprised solely of independent directors of the Corporation (the "Special Committee (Operations)") sought to achieve a comprehensive solution that would allow all parties to move forward in a manner that advances the development of the project for the benefit of all stakeholders, including the Mongolian people and Turquoise Hill's shareholders.

In assessing whether the terms of the GoM Agreements and the A&R HoA should be recommended for approval by the Board, the Special Committee (Operations) with the advice of external advisors, considered the following non-exhaustive list of considerations: the proposed GoM Agreements and the A&R HoA; views expressed by the Government of Mongolia and various minority shareholders with respect to the performance of Rio Tinto OT Management Limited, a subsidiary of Rio Tinto and manager of Oyu Tolgoi ("Rio Tinto Manager"); Rio Tinto's position with respect to Rio Tinto Manager's performance; inherent risks in large underground project development; and the terms of the agreements between the Corporation, Oyu Tolgoi LLC, and Rio Tinto, including those which establish a "gross fault" standard for liability for Rio Tinto Manager and the absence of guarantees with respect to project cost or time for completion.

The Special Committee (Operations) further considered the significant benefits of resolving all matters amongst the parties, including enabling the parties to proceed with the undercut, avoiding further delays that would likely arise if the parties were unable to resolve outstanding issues and the additional costs

and potential value destruction of such delays as well as the value of the concessions offered by Rio Tinto in amending the terms of the 2021 HoA. After weighing these and other considerations, the Special Committee (Operations) determined that it would be in the best interests of the Corporation to obtain a comprehensive resolution of outstanding issues between all parties involved in the Oyu Tolgoi underground project that enables the project to move forward.

Therefore, the Special Committee (Operations) recommended to the Board that the Corporation accept the terms in the A&R HoA, including a provision whereby the Corporation has agreed not to assert any claims of breach of any obligation of Rio Tinto or its affiliates under any agreement between the Corporation or any of its subsidiaries and Rio Tinto or any of its affiliates based on facts available to and known by the Corporation as of the date of the A&R HoA.

The foregoing is a summary of certain terms of such agreement only and is qualified in its entirety by reference to the A&R HoA, a copy of which has been filed with the Canadian Securities Authorities on SEDAR at [www.sedar.com](http://www.sedar.com).

### ***Agreements in Connection with Oyu Tolgoi Project Financing***

The Corporation has entered into a number of agreements in connection with, and/or in consideration for, the Project Finance Facility and the Completion Support Undertaking, including: a financing support agreement with Rio Tinto dated December 15, 2015 (the "Turquoise Hill Financing Support Agreement"); and a financing support agreement with Oyu Tolgoi LLC and Rio Tinto dated December 15, 2015 (the "Oyu Tolgoi Financing Support Agreement").

#### ***Turquoise Hill Financing Support Agreement***

The provisions contained in the Turquoise Hill Financing Support Agreement are broadly in line with the principles, provisions and restrictive covenants established under the 2012 MoA. Under the Turquoise Hill Financing Support Agreement, Rio Tinto has the right to require that the Corporation effect an equity contribution by way of private placement of Turquoise Hill shares to Rio Tinto or a rights offering similar in form and structure to the 2013 Rights Offering in the event a fact or circumstance occurs which (i) affects or could reasonably be expected to affect the Corporation's ability to meet its obligations under the sponsor debt service undertaking that the Corporation entered into with Rio Tinto, the project lenders and agents representing such lenders in May 2016 (the "Sponsor Debt Service Undertaking") in order to guarantee to the finance parties the payment of principal, interest and fees owed by Oyu Tolgoi LLC to the senior lenders under the Oyu Tolgoi Project Financing, or (ii) gives rise to an event of default or completion default under the agreements entered into in connection with the Project Finance Facility. Under the Turquoise Hill Financing Support Agreement, the Corporation also has the right to propose an alternative financing proposal to Rio Tinto which, depending on the nature of such proposal, may require Rio Tinto's consent. The parties have agreed that the aggregate amount of any such funding mechanisms shall not exceed 25% of Turquoise Hill's market capitalisation as of the date of signing. Any such transaction shall also be subject to applicable securities laws.

The Turquoise Hill Financing Support Agreement also contains certain restrictions relating to the conduct of the Corporation's business and operations and to the implementation of certain corporate transactions until the later of (i) the date the Completion Support Undertaking terminates, (ii) the date that all senior loan advances under the agreements entered into in connection with the Project Finance Facility are repaid in full, and (iii) the date that all subordinated debt advances by Rio Tinto have been repaid in full, which shall be deemed to be the date on which the Completion Support Undertaking

terminates if, as of such date, the aggregate amount of subordinated debt advances by Rio Tinto has not exceeded \$500 million.

#### *Oyu Tolgoi Financing Support Agreement*

Under the Oyu Tolgoi Financing Support Agreement, in the event a fact or circumstance occurs which affects or could reasonably be expected to affect Oyu Tolgoi LLC's ability to meet its obligations under the agreements entered into in connection with the Project Finance Facility or give rise to an event of default thereunder, Rio Tinto shall have the right to require that Oyu Tolgoi LLC borrow funds from Rio Tinto (or an affiliate thereof) by way of a senior debt advance or a subordinated debt advance, or borrow funds from a third party senior lender. The proceeds of any such advances shall be used to repay amounts due and owing to the Oyu Tolgoi Project Financing lenders.

The foregoing is a summary of certain terms of such agreements only and is qualified in its entirety by reference to the Turquoise Hill Financing Support Agreement and the Oyu Tolgoi Financing Support Agreement, a copy of each of which has been filed with the Canadian Securities Authorities on SEDAR at [www.sedar.com](http://www.sedar.com).

#### *Additional Agreements*

There are also various agreements in place between the Corporation and Rio Tinto relating to the provision of services to Turquoise Hill, including but not limited to finance, accounting, tax, treasury and exploration services.

In addition, the Corporation and Rio Tinto have entered into a Non-Disclosure Agreement to consolidate the pre-existing confidentiality provisions in certain agreements.

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### **Agreements with the Government of Mongolia**

#### *Investment Agreement*

The Investment Agreement provides for, among other things, a framework for maintaining a stable tax and operational environment for Oyu Tolgoi, protection of the parties' investment in Oyu Tolgoi, the term of the parties' investment in Oyu Tolgoi, the right to realise the benefits of such investment, the undertaking of mining activities with minimum damage to the environment and human health, the rehabilitation of the environment, the social and economic development of the Southern Gobi region and the creation of new jobs in Mongolia.

#### *Effective Date*

The Investment Agreement became effective as of March 31, 2010 (the "Effective Date"), following the satisfaction of all conditions precedent to its effectiveness. These conditions included the completion of a number of corporate transactions intended to establish an efficient foundation for the operation of Oyu Tolgoi and the respective interests of the parties, such as the restructuring of Oyu Tolgoi LLC and the conversion of certain exploration licences to mining licences.

#### *Term*

The Investment Agreement has an initial term of 30 years from the Effective Date (the "Initial Term"). Oyu Tolgoi LLC has the right, exercisable by notice given not less than 12 months prior to the expiry of the

Initial Term and subject to the fulfillment of certain conditions, to extend the Initial Term of the Investment Agreement for an additional term of 20 years (the "Renewal Term").

In order to exercise its right to obtain the Renewal Term, Oyu Tolgoi LLC must have performed certain obligations during the Initial Term, including, among others:

- having demonstrated that Oyu Tolgoi has been operated to industry best practice in terms of national and community benefits, environment and health and safety practices;
- having made capital expenditures in respect of Oyu Tolgoi of at least \$9 billion;
- having complied in all material respects with its obligations to pay taxes under the laws of Mongolia, as stabilised under the terms of the Investment Agreement;
- if, as part of the development of Oyu Tolgoi, Oyu Tolgoi LLC has constructed, or is constructing, a copper smelter, Oyu Tolgoi LLC must have constructed or be constructing such smelter in Mongolia;
- if the development and operation of Oyu Tolgoi has caused any unanticipated and irreversible ecological damage to natural resources in Mongolia, Oyu Tolgoi LLC must have paid compensation based on the value of any such permanently damaged natural resources in accordance with the applicable laws of Mongolia; and
- having secured the total power requirements for Oyu Tolgoi from sources within the territory of Mongolia within four years of Commercial Production.

#### *Investment Protection*

The Investment Agreement confirms Oyu Tolgoi LLC's rights to market, sell and export mineral products from Oyu Tolgoi at international market prices and to freely expend and repatriate its sale proceeds in Mongolian togrogs and foreign currencies. It also conveys legal protection on capital, property and assets of Oyu Tolgoi LLC and its affiliates, and the requirement that any expropriation action must be in accordance with due process of law on a non-discriminatory basis and with the condition of full compensation by the Government of Mongolia to the affected party.

#### *Taxes, Royalties and Fees*

Throughout the Initial Term and the Renewal Term, if any, all taxes payable by Oyu Tolgoi LLC will remain stabilised. The annual corporate income tax rate is stabilised. In addition to corporate income tax, the following taxes have been stabilised: customs duties; value-added tax; excise tax (except on gasoline and diesel fuel purchases); royalties; mineral exploration and mining licence payments; and immovable property tax and/or real estate tax.

Taxation on dividends and other forms of income have also been stabilised. Non-stabilised taxes shall apply to Oyu Tolgoi LLC on a non-discriminatory basis.

#### *Infrastructure*

All roads, pipelines and other transportation infrastructure funded or constructed by Oyu Tolgoi LLC or its affiliates in connection with the development of Oyu Tolgoi are required to be constructed to a standard necessary to meet the specific requirements of Oyu Tolgoi only. Oyu Tolgoi LLC may provide the public, the Government of Mongolia and third parties with access to certain infrastructure and/or services, provided such access does not interfere with the operation of Oyu Tolgoi. In addition, Oyu

Tolgoi LLC may recover costs by way of payments or collection of tolls from those persons or entities using such infrastructure and/or services.

Oyu Tolgoi LLC is permitted to construct a road between the Oyu Tolgoi site and the Gashuun Sukhait border crossing with China. Oyu Tolgoi LLC may deduct the road construction expenses from its annual taxable income. The Government of Mongolia is responsible for the maintenance of the road and the collection of road use fees from any third party users. Oyu Tolgoi LLC and its contractors/sub-contractors are exempt from any such road use fees.

Oyu Tolgoi LLC has the right to access, and to use, self-discovered water resources for any purpose connected with Oyu Tolgoi during the life of Oyu Tolgoi, including construction, commission, operation and rehabilitation of Oyu Tolgoi. Oyu Tolgoi LLC is required to pay fees for its water use but such fees must be no less favourable than those payable from time to time by other domestic and international users, must take into account the quantity and quality of the water removed and consumed, and are treated as a deductible expense from Oyu Tolgoi LLC's taxable income.

#### *Power Supply*

During the construction period of Oyu Tolgoi and until the four year anniversary of Commercial Production, Oyu Tolgoi LLC has the right to import electric power from sources outside Mongolia, including China. Within four years of Commercial Production, Oyu Tolgoi LLC is required to secure all of its power requirements for Oyu Tolgoi from a domestic Mongolian source.

In August 2014, Oyu Tolgoi LLC entered into the PSCA with the Government of Mongolia for the exploration of a Tavan Tolgoi-based independent power producer. The PSCA laid out a framework for long-term strategic cooperation between the Government of Mongolia and Oyu Tolgoi LLC to deliver a comprehensive energy plan for the South Gobi region. In February 2018, Oyu Tolgoi received notification that the Government of Mongolia had cancelled the PSCA. The cancellation, under Section 1.3 of the PSCA, indicated that the TTPP Project was no longer a viable option. As a result of the Government of Mongolia's cancellation, effective February 15, 2018, long-term power for Oyu Tolgoi was required to be domestically sourced within four years of such date.

In May 2015, the Corporation entered into the UDP with the Government of Mongolia, Erdenes, THR Oyu Tolgoi Ltd., Oyu Tolgoi Netherlands B.V., RTIH and Oyu Tolgoi LLC, which addresses, among other things, the sourcing of power for Oyu Tolgoi from within Mongolia. For more information on the UDP, see "General Development of the Business – Agreements with the Government of Mongolia – UDP".

In May 2017, Oyu Tolgoi LLC entered into the Power Agreement with NPTG. The Power Agreement was executed in connection with the power import arrangement between NPTG and the IMPIC, which took effect on July 4, 2017. The Power Agreement has a term of up to six years.

In December 2018, Oyu Tolgoi LLC entered into the PSFA with the Government of Mongolia, which initially provided a binding framework and pathway forward for the construction of a Tavan-Tolgoi-based power solution for the Oyu Tolgoi Mine by June 30, 2023. The power plant would have been majority owned by Oyu Tolgoi LLC and situated close to the Tavan Tolgoi coal mining district located approximately 150 kilometres from the Oyu Tolgoi mine. The PSFA required the construction of a coal-fired power plant in conjunction with other sources of power including imported or back-up power, power from the Mongolian national grid, renewables power and diesel power.

In June 2020, Oyu Tolgoi LLC and the Government of Mongolia amended the PSFA to reflect their agreement to jointly prioritise and progress a SOPP at Tavan Tolgoi as the domestic source of power for Oyu Tolgoi, in accordance with and subject to agreed milestones. The agreed milestones include signing

a Power Purchase Agreement for the supply of power to Oyu Tolgoi by March 31, 2021, commencing construction of a SOPP by no later than July 1, 2021, commissioning of the SOPP within four years thereafter, and reaching an agreement with IMPIC on an extension to the existing power import agreement by March 1, 2021 in order to ensure that there is no disruption to the power supply required to safeguard Oyu Tolgoi's ongoing operations and development.

The amended PSFA provides that if the agreed milestones are not met in a timely manner, then Oyu Tolgoi LLC will be entitled to select from, and implement, the alternative power solutions specified in the amended PSFA, including a coal-fired power plant at Oyu Tolgoi, the Mongolian grid or a primary renewables solution, and the Government of Mongolia would be obliged to support such a decision. The milestones in the amended PSFA have not been met.

On February 25, 2021, the Government of Mongolia formally notified Oyu Tolgoi LLC and Rio Tinto that the Tavan Tolgoi thermal power station project will be implemented, connected to the Central Energy System and operated under a unified load dispatch control. The letter also stated that agreement on the long-term power supply to Oyu Tolgoi LLC is related to the extension of the power import arrangements with IMPIC. In recognising the linkage of the extension of the IMPIC supply arrangements with the progress on resolving the issue of domestic power supply, the Government of Mongolia suggested that all milestone dates under the amended PSFA be extended. On January 24, 2022, the Corporation announced that, in connection with the GoM Agreements, the Oyu Tolgoi LLC board of directors had approved the signing of the ESA to provide Oyu Tolgoi with a long-term source of power from the Mongolian grid on terms fully agreed with the Government of Mongolia. On January 26, 2022, Oyu Tolgoi LLC entered into the ESA with, amongst others, Southern Region Electricity Distribution Network. Power will be delivered pursuant to the ESA once certain technical conditions are satisfied. Those conditions require that either (i) an updated grid study is prepared which demonstrates that the Mongolian grid is able to deliver stable, reliable, secure and uninterrupted supply of electricity to Oyu Tolgoi LLC's facility, or (ii) that a high-voltage, direct current (HVDC) converter has begun construction, and associated agreements are in place, providing the technical ability to connect with the Chinese grid when supplying electricity to Oyu Tolgoi from the Mongolian grid.

The ESA has a term of 20 years from the date on which supply commences and provides a pathway to meeting Oyu Tolgoi LLC's long-term power requirements from domestic power sources.

While the Mongolian national grid undergoes an upgrade to be in a position to provide stable and reliable power to the Oyu Tolgoi mine, Oyu Tolgoi LLC will continue to import its power from Inner Mongolia, China. An agreement-in-principle has been reached between NPTG and IMPIC for a three-year fixed term extension to 2026, potentially followed by an extension to up to 2030, if required (the current agreement expires in July 2023). The outstanding commercial terms are in the process of being finalised.

#### *Local Communities*

Oyu Tolgoi LLC conducts, implements, and, from time to time, updates, socio-economic impact assessments, socio-economic risk analyses, multi-year community plans, community relations management systems, policies, procedures and guidelines, and mine closure plans, all of which shall be produced with community participation and input and be consistent with international best practices. Oyu Tolgoi LLC will also conduct community development and education programmes.

Oyu Tolgoi LLC prioritises the training, recruiting and employment of citizens from local communities for Oyu Tolgoi, giving specific preference to the citizens of Umnugobi Aimag. Given that Commercial

Production has been achieved, 90% of the employees at Oyu Tolgoi must be Mongolian nationals. Oyu Tolgoi LLC must also use its best endeavours to ensure that 50% of its engineers are Mongolian nationals within five years of achieving Commercial Production (i.e. by September 2018), which target is achieved, and increasing to 70% after ten years of achieving Commercial Production (i.e. after September 2023). Oyu Tolgoi LLC must use its best efforts to ensure that not less than 60% of its contractors' employees are Mongolian nationals for construction work and 75% of its contractors' employees are Mongolian nationals for mining and mining related work. See also "Sustainability" for further information.

#### *Environment*

The Investment Agreement also includes environmental protection provisions, in accordance with which Oyu Tolgoi LLC will implement an environmental protection plan and provide to the Government of Mongolia an independent report on progress every three years. In 2012, the Corporation completed the Environmental and Social Impact Assessment ("ESIA") and shortly thereafter such plan was submitted to the Government of Mongolia. Independent reports on progress were subsequently submitted in 2014, 2016, 2018 and 2020.

The Mongolian Detailed Environmental Assessments ("DEIA") are subject to periodic review on 5-year cycles or when there are significant changes to the project description.

#### *Disputes*

Any dispute that is not resolved through negotiation will be resolved by binding arbitration in accordance with the procedures under the Arbitration Rules of the United Nations Commission on International Trade Law in force at the time of the dispute.

#### **ARSHA**

Concurrently with the execution of the Investment Agreement, Oyu Tolgoi LLC and the Oyu Tolgoi Shareholder Holdcos entered into the ARSHA with Erdenes. Erdenes MGL LLC transferred its shares in Oyu Tolgoi LLC and its rights and obligations under the ARSHA to its subsidiary, Erdenes. The ARSHA contemplates the basis upon which the Government of Mongolia, through Erdenes, acquired an initial 34% equity interest in Oyu Tolgoi through a shareholding in Oyu Tolgoi LLC and provides for the respective rights and obligations of the parties as shareholders of Oyu Tolgoi LLC.

On June 8, 2011, the parties to the ARSHA amended the interest payable terms under such agreement. Specifically, the interest rate to be applied to Existing Shareholder Loans, Shareholder Debt and Government Debt (each as defined and discussed further below) on and from January 31, 2011, was reduced to LIBOR plus 6.5%.

#### *Ownership of Oyu Tolgoi LLC*

Under the terms of the ARSHA, within 21 business days after the Effective Date, Oyu Tolgoi LLC issued to Erdenes that number of common shares of Oyu Tolgoi LLC ("Oyu Tolgoi Shares") that, upon issuance, represented 34% of the then issued and outstanding Oyu Tolgoi Shares. If Oyu Tolgoi LLC exercises its right under the Investment Agreement to obtain the Renewal Term, Erdenes shall have the option to acquire additional Oyu Tolgoi Shares on terms to be agreed upon between Erdenes and the Oyu Tolgoi Shareholder Holdcos, to increase its shareholding in Oyu Tolgoi LLC to 50%. Erdenes' shareholding of Oyu Tolgoi LLC may not be diluted by the issuance of new Oyu Tolgoi Shares without its consent.

#### *Management of Oyu Tolgoi*

Oyu Tolgoi LLC's board of directors must appoint a management team for Oyu Tolgoi as nominated by the Oyu Tolgoi Shareholder Holdcos to provide management services to Oyu Tolgoi LLC. The management team engaged by Oyu Tolgoi LLC is responsible for providing management services to Oyu Tolgoi LLC for Oyu Tolgoi and is required to report to Oyu Tolgoi LLC's board of directors on a quarterly basis. For more information on the management of Oyu Tolgoi, see "General Development of the Business – Agreements with Rio Tinto – 2010 HoA".

#### *Management Services Payment*

The ARSHA provides that a management services payment is payable to the management team in the amount of 3% of Oyu Tolgoi's operating and capital costs incurred prior to Commercial Production and 6% thereafter. The management team can direct Oyu Tolgoi LLC to pay part or all of this management services payment to the Corporation, RTIH or their respective affiliates. This management services payment is shared, as to 50%, by the Corporation and its affiliates and, as to 50%, by RTIH and its affiliates, as agreed separately by the Corporation and RTIH. Notwithstanding the foregoing, it was agreed in the UDP that in calculating the management services payment, the rate applied to capital costs of the underground development is to be 3% instead of 6%, as provided by the ARSHA. The management services payment rate on operating costs and capital related to current operations remains at 6%. For more information see "General Development of the Business – Agreements with the Government of Mongolia – UDP".

#### *Election of Directors*

Appointment of directors as between the Oyu Tolgoi Shareholder Holdcos and Erdenes is divided *pro rata* based on their respective shareholdings. The Oyu Tolgoi Shareholder Holdcos have the right to nominate six directors and Erdenes has the right to nominate three directors. Under the 2010 HoA, the Corporation and RTIH have agreed that the six directors nominated by the Oyu Tolgoi Shareholder Holdcos will be comprised of three nominees from each of the Corporation and RTIH. See "General Development of the Business – Agreements with Rio Tinto – 2010 HoA".

#### *Existing Shareholder Loans and Cash Calls*

All funds advanced to Oyu Tolgoi LLC prior to the Effective Date by the Corporation, RTIH or any of their respective affiliates in relation to Oyu Tolgoi (the quantum of which has been agreed to by Oyu Tolgoi LLC and the Government of Mongolia), including interest thereon (collectively, the "Existing Shareholder Loans"), are repayable prior to any dividends or distributions being made to the shareholders of Oyu Tolgoi LLC, as further discussed below.

Oyu Tolgoi LLC may request that the shareholders of Oyu Tolgoi LLC contribute funds ("Called Sums") in proportion to their respective share ownership interests in Oyu Tolgoi LLC to meet the projected cash requirements of Oyu Tolgoi LLC under Oyu Tolgoi programmes and budgets approved by Oyu Tolgoi LLC's board of directors.

During the period commencing on the date Erdenes acquired its 34% interest in Oyu Tolgoi LLC and ending in September 2021 (the "Funding Period"), the Oyu Tolgoi Shareholder Holdcos agreed to fund all contributions of Called Sums, including those otherwise payable by Erdenes, unless Erdenes elected to contribute to any Called Sum. Such contributions on Erdenes' behalf ("Government Debt") are subject to interest as set out below. All dividends payable to Erdenes must be paid by Oyu Tolgoi LLC to the Oyu Tolgoi Shareholder Holdcos (or nominated Turquoise Hill Group or Rio Tinto companies) in repayment of the principal and interest outstanding on Government Debt, but otherwise the Oyu Tolgoi Shareholder



Holdcos have no recourse to Erdenes. In addition, Erdenes may elect to repay outstanding Government Debt at any time.

Since the expiry of the Funding Period, Erdenes has the option of contributing to any required funding, but is not obligated to do so. Regardless of whether or not Erdenes contributes funding, its shareholding in Oyu Tolgoi LLC cannot be diluted. If Erdenes elects not to fund its proportionate share, the Oyu Tolgoi Shareholder Holdcos have the right to meet the full funding requirement in a manner similar to that during the Funding Period (but are not obligated to do so).

Each of the Government Debt, the Existing Shareholder Loans and shareholder debt provided after the Effective Date ("Shareholder Debt") accrues interest at a rate of LIBOR plus 6.5%.

On January 24, 2022, the Corporation announced that as part of the GoM Agreements, it had agreed to waive in full the \$2.4 billion of Government Debt, comprising the amount of Called Sums invested in Oyu Tolgoi LLC by the Corporation on behalf of Erdenes (\$1.4 billion), plus \$1.0 billion of accrued interest.

#### *Payment of Dividends*

All principal and interest outstanding on Shareholder Debt, Government Debt and the Existing Shareholder Loans must be paid in full to the Corporation prior to the payment of any dividends to the shareholders of Oyu Tolgoi LLC. Subject to the foregoing, if Oyu Tolgoi LLC has profits available for distribution in respect of any completed financial year, Oyu Tolgoi LLC's board of directors will declare that all of those profits must be distributed by way of cash dividends within three months after the end of that financial year, subject to the retention of reasonable and proper reserves for Oyu Tolgoi LLC's future cash requirements (including potential expansions, working capital, and the maintenance of funds for capital costs and other actual or contingent liabilities).

#### *Transfer of Shares of Oyu Tolgoi LLC to Third Parties*

No shareholder of Oyu Tolgoi LLC may dispose of or transfer any of its shares to a third party without first offering such shares to the other shareholders of Oyu Tolgoi LLC on equivalent commercial terms as those offered by the relevant third party.

#### *UDP*

The signing of the UDP provided a pathway forward in addressing outstanding shareholder matters to restart underground development at Oyu Tolgoi. The UDP confirmed the project cost for Oyu Tolgoi's initial construction and development and reinforced the principles set out in the Investment Agreement and the ARSHA. The UDP and certain related agreements addressed key outstanding matters including the following specific items: tax matters, entitlement to payments of a 2% NSR royalty, sales royalty calculation, management services payments and principles of a comprehensive financing plan, including project financing for development of the underground at Oyu Tolgoi. Such agreements also addressed the sourcing of power for Oyu Tolgoi from within Mongolia.

The Parliament of Mongolia approved Resolution 103 to resolve the outstanding issues that the Corporation and Rio Tinto had been negotiating with the Government of Mongolia in relation to Resolution 92. While a number of outstanding issues were resolved as part of the GoM Agreements announced by the Corporation on January 24, 2022, Turquoise Hill continues to work with the Government of Mongolia and Rio Tinto to finalise the remaining outstanding measures of Resolution 92, including the formal termination of the UDP and resolution of the outstanding tax arbitration.

The foregoing is a summary of certain terms of such agreements only and is qualified in its entirety by reference to the Investment Agreement, the PSFA, the ARSHA and the UDP, a copy of each of which has been filed with the Canadian Securities Authorities on SEDAR at [www.sedar.com](http://www.sedar.com).

## SUSTAINABILITY

The Corporation has a Health, Safety, Environment and Communities (“HSEC”) Policy that affirms its commitment to protecting the environment and to safeguarding the health, safety and welfare of people affected by the Corporation or its subsidiaries including employees, contractors and communities in which Turquoise Hill operates. The Corporation is dedicated to performing its duties in a safe, sustainable and environmentally responsible manner.

Underground development by its nature increases specific levels of safety risk and reinforces why safety is Oyu Tolgoi’s main priority. The mine’s management is committed to reducing risk and injury. Oyu Tolgoi achieved an industry-leading All Injury Frequency Rate (“AIFR”) of 0.14 per 200,000 hours worked for the year ended December 31, 2021. In addition, there are additional safety metrics that are common in the mining industry, utilised by Oyu Tolgoi to continuously monitor safety performance.

The Corporation’s *Code of Business Conduct* reflects the Corporation’s strong commitment to undertaking its business with integrity and requires that all employees, consultants, officers and directors adhere to rigorous standards of corporate governance and contribute to sustainable development. The *Code of Business Conduct* specifically addresses questions of health, safety and environmental protection.

The Corporation’s commitment to health, safety and environment also extends to communities that can be affected by the Corporation’s activities. The Corporation supports and respects human rights consistent with the Universal Declaration of Human Rights and seeks to ensure that it is not complicit in human rights abuses committed by others. The Corporation respects and supports the dignity, well-being and rights of its employees, their families and the communities in which it operates. The Corporation also sets out to build enduring relationships with its neighbours that demonstrate mutual respect, active partnership, and long-term commitment. The Corporation respects the diversity of Indigenous peoples acknowledging the unique and important interests that they have in the land, waters and environment as well as their history, culture and traditional ways.

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### Environmental and Social Impact Assessment Management

In 2012, as part of project finance requirements, Oyu Tolgoi LLC undertook a comprehensive ESIA, which was performed independently. The process involved consultations with local and regional authorities, local businesses, community organisations and local community representatives.

The study provided an evaluation of both the direct and indirect impacts of Oyu Tolgoi’s operations and project on the society, economy and environment in Mongolia. It described how Oyu Tolgoi LLC expects to minimise and manage the mine’s environmental and social impact while maximising positive benefits over the mine’s life. It also demonstrated a process to ensure local communities are consulted in decisions to be made throughout the life of Oyu Tolgoi’s operation.

The first ESIA, which provides the project baseline, was published in 2013 showing a 91% compliance rate and 26 non-conformances. Subsequent audits have shown improved compliance rates with only 2 non-material non-conformances of the lowest category outstanding in the latest 2021 audit. In 2021, a water audit was completed as per agreement requirements. The last bi-annual Mongolian environmental law and regulation audit was completed in 2020 with all environmental activities of Oyu Tolgoi LLC found to be in compliance with relevant national legislation. Oyu Tolgoi LLC continues to engage with various stakeholders regarding areas that are of heightened community concern.

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## Health

The Corporation complies with the Rio Tinto-wide occupational health standards and Mongolian occupational health regulations to improve identification and management of health risks. Rio Tinto performance standards are integrated with HSEC management systems to ensure consistent application across the Project.

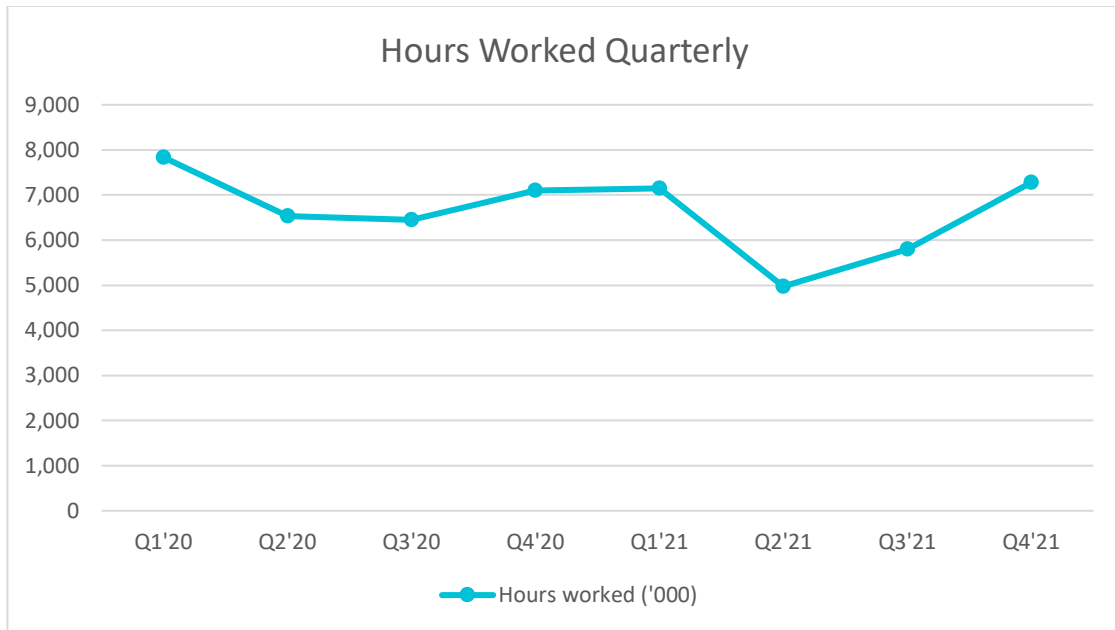
### *COVID-19 Response*

Turquoise Hill continues to remain vigilant in the fight against COVID-19, monitoring the evolving situation and taking the necessary steps to ensure that, globally, its employees are protected while adhering with local governmental guidelines.

Due to the unprecedented and ongoing nature of the COVID-19 pandemic and the fact that response to the pandemic is evolving in real time, estimates of the overall economic impact remain uncertain at this time.

Effects of COVID-19 were felt significantly from the end of the first quarter of 2021 to the beginning of the fourth quarter of 2021. The reduced site workforce in 2021 led to reduced progress in the stripping of the next open pit work area, Phase 5, as well as reduced progress on underground development construction work fronts, particularly those reliant on a higher proportion of out of country workers, such as shaft sinking activities.

COVID-19 related restrictions continued to impact availability of personnel on site during 2021.



Oyu Tolgoi LLC continues to comply with the Government of Mongolia directives and is working closely with the Mongolian authorities to prioritise the health and safety of its employees and the community in which it operates. Since the onset of the pandemic, Oyu Tolgoi LLC put in place strict controls to minimise the COVID-19 risks at site and to manage cases as they arise. Onsite COVID-19 controls include social distancing practices, mandatory wearing of masks, hand washing and temperature measurements in high traffic areas. Four rapid testing screening hubs have been implemented to monitor the exposure of the workforce to COVID-19.

Turquoise Hill and Oyu Tolgoi are focused on the health, safety and well-being of its employees and contractors amid the restrictions on domestic and international travel and will continue to rotate employees when safe to do so.

***Occupational health***

The Corporation’s approach to managing occupational illness is focused on taking proactive measures and implementing strong occupational surveillance programmes coupled with controls to minimise occurrences of illnesses that may develop as a result of conditions and exposures in the workplace, and is demonstrated through:

- Understanding and assessing employees' workplace exposure hazards;
- Identifying individuals and work tasks with highest occupational illness risks;
- Implementing occupational hygiene surveillance programmes; and
- Using surveillance data as the foundation for implementing best prevention and mitigation strategies.

These control procedures may include the substitution of harmful or toxic materials with less dangerous ones, changing of work processes to minimise work exposure, installation of exhaust ventilation systems, good housekeeping, and the provision of proper personal protective equipment.

### ***Health awareness and wellbeing programmes***

In collaboration with its health service provider, International SOS, HR and Training Department ("International SOS"), Oyu Tolgoi LLC conducts health and hygiene awareness trainings and programmes. In addition, campaigns addressing various health related matters are ran by Oyu Tolgoi LLC, including programs directed at mental health, wellbeing, and infectious disease, the Employee Assistance Program and seasonal flu vaccination and COVID-19 booster campaigns. These programmes are developed based on public health risks in Mongolia and the results of studies of the Oyu Tolgoi population. These initiatives greatly increase knowledge of health issues at Oyu Tolgoi.

Individuals with underlying health conditions are identified and provided with support. Health topics share the spotlight in the monthly HSEC themes, and healthy meal choices are provided on site.

Other activities typically provided by the Corporation for the health and wellbeing of those on site, such as the accessible gym and cinema, have been impacted by the ongoing global pandemic.

### ***Medical preparedness and response***

Due to the remoteness of the Oyu Tolgoi site, it is important to ensure the Corporation's employees and contractors have access to timely emergency medical services.

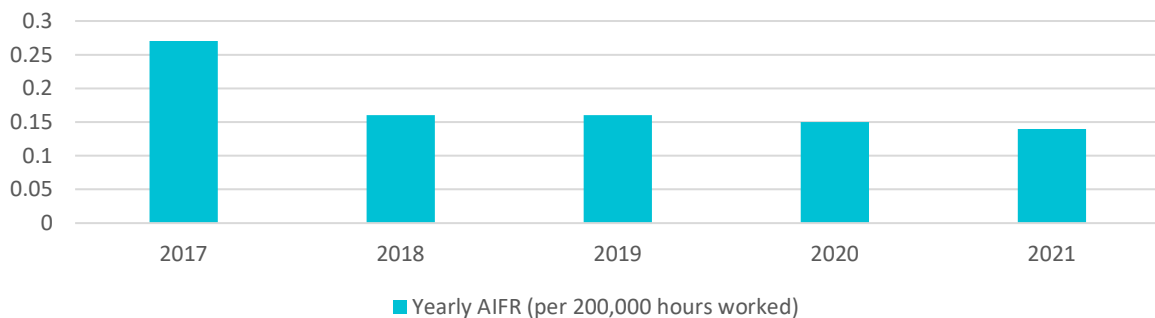
In addition to Oyu Tolgoi LLC's dedicated Emergency Response Team, it also maintains an onsite medical clinic facility managed by International SOS that provides a range of services, including:

- 24/7 medical clinic access and services;
- Internationally trained expatriate and local doctors;
- A fully equipped emergency room with resuscitation and monitoring areas;
- Adherence to Advanced Cardiac Life Support standards;
- In-house diagnostics;
- Medical evacuation services; and
- COVID-19 treatment services.

## Safety

At Oyu Tolgoi, the Corporation's first priority is the safety and health of those on site. With risk identification and control at its core, safety systems extend from inductions and training to major facility engineering audits. Some types of mining environments increase the complexity of managing safety, which reinforces the need for a comprehensive safety management system.

5-year AIFR<sup>1</sup> Results at Oyu Toloi



<sup>1</sup> Note: The AIFR is an indicator of workplace health and safety and provides insight into an organisation's efforts to protect its workforce from work-related hazards

The integrated safety system at Oyu Tolgoi LLC leverages comprehensive safety standards covering the Corporation's specific workplaces and is supported by assurance programmes. There is a strong focus on risk assessment and controls to prevent accidents. Systems are designed to prevent low-probability but high-consequence events that can cause fatalities as well as reducing and preventing injuries. Oyu Tolgoi's safety performance is underpinned by a rigorous approach to safety consisting of the following areas:

- *Leadership* – Oyu Tolgoi LLC's leadership team creates and promotes a safe work environment by being present in the field and highly engaged with their teams. A number of tools are utilised to help leaders integrate safety into their activities and to become champions of safety improvements. Employees are encouraged to become safety leaders within their own teams and to take personal responsibility for their own safety and that of their colleagues.
- *Culture* – Oyu Tolgoi LLC aligns organisational and employee values to create a positive culture that drives consistent behaviour. All individuals at Oyu Tolgoi should feel comfortable to stop work if they feel it is unsafe to continue. Every meeting at Oyu Tolgoi starts with a "safety share", a chance for employees to describe any safety-related issue and to listen to constructive advice from colleagues. Risk-based task planning has been normalised as well as in the field assessments by team members and leaders to identify hazards that need to be addressed.
- *Systems and processes* – Oyu Tolgoi LLC seeks to adopt best practice safety management systems to deliver world-class safety performance. Oyu Tolgoi's safety standards are aligned with broader corporate and enterprise-wide safety standards providing a framework to measure, monitor and continuously drive improvement in safety performance. Oyu Tolgoi LLC has successfully

embedded the Kaizen process into business improvement activities to enable teams to identify and eliminate elements of work that do not add value or are obstacles to efficiency or safety. Examples of Kaizen process initiatives include elimination of root causes that may trigger failures of critical controls and identification of opportunities to improve the concentrate bagging process and border procedures.

- *Risk management* – Given the scale and complexity of Oyu Tolgoi, the workforce faces a range of risks that must be managed carefully. Proactive measures are taken to control risks at a range of levels in the organisation, from a strategic to daily workplace level, by identifying hazards, assessing the risks they pose and using controls to prevent damage and harm. Oyu Tolgoi LLC's systems use risk assessments and controls for all tasks and utilise a variety of different tools to help manage risks in their workplace. An example of risk management innovation is the integration of the geographic information mapping system with high-risk work activities to provide the Emergency Response Team live location and work status. Oyu Tolgoi LLC has a strong focus on critical risk management, controlling the risks that are the most serious, i.e., those that could lead to fatality or permanent injury.

Over 122,800 critical risk management verifications were completed during 2021 as part of Oyu Tolgoi's proactive fatality prevention programme.

- *Training and awareness* – Oyu Tolgoi LLC gives each employee relevant classroom courses and on-the-job training to provide them with the skillsets, tools and knowledge needed to succeed safely. In 2013, Oyu Tolgoi LLC opened a risk demonstration centre, the first of its kind in Mongolia, which uses interactive demonstrations and activities to show the potential consequences of the risks faced. Safety campaigns run continuously throughout the year to highlight key operational risks including working at heights, hand safety, electrical safety, and others.
- *Employee and contractor engagement* – Oyu Tolgoi LLC actively encourages employee and contractor participation in all aspects of safety management. Contractors are required to adhere to the same safety standards as Oyu Tolgoi LLC employees with a team dedicated to managing contractor safety performance. Regular contractor engagement conferences provide an additional forum to share safety approaches with contractors.

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## Environment

At the heart of the mine's operations and future development strategies is respect for the environment. All partners including Oyu Tolgoi LLC, Rio Tinto and Turquoise Hill are committed to preventing and mitigating environmental impacts from the mine's operations.

The Gobi Desert has unique natural formations that need to be protected. The overall goal is to minimise impacts on the environment and, where possible, implement measures that benefit the environment.

To achieve this goal, Oyu Tolgoi implements a variety of activities and monitoring programmes in the areas of water, air, biodiversity, waste management, and land management and complies with the following laws and requirements including:

- Environmental requirements and standards of project lenders - International Finance Corporation (IFC), European Bank for Reconstruction and Development (EBRD);
- Applicable environmental laws, regulations and standards of Mongolia;
- Internationally recognised standards (ISO14001);
- Rio Tinto's environmental policies, strategies and standards; and
- Regular monitoring of environmental performance and adherence to internal environmental monitoring programmes.

### *Water*

In the South Gobi Desert, water is a precious natural resource. To ensure ongoing availability of surface water, Oyu Tolgoi LLC is committed to using water carefully, balancing the mine's operational needs while ensuring water is fully available for local residents and future generations.

Oyu Tolgoi was designed as one of the most water-efficient mines in the world and operates to a demonstrated high standard of water conservation. The water used by Oyu Tolgoi comes from a deep saline aquifer and is not suitable for consumption by humans and livestock. Hydrogeological modelling indicates that even after 40 years of extraction, the deep aquifer system will remain confined and is unlikely to impact the streambed aquifers. Drawdown will be continuously monitored, and the aquifer model will be updated and refined as more data becomes available. As necessary, abstraction from the boreholes will be adjusted to optimise drawdown characteristics and protect the shallow groundwater resources.

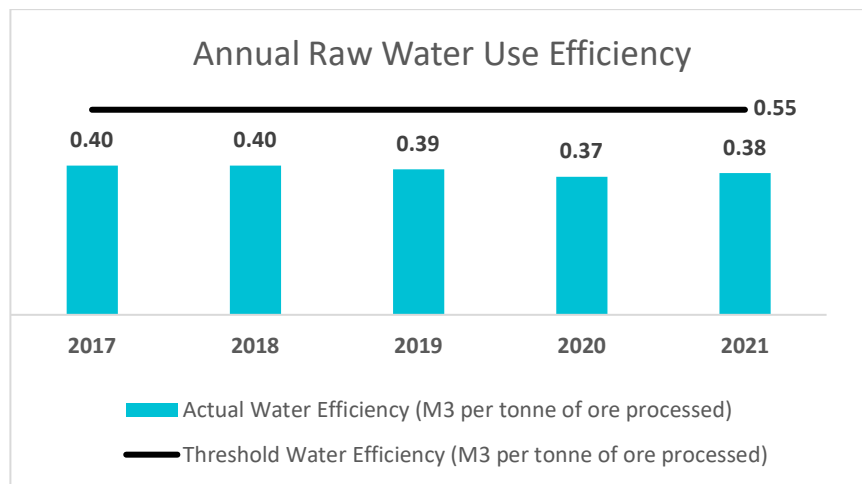
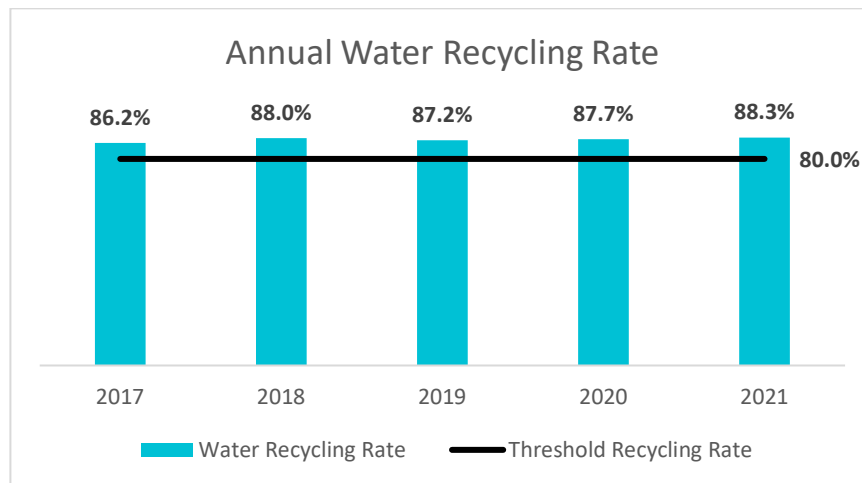
Consumption rate of 0.38 cubic metres of water per tonne of ore processed is below the global average and demonstrates Oyu Tolgoi's commitment to water efficiency and sustainability.

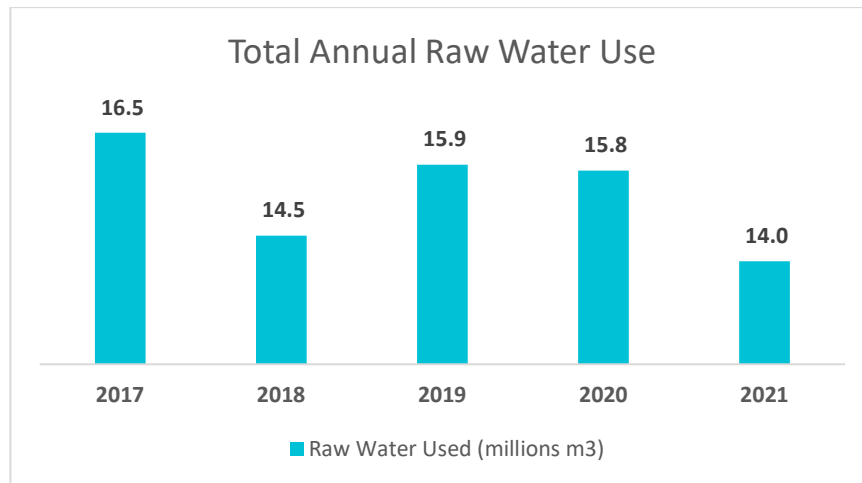
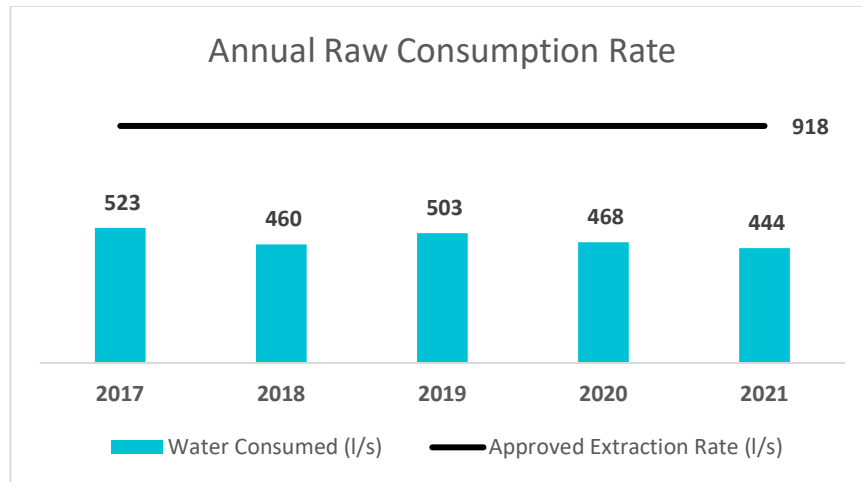
An independent water audit is undertaken every five years, with the last audit completed in 2021. A diverse process including inspections from the Government of Mongolia as well as local community field monitoring ensures Oyu Tolgoi's continued compliance with water management and conservation policies, standards, and legislation.



This audit found that Oyu Tolgoi LLC continues to comply with the requirements under Mongolian law on water and other relevant laws and procedures during the period covering 2016-2020, inclusively. Further, it concluded that Oyu Tolgoi LLC is fulfilling its water-related commitments under the Investment Agreement.

Since 2014, Oyu Tolgoi has consistently achieved annual water recycling rates above the mine's targeted recycling rate of 80%. In 2021, water used by Oyu Tolgoi has been continuously recycled at an average rate of 88.3%.





From 2014 to 2020, 149 exploration wells had been sealed, rehabilitated and handed over to the local government and the Galba Oosh Dolood Gobi Basin Administration. Unfortunately, in 2021, monitoring bores drilling and exploration boreholes could not be sealed due to the unprecedented circumstances of COVID-19.

Oyu Tolgoi LLC undertook various activities in 2021, including:

- Two clean-up initiatives for local water sources;
- Building industry coordination and information sharing on water management through the development of a Voluntary Code of Practice (VCP); and
- Water monitoring review.

## ***Waste management***

The mining process produces mineralised waste which is pumped into storage areas for long-term storage. Every effort is made to minimise the footprint of these facilities to reduce non-productive land area as much as possible. One way to minimise the footprint is to maximise density of the tailings through thickening, or reduction in water content, and by designing storage facilities to maximise water drainage and collection for re-use. Minimising the footprint not only positively reduces environmental impact on land area and water use, but also minimises costs for the operations.

### ***Tailing Storage Facility***

Oyu Tolgoi LLC stores mineralised waste in tailings storage facilities, which are engineered structures designed to minimise the impact on the local environment. Tailings Storage Facility 1 has been in use since 2013 and is currently 56.2 metres high. In 2021, 38 million dry metric tonnes were pumped to the tailings' storage facility, meeting the anticipated level rise of 6.5 metres. The Oyu Tolgoi tailings facility uses the downstream method of wall construction and the latest independent review of the facility was carried out in November 2020.

Oyu Tolgoi LLC's tailings risk is managed in a structured way with three levels of assurance used to monitor and reduce risk.

The first level of assurance is based on the work of site teams and processes. The second level of assurance is provided by the project manager, Rio Tinto, with in-house specialists providing technical reviews and monitoring the application of Rio Tinto's Global Standard. The third level of assurance is provided by regular external reviews of the facility. The facility has been risk-reviewed against the Australian National Committee on Large Dams framework and actions have been taken to reduce risk.

### ***Non-Mineralised Waste Management***

As a result of the development of the underground portion of the mine, the amount of waste generated at Oyu Tolgoi has significantly increased. Oyu Tolgoi LLC has focused on continuous improvement of non-mineral waste management through the development of the long-term non-mineral waste management strategy and the reduction of the waste that goes to the waste management centre by improving the ability to reuse and recycle waste materials and segregating waste in the work areas.

Oyu Tolgoi LLC has successfully established relationships with national recycling contractors and a memorandum of understanding was signed with the local Red Cross to allow Oyu Tolgoi LLC to send the re-usable items, such as wood, to local communities.

In 2018, Oyu Tolgoi LLC also started a programme to prepare organic compost using food waste and, since 2020, operations of the composting facility have been managed by the Oyu Tolgoi infrastructure team. In 2021, Oyu Tolgoi LLC purchased a composter machine which has the capacity to compost 5 tons of food waste daily.

19.7% of total waste was diverted from the Waste Management Centre through reuse and recycling.	The amount of waste landfilled per person per day has decreased from 6.7 kg to 2.3 kg of 2021
1531 tons of food waste, wood scraps, cardboard were used for composting and 7.7 tons of prepared compost was used for the first time in rehabilitation	Over 2025 tons of wood was reused in cooperation with the local Red Cross Primary Committee

Over the last two years, Oyu Tolgoi implemented a number of improvement works for hazardous substance and dangerous goods management and for reducing hazardous waste generation from hazardous materials. Notably, Oyu Tolgoi:

- Clarified the role and responsibility of teams involved in hazardous substance and dangerous goods management processes;
- Added the planning stage on the process flow;
- Started considering the hazardous substance and dangerous goods management from the procurement stage, and the procurement process only after the ChemAlert approval;
- Improved the hazardous substance and dangerous goods registration and control;
- Included the “Waste Management Plan” submission requirement on Oyu Tolgoi Supplier Database registration and proposed management is considered in tender evaluation process; and
- Updated the relevant management plan and procedures.

OT non-mineral waste data	2020		2021	
	Amount/tn	Percentage, %	Amount/tn	Percentage, %
<b>Generated waste</b>				
Hazardous and controlled waste	1,628	3.90%	1,396	3.10%
Non-hazardous waste	40,658	96.10%	43,218	96.90%
<b>Total</b>	<b>42,286</b>	<b>100%</b>	<b>44,614</b>	<b>100%</b>
<b>Re-used and recycled waste</b>				
Hazardous and controlled waste	1,469	3.50%	1,222	2.70%
Non-hazardous waste	9,083	21.50%	7,559	16.90%
<b>Total</b>	<b>10,552</b>	<b>25.00%</b>	<b>8,781</b>	<b>19.70%</b>
<b>Landfilled waste</b>				
Landfilled in WMC	6,564	15.50%	4,430	9.90%
Landfilled in Inert waste pit	24,703	58.40%	30,612	68.60%
<b>Total</b>	<b>31,267</b>	<b>73.90%</b>	<b>35,041</b>	<b>78.50%</b>
<b>Stored hazardous waste</b>	<b>378</b>	<b>0.80%</b>	<b>395</b>	<b>0.90%</b>

### *Biodiversity*

Oyu Tolgoi is committed to minimising the mine’s operational impact and contributing to biodiversity conservation to ensure that the region will benefit from the mine’s presence.

Oyu Tolgoi LLC supports landscaping and greening of Khanbogd and has donated over 11,700 individual saplings to the local community and neighbouring soums and aimags.

Oyu Tolgoi LLC works with international non-government organisations (“NGOs”), including Global Biodiversity Conservation, Wildlife Conservation Society, consultants and university researchers to ensure a net positive impact on biodiversity (habitat, wildlife and pasture land) in the mine area. The annual biodiversity monitoring programmes provide information to assess the effectiveness of the mitigation strategies that have been incorporated into the Oyu Tolgoi LLC operational management plans.

In 2020, the Core Biodiversity Monitoring Program (“CBMP”) contract was renewed for an additional five years to 2024. Despite the COVID-19 pandemic, overall CBMP activities have progressed well in 2021 although travel restrictions have impacted the Khulan collaring programme and priority plants survey on site; however, all 2021 planned field works were completed successfully.

Oyu Tolgoi LLC has implemented several biodiversity offsetting projects that contribute to making a net positive impact on biodiversity and ecosystem services in the region.

**Anti-poaching offsetting project**

Since 2015, Oyu Tolgoi LLC has been collaborating with local government agencies on this successful initiative. A Multi-Agency Team and a Mobile Anti-Poaching Unit were formed to improve and solve the difficulties that patrols face. The Anti-Poaching Unit consists of East, Central and West teams and patrol the Omnogobi and Dornogobi aimags. In addition, the rangers of the Small Gobi Strictly Protected Area A and B also carry out patrols in the protected areas close to Oyu Tolgoi.

**Spatial Monitoring and Reporting Tool (“SMART”)**

An important component of the anti-poaching project, this software package is used to plan patrol efforts, monitor patrols and document the location of carcasses found by the patrols. The information collected is used to assess patrol efficacy. The effectiveness of the SMART system has led the Government of Mongolia to develop a working group to examine the expansion of SMART into other protected areas in Mongolia.

**Poaching rate research**

In order to further support the anti-poaching programmes and the overall management of endangered species in the region, Oyu Tolgoi also conducts research on poaching in Southern Gobi using acoustic devices. Acoustic recording devices are placed near watering points with the highest poaching rate probability. The devices record gun shots to evaluate the poaching rate and determine locations being used by the poachers.

Other offsetting projects include powerline insulation in order to reduce bird mortality, development of sustainable cashmere, and modification of railroad fencing to promote khulan movement and extend their habitat. Additionally, Oyu Tolgoi LLC organises scientific symposiums (i.e. Gobi Gracious 6) and alternate nature conservation activities (i.e. celebrating international nature conservation days such as International Migratory Bird Day, etc.) to raise awareness among the public and to share information.

***Greenhouse gas emissions***

Oyu Tolgoi has implemented an Atmospheric Emissions Management Plan that outlines the applicable national, Rio Tinto and international standards and defines Oyu Tolgoi’s key management atmospheric emissions controls. The plan also includes monitoring and reporting procedures. One of the key management controls is reporting on Oyu Tolgoi’s greenhouse gas emission performance against the estimated emission targets. Oyu Tolgoi has a comprehensive greenhouse gas inventory and reporting

process and continues to explore energy-saving opportunities through a registry focused on energy saving and greenhouse gas reduction initiatives.

Oyu Tolgoi LLC has been measuring monthly greenhouse gas (“GHG”) emissions since 2012 and completes an annual GHG workbook. Greenhouse gas emission control is constantly monitored and performance for the year ended December 31, 2021, was 2.31 tonnes CO<sup>2</sup>/unit product against an annual forecasted intensity of 2.69 tonnes CO<sup>2</sup>/unit product. These emissions include Scope 1 (direct emissions from owned and controlled sources) and Scope 2 (indirect emissions from the generation of purchased energy).

Moreover, in October 2021, Rio Tinto announced that they will bring forward their target of reducing their Scope 1 and 2 emissions by 15% to 2025. Oyu Tolgoi LLC is collaborating with the Rio Tinto Copper Group Energy Development team to support the GHG reduction pathways.

	2017a <sup>2</sup>	2018a <sup>2</sup>	2019a <sup>2</sup>	2020a <sup>2</sup>	2021a <sup>3</sup>
<b>Total emissions (tonnes CO<sub>2</sub>-e)</b>	1,572,355	1,514,205	1,596,287	1,604,224	1,738,426
<b>Emissions intensity (tonnes CO<sub>2</sub>-e per tonne of concentrate)<sup>1</sup></b>	2.18	2.06	2.38	2.32	2.31
<b>Emissions intensity (kg CO<sub>2</sub>-e per tonne of ore milled)</b>	38.2	39.1	39.1	39.9	44.4

Notes:

- (1) The emissions intensity per tonne concentrate produced is impacted by variability of the grade of the ore mined, which is a function of the orebody.
- (2) The figures for 2014-2020, inclusively, exclude the underground development project emissions.
- (3) The figures for 2021 represent the sum of both operations and underground emissions as underground material begins to be processed as Oyu Tolgoi moves towards sustainable production. Over 1 million tons of underground material was processed in 2021.

Since 2015, Oyu Tolgoi LLC has been implementing programmes and activities to support the reduction of its GHG emissions and to save energy. Such activities include:

- Ending the use of diesel generators for remote infrastructure by providing permanent power supply at:
  - Training center, Khanbogd soum, Umnugobi province (2015);
  - Marshall yard, Oyu Tolgoi mine site (2017);
  - Power camp, Oyu Tolgoi mine site (2018);
  - Emulsion plant, Oyu Tolgoi mine site (2018); and
  - Khanbumbat permanent airport (2018);
- Installing solar energy powered walkway lighting for the Oyut Camp to the Bagging Plant and the Northgate, which resulted in thirty-four sections of walkway lightings being installed in 2019;
- Installing runtime management equipment on air conditioners in various facilities, which resulted in reducing over 7,000 units’ runtime thereby decreasing 30% in energy use for these units;

- Installing LED lights in numerous buildings at site, thereby saving 688.8 mWh/year electricity and 728.75 tCO<sub>2</sub>-e emissions; and
- Reducing testing period on 20 standby diesel generators each with a capacity of 2 MW from weekly to twice weekly, which saved 105.68t of diesel in this year and resulted in annual abatement of 284.27t CO<sub>2</sub>-e.

### ***Land Management***

As part of Oyu Tolgoi's sustainable land management policy, the mine's closure and rehabilitation plans have been developed in accordance with Mongolian laws and standards, in an effort to keep land degradation to a minimum.

#### ***Land Disturbance Management***

In order to ensure minimal land disturbance, Oyu Tolgoi requires an environmental inspection and assessment before any land disturbance occurs. A permit for work is only approved after protective actions identified in the assessment are completed. This process eliminates or minimises potential impact on local water, biodiversity, the community, cultural heritage and many other areas. It also ensures compliance with environmental and other relevant legislation. This procedure also applies to Oyu Tolgoi-sponsored projects.

#### ***Topsoil Management***

The Oyu Tolgoi topsoil management plan is one of the most important elements in rehabilitating land affected by the mine's operations and infrastructure development, helping to restore vegetation and biodiversity. Before the start of any land disturbance activity, Oyu Tolgoi strips and stores the topsoil so it can be used to rehabilitate the land after the work is complete.

#### ***Environment Rehabilitation***

Areas that were disturbed during exploration, development and operations are rehabilitated during and after the project, including through the development of a mine closure plan at the start of the construction phase. Making disturbed areas safe for people, animals and the environment is one of the main reasons for proper rehabilitation. To make an area safe, technical rehabilitation must be completed to high standards. Oyu Tolgoi has a dedicated team to work with contractors to monitor rehabilitation.

Oyu Tolgoi continued its comprehensive environmental monitoring programme and maintained compliance with key environmental programmes. In 2021, planned biological rehabilitation was completed on 35.64 ha of land associated with off-site construction works, such as road construction and including the planting of almost 48,018 individual saplings from 18 species grown by the Native Plant Propagation Centre in Khanbogd. In 2020, over 52 ha of biologically rehabilitated land were handed back to local government.

Technical rehabilitation was completed on 27.26 ha in 2021, bringing the total to 1706.17 ha between 2010 and 2021.

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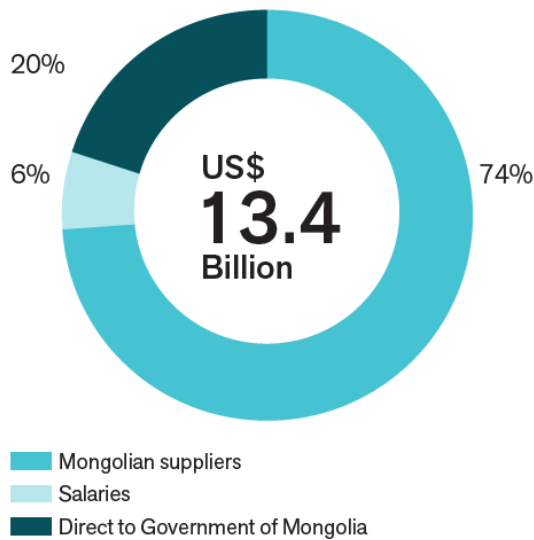
## Communities and People

### *Community Engagement*

Oyu Tolgoi has reached \$13.4 billion in total in-country spend since 2010, marking the largest foreign investment in the country to date. The total in-country spend has substantially contributed to the country's economic development through taxes, fees, national and local procurement, salaries and other contributions provided to communities and the society over the past 11 years.

#### **Total In-Country Spend** (2010 - Q4 2021)

Since 2010, Oyu Tolgoi has spent US\$13.4 billion in-country in the form of salaries, payments to Mongolian suppliers, taxes and other payments to the Government of Mongolia.



Oyu Tolgoi LLC continues to work collaboratively with national and local suppliers to increase capability to ensure the highest international standards. The purchase of goods and services from Mongolian suppliers represents 74% of the total spend.

Oyu Tolgoi LLC has also made a significant investment in people through not only employment but also the development of the workforce. Over 96% of Oyu Tolgoi's workforce are Mongolian nationals, exceeding the commitment made under longstanding agreements with the Government of Mongolia of 90% during operations. Many employees have been given the opportunity to work at Rio Tinto operations in Australia, the United States, United Kingdom, Canada and Singapore through a development programme designed to build comprehensive mining industry skills in the Oyu Tolgoi workforce.

Oyu Tolgoi contracts expatriate professionals and experts in rotating specialised roles; however, the development of skills for local Mongolian nationals is a high priority – structured professional



development programmes are offered to ensure high potential personnel are ready for leadership and subject matter expert roles.

### *Surrounding Communities*

The Cooperation Agreement signed in 2015 by the Umnugobi aimag, Khanbogd soum and Oyu Tolgoi LLC supports Oyu Tolgoi's continued relationship building and nurturing of communities surrounding the mine, as well as partner communities, Khanbogd, Manlai, Bayan-Ovoo and Dalanzadgad soums.

In Khanbogd, the partnership with Oyu Tolgoi LLC led to:

- The connection of the town to a permanent power supply;
- Construction of a new water supply system with the capacity to support 13,000 residents;
- Sealing of local roads (the Oyu Tolgoi LLC funded construction of a 35.1 kilometres sealed road between Oyu Tolgoi and Khanbogd which opened in 2019);
- Funding of new educational and healthcare facilities; and
- Programmes to help improve social conditions.

Moreover, Oyu Tolgoi LLC makes an annual contribution of \$5 million to the Gobi Oyu Development Support Fund ("DSF"), an independent fund that supports sustainable community development. Since its creation in September 2015, the DSF has invested \$32.9 million, including \$5.7 million in 2021, in 304 sustainable development projects and programmes, which have resulted in the creation of over 480 permanent jobs, and scholarships for 324 students, among many other achievements.



Examples of projects implemented through the DSF include:

- Construction of a 1200-student capacity school and 200-student capacity kindergarten in Dalanzadgad;
- Construction of a health care center in Tsogt-Ovoo soum to provide better health service to local community;
- A micro loan provided to 51 small businesses of Umnugovi to support their growth and sustainable development;
- Construction of a health-care centre in Mandal-Oyoo soum to provide easier access to health services;

- Construction of a new museum in Umnugobi aimag, as well as the provision of required equipment;
- Co-funding of an integrated health care programme to provide health-related support to Umnugobi aimag women and youth; and
- Maintaining a strong partnership with local stakeholders and working together to protect communities during the unprecedented COVID-19 pandemic, as well as coordinating a series of contributions to improve local emergency response capacity while enabling uninterrupted business operations.

Since 2019, Oyu Tolgoi has partnered with the National Police Agency on road safety projects focusing on reducing deaths and injuries on the local roads.

In 2019 and 2020, Oyu Tolgoi co-organised the *No need to rush* and *Do not be a mule, play by the rules* campaigns with the National Police Agency to promote road safety and responsible driving on rural intercity roads. Oyu Tolgoi worked closely with police departments in all aimags and soums to raise public awareness through media campaigns and installed speedometers on roads where accidents caused by speeding were prevalent.

In 2021, Oyu Tolgoi continued the partnership, launching the *Let's protect our future* – a two-month campaign focused on preventing traffic accidents and child passenger safety. As a result of the campaign, the total number of traffic accidents decreased by 5%, injuries by 25.2% and deaths by 33.3%. Child deaths decreased 33.3%.

Oyu Tolgoi also supports several other community programmes, including:

- The Khanbogd Development Strategy which OT developed to maximise shared values and lasting benefits for employees and communities to a catalyst for Khanbogd development in coming decades, and to provide funding to update Khanbogd Master Plan as approved by local parties;
- Livelihood and economic diversification initiatives for communities in Khanbogd through the Local Agribusiness Support Strategy and collaborating on initiatives with herders' cooperatives and local government to improve livestock health services, increase productivity of livestock, vegetable and dairy production, strengthen market linkages, and nurture entrepreneurial mindsets amongst local communities;
- Sustainable livelihood pilot projects in Khanbogd including a partnership to create a new local brand of camel milk, angus cattle breeding, Gaviluud sheep breeding, vegetable growing and sewing business;
- Hay and fodder donation provided to help local herder households to survive harsh winters;
- Herder support programme to help herders access water and which repaired and constructed wells and connecting to solar power sources;
- Partnerships with local herders to monitor hand wells since 2012 under the Participatory Environmental Monitoring programme administered by a local NGO established by Khanbogd community members involving 86 local herders and monitoring 87 hand wells; and
- Continued constructive community engagement with local stakeholders through the Khanbogd Tripartite Council and implementing 74% of agreed actions under the Herder Complaint Resolution Agreements as of the end of 2021.

## Corporate Governance

The table below outlines various initiatives undertaken by the Corporation in the management and disclosure of environmental and social matters affecting the Corporation's activities:

Best practices	Corporate initiatives
Corporate culture	The Corporation adopted a HSEC Policy on March 14, 2018, demonstrating its commitment to HSEC matters. Fulsome HSEC updates are provided to the Board of Directors on a quarterly basis along with a monthly overview included as part of the CEO reports to the Board of Directors. In addition, safety shares are part of all Board of Directors and management meetings which the Corporation believes foster a strong culture of HSEC consciousness throughout the Corporation.
Risk management	The Corporation's disclosure of risk factors in this AIF includes information on key HSEC risks. Risks of significance are monitored by management. Management is able to influence the inclusion of additional HSEC risks, or elevation of existing risks in the Corporation's principal risk register. HSEC risks are also tracked by Oyu Tolgoi LLC management on a continuous basis.
Corporate strategy	Material risks are taken into account in the Corporation's strategy. At this time, other than the risks related to COVID-19 and to the social licence to operate, as disclosed in the Corporation's risk factors in this AIF, no other material environmental and social risks that would have an impact on the overall strategy of the Corporation have been identified and highlighted in the strategy outside of the broader risks which could have an impact on environmental and social matters.
Board composition	The Nominating, Corporate Governance and Sustainability Committee reviews the Board of Directors' skills matrix every year to ensure that the Board of Directors is composed of the right mix of skills, knowledge and experience. The skills matrix includes a HSEC component to ensure the Board of Directors is able to meet its oversight responsibilities on all HSEC matters.
Board structure	The Board of Directors has the ultimate oversight on HSEC matters and created the Health, Safety, Environment, Communities and Operations ("HSECO") Committee to help discharge its duties on these matters. The HSECO Committee meets as often as necessary, but no less than four times per year.
Board practices	The HSECO Committee meets a minimum of four times a year. All meetings of the HSECO Committee follow an established agenda and are minuted. Safety shares are part of all Board meetings which the Corporation believes foster a strong culture of HSEC consciousness.
Performance evaluation and incentives	All short-term incentive awards paid to the Corporation's executives contain an HSEC component.
Disclosure to shareholders	This AIF contains a dedicated section on the importance of HSEC matters for the Corporation and on HSEC matters at Oyu Tolgoi. This section is reviewed and recommended by the HSECO Committee and approved by the Board of Directors before the documents are filed.

## RISK FACTORS

The Corporation is subject to a number of risks due to the nature of the industry in which it operates, the present state of development of its business and the foreign jurisdictions in which it carries on business. The following is a summary description of the material risks and uncertainties to which the Corporation is subject. Some of the following statements are forward-looking and actual results may differ materially from the results anticipated in these forward-looking statements. Please refer to the section titled "Special Note Regarding Forward-Looking Statements" in this AIF. If any of such risks or risks not currently known to the Corporation actually occurs or materialises, the Corporation's business, financial condition or results of operations could be adversely affected, even materially adversely affected.

***The Corporation's ability to carry out its activities in multiple jurisdictions, including Mongolia, is subject to various legal and political risks.***

Although the Corporation expects that the Investment Agreement and the UDP (to the extent such agreement remains enforceable) should continue to bring significant stability and clarity to the legal, political and operating environment in which the Corporation will develop and operate Oyu Tolgoi, the Corporation remains subject to various legal and political risks in Mongolia. In addition, the Government of Mongolia also owns a significant stake in Oyu Tolgoi LLC which holds the Oyu Tolgoi property.

There can be no assurance that the Corporation's assets will not be subject to nationalisation, requisition, expropriation or confiscation, whether legitimate or not, by any authority or body. In addition, there can be no assurance that the political and economic policies of neighbouring countries, including China, in relation to Mongolia will not have adverse economic effects on the development of the Corporation's mining projects, including its ability to access power, transport (including across borders) and sell its products and access construction labour, supplies and materials. There is no assurance that provisions under Mongolian law for compensation and reimbursement of losses to investors under such circumstances would be effective to restore the full value of the Corporation's original investment or to compensate for the loss of the current value of the Mongolian projects. Insofar as the Government of Mongolia is a sovereign entity against which the terms of the Investment Agreement (and the UDP, to the extent such agreement remains enforceable) may take considerable time to enforce (if enforceable at all), this risk applies to Oyu Tolgoi despite the provisions of the Investment Agreement respecting nationalisation and expropriation. There can be no assurance that Mongolian laws protecting foreign investments will not be amended or abolished or that existing laws will be enforced or interpreted to provide adequate protection against any or all of the risks described herein, or that the principles agreed to under the GoM Agreements will be adhered to, including the principle that debt financing at the Oyu Tolgoi LLC level would be permitted after achievement of sustainable production for Panel 0 (currently expected in the first half of 2023). There can be no assurance that there would not be disputes resulting from multiple levels of corporate and/or governmental approvals and differing sophistication in relevant business and technical matters, inequality of bargaining power and incompatible strategic and economic objectives (both in the short term and the longer term) among the shareholders of Oyu Tolgoi LLC which could have a material adverse impact on the Corporation's business prospects, results of operations and financial condition.

The Corporation carries out its activities in countries which may be affected in varying degrees by political stability, government regulations (including but not restricted to those related to the mining industry) and domestic or foreign investment therein, and by the policies of other nations in respect of these countries. Any changes in regulations, shifts in political conditions, outbreak of war or other hostilities are beyond the control of the Corporation and may adversely affect its business. The Corporation's

mining, exploration and financing activities may be affected to varying degrees by government regulations, or other political and administrative undertakings, including those with respect to restrictions on production, price controls, export controls, income and other taxes, expropriation of property, employment, land use, water use, environmental legislation and mine safety. The Corporation may be subject to disputes or issues with customs officials or border crossings affecting the shipment of the Corporation's products in jurisdictions in which it operates, and the ability of its customers to collect such products may arise and could have an adverse effect on the Corporation's ability to collect and/or recognise revenue. In addition, in the various jurisdictions where the Corporation operates and finances its business activities (including Mongolia, China, U.S., Canada and Europe), the Corporation is subject to taxes (including income taxes and mining taxes) and it may from time to time be subject to disputes with tax authorities over the interpretation and application of existing tax legislation and/or computation of taxes owing to such jurisdictions. The Corporation also faces risks regarding future changes in the tax laws of such jurisdictions (and future changes in the way such tax authorities interpret and apply existing tax legislation) that could increase the amount of taxes owing. In this regard, in October 2021, members of the OECD/G20 Inclusive Framework on BEPS endorsed a "Two-Pillar Solution" designed to ensure that in-scope multinational enterprises are subject to a minimum tax rate of 15% and targeting certain "base-eroding" payments made in respect of developing countries. These proposals are not yet fully developed and their potential impact on the Corporation cannot be determined at this time. The Corporation's activities may also be affected to varying degrees by terrorism, military repression, crime, extreme fluctuations in currency exchange rates and high inflation.

Moreover, the legal framework in Mongolia is, in many instances, based on recent political reforms or newly enacted legislation, which may not be consistent with long-standing conventions and customs. Although legal title risks in respect of Oyu Tolgoi are believed to be significantly mitigated by the terms of the Investment Agreement, there may still be ambiguities, inconsistencies and anomalies in the other agreements, licences and title documents through which the Corporation holds its direct or indirect interests in other mineral resource properties in Mongolia, or the underlying legislation upon which those interests are based, which are atypical of more developed legal systems and which may affect the interpretation and enforcement of the Corporation's rights and obligations. Many laws of certain of the countries in which the Corporation carries out its activities have been enacted, but in many instances they are neither understood nor enforced and may be applied in an inconsistent, arbitrary and unfair manner due to the substantial administrative discretion granted to the responsible government officials or agencies, while legal remedies may be uncertain, delayed or unavailable. These laws or their enforcement by national, regional or local authorities can adversely affect, among other things, water access rights, operating costs resulting from unanticipated increases in tariff rates and overall assessment of risk. These uncertainties could limit the legal protections available to the Corporation. Even the Corporation's best efforts to comply with applicable laws and regulations may not result in effective compliance in the determination of government representatives, which may have a material adverse impact on the Corporation and its share price. Accordingly, while the Corporation believes that it has taken the legal steps necessary to obtain and hold its property and other interests in Mongolia, there can be no guarantee that such steps will be sufficient to preserve those interests.

***The Corporation may be limited in its ability to enforce the Investment Agreement and the ARSHA against Mongolia, a sovereign government.***

The Investment Agreement imposes numerous obligations and commitments upon the Government of Mongolia that provide clarity and certainty in respect of the development and operation of Oyu Tolgoi, while the ARSHA sets out, among other things, certain rights and obligations of Erdenes and the

Shareholder Holdcos, with respect to their ownership in, and the management of, Oyu Tolgoi LLC. Each of the Investment Agreement and the ARSHA include a dispute resolution clause that requires the parties to resolve disputes through international commercial arbitration procedures. Nevertheless, if and to the extent that the Government of Mongolia does not observe the terms and conditions of the Investment Agreement and the ARSHA, there may be limitations on the Corporation's ability to enforce the terms of the Investment Agreement and the ARSHA against the Government of Mongolia, which is a sovereign nation, regardless of the outcome of any arbitration proceeding.

Resolution 92, approved by the Mongolian Parliament in November 2019, mandated the Government of Mongolia to take necessary measures to ensure the benefits to Mongolia of Oyu Tolgoi, including comprehensive measures to improve the implementation of the Investment Agreement. Resolution 103 was approved by the Mongolian Parliament in December 2021 to resolve outstanding issues between the Corporation, Rio Tinto and the Government of Mongolia in connection with the implementation of Resolution 92. On January 24, 2022, the Corporation announced that it had successfully reached a mutual understanding of a renewed partnership with the Government of Mongolia and that the board of directors of Oyu Tolgoi LLC had unanimously approved commencement of the undercut. The Corporation further announced the entering into of the GoM Agreements, which address the majority of the measures contemplated by Resolution 92.

If the terms of the Investment Agreement and/or the ARSHA cannot be enforced, Turquoise Hill would be limited in its ability to enforce its contractual rights and could be deprived of substantial rights and benefits arising from its investment in Oyu Tolgoi with little or no recourse against the Government of Mongolia for fair and reasonable compensation. Similarly, if the arrangements concluded pursuant to the GoM Agreements cannot be effectively enforced or if the Government of Mongolia does not abide by the terms of the GoM Agreements or wishes to revise their terms in a manner that is not in the best interests of the Corporation, it would be limited in its ability to enforce its contractual rights. Irrespective of the ultimate outcome of any potential dispute, any requirement to engage in discussions or proceedings with the Government of Mongolia, whether or not formal, would result in significant delays, expense and diversion of management's attention. Such an outcome would have a material adverse impact on the Corporation and its share price.

***Resolution 103 may not be considered by the Government of Mongolia as resolving all outstanding issues in a manner and on terms that are satisfactory to the Corporation.***

Resolution 103 was approved by the Mongolian Parliament in December 2021 to resolve outstanding issues between the Corporation, Rio Tinto and the Government of Mongolia in connection with the implementation of Resolution 92. Resolution 92 was approved by the Mongolian Parliament in November 2019 and mandated the Government of Mongolia to take necessary measures to ensure the benefits to Mongolia of Oyu Tolgoi.

On January 24, 2022, the Corporation announced the entering into of the GoM Agreements, which address the majority of the measures to be completed for Resolution 92 to be considered formally implemented, including the write off of the carry account loan, improved cooperation with Erdenes in monitoring underground development and enhancing ESG matters, the approval of the ESA, and the establishment of a funding at Oyu Tolgoi LLC that does not incur additional loan financing prior to sustainable production for Panel 0. The Corporation stated that it continues to work with the Government of Mongolia and Rio Tinto to finalise the remaining outstanding measures of Resolution 103, including the formal termination of the UDP and the resolution of the outstanding tax arbitration. As of the date hereof, the UDP has not been formally terminated and remains in effect.

If Resolution 103 is not deemed by the Government of Mongolia to resolve outstanding issues in a manner and/or on terms that are satisfactory to the Corporation, the Corporation could be limited in its ability to enforce its contractual rights. For example, if the UDP remains in effect (because it is not terminated in a manner and on terms that are satisfactory to the Corporation, or otherwise) but is not capable of being enforced, Turquoise Hill would be limited in its ability to enforce its contractual rights and could be deprived of substantial rights and benefits arising from its investment in Oyu Tolgoi with little or no recourse against the Government of Mongolia for fair and reasonable compensation. Similarly, the Corporation or Oyu Tolgoi LLC may not agree with the manner in which the Government of Mongolia may propose to enhance monitoring of underground development or ESG considerations. The Corporation's ability to influence such outcomes may be limited. Further, any requirement to engage in discussions or proceedings with the Government of Mongolia, whether or not formal, including the continuation of the ongoing tax arbitration, would result in significant delays, expense and diversion of management's attention. Such an outcome would have a material adverse impact on the Corporation and its share price.

***There can be no assurance that the Corporation will be able to secure the funding that it needs, whether under the A&R HoA or otherwise, to continue development of the Oyu Tolgoi underground mine.***

Additional funding will be required to complete the development of the underground mine, which could potentially include securing and funding alternative power options pursuant to the amended PSFA. While the A&R HoA is a binding agreement which sets out a comprehensive funding arrangement to address the Corporation's base case incremental funding requirements, there can be no assurance that all key elements of the A&R HoA, including the re-profiling of existing senior debt or obtaining senior supplemental debt, can be secured within the timeframes set out in the A&R HoA or on terms acceptable to Rio Tinto and the Corporation, or at all. In addition, there can be no assurance that the conditions precedent to the obligation of RTIH under the A&R HoA to provide the Co-Lending Facility and make the US\$300 million short-term bridge financing available will be satisfied, which could all result in delays to the project development schedule.

As part of the GoM Agreements, Oyu Tolgoi LLC entered into the ESA to provide Oyu Tolgoi with a long-term source of power from the Mongolian grid, once certain technical conditions are satisfied. While the Mongolian grid prepares to connect to Oyu Tolgoi, Oyu Tolgoi LLC will continue to import its power from Inner Mongolia, China, under an agreement between NPTG and IMPIC. However, there can be no assurance that the conditions to the implementation of the ESA will be satisfied in a timely manner, or that the required extensions to the power import agreements will be obtained, which could result in delays in securing a reliable domestic power source for Oyu Tolgoi and additional funding costs. Any such additional funding may not be available or available on reasonable commercial terms.

If the full amount of funding under the funding elements set out in the A&R HoA is not available or obtainable on reasonable commercial terms, or if the Corporation's base case incremental funding requirement increases beyond the scope of the funding contemplated by the A&R HoA, the Corporation may be required to issue Common Shares or instruments convertible into equity, including through future rights offerings, which issuances could result in dilution to the holders of Common Shares and have a material adverse effect upon the market price of Common Shares. Under the terms of the covenants forming part of the Turquoise Hill Financing Support Agreement, the Corporation is prohibited from creating, incurring or permitting to remain outstanding any indebtedness, other than certain permitted indebtedness, and from amending its constating documents to create and issue Preferred Shares. As a result of these restrictions, in seeking to raise additional capital, the Corporation may not

incur indebtedness for borrowed money or issue debt securities, other securities convertible into debt securities or Preferred Shares while the covenants forming part of the Turquoise Hill Financing Support Agreement are in force and effect unless it obtains a waiver or consent from RTIH permitting the incurrence of such indebtedness or the issuance of such securities. In addition, the GoM Agreements include a principle that debt financing at the Oyu Tolgoi LLC level would be permitted only after achievement of sustainable production for Panel 0 (expected in the first half of 2023). The ability of the Corporation to implement all of the funding elements contemplated by the A&R HoA depends in part upon the adherence to that principle by the Government of Mongolia.

***RTIH, as the holder of a majority of the Common Shares and as manager of Oyu Tolgoi, has the ability to exert a significant degree of control over the Corporation, Oyu Tolgoi LLC and Oyu Tolgoi.***

RTIH, a wholly-owned subsidiary of Rio Tinto, together with other Rio Tinto affiliates, owns a majority of the outstanding Common Shares and can exercise its voting power to elect all of the members of the Board of Directors, subject to applicable securities legislation. RTIH can also exercise its majority voting power to unilaterally pass any ordinary resolution submitted to a vote of the Corporation's shareholders, except for resolutions in respect of which RTIH is an interested party and for which disinterested shareholder approval is required, and RTIH also effectively has the power to block or vote down any other matter proposed by the Corporation or any minority shareholder. In addition, under the 2010 HoA and a management agreement between an affiliate of RTIH and Oyu Tolgoi LLC entered into in June 2015, such affiliate of RTIH was appointed as manager of Oyu Tolgoi which provides such affiliate of RTIH with responsibility for the management of Oyu Tolgoi.

RTIH is also able to exert a significant degree of control over the management, development and operation of Oyu Tolgoi, as well as the Corporation, through a series of governance mechanisms and restrictive covenants established under the Private Placement Agreement, the 2010 HoA and other agreements entered into with Rio Tinto. These include the Technical Committee established under the Private Placement Agreement and the Operating Committee established under the 2010 HoA, through which RTIH is able to control decisions respecting the business of Oyu Tolgoi LLC subject to a veto of the Corporation in respect of certain special matters. The Operating Committee is comprised of two nominees from each of the Corporation and RTIH, with an RTIH nominee serving as chairman. All decisions of the Operating Committee, other than decisions in respect of certain defined special matters, require a majority vote of the members with a casting vote of the chair in the case of a tie. Decisions in respect of "special matters", such "special matters" being set out in the 2010 HoA, require a unanimous vote of the members of the Operating Committee, giving the Corporation a veto in such matters. The Operating Committee meets in advance of each meeting of the board of directors of Oyu Tolgoi LLC to make decisions with respect to all matters to be adopted by resolution at such meetings, and the nominees of RTIH and the Corporation to the Oyu Tolgoi LLC board of directors must exercise their voting rights under the ARSHA in accordance with the instructions given by the Operating Committee. The 2010 HoA contains provisions regarding the calling of meetings of the Operating Committee, the establishment of quorum and related procedural matters.

The interests of RTIH and the interests of the Corporation's other shareholders may not necessarily be aligned in all respects and there can be no assurance that RTIH, together with other Rio Tinto affiliates, will exercise its rights as the Corporation's majority shareholder and its other contractual rights under the Private Placement Agreement, the 2010 HoA and other agreements entered into with Rio Tinto in a manner that is consistent with the best interests of either the Corporation or the Corporation's other shareholders.



***The actual cost of developing Oyu Tolgoi may differ materially from the Corporation's estimates, and development may involve unexpected problems or delays.***

The Corporation's estimates regarding the cost of development and operation of Oyu Tolgoi are estimates only and are based on many assumptions and analyses made by the Corporation's management in light of their experience and perception of historical trends, current conditions and expected future developments, as well as other factors management believes are appropriate in the circumstances. These estimates and the assumptions upon which they are based are subject to a variety of risks and uncertainties and other factors that could cause actual expenditures to differ materially from those estimated. If these estimates prove incorrect, the total capital expenditures required to complete development of the underground components of Oyu Tolgoi may increase, which may have a material adverse impact on the Corporation, its results of operations, financial condition and share price. Specifically, the estimated schedule and cost for the completion of the underground development, including in respect of timing of sustainable first production and the development capital spend for the project, may differ materially from what was announced following completion of the Definitive Estimate review and further technical work to be conducted in connection therewith.

In October 2021, the Corporation announced that previously disclosed underground delays and open-pit metal deferrals had caused an increase in the Corporation's base case estimated incremental funding requirement to \$3.6 billion. In October 2021, the Corporation also announced that COVID-19 restrictions had adversely impacted both open-pit operations and underground development, which, through the end of the third quarter of 2021, had resulted in a cumulative increase of \$140 million to the estimate of underground development capital included in the Definitive Estimate.

Further, in November 2021, the Corporation elaborated that it then expected sustainable production for Panel 0 to be delayed to the first half of 2023, broadly in line with the then forecast 6-month delay to undercut commencement, and that the previously announced 9-month delay on Shafts 3 and 4, in combination with the COVID-related reduced underground development progress and expected changes to mining scope, would result in delays to the start of Panel 2 by approximately 14-16 months compared to the Definitive Estimate, and to the start of Panel 1 by approximately 11 months compared to the Definitive Estimate.

On January 24, 2022 in connection with the announcement of the GoM Agreements and the entering into of the A&R HoA, the Corporation announced that its estimated base case incremental funding requirement was US\$3.4 billion as of December 31, 2021, prior to giving effect to the funding elements in the A&R HoA. The Corporation further announced that the board of directors of Oyu Tolgoi LLC had unanimously approved the commencement of the undercut and that, as a result of that decision, Turquoise Hill continued to expect that sustainable production for Panel 0 would be achieved in the first half of 2023. However, there can be no assurance that all key elements of the A&R HoA, including the Re-profiling of existing senior debt or obtaining SSD can be secured within the timeframes set out in the A&R HoA or on terms acceptable to Rio Tinto and the Corporation, or at all. In addition, there can be no assurance that the conditions precedent to the obligation of RTIH under the A&R HoA to provide the Co-Lending Facility and make the US\$300 million short-term bridge financing available will be satisfied, which could all result in delays to the project development schedule. Further, in such circumstances, the Corporation could be required to issue significant amounts of additional equity.

In addition to the requirements of the Investment Agreement, there are also a number of uncertainties inherent in the development and construction of any new or existing mine, including Oyu Tolgoi. These uncertainties include the timing and cost, which can be considerable, of the construction of mining and processing facilities; the availability and cost of skilled labour; the ongoing impacts of COVID-19 on both

open pit operations and underground development; ground and rock mass conditions and stability, the impact of fluctuations in commodity prices, process water, power and transportation, including costs of transport for the supply chain for Oyu Tolgoi, which requires routing approaches which have not been fully tested; the annual usage fees payable to the local province for sand, aggregate and water; the availability and cost of appropriate smelting and refining arrangements; and the need to obtain necessary environmental and other government permits, such permits being on reasonable terms, and the timing of those permits. The cost, timing and complexities of mine construction and development are increased by the remote location of a property such as Oyu Tolgoi.

It is common in mining operations and in the development, construction or expansion of existing facilities to experience unexpected problems and delays during such activities, which may cause delays in the commencement or expansion of mineral production or sustainable production. Such delays could have unforeseen impacts on disclosed project economics. Accordingly, there is no assurance that the current or future development, construction or expansion activities will be successfully completed within cost estimates, on schedule or at all and, if completed, there is no assurance that such activities will result in profitable mining operations.

***The mineral resource and mineral reserve estimates are estimates only and are subject to change based on a variety of factors, some of which are beyond the Corporation's control.***

The estimates of mineral reserves and mineral resources in this AIF, including the anticipated tonnages and grades that are expected to be achieved or the indicated level of recovery that will be realised, are estimates and no assurances can be given as to their accuracy. Such estimates are, in large part, based on interpretations of geological data obtained from drill holes and other sampling techniques and modelling assumptions and parameters. Large-scale continuity and character of the Corporation's deposits will only be determined once significant additional drilling and sampling have been completed and analysed. Actual mineralisation or formations may be different from those predicted. Reserve and resource estimates are materially dependent on prevailing metal prices and the cost of recovering and processing minerals at the individual mine sites.

The estimated mineral resources and mineral reserves described in this AIF should not be interpreted as assurances of commercial viability or potential or of the profitability of any future operations. Investors are cautioned not to place undue reliance on these estimates.

In addition, inferred mineral resources are quoted in this AIF. Inferred mineral resources have a great amount of uncertainty as to their existence, and economic and legal feasibility. Accordingly, there is no assurance that inferred mineral resources will ever be upgraded to a higher category. Investors are cautioned not to assume that part or all of an inferred mineral resource exists, or is economically or legally mineable.

There are numerous uncertainties inherent in estimating quantities of mineral reserves and resources. The estimates referenced in this AIF are based on various assumptions relating to commodity prices and exchange rates during the expected life of production, mineralisation of the area to be mined and the sequencing of mining of various areas, changes or updates to the mine design or mine plan for underground development, the projected cost of mining, and the results of additional planned development work. Actual future production rates and amounts, revenues, taxes, operating expenses, environmental and regulatory compliance expenditures, development expenditures, and recovery rates may vary substantially from those assumed in the estimates. Many of the projections and estimates are based on subjective views and assumptions. Any significant change in these assumptions, including changes that result from variances between projected and actual results, could result in material

downward revision to current estimates, which may have a material adverse impact on the Corporation and its share price.

***The Corporation's actual production, revenues and capital expenditures may differ materially from mineral reserve estimates.***

Market fluctuations in the price of metals or increases in the costs to recover metals from the Corporation's mining projects may render mining of ore reserves uneconomical and affect the Corporation's operations in a materially adverse manner. Moreover, various short-term operating factors, or changes, revisions or updates to the mine design or mine plan, may cause a mining operation to be unprofitable in any particular accounting period or to be worth less over the long term on a net present value (NPV) basis.

Prolonged declines in the market price of metals may render reserves containing relatively lower grades of mineralisation uneconomic to exploit and could materially reduce the Corporation's reserves and resources. Should such reductions occur, material write-downs of the Corporation's investments in mining properties or the discontinuation of development or production might be required, and there could be cancellations of or material delays in the development of new projects, increased net losses and reduced cash flow. The estimates of mineral reserves and resources attributable to a specific property are based on internationally accepted engineering and evaluation principles. The estimated amount of contained metals in proven mineral reserves and probable mineral reserves does not necessarily represent an estimate of a fair market value of the evaluated properties.

The Corporation uses prices reflecting market pricing projections in the financial modelling for Oyu Tolgoi which are subjective in nature. It should be expected that actual prices will be different than the prices used for such modelling (either higher or lower), and the differences could be significant.

A number of the uncertainties relate to the costs and availability of smelting services for the metals mined from Oyu Tolgoi, which require arrangements with third parties and involve the potential for fluctuating costs to transport the metals and fluctuating costs and availability of such services. These costs can be significantly impacted by a variety of industry-specific and also regional and global economic factors (including, among others, those which affect commodity prices). Many of these factors are beyond the Corporation's control.

While Mineral Reserves remain stable, ongoing studies designed to optimise grade while minimising production risk in response to geotechnical conditions and other constraints on Hugo North Lift 1 may impact, either negatively or positively, the timing of metal production over the mine life.

***Recent and future amendments to Mongolian laws and regulations, whether actual or the interpretation thereof, could adversely affect the Corporation's activities, its mining rights in Oyu Tolgoi, or make it more difficult or expensive to develop such project and carry out mining in Mongolia.***

The Government of Mongolia has put in place a legislative framework and environment for foreign direct investment, including constitutional amendments, laws and policies specific to the resource sector. However, there are political constituencies within Mongolia that have espoused ideas that would not be regarded by the international mining industry as conducive to foreign investment if they were to become law or official government policy, such as amendments relating to the purpose and principles surrounding the use of Mongolian natural resources, which could impact the distribution and allocation of social and economic benefits from mineral deposits of strategic importance in Mongolia, including the deposits of Oyu Tolgoi.

As such, it is not possible to know when, if ever, and in what form these amendments could be adopted and there can be no assurance that the present or future Parliament will refrain from enacting legislation, including constitutional amendments, that undermines the Investment Agreement or otherwise adversely impacts Oyu Tolgoi or the interests held by the Corporation in its mining, development and exploration properties. There can also be no assurance that the present or a future government will refrain from adopting government policies or seeking to renegotiate the terms of the Investment Agreement in ways that are adverse to the Corporation's interests or that impair the Corporation's ability to develop and operate Oyu Tolgoi or other projects on the basis presently contemplated, which may have a material adverse impact on the Corporation and its share price.

In addition, mining operations, exploration and related financing activities are subject to extensive laws and regulations. These relate to production, development, exploration, exports, imports, taxes and royalties, labour standards, occupational health, waste disposal, protection and remediation of the environment, access to water, mine decommissioning and reclamation, mine safety, toxic substances, transportation safety and emergency response and other matters.

Compliance with these laws and regulations increases the costs of exploring, drilling, financing, developing, constructing, operating and closing mines and other facilities. It is possible that the costs, delays and other effects associated with these laws and regulations may impact the Corporation's decision as to whether to continue to operate in a particular jurisdiction or whether to proceed with exploration or development of properties and the nature of related investing and financing arrangements.

Since legal requirements change frequently, are subject to interpretation and may be enforced to varying degrees in practice, the Corporation is unable to predict the ultimate cost of compliance with these changes and their effect on operations or other business activities. Furthermore, changes in governments, regulations, interpretations, policies or practices could have an adverse impact on the Corporation's future cash flows, earnings or results of operations and financial condition, which may have a material adverse impact on the Corporation and its share price.

***The Investment Agreement commits Oyu Tolgoi LLC to eventually utilise only Mongolian power sources.***

The Investment Agreement commits Oyu Tolgoi LLC to eventually utilise only Mongolian power sources. In June 2020, Oyu Tolgoi LLC entered into an amendment to the PSFA with the Government of Mongolia, which reflected a joint prioritisation and progression of a SOPP in accordance with various agreed milestones, and which envisages that the Government of Mongolia would fund and construct a SOPP at Tavan Tolgoi. None of the milestones under the amended PSFA have been met. The Ministry of Energy formally notified Rio Tinto and Oyu Tolgoi LLC on February 25, 2021 that the Government of Mongolia's preference is to supply power to the Oyu Tolgoi mine from the Central Energy System through a Mongolian grid electricity supply agreement.

On January 24, 2022, the Corporation announced that, in connection with the GoM Agreements, the Oyu Tolgoi LLC board of directors had approved the signing of the ESA to provide Oyu Tolgoi with a long-term source of power from the Mongolian grid on terms fully agreed with the Government of Mongolia, and on January 26, 2022, Oyu Tolgoi LLC entered into the ESA with, among others, Southern Region Electricity Distribution Network, pursuant to which power will be delivered to the Oyu Tolgoi mine subject to the fulfilment of certain technical conditions. While the Mongolian grid prepares to connect to Oyu Tolgoi, Oyu Tolgoi LLC will continue to import its power from Inner Mongolia, China under an agreement between NPTG and IMPIC.

However, there is no certainty that technical conditions underlying the ESA will be satisfied, that the required extensions to the power import agreements between NPTG and IMPIC will be obtained, or that any alternative power plant or arrangement for power under the amended PSFA will be sufficient to meet the Corporation's future needs or be available in a timely manner. Despite the Corporation's best efforts, the ability to meet its obligations under the Investment Agreement, the amended PSFA or any future agreement committing the Corporation to use Mongolian power sources is an obligation not necessarily within the Corporation's control and non-fulfilment of this requirement may result in a default under the Investment Agreement. Such default could result in termination of the Investment Agreement or damages accruing, which may have a material adverse impact on the Corporation and its share price.

***The Investment Agreement and the UDP (to the extent enforceable) include a number of future covenants that may be outside of the control of the Corporation to perform, a breach of which could have a material adverse effect on the Corporation and its business.***

The Investment Agreement and the UDP, to the extent it remains enforceable, commit the Corporation to perform many obligations in respect of the development and operation of Oyu Tolgoi. While performance of many of these obligations is within the effective control of the Corporation, the scope of certain obligations may be open to interpretation. Further, the performance of other obligations may require cooperation from third parties or may be dependent upon circumstances that are not necessarily within the control of the Corporation. For example:

- Mongolian nationals must represent at least 90% of Oyu Tolgoi employees now that Commercial Production has been attained, and 50% of Oyu Tolgoi's engineers must be Mongolian nationals within five years of achieving Commercial Production (i.e. by September 2018), which targets are achieved, and increasing to 70% after ten years of achieving Commercial Production (i.e. expected after September 2023). Achieving or maintaining these targets is contingent upon the availability of a sufficient number of qualified personnel, which is not wholly within the Corporation's control.
- Although Oyu Tolgoi LLC has achieved Commercial Production, there is a risk that unforeseen mining or processing difficulties may be encountered that could prevent Oyu Tolgoi LLC from maintaining the required Commercial Production levels.
- Oyu Tolgoi LLC is obligated, on a priority basis, to purchase and utilise services supplied by Mongolian citizens and/or legal entities, and equipment, raw materials, other materials and spare parts manufactured in Mongolia, to the extent such services and materials are available on a competitive time, cost, quantity and quality basis, and to give preference to Mongolian suppliers of freight and transportation services required for Oyu Tolgoi. Such services, materials and suppliers may not be available to the extent required or may be available upon commercial terms that are less advantageous than those available from other sources.
- Oyu Tolgoi LLC has community development commitments and social responsibility obligations. There is a risk that Oyu Tolgoi LLC will be unable to meet the expectations or demands of relevant community stakeholders to the extent contemplated to allow Oyu Tolgoi LLC to meet its commitments under the Investment Agreement.
- The extension of the term of the Investment Agreement is subject to a number of conditions, including the Corporation having demonstrated that Oyu Tolgoi has been operated in accordance with industry best practices in terms of national and community benefits, environment and health and safety practices. The inherently subjective nature of these criteria creates the risk that the

Corporation and the Government of Mongolia may disagree as to whether the conditions for extending the term of the Investment Agreement have been met.

Despite the Corporation's best efforts, such provisions are not necessarily within its control and non-fulfilment of any such provision may result in a default or breach under the Investment Agreement (and the UDP, to the extent it remains enforceable). Such a default or breach could result in termination of the Investment Agreement (and the UDP) or damages accruing, which may have a material adverse impact on the Corporation and its share price.

In addition to the Investment Agreement (and the UDP), the Corporation is party to a number of other material contractual agreements with a number of third parties, including the Government of Mongolia and Rio Tinto. Should the Corporation breach any of these agreements, it could face consequences that could have an adverse effect on its share price and/or on the operations of Oyu Tolgoi, the Corporation's main asset. Rio Tinto, as the Corporation's majority shareholder and as manager of Oyu Tolgoi, could materially affect the business of the Corporation if it were to claim damages for a breach of an agreement against the Corporation or require specific performance of an obligation that the Corporation is unable to comply with.

***There are risks associated with mining companies operating sustainably, their community relations and their social licence to operate.***

Mining companies are increasingly required to operate in a sustainable manner and to provide benefits to affected communities, including as described in greater detail in the preceding risk factor, and there are risks associated with the Corporation failing to maintain a "social licence" to operate Oyu Tolgoi. "Social licence" does not refer to a specific permit or licence, but rather is a broad term used to describe community and even governmental acceptance of a company's plans and activities related to exploration, development or operations on its mineral projects.

The Corporation places a high priority on its community relationships and responsibilities. Despite its best efforts, there are factors that may affect the Corporation's efforts to maintain social licence for Oyu Tolgoi, including national or local changes in sentiment toward mining, evolving social concerns, changing economic conditions and challenges, and the influence of opposition toward mining on local support. There can be no guarantee that social licence can be maintained by the Corporation, and without strong community support, the ability to secure necessary permits, obtain project financing, and/or move a project into development or operation may be compromised or precluded. Delays attributable to a lack of community support or other community-related disruptions or delays can translate directly into a decrease in the value of a project or into an inability to bring the project to, or maintain, production. The cost of measures and other issues relating to the sustainable development of mining operations may result in additional operating costs, higher capital expenditures, reputational damage, active community opposition and other unforeseeable consequences.

***Public health crises, including the ongoing COVID-19 pandemic, have adversely affected the Corporation's business, and may continue to do so in the future.***

The Corporation's business, operations and financial condition have been, and may continue to be in the future adversely, and possibly materially adversely, affected by the outbreak of epidemics or pandemics or other health crises.

The COVID-19 pandemic has significantly disrupted, and continues to significantly disrupt, global health, economic and market conditions, which have already and may again trigger an indeterminate period of slowdown in the global economy and recessions. Despite differing levels of business and commercial re-openings throughout the world, the availability of vaccines and ongoing vaccination programmes in some geographies, the pandemic has had and continues to have adverse (and potentially material adverse) repercussions in the jurisdictions where the Corporation operates. This is especially the case given the emergence of new variants of the SARS-CoV-2 virus which raise uncertainties regarding the efficacy of existing vaccines. As such, the full impact of the ongoing COVID-19 pandemic, including the impact of the sweeping preventative and mitigating measures that the Corporation, other businesses and governments, including the Government of Mongolia, have taken and continue to take to combat the spread of the disease, continues to rapidly evolve, creating significant volatility and negative pressure on virtually all national economies as well as financial and commodity markets. Although from time to time there has been an easing of restrictions in certain jurisdictions, some of these restrictions have been reinstated in other jurisdictions, or could be reinstated in the future, to manage a resurgence or new outbreak of COVID-19, including in connection with new variants or mutations of the virus. As such, at the present time, it is not possible to predict the duration, severity or scope of the pandemic, and it is extremely challenging for the Corporation to accurately predict or quantify the extent to which COVID-19 will impact its business, including its operations, the market for its securities and the ability of the Oyu Tolgoi team to advance the project, or the businesses of its vendors, suppliers, construction companies and other counterparties that the Corporation relies on. The COVID-19 pandemic has adversely affected the ability of the Oyu Tolgoi team to advance the project and it is possible that it may affect, even materially, the Corporation's financial condition, liquidity, and future results of operations and outlook due to, among other factors:

- Action taken by governmental and non-governmental bodies, including the Government of Mongolia, to curtail activity in an effort to help slow the spread of COVID-19, including restrictions on both travel and the movement of goods and people within and across borders, and restrictions on the types of businesses that may continue to operate, have caused and are likely to continue to cause significant business interruptions. While work on the underground project continues, the Corporation's operations have been and will likely continue in the near and medium terms (and possibly longer) to be disrupted in varying degrees, including as a result of (i) access restrictions, which are preventing teams from Oyu Tolgoi LLC, Rio Tinto and the Corporation's construction partners, who are required to oversee development and provide essential specialist technical services at Oyu Tolgoi, from accessing the site; although some expatriates returned to Mongolia in 2021, and further flights are planned in order to return the required specialists to site continued interruptions to flights are possible as the authorities endeavour to minimise COVID-19 case numbers in Mongolia; and (ii) delays resulting from various measures implemented to slow the spread of COVID-19, including restrictions on the movement of goods within and across borders and curtailed operations in certain jurisdictions, including Mongolia and China, which may, in each case, cause schedule and cost delays, slowdown or temporary suspensions in operations, decreased sales and may expose the Corporation to penalties or sanctions for breach of contracts or customer agreements, business interruption claims, or even the cancellation or termination of contracts altogether. Since the initial confirmation of COVID-19 cases in Ulaanbaatar and on site and in response to the spread of new COVID-19 variants in Mongolia, local authorities have implemented and continue to implement additional steps to minimise the risk of transmission, which may amplify the aforementioned impacts.

- The spread of COVID-19 has caused and may continue to cause delays to the Corporation's announced key project milestones and increases in development capital costs. A number of work fronts have been and continue to be directly impacted by quarantine requirements and international travel restrictions related to COVID-19, including the delay of expected sustainable production for Panel 0 announced by the Corporation in November 2021 until the first half of 2023, and the 9-month delay to Shafts 3 and 4, which in turn will result in delays to the start of Panels 1 and 2. There were significant COVID-19 related challenges at Oyu Tolgoi in 2021 and into 2022, causing the site to operate at less than 50% of its planned personnel for all of 2021, although 2021 production targets were met and there was progress on underground development. Ongoing impacts to domestic and international movement have and could continue to impact key project milestones.
- Effects of the COVID-19 pandemic, including ongoing restrictions in place to curtail its spread, may adversely impact the Corporation's ability to secure on a timely basis a long-term domestic source of power for the mine as required under the Investment Agreement.
- Suppliers have declared and may continue to declare force majeure on their contracts with the Corporation. In addition, the continued impacts of the COVID-19 pandemic may force the Corporation to declare force majeure on contracts, due to the inability to meet contractual obligations. As an example, Oyu Tolgoi has notified its project lenders that the COVID-19 pandemic constitutes a force majeure event under its project finance facilities, which will have the effect of extending the June 30, 2028 project longstop date under those facilities for the duration of the force majeure. Additionally, in March 2021, the Corporation announced that Oyu Tolgoi LLC had declared force majeure in connection with customer contracts for concentrate as a result of Oyu Tolgoi shipments of concentrate to its Chinese customers being suspended due to COVID-19 health and safety precautions related to Chinese-Mongolian border crossings. While these shipments resumed in April 2021, the transport team is continually adapting to the changing precautionary measures against COVID-19 transmission risks and the force majeure will remain in place until sustained volumes of convoys are crossing the border to ensure Oyu Tolgoi's ability to meet its ongoing commitments to customers and to return onsite concentrate inventory to target levels.
- The ongoing pandemic has, and likely will continue to, adversely affect global economies and financial markets resulting in an economic downturn that has had, and likely will continue to have, an adverse effect on the demand for base metals and Turquoise Hill's future prospects, including significant fluctuations in copper prices and the concentrate market. Financial difficulties for smelters as a result of the COVID-19 pandemic and logistics disruptions in China have prevented, and may continue to prevent, smelters from taking feed and shipping acid out. Unstable market conditions have led market participants to flee to cash, causing significant fluctuations in gold prices.
- The continued spread of COVID-19, including the emergence of variants and further resurgences of the SARS-CoV-2 virus, has impacted, and may continue to impact, the health of the Corporation's personnel, partners and contractors, including members of its management team and the availability of industry experts and personnel crucial to the continued operation and development of Oyu Tolgoi. The ongoing pandemic may also make it difficult to recruit, attract and retain skilled personnel, reducing the availability of its workforce, as well as its productivity,



and causing human impact that may, in turn, negatively affect its business. These impacts may be compounded by other seasonal illnesses, such as the seasonal flu.

- Increased health risks associated with continued operations during the ongoing COVID-19 pandemic may result in the Corporation incurring increased medical costs for its personnel that continue to work during this time, and may result in increases in insurance premiums payable by the Corporation.
- Unstable market conditions have caused, and the resurgence or continued spread of the pandemic in various countries across the world may once again cause, significant volatility or decline in the trading price of the Corporation's securities. The Corporation may have difficulty accessing debt and equity capital on attractive terms, or at all, given severe disruption or instability in the global financial markets and deteriorations in credit and financing conditions. Further, this could adversely impact the Corporation's ability to secure the significant incremental funding it will require to sustain its underground development over and above its available liquidity.
- The emergence and spread of new COVID-19 variants including, but not limited to, the Omicron variant, may contribute to and worsen the above-listed factors if the mutations underlying such variants adversely impact the virus's properties, such as how easily it spreads, the associated disease severity and the performance of vaccines, therapeutic medicines and diagnostic tools, and by resulting in the prolonging of, or imposition of additional, restrictive public health and social measures.

Due to the unprecedented and ongoing nature of the COVID-19 pandemic and the fact that the response to the pandemic is evolving in real time, estimates of the economic impacts of the COVID-19 pandemic remain inherently highly uncertain and speculative. While the open pit at Oyu Tolgoi has continued to operate despite the ongoing COVID-19 pandemic, and the Corporation has made efforts to manage and mitigate the aforementioned risks, such efforts may not sufficiently mitigate the negative impacts of COVID-19 on the business and the effectiveness of these efforts and the extent to which the COVID-19 pandemic affects the Corporation's business will depend on factors beyond its control, including the duration, severity and scope of the pandemic and current resurgences of the virus, the likelihood, timing, duration and scope of further resurgences or accelerating spread of COVID-19, the measures taken or necessary to contain the spread of such outbreaks, the timing, development and distribution of effective vaccines and/or effective therapeutic treatments for COVID-19, and the prolonged effects on different members of the Corporation's supply chain. Even after the COVID-19 pandemic is over, the Corporation may continue to experience material adverse effects to its business, financial condition and prospects as a result of the continued disruption in the global economy and any resulting recession, the effects of which may persist beyond that time.

***The Corporation may be subject to public allegations, regulatory investigations or litigation that could materially and adversely affect the Corporation's business.***

The Corporation at one time conducted exploration and mining operations in a number of jurisdictions and, as a result of such activities and operations or current or future activities and operations, including, without limitation, jurisdictions subject to various sanctions regimes, may be subject to governmental or regulatory investigations and claims in or regarding those jurisdictions, including jurisdictions in which

it is not currently active. A serious allegation, formal investigation by regulatory authorities or other legal claim (in each case, regardless of the ultimate decision) could have a material adverse impact on the Corporation, its reputation and its share price.

All industries, including the mining industry, are subject to legal claims, with and without merit. The Corporation may be required to defend against any such public allegations, regulatory investigations or other claims that are asserted against it, or may deem it necessary or advisable to initiate legal proceedings to protect its rights. The expense and distraction of any such public allegations, regulatory investigations or other claims or proceedings, even with respect to claims that have no merit and whether or not resolved in the Corporation's favour, could materially and adversely affect its business, operating results, and financial condition. There may also be considerable cost and disruption in responding to allegations, investigations or claims and taking any remedial action. Further, if an investigation, claim or proceeding were resolved against the Corporation or if it were to settle any such dispute, the Corporation may be required to pay damages and costs or refrain from certain activities, any of which could have a material adverse impact on the Corporation's business, operating results, and financial condition.

Securities class action litigation is also becoming more prevalent and is often brought against companies following periods of volatility in the market price of their securities. In October 2020, a class action complaint was filed in the U.S. District Court, Southern District of New York against the Corporation, certain of its current and former officers as well as Rio Tinto and certain of its officers, which complaint was first amended on March 16, 2021 and again on September 16, 2021. Further, in January 2021, a proposed class action was initiated in the Superior Court in the District of Montréal against the Corporation and certain of its current and former officers, which complaint was first amended on July 27, 2021 and again on January 7, 2022. See "Legal Proceedings".

A successful class action lawsuit, by its nature, could result in a sizable damage award that could negatively affect the Corporation's financial or operating results. The Corporation cannot predict the outcome of pending or threatened proceedings or actions or any other litigation, which proceedings could result in substantial costs and diversion of management's attention and resources. If the Corporation cannot resolve disputes favourably, or if there is significant reputational damage as a result of any real or frivolous claim, the Corporation may face increased costs or liabilities to third parties, impairment of assets, lost revenues and the Corporation's activities and operations, financial condition, results of operations, future prospects and share price may be adversely affected.

***The Corporation is subject to anti-corruption legislation.***

The Corporation is subject to the United States' *Foreign Corrupt Practices Act* and other similar legislation, such as, but not necessarily limited to, Canada's *Corruption of Foreign Public Officials Act* (collectively, "Anti-Corruption Legislation"), which prohibits the Corporation or any director, officer, employee, consultant or agent of the Corporation or any shareholder of the Corporation acting on its behalf from giving, paying, offering to give or pay, or authorising the giving or payment of any reward, advantage, benefit or anything of value to any foreign government or public official, government staff member, government employee, employee of any international public organisation, political party, or political candidate in an attempt to obtain or retain business, obtain an advantage in the course of business, or to otherwise induce or influence a person working in an official capacity. The Anti-Corruption Legislation also requires public companies to make and keep books and records that accurately and fairly reflect their transactions and to devise and maintain an adequate system of internal accounting controls. The Corporation's international activities create the risk of unauthorised payments or offers of payments by its directors, officers, employees, consultants or agents, even though they may not always be subject to its control. The Corporation strictly prohibits these practices by its directors, officers, employees,

consultants and agents. However, the Corporation's existing safeguards and any future improvements may prove to be less than effective, and its directors, officers, employees, consultants or agents may engage, or may previously have engaged, in conduct for which the Corporation might be held responsible. Any failure by the Corporation to adopt appropriate compliance procedures and ensure that its directors, officers, employees, consultants and agents comply with the Anti-Corruption Legislation and applicable laws and regulations in foreign jurisdictions could result in substantial penalties or restrictions on its ability to conduct its business, which may have a material adverse impact on the Corporation and its share price.

***Mining projects are sensitive to the volatility of metal prices.***

The long-term viability of Oyu Tolgoi depends in large part on the world market prices of copper, gold and silver. The market prices for these metals are volatile and are affected by numerous factors beyond the Corporation's control. These factors include international economic and political trends, expectations of inflation, global and regional demand, currency exchange fluctuations, interest rates and global or regional consumption patterns, speculative activities, increased production due to improved mining and production methods and optimisation of existing mine designs or mine plans, and economic events, including the performance of Asia's economies. Ongoing worldwide economic uncertainty could lead to prolonged recessions in many markets which may, in turn, result in reduced demand for commodities, including base and precious metals. It is anticipated that there will be continued volatility in metal prices.

The aggregate effect of these factors on metal prices in the medium or long term is impossible to predict. Should prevailing metal prices be depressed or below variable production costs of the Corporation's current and planned mining operations for an extended period, losses may be sustained and, under certain circumstances, there may be a curtailment or suspension of some or all of the Corporation's mining, development and exploration activities. The Corporation would also have to assess the economic impact of any sustained lower metal prices on recoverability and, therefore, the cut-off grade and level of the Corporation's reserves and resources. These factors could have an adverse impact on the Corporation's future cash flows, earnings, results of operations, stated reserves and financial condition, which may have a material adverse impact on the Corporation and its share price.

***There is no guarantee that any exploration or development activity will result in additional commercial production.***

Development of a mineral property is contingent upon obtaining satisfactory exploration results. Mineral exploration and development involves substantial expenses and a high degree of risk, which even a combination of experience, knowledge and careful evaluation may not be able to adequately mitigate. There is no assurance that additional commercial quantities of ore will be discovered on any of the Corporation's properties, including Hugo North Lift 2, Hugo South and Heruga. There is also no assurance that, even if commercial quantities of ore are discovered, a mineral property will be brought into commercial production. The discovery of mineral deposits is dependent upon a number of factors, not the least of which is the technical skill of the exploration personnel involved. The commercial viability of a mineral deposit, once discovered, is also dependent upon a number of factors, some of which are the particular attributes of the deposit, such as size, grade and proximity to infrastructure, metal prices and government regulations, including regulations relating to royalties, allowable production, importing and exporting of minerals, and environmental protection. In addition, assuming discovery of a commercial ore body, depending on the type of mining operation involved, several years can elapse from the initial phase of drilling until commercial operations are commenced. Most of the above factors are beyond the control of the Corporation.

***Under Mongolia's Resolution No. 175, the Government of Mongolia may seek contribution or reimbursement from Oyu Tolgoi LLC for compensation it provides to third parties adversely affected by Resolution No. 175.***

On June 8, 2011, the Government of Mongolia passed Resolution No. 175, the purpose of which is to authorise the designation of certain land areas for "State special needs" with certain defined areas in proximity to Oyu Tolgoi. These State special needs areas are to be used for infrastructure facilities for the development of Oyu Tolgoi.

Most of the areas designated for State special needs are subject to existing mineral exploration and mining licences issued by the Government of Mongolia to third parties and, in certain cases, a mineral resource has been declared and registered with the applicable governmental authorities in respect of such licences.

In accordance with the terms of Resolution No. 175 and the Minerals Law (2006), the Government of Mongolia will be responsible for compensating third parties whose right to use and access the subject land area is adversely affected by the application of Resolution No. 175. The Minerals Law specifically encourages non-monetary compensation where the Government of Mongolia issues to such third parties a mineral exploration or mining licence in land areas of which mineral resources are identified by a geological study or exploration works with state funding, if it reaches agreement with the third parties.

To the extent that agreement for non-monetary compensation are not reached with affected third parties, it is not clear at this time whether the Government of Mongolia will expect any compensation that may be payable to such third parties to be borne by Oyu Tolgoi LLC. If the Government of Mongolia seeks contribution or reimbursement from Oyu Tolgoi LLC for compensation it provides such third parties, the amount of such contribution or reimbursement is not presently quantifiable but may be significant. The description of Resolution No. 175 has been provided by Oyu Tolgoi LLC and has been relied on under Item 3 of NI 43-101 Reliance on Other Experts.

In April 2015, the Standing Committee of the Parliament of Mongolia requested the Government of Mongolia to modify Resolution No. 175 due to an alleged inconsistency between Resolution No. 175 and the Minerals Law and Land Law. Oyu Tolgoi LLC understands that the Government of Mongolia supports the validity and justification for Resolution No. 175 and that Resolution No. 175 will not be modified or revoked.

In September 2016, one of the affected third parties challenged the validity of Resolution No. 175 before an administrative court of Mongolia, and claimed that Resolution No. 175 be resolved to be "obviously illegal". The Government of Mongolia, as a defendant, attended the litigation. In June 2017, the Supreme Court of Mongolia resolved that there is no legal ground under which Resolution No. 175 may be deemed to be "obviously illegal." Resolution 92 resolved nonetheless to revise Resolution No. 175 to reflect consideration of the groundwater usage conditions in the Gobi region. Resolution 103 does not make reference to the revision of Resolution No. 175 as one of the required steps to implement Resolution 92 and instead includes a general reference to cooperating on the improvement of water usage.

***There can be no assurance that the interests held by the Corporation in its mining, development and exploration properties are free from defects or that material contractual arrangements between the Corporation and entities owned or controlled by foreign governments will not be unilaterally altered or revoked.***

The Corporation has investigated its rights to exploit and explore its various properties and, to the best of its knowledge, those rights are in good standing, but no assurance can be given that such rights will not be revoked, or significantly altered, to the detriment of the Corporation. There can also be no assurance that the Corporation's rights will not be challenged or impugned by third parties. The Corporation has also applied for rights to explore various properties, but there is no certainty that such rights, or any additional rights applied for, will be granted on terms satisfactory to the Corporation or at all, which may have a material adverse impact on the Corporation and its share price.

***The Corporation is subject to substantial environmental and other regulatory requirements and such regulations are becoming more stringent. Non-compliance with such regulations, either through current or future operations or a pre-existing condition, could materially adversely affect the Corporation.***

All phases of the Corporation's operations are subject to environmental regulations in the various jurisdictions in which it operates and has operated. For example, Oyu Tolgoi is subject to a requirement to meet environmental protection obligations. The Corporation must complete an environmental protection plan for approval by the Government of Mongolia and complete a report prepared by an independent expert on environmental compliance every three years.

Failure to comply with applicable laws, regulations and permitting requirements may result in enforcement actions thereunder, including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment, or remedial actions. Parties engaged in mining operations may be required to compensate those suffering loss or damage by reason of the mining activities and may have civil or criminal fines or penalties imposed for violations of applicable laws or regulations.

Environmental legislation is evolving in a manner which will likely require stricter standards and enforcement, increased fines and penalties for non-compliance, more stringent environmental assessments of proposed projects and a heightened degree of responsibility for companies and their directors, officers and employees. There is no assurance that future changes in environmental regulation, if any, will not adversely affect the Corporation's operations. Environmental hazards may exist on the properties in which the Corporation holds interests which are presently unknown to the Corporation and which have been caused by previous or existing third-party owners or operators of the properties. Government approvals and permits are also often required in connection with various aspects of the Corporation's operations. To the extent such approvals are required and not obtained, the Corporation may be delayed or prevented from proceeding with planned development or exploration of its mineral properties, which may have a material adverse impact on the Corporation and its share price.

Amendments to current laws, regulations and permits governing operations and activities of mining companies, or more stringent implementation thereof, could have a material adverse impact on the Corporation and cause increases in capital expenditures or production costs or reductions in levels of production at producing properties or require abandonment or delays in development of new mining properties, which may have a material adverse impact on the Corporation and its share price.

***Previous mining operations may have caused environmental damage at former mining projects of the Corporation, and if the Corporation cannot prove that such damage was caused by other operators, its indemnities and exemptions from liability may not be effective.***

The Corporation has received exemptions from liability from relevant governmental authorities for environmental damage caused by previous mining operations at former mining projects. There is a risk, however, that, if an environmental accident occurred at those sites, including with respect to tailings or water contamination, it may be difficult or impossible to assess the extent to which environmental damage was caused by the Corporation's activities or the activities of other operators. In that event, the liability exemptions could be ineffective and possibly worthless, which may have a material adverse impact on the Corporation and its share price.

***The Corporation cannot insure against all of the risks associated with mining.***

Production, development and exploration operations on mineral properties involve numerous risks and hazards, including rock bursts, slides, fires, earthquakes or other adverse environmental occurrences; industrial accidents; labour disputes; political and social instability; technical difficulties due to unusual or unexpected geological formations; failures of pit walls, shafts, head frames, and/or underground workings; and flooding and periodic interruptions due to inclement or hazardous weather conditions.

These risks can result in, among other things, damage to, and destruction of, mineral properties or production facilities; personal injury (and even loss of life); environmental damage including resulting from the presence of tailings or water contamination; delays in mining; monetary losses; and legal liability.

It is not always possible to obtain insurance (or to fully insure) against all such risks and the Corporation may not be insured against certain or any of these risks as a result of high premiums or other reasons. The occurrence of an event that is not fully covered or covered at all, by insurance, could have a material adverse effect on the Corporation's financial condition, results of operations and cash flows and could lead to a decline in the value of the securities of the Corporation. The Corporation does not maintain general insurance against political or environmental risks, which may have a material adverse impact on the Corporation and its share price.

### ***Global climate change***

Global climate change could exacerbate certain of the threats facing the Corporation's business, including the frequency and severity of weather-related events, resource shortages, changes in rainfall and storm patterns and intensities, water shortages, rising water levels and changing temperatures which can disrupt the Corporation's operations, damage its infrastructure or properties, create financial risk to the business of the Corporation or otherwise have a material adverse effect on the Corporation's results of operations, financial position or liquidity. These may result in substantial costs to respond during the event, to recover from the event and possibly to modify existing or future infrastructure requirements to prevent recurrence. Climate change could also disrupt the operations of the Corporation by impacting the availability and cost of materials needed for mining operations and could increase insurance and other operating costs.

Global climate change also results in regulatory risks which vary according to the national and local requirements implemented by each jurisdiction where the Corporation is present. There continues to be a lack of consistent climate legislation, which creates economic and regulatory uncertainty. Increased public awareness and concern regarding global climate change may result in more legislative and/or regulatory requirements to reduce or mitigate the effects of greenhouse gas emissions.

***The Corporation does not expect to pay dividends for the foreseeable future.***

The Corporation has not paid any dividends on its Common Shares to date, nor does it contemplate a declaration of payment of dividends until its operations generate sufficient excess cash flow for distribution as it anticipates that it will reinvest the majority of, if not all, future earnings, if any, in the development and growth of Oyu Tolgoi and its business generally. Therefore, investors may not receive any funds unless they sell their Common Shares, and investors may be unable to sell their Common Shares on favourable terms or at all. The Corporation cannot give any assurance of a positive return on investment or that investors will not lose the entire amount of their investment in Common Shares. Prospective investors seeking or needing dividend income or liquidity are discouraged from purchasing Common Shares.

***The Corporation's ability to obtain dividends or other distributions from its subsidiaries may be subject to restrictions imposed by law, foreign currency exchange regulations and financing arrangements.***

The Corporation conducts its operations through subsidiaries. Its ability to obtain dividends or other distributions from its subsidiaries may be subject to restrictions or costs on dividends or repatriation of earnings under applicable local law, including any tax obligations, monetary transfer restrictions and foreign currency exchange regulations in the jurisdictions in which the subsidiaries operate or are incorporated. The ability of the Corporation's subsidiaries to pay dividends or to make other distributions to the Corporation is also subject to their having sufficient funds to do so. If its subsidiaries are unable to pay dividends or to make other distributions, the Corporation's growth may be inhibited unless it is able to obtain additional equity or debt financing on acceptable terms. In the event of a subsidiary's liquidation, the Corporation may lose all or a portion of its investment in that subsidiary. The Corporation expects to be able to rely on the terms of the Investment Agreement to pay dividends out of Mongolia, subject to certain restrictions contained in the Investment Agreement, but will be unable to do so in respect of projects that are not covered by the terms of the Investment Agreement, which may have a material adverse impact on the Corporation and its share price.

**There is no assurance that the Corporation will be capable of consistently producing positive operating cash flows, failing which capital may not at all times be available on terms acceptable to the Corporation or at all.**

Oyu Tolgoi LLC generated positive operating cash flows in 2021. However, there is no assurance that the Corporation will be capable of producing positive cash flow on a consistent basis or for a sustained period of time. For instance, a reduction or delay in orders from leading customers could have a material adverse effect upon the Corporation's results of operations, including operating cash flows. Such reduction or delay in orders from leading customers may be due to market, economic or competitive conditions and customers that previously accounted for significant revenue may not necessarily generate similar levels of or any revenue in any future period. The failure to obtain new customers or repeat orders from existing customers may materially affect the Corporation's operating results, including operating cash flows. The Corporation anticipates that its exposure to a group of key customers in any given fiscal year will continue for the foreseeable future. There is a risk that existing customers will elect not to do business with the Corporation in the future or will experience financial or other difficulties. In addition, suppliers have declared and may continue to declare force majeure on their contracts with the Corporation, and continued impacts of the COVID-19 pandemic may force the Corporation to declare force majeure on customer contracts due to the inability to meet contractual obligations. In March 2021, the Corporation announced that Oyu Tolgoi LLC had declared force majeure in connection with customer contracts for concentrate as a result of Oyu Tolgoi shipments of concentrate to its Chinese customers

being suspended due to COVID-19 health and safety precautions related to Chinese-Mongolian border crossings. While these shipments resumed in April 2021, changing precautionary measures against COVID-19 transmission risks may continue to significantly disrupt shipments of concentrate to customers.

If as a result of these or other factors the Corporation's estimated base case incremental funding requirement of US\$3.4 billion as of December 31, 2021, prior to giving effect to the funding elements in the A&R HoA, increases significantly and is not capable of being addressed within the framework of the A&R HoA, the Corporation may be required to make arrangements for additional capital, whether through project debt financing or otherwise, to continue open-pit operations as currently planned or in respect of additional funding requirements for the underground mine or for the power plant.

If such additional capital is required, the Corporation may be required to access securities markets. Such markets throughout the world are cyclical and, over time, tend to undergo high levels of price and volume volatility, and the market price of securities of many companies, particularly those in the resource sector, can experience wide fluctuations which are not necessarily related to the operating performance, underlying asset values or prospects of such companies. Increased levels of volatility and resulting market turmoil could adversely impact the Corporation and its share price. In addition, in the past, following periods of volatility in the market price of a particular company's securities, securities class action litigation has often been brought against that company. The Corporation cannot provide assurance that similar litigation will not occur in the future with respect to it. Such litigation could result in substantial costs and a diversion of management's attention and resources, which could have a material adverse effect upon the Corporation's business, operating results, and financial condition.

If the Corporation is required to access credit markets to carry out its development objectives, the state of domestic and international credit markets and other financial systems could affect the Corporation's access to, and cost of, capital. If these credit markets were significantly disrupted, such disruptions could make it more difficult for the Corporation to obtain, or increase its cost of obtaining, capital and financing for its operations. Such capital may not be available on terms acceptable to the Corporation or at all, which may have a material adverse impact on the value of Oyu Tolgoi and, consequently, on the Corporation and its share price. In addition, as part of the GoM Agreements, the Corporation has agreed not to incur additional debt financing at the Oyu Tolgoi LLC level prior to sustainable production for Panel 0 being achieved, currently expected in the first half of 2023.

***The Corporation's prospects depend on its ability to attract and retain key personnel.***

Recruiting and retaining appropriately qualified personnel is critical to the Corporation's success. The number of persons skilled in the construction, operation, development and exploration of mining properties is limited and competition for such persons is intense. The ongoing COVID-19 pandemic may also make it difficult to recruit, attract and retain skilled personnel, reducing the availability of its workforce, as well as its productivity, and causing health and safety impact that may, in turn, negatively affect its business. The Corporation believes that it has been successful in recruiting the necessary personnel to meet its corporate objectives but, as the Corporation's business activity grows, it will require additional key financial, operational, technical, mining and management personnel, as well as additional staff on the operations side. The Corporation is also dependent on Rio Tinto for the secondment of skilled labour at Oyu Tolgoi, particularly in the construction and development phases. Although the Corporation believes that it will be successful in attracting and retaining qualified personnel, including qualified secondees on a timely basis from Rio Tinto, there can be no assurance of such success.



In addition, pursuant to the terms of the Investment Agreement, Oyu Tolgoi LLC is obligated to hire a specific number of Mongolian nationals following the achievement of Commercial Production. Among other obligations, Oyu Tolgoi LLC must use its best endeavours to ensure that 50% of its engineers are Mongolian nationals within five years of achieving Commercial Production (i.e. by September 2018), which target is achieved, and increasing to 70% after ten years of achieving Commercial Production (i.e. after September 2023) (and failure to meet these levels will result in financial penalties).

***The Corporation may from time to time hold substantial funds in cash, cash equivalents, loans and receivables, and other deposits and there is a risk that financial market turmoil or other extraordinary events could prevent the Corporation from obtaining timely access to such funds or result in the loss of such funds.***

The Corporation may from time to time hold substantial funds in cash, cash equivalents and other deposits, including treasury bills, money market funds, liquidity funds, bank deposits, and receivables and deposits with related parties. Management has adopted a conservative investment policy with respect to such funds, as the Corporation may require that these funds be used on short notice to support its business objectives. Nevertheless, there is a risk that an extraordinary event in financial markets generally or with respect to an obligor under an investment individually will occur that prevents the Corporation from accessing its funds. Such an event could, in the case of delayed liquidity, have a negative impact on the implementation of time sensitive business objectives that require access to such funds or such an event could, in extreme circumstances, result in the loss of some or all of such funds.

***The Corporation may experience cybersecurity threats, which could result in disruptions in business operations and adverse operating results.***

The Corporation relies on secure and adequate operations of information technology systems in the conduct of its operations. Access to and security of the information technology systems are critical to the Corporation's operations. To the Corporation's knowledge, it has not experienced any material losses relating to disruptions to its information technology systems. The Corporation has implemented ongoing policies, controls and practices to manage and safeguard the Corporation and its stakeholders from internal and external cybersecurity threats and to comply with changing legal requirements and industry practice. The Corporation is also dependent on Rio Tinto to manage the information technology systems of Oyu Tolgoi. Given that cyber risks cannot be fully mitigated and the evolving nature of these threats, the Corporation may not have the resources or technical sophistication to anticipate, prevent, or recover from cyber attacks and cannot assure that its information technology systems are fully protected from cybercrime or that the systems will not be inadvertently compromised, or without failures or defects. Disruptions to the Corporation's information technology systems, including, without limitation, security breaches, power loss, theft, computer viruses, cyber-attacks, natural disasters, and non-compliance by third-party service providers and inadequate levels of cybersecurity expertise and safeguards of third-party information technology service providers, may adversely affect the operations of the Corporation as well as present significant costs and risks including, without limitation, loss or disclosure of confidential, proprietary, personal or sensitive information and third-party data, material adverse effect on its financial performance, compliance with its contractual obligations, compliance with applicable laws, damaged reputation, remediation costs, potential litigation, regulatory enforcement proceedings and heightened regulatory scrutiny.

***The Corporation may be a passive foreign investment corporation ("PFIC"), which could have adverse U.S. federal income tax consequences to U.S. holders of Common Shares.***

If the Corporation were to constitute a PFIC within the meaning of Section 1297 of the United States Internal Revenue Code of 1986, as amended for any year during a U.S. holder's holding period, then certain potentially adverse U.S. federal income tax rules would affect the U.S. federal income tax consequences to such U.S. holder resulting from the acquisition, ownership and disposition of Common Shares.

The U.S. Treasury Department has not issued specific guidance on how the income and assets of a non-U.S. corporation such as the Corporation will be treated under the PFIC rules. Based on financial information for 2021, the Corporation believes that it was not a PFIC for its tax year ended December 31, 2021, and, based on its current and anticipated business activities and financial expectations, the Corporation expects that it will not be a PFIC for its current tax year and for the foreseeable future.

The determination as to whether a corporation is, or will be, a PFIC for a particular tax year depends, in part, on the application of complex U.S. federal income tax rules, which are subject to differing interpretations and uncertainty. In addition, there is limited authority on the application of the relevant PFIC rules to entities such as the Corporation. Accordingly, there can be no assurance that the Internal Revenue Service will not challenge the views of the Corporation concerning its PFIC status. In addition, whether any corporation will be a PFIC for any tax year depends on its assets and income over the course of such tax year, and, as a result, the Corporation's PFIC status for its current tax year and any future tax year cannot be predicted with certainty. Each U.S. holder should consult its own tax advisor regarding the PFIC status of the Corporation.

***The Corporation may be subject to emerging regulatory and legislative requirements and scrutiny with respect to human rights.***

The Corporation and its operations may be subject to emerging regulations and legislation globally with respect to human rights issues, including forced labour, child labour and other slavery-like practices, and the Corporation may face heightened scrutiny from investors, shareholders and other stakeholders regarding such matters. Although the Corporation supports and respects human rights consistent with the Universal Declaration of Human Rights and seeks to ensure it is not complicit in human rights abuses committed by others, as described in the Corporation's Code of Business Conduct, as well as in Rio Tinto's global code of business conduct that defines the way Rio Tinto manages the economic, social, and environmental challenges of its global operations and in Rio Tinto's "*Modern Slavery & Human Trafficking*" statement, the mining industry faces increasing scrutiny by human rights groups and is particularly prone to complaints and/or legal disputes in connection with human rights risks associated with adverse environmental impacts, health and safety, the use of migrant labour, child labour, forced labour and Indigenous peoples.

Compliance with emerging modern slavery, human trafficking and forced labour reporting, training and due diligence regulations and laws could increase the Corporation's operating costs. Further, if the Corporation fails to appropriately identify and respond to human rights abuses or allegations thereof, either internally or externally or through third party business relationships, it could face costly and disruptive enforcement actions, potential litigation, investor and stakeholder dissatisfaction and reputational damage.

## DESCRIPTION OF THE BUSINESS

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### Current Technical Report and Qualified Persons

The 2020 OTTR is the current Technical Report for Oyu Tolgoi and related projects. The 2020 OTTR was prepared in accordance with the requirements of NI 43-101 by M. Thomas (FAusIMM) and R. Carlson (MAIG RPGeo) of AMC Consultants Pty Ltd and J. Dudley (FAusIMM) (Chief Operating Officer, Turquoise Hill) and R. Kolkert (FAusIMM) (Director, Resources & Exploration of Turquoise Hill) with an effective date of June 30, 2020. Disclosure of scientific and technical information in this AIF was approved by Jo-Anne Dudley (FAusIMM(CP)) (Chief Operating Officer, Turquoise Hill) for mineral reserves and Racquel Kolkert (FAusIMM (CP)) (Director, Resources & Exploration of Turquoise Hill) for mineral resources each of whom are "qualified persons" as set forth in NI 43-101. The qualified persons have verified the data disclosed in this AIF including sampling, analytical and test data underlying the information contained in this AIF. This included review of mineral resources reports for the historical mineral resources and review of the current mineral resources documentation for the updated Oyu Mineral Resource.

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### Oyu Tolgoi Project

#### *Project Location*

The Oyu Tolgoi project is located in the South Gobi region of Mongolia, approximately 550 km by road south of the capital, Ulaanbaatar. The Project is being developed by Oyu Tolgoi LLC and consists of a series of deposits containing copper, gold, and silver.

The mineral deposits at Oyu Tolgoi lie in a structural corridor where mineralisation has been discovered over a 26 km strike length. Four deposits hosting mineral resources have been identified; Oyut, Hugo North, Hugo South, and Heruga. Mineral Reserves have been reported at the Oyut and Hugo North Deposits. The Oyut deposit is currently being mined as an open pit using conventional drill, blast, load, and haul methods. The Hugo North deposit is currently being developed as an underground mine using the block caving mining method. A staged approach is envisaged for developing the Hugo North deposit, involving mining two block cave lifts (Lift 1 and potentially Lift 2). Mineral Reserves have been estimated for Lift 1, which comprises three panels (Panel 0, Panel 1, and Panel 2).

The location of the Oyu Tolgoi project relative to the capital of Mongolia, Ulaanbaatar, and the major national infrastructure is illustrated below.

## Project Location



## Project Access

Access to the property from Ulaanbaatar is by an unpaved road, via Mandalgobi, or by air travel with a flight time of just over one hour. A permanent domestic airport designed to accommodate commercial aircraft up to the Boeing 737-800 series has been constructed 11 km north of the Oyu Tolgoi camp area. The airport also serves as the regional airport for the town of Khanbogd.

The Trans-Mongolian Railway crosses the Mongolia-China border approximately 420 km east of the Oyu Tolgoi project site, traversing the country from south-east to north-west through Ulaanbaatar to the border with Russia. At the Mongolian-Chinese border, the rail gauge changes from the Russian standard to the Chinese standard. There is currently no access from the project site to the rail line within Mongolia except along a 330 km desert trail north-east to Sainshand.

The Government of Mongolia may construct or facilitate the construction and management of a railway in the vicinity of the project to the Mongolia-China border. The Government of Mongolia will consult with Oyu Tolgoi LLC on the location and route of the railway, and, if the railway is constructed, then it will be made available to Oyu Tolgoi LLC on commercial and non-discriminatory terms. Energy Resources LLC is currently constructing a single-track heavy-haul railway from its Ukhaa Khudag coal mine (approximately 120 km to the north-west of Oyu Tolgoi) to Gashuun Sukhait, ultimately to be

interconnected with the Chinese rail network at Ganqimaodao on the Chinese side of the border. Once constructed, the South Gobi Rail alignment would pass within 12 km of the Oyu Tolgoi area and therefore represents an opportunity for eventual connection of Oyu Tolgoi to the rail network.

The Chinese Government has upgraded 226 km of road from Ganqimaodao to Wuyuan, providing a direct road link between the Mongolian border crossing at Gashuun Sukhait, 80 km south of Oyu Tolgoi, and the Trans-China Railway system. A 105 km sealed road is being constructed to the Mongolian-Chinese border crossing at Gashuun Sukhait. Approximately 23 km of the road are pending final construction to a fully paved standard.

Oyu Tolgoi LLC makes use of the Chinese Port of Tianjin, the largest port in northern China, some 150 km south-east of Beijing, to import freight from overseas. The port is open year-round and has no ice restrictions during winter. Subsequent road delivery follows the extensive network of Chinese highways connecting Tianjin to Wuyuan, a distance of about 1,050 km, from there along a state highway to Hailiutu, about 60 km, and then on to the China-Mongolia border crossing at Ganqimaodao-Gashuun Sukhait. This is the primary border crossing for both cargo and Chinese personnel immigration for the project. Baotou, just east of Wuyuan, will be the consolidation point for freight originating from China.

### ***Oyu Tolgoi Licence Areas***

The Oyu Tolgoi project area comprises five mining licences held by Oyu Tolgoi LLC and Entrée LLC, a subsidiary of Entrée Resources Ltd., formerly known as Entrée Gold Inc. The mining licences provide rights to the holders to explore, develop mining infrastructure, and conduct mining operations at Oyu Tolgoi. Oyu Tolgoi LLC owns 100% of three licences; MV-006708 (the Manakht Licence), MV-006709 (the Oyu Tolgoi Licence), and MV-006710 (the Khukh Khad Licence) while legal title to MV-015226 (the Shivee Tolgoi Licence) and MV-015225 (the Javkhant Licence) is currently held by Entrée LLC, subject to the conditions described below.

Oyu Tolgoi's legal title to the Shivee Tolgoi and Javkhant licences is subject to the Entrée Earn-in Agreement, which established a joint venture arrangement between Oyu Tolgoi LLC and Entrée LLC and provides for Oyu Tolgoi LLC to hold legal title in the licences, subject to the terms of the agreement, and to Oyu Tolgoi LLC meeting prescribed earn-in expenditures. Although a formal joint venture agreement has not been signed, the earn-in requirements have been met. Both the Shivee Tolgoi and Javkhant licences are planned to be operated by Oyu Tolgoi LLC.

Under the Entrée Earn-in Agreement, Oyu Tolgoi LLC's participating interest in the proposed joint venture arrangements (including the licences) consists of:

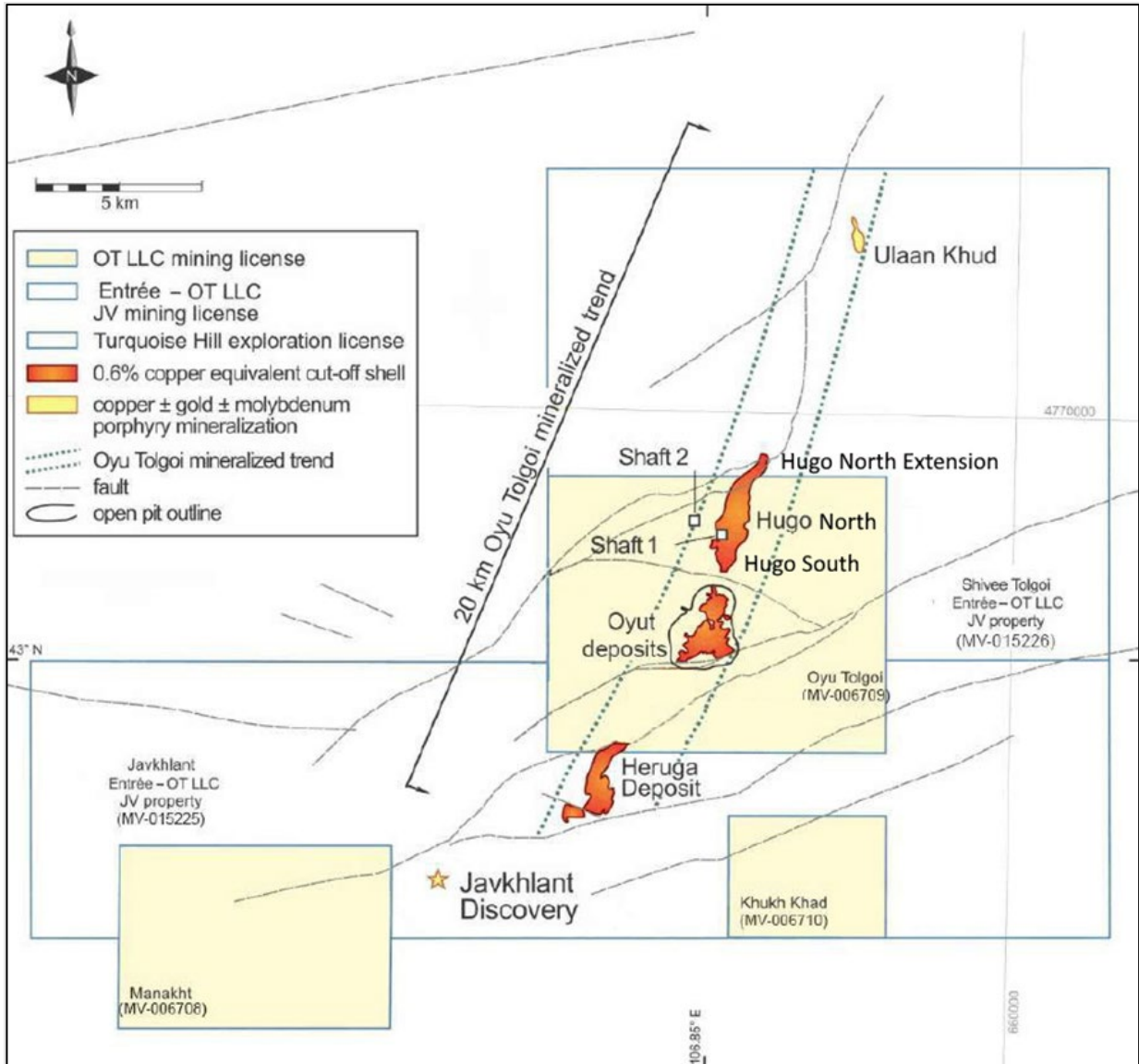
- 70 percent of the proceeds from mining from the surface to 560 m below the surface; and
- 80 percent of the proceeds from mining from depths below 560 m.

Most of the identified mineralisation at Oyu Tolgoi occurs at the Hugo North and Oyut deposits within the Oyu Tolgoi Licence (MV-006709). The northernmost extension of the Hugo North deposit extends onto the Shivee Tolgoi Licence and is subject to the terms of the Entrée Earn-in Agreement.

The three Oyu Tolgoi mining licences have 30-year terms from 23 December 2003, and the Shivee Tolgoi Licence and the Javkhant Licence each have 30-year terms from 27 October 2009. Each of the five mining licences has two 20-year extensions.

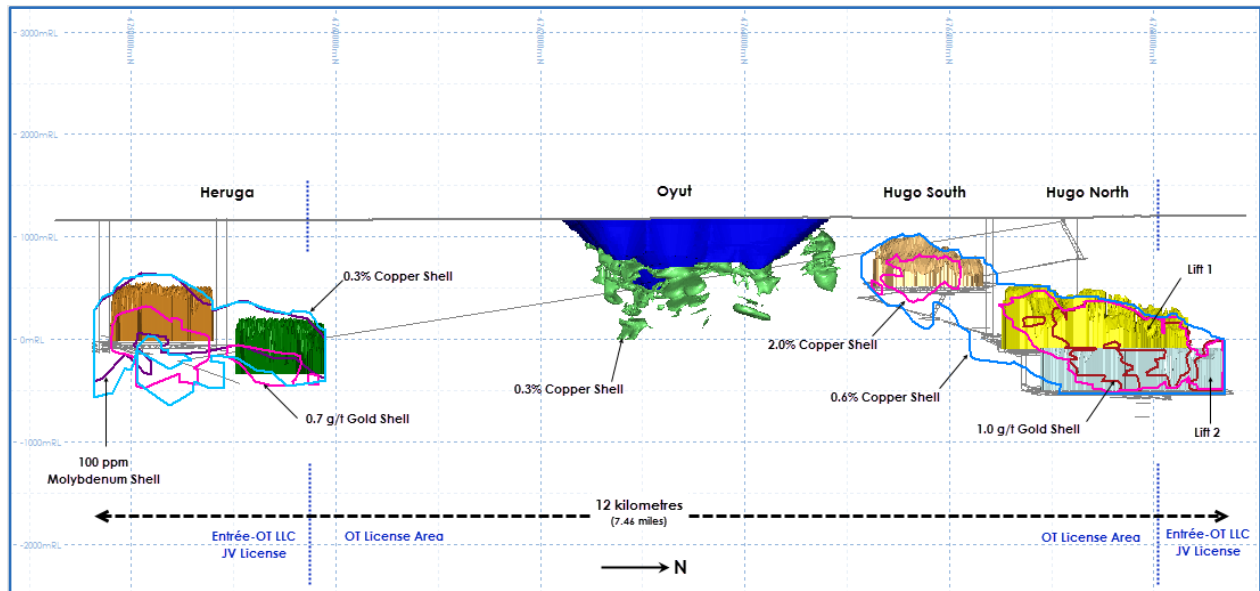
<b>Licence number</b>	<b>Area (ha)</b>	<b>Legal owner</b>	<b>Oyu Tolgoi's interest</b>
MV-006708	4,533	Oyu Tolgoi LLC	100%
MV-006709	8,490	Oyu Tolgoi LLC	100%
MV-006710	1,763	Oyu Tolgoi LLC	100%
MV-015225 (Javkhlant)	20,327 all under agreement	Entrée LLC (a subsidiary of Entrée Resources Ltd)	70% from the surface to 560 m below the surface; and 80% from below 560 m
MV-015226 (Shivee Tolgoi)	42,592.58 all under agreement	Entrée LLC (a subsidiary of Entrée Resources Ltd)	70% from the surface to 560 m below the surface; and 80% from below 560 m

### The Oyu Tolgoi Licence Areas



The illustration below shows a projected long section stretching 12 km from the Hugo North deposit in the north through to the Heruga deposit in the south.

### Idealised Profile of Oyut, Hugo Dummett, and the Heruga Deposits (Long Section Looking West)



The northernmost extension of the Hugo North deposit crosses onto the Shivee Tolgoi Property. The Heruga deposit lies almost entirely within the Javkhant Property, with only the far northern extent passing into MV-006709. There are numerous exploration targets across the three Oyu Tolgoi mining licences MV-006708, MV-006709, and MV-006710.

The mining licences comprising the Oyu Tolgoi property were surveyed by an independent consultant in 2002 and by a qualified Mongolian Land Surveyor in 2004. In early-2011, the Government of Mongolia changed its official survey datum to WGS 84 / UTM zone 48N. In accordance with the requirements of the change, Geomaster Co. Ltd. resurveyed the licences and new licence certificates reflecting the slight change from prior surveys were issued to Oyu Tolgoi LLC. The Project is centred at approximately latitude 43°00'45"N, longitude 106°51'15"E.

### *Project History*

The existence of copper in the Oyu Tolgoi area has been recognised since the Bronze Age, but contemporary exploration for mineral resources did not begin until the 1980s, when a joint Mongolian and Russian geochemical survey team identified a molybdenum anomaly. Evidence of alteration and copper mineralisation in the area of the Oyuut deposit was first noted in 1983. In September 1996, geologists from the Magma Copper Company identified a porphyry copper leached cap over what is now known as the Central zone of the Oyuut deposit. The Magma Copper Company subsequently secured exploration tenements in the area. Magma Copper Company was subsequently acquired by BHP, which became BHP-Billiton ("BHP").

Geophysical surveying on the Oyu Tolgoi mining licence (MV-006709) was first conducted by BHP in 1997. An airborne magnetometer survey was carried out, followed by induced polarisation ("IP") surveys. The surveys covered exploration targets in the area of the Oyuut deposit but did not extend into the northern area that ultimately became the Hugo Dummett deposits (Hugo North and Hugo South).



Between 1997 and 1998, BHP also carried out geological, geophysical, and geochemical (stream sediment and soil) surveys, and diamond drilling programmes (23 drill holes in total) in the Central and South zones of the Oyut deposit. Copper and gold values were encountered at depths from 20 m to 70 m below the surface, and a supergene-enriched, chalcocite blanket was encountered in one drill hole. Based on the results of this drilling, BHP prepared a mineral resource estimate in 1998, but the resulting tonnage and grade estimate was considered too small to meet BHP corporate objectives, and BHP elected to offer the property for joint venture.

In 1999, Turquoise Hill (known at the time as Ivanhoe Mines Ltd.) visited Oyu Tolgoi and agreed to acquire 100% interest in the property, subject to a 2% NSR royalty. The Corporation subsequently acquired the 2% NSR royalty payable by Oyu Tolgoi LLC in November 2003, thereby removing any future obligations to BHP.

In 2000, Ivanhoe, through its subsidiary Oyu Tolgoi LLC (known at the time as Ivanhoe Mines Mongolia Inc. LLC ("IMMI"), completed 8,000 m of reverse circulation ("RC") drilling, mostly at the Central zone, to explore the chalcocite blanket discovered earlier by BHP, and updated the BHP mineral resource estimate.

In 2001, Oyu Tolgoi LLC continued RC drilling, mostly in the South zone area, to test for additional supergene copper mineralisation. Oyu Tolgoi LLC then drilled three diamond core holes to test the deep hypogene copper-gold potential. One of these holes, drilled over the Southwest zone, intersected 508 m of chalcopyrite mineralisation from a depth of 70 m, grading 0.81% Cu and 1.17 g/t Au. This marked the discovery of the Oyut deposit.

These results encouraged Ivanhoe to mount a major follow-up drilling programme. In late-2002, drilling in the far northern section of the property intersected 638 m of bornite-chalcopyrite-rich mineralisation, starting at a depth of 222 m. This hole marked the discovery of the Hugo Dummett deposits (Hugo North and Hugo South).

In 2003, the Government of Mongolia granted mining licence MV-006709 to IMMI, along with mining licences for MV-006708 and MV-006710.

In 2004, a NI 43-101 Preliminary Economic Assessment ("PEA") was completed on the economics of open pit mining the Oyut deposit and a first-time Mineral Resource estimate was reported for the Hugo South portion of the Hugo Dummett deposits. In November 2004, following the signing of the Entrée Earn-in Agreement, Oyu Tolgoi LLC initiated exploration work on the Javkhlant and Shivee Tolgoi licences. Entrée LLC had previously undertaken soil geochemical surveys, geophysical surveys and geological mapping, but had failed to locate any mineralisation of significance.

In 2005, the Hugo Dummett Mineral Resource estimate was updated to include Hugo North and a PEA was prepared based on an integrated development plan for open pit mining of the Oyut deposit, two block caves on the Hugo North deposit, and one block cave on Hugo South. The integrated development plan included a processing plant with a capacity of 25.5 million tonnes per annum (Mtpa), with an expansion to 51 Mtpa.

In 2006, following further geophysical exploration and drilling, Oyu Tolgoi LLC reported a first-time resource estimate for the part of the Hugo North deposit that extends onto the Shivee Tolgoi mining licence. This area is known as the Hugo North Extension. A mineral reserve estimate for the Oyut deposit was reported, based on a study assessing an open-pit only mining scenario.

In January 2006, Shaft 1 headframe, hoisting plant, and associated infrastructure were completed. By January 2008, the shaft had been sunk to a depth of 1,385 m enabling underground exploration development for the Hugo North deposit to commence.

In early 2007, core drilling was initiated to test IP anomalies on Entrée LLC's Javkhlant licence. The drilling identified the Heruga deposit in 2008. In 2007 the Hugo North mineral resource estimate was also updated.

In 2008, a first-time mineral resource estimate was reported for the Heruga deposit.

In 2009, the Investment Agreement between Oyu Tolgoi LLC and the Government of Mongolia was signed (See "General Development of the Business – Agreements with the Government of Mongolia – Investment Agreement"). As part of the agreement process, Oyu Tolgoi LLC prepared a Mongolian statutory study ("MSS09") for the Government of Mongolia. MSS09 envisaged open-pit mining on the Oyut deposit and underground mining by block caving on Hugo North, Hugo South, and the Heruga deposits. A processing plant capacity of 36.5 Mtpa expanding to 58 Mtpa was envisaged.

In 2010, an NI 43-101 Technical Report ("2010 Technical Report") was released based on an integrated development plan for the project. The 2010 Technical Report included a Mineral Reserve for the Oyut deposit based on open-pit mining and an ore reserve for part of the Hugo North deposit (Lift 1) based on the block caving method. The report envisaged the same plant capacity as MSS09. A decision was made to construct the Oyut open pit mine and to construct a 36.5 Mtpa concentrator and supporting infrastructure.

In 2011, an updated NI 43-101 Technical Report was released that updated the 2010 Technical Report while maintaining the same concentrator feed capacity and sinking of Shaft 2 (the main personnel, rock hoisting, and intake ventilation shaft) commenced.

In 2012, Rio Tinto Ltd became the majority shareholder of Ivanhoe and Ivanhoe was renamed Turquoise Hill Resources Ltd. The Detailed Integrated Development and Operating Plan was prepared examining the scenario of open-pit mining on the Oyut deposit and underground block caving on Hugo North Lift 1, without a plant expansion.

In January 2013, Oyu Tolgoi processed its first ore through the concentrator, and shortly thereafter, produced the first copper-gold concentrate. In March 2013, Detailed Integrated Development and Operating Plan and a further Technical Report (the "2013 Technical Report") was released based on a more detailed study assessing open pit mining of the Oyut deposit and underground block caving of Hugo North Lift 1. In June 2013, more than 40,000 t of concentrate had been produced. The concentrator was reported to be running at full capacity in September 2013. In August 2013, development of the underground mine was suspended to allow matters to be resolved between the parties to the Investment Agreement, including a tax dispute, approval of the Detailed Integrated Development and Operating Plan by Oyu Tolgoi's shareholders and by the Mongolian Minerals Council, agreement of a comprehensive funding plan, and receipt of all necessary permits.

In 2014, the Hugo North mineral resource estimate was updated, and Oyu Tolgoi LLC submitted a statutory study with the Mongolian Minerals Council. The study envisaged open pit mining on the Oyut deposit and underground block caving on Hugo North Lift 1. In addition, the study considered the development of resources at Hugo North Lift 2, Hugo South, and Heruga. A concentrator throughput rate of 36.5 Mtpa was envisaged. In March 2014, the Corporation announced that it was continuing to work together with Rio Tinto and the Government of Mongolia with the aim of resolving outstanding shareholder matters and finalising Oyu Tolgoi project financing. In October 2014, the Corporation filed

a Technical Report (the "2014 Technical Report") for the Project. The 2014 Technical Report was based on a new statutory study prepared by Oyu Tolgoi LLC. The study envisaged the same integrated mining concept as the 2013 Technical Report. Oyu Tolgoi LLC produced 148,400 t of copper and 589,000 oz of gold in concentrates.

In March 2015, Oyu Tolgoi LLC filed a statutory study with the Mongolian Minerals Council and in May 2015, Turquoise Hill announced the signing of the UDP by the Government of Mongolia, the Corporation and Rio Tinto, which addressed key outstanding shareholder matters and set out an agreed basis for the funding of the Project. The study (updated in 2016, and which corresponds to MSS16) incorporated matters resolved between the shareholders and was approved by the Oyu Tolgoi LLC board of directors and shareholders. In August 2015, Oyu Tolgoi LLC filed revised schedules for MSS16 with the Mongolian Minerals Council. The filing aligned MSS16 with the UDP. Oyu Tolgoi LLC produced 202,200 t of copper and produced 653,000 oz of gold in concentrate. It recorded net revenue of approximately \$1.6 billion in sales on approximately 820,000 t of concentrates. Mill throughput increased by 23.9% compared to 2014, driven by operational improvements.

In May 2016, Oyu Tolgoi LLC received the formal notice to restart underground development. Underground construction began in mid-2016. In October 2016, the Corporation released the 2016 Technical Report, which updated and replaced the 2014 Technical Report.

In May 2017, Oyu Tolgoi LLC signed a new power purchase agreement with NPTG, which was executed in connection with the power import arrangement between NPTG and IMPIC. The new arrangement took effect on July 4, 2017, subsequent to the expiry of the existing IMPIC agreement, for a term of up to six years, with possibility of early cancellation after the fourth year, if a domestic power plant was commissioned earlier.

In June 2017, Oyu Tolgoi shipped its three millionth tonne of concentrate.

In 2018, Oyu Tolgoi achieved a significant underground development milestone with the completed sinking of Shaft 5 at a final depth of 1,178 metres. In July 2018, the Corporation announced the completed commissioning of Shaft 5 and in December 2018, the Corporation announced the signing of the PSFA between Oyu Tolgoi LLC and the Government of Mongolia, which provided a binding framework and pathway forward for the construction of the TTPP Project, as well as established the basis for a long-term domestic power solution for Oyu Tolgoi. See also "General Development of the Business - Three Year History".

### *Geology*

The Oyu Tolgoi copper-gold porphyry deposits are situated in a poorly exposed inlier of Devonian mafic to intermediate volcanic, volcanoclastic, and sedimentary rocks that have been intruded by Devonian to Permian felsic plutons. These rocks are unconformably overlain by poorly consolidated Cretaceous sedimentary rocks and younger unconsolidated sedimentary deposits.

The stratigraphic sequences recognised in the project area, from oldest to youngest, include:

- Alagbayan Group – comprising the Bulagbayan and Khalzan-Ovoo Formations that consist of tuffs, basaltic rocks, and sedimentary strata of probable island-arc affinity assigned to the Upper Devonian;
- Sainshandhudag Formation - an overlying succession containing conglomerates, fossiliferous marine siltstones, sandstones, water-lain tuffs, and basaltic to andesitic flows and volcanoclastic rocks, assigned to the Carboniferous;

- Bayanshiree Formation - overlying Upper Cretaceous clays and gravels; and
- Quaternary sediments.

The Alagbayan and Sainshandhudag sequences are separated by a regional unconformity that, in the Oyu Tolgoi area, is associated with a time gap. The volcanic and sedimentary rocks are cut by several phases of intrusive rocks ranging from batholithic intrusions to narrow discontinuous dykes and sills. Compositional and textural characteristics vary.

The project area is intersected by a complex network of faults, folds, and shear zones. These structures influence the distribution of mineralisation by both controlling the original position and form of mineralised bodies and modifying them during post-mineral deformation events.

The mineralised porphyry centres define a north-north-east trending corridor underlain by east-dipping panels of Upper Devonian or older layered sequences intruded by quartz-monzodiorite and granodiorite stocks and dykes.

### ***Deposits Hosting Mineral Resources***

Four deposits hosting Mineral Resources have been identified: Oyut, Hugo North, Hugo South, and Heruga.

#### ***Oyut Deposit***

The Oyut deposit includes the most mineralised domain called Southwest Oyu (Southwest), but also includes South Oyu (South), Wedge, and Central Oyu (Central) domain and several smaller, fault-bounded zones. The open pit incorporates most of these domains. They form contiguous sectors of mineralisation representing multiple mineralising centres, each with distinct styles of mineralisation, alteration, and host rock lithology. The boundaries between the individual zones coincide with major faults. Faulting has resulted in different erosional histories for the zones, depending on the depth to which a zone has been downfaulted or uplifted relative to neighbouring zones.

The Southwest Oyu zone is a gold-rich porphyry system characterised by a south-west-plunging, pipe-like geometry that has a vertical extent of as much as 700 m. The Central zone is hosted within a swarm of feldspar-phyric quartz-monzodiorite intrusions, emplaced into porphyritic augite basalt and overlying basaltic tuff of the Alagbayan Group. The South Oyu zone is developed mainly in basaltic volcanics and related to small, strongly-sericite altered quartz-monzodiorite dykes.

#### ***Hugo North and Hugo South Deposits***

The Hugo North and Hugo South deposits contain porphyry-style mineralisation associated with quartz-monzodiorite intrusions, concealed beneath a sequence of Upper Devonian and Lower Carboniferous sedimentary and volcanic rocks. The deposits are highly elongated to the north-north-east and extend over 3 km. The dividing line between the two deposits is 4,766,300 m North, a location marked by the thinning and locally discontinuous nature of the high-grade copper mineralisation (defined by greater than 2.0% copper). The line, which is broadly coincident with the east striking 110° fault, separates the gold-rich and copper-rich zone hosted in augite basalt and quartz-monzodiorite of the Hugo North deposit from the more southerly, gold-poor, ignimbrite and augite basalt-hosted mineralisation at Hugo South.

The highest-grade copper mineralisation in the Hugo North deposit is related to a zone of intensely stockworked to sheeted quartz veins known as the QV90 zone, so named because greater than 90% of the

rock has greater than 15% quartz veining. The high-grade zone is centred on thin, east dipping quartz monzodiorite intrusions or within the apex of the large quartz monzodiorite body and extends into the adjacent basalt. In addition, moderate-to-high grade copper and gold values occur within quartz monzodiorite below and to the west of the intense vein zone, in the Hugo North gold zone. This zone is distinct and has a high Au (ppm) to Cu (%) ratio of 0.5 to 1.

### *Heruga Deposit*

The Heruga deposit is the most southerly of the known deposits at Oyu Tolgoi. The deposit is a copper–gold–molybdenum porphyry deposit and is zoned with a molybdenum-rich carapace at higher elevations overlying gold-rich mineralisation at depth. The top of the mineralisation starts 500–600 m below the present ground surface. The deposit has been drilled over a 2.3 km length, is elongated in a north–northeast direction and terminates to the north on an east–northeast-trending regional fault with 500 m of apparent dextral displacement.

Quartz monzodiorite intrudes the Devonian augite basalts as elsewhere in the district, and again are the progenitors of mineralisation and alteration. The quartz monzodiorite intrusions are small compared to the stocks present in the Hugo Dummett and Oyut areas, perhaps explaining the lower grade of the Heruga deposit. Non-mineralised dykes, comprising about 15% of the volume of the deposit, cut all other rock types.

The deposit is transected by a series of north–north-east trending vertical fault structures that step down 200 m to 300 m at a time to the west and have divided the deposit into at least two structural blocks.

Mineralised veins have a much lower density at Heruga than in the more northerly Oyut and Hugo Dummett deposits. High-grade copper and gold intersections show a strong spatial association with contacts of the mineralised quartz monzodiorite porphyry intrusion in the southern part of the deposit, occurring both within the outer portion of the intrusion and in adjacent enclosing basaltic country rock. At deeper levels, mineralisation consists of chalcopyrite and pyrite in veins and disseminated within biotite–chlorite–albite–actinolite-altered basalt or sericite–albite-altered quartz monzodiorite. The higher levels of the orebody are overprinted by strong quartz–sericite–tourmaline–pyrite alteration where mineralisation consists of disseminated and vein-controlled pyrite, chalcopyrite and molybdenite.

There is no oxide zone at Heruga, nor is there any high-sulphidation style mineralisation known to date.

### ***Near Mine Exploration and Drilling***

Exploration on the mine leases is undertaken by Oyu Tolgoi LLC’s site technical services team. The current exploration strategy is focused on developing a project pipeline prioritised in areas that can impact the current development of the Oyu Tolgoi deposits, seeking low-cost development options and continuing the assessment of legacy datasets to enable future discovery. The table below summarises current exploration targets, based on medium or high priority, which are currently identified. Some of the targets have exploration work planned in 2022 and some targets will be investigated in the future. Development of the known mineral resources is a key objective of stakeholders and over the life of Oyu Tolgoi, Oyu Tolgoi LLC will continue to progress its understanding of these resources and ultimately make decisions on their development.

### Exploration Target Prospect Classification

Company	Mining Licence	High priority	Medium priority
<b>Oyu Tolgoi LLC</b>	Oyu Tolgoi (MV-006709)	<ul style="list-style-type: none"> <li>• Shallow Hugo</li> <li>• West Oyu</li> <li>• Hugo West</li> <li>• SW Gold</li> </ul>	<ul style="list-style-type: none"> <li>• SE Oyu</li> <li>• Zeer</li> </ul>
	Manakht (MV-006708)		<ul style="list-style-type: none"> <li>• West Manakht</li> <li>• Manakht Ovoo</li> </ul>
	Khukh Khad (MV-006710)		<ul style="list-style-type: none"> <li>• Central Khuh Khad</li> </ul>
<b>Entrée LLC</b>	Shivee Tolgoi (MV-015226)	<ul style="list-style-type: none"> <li>• North Hugo Extension</li> </ul>	<ul style="list-style-type: none"> <li>• North-Ulaan Khud (Ulaan Khud South)</li> <li>• Airstrip target</li> </ul>
	Javkhlant (MV-015225)	<ul style="list-style-type: none"> <li>• Heruga deposit</li> </ul>	<ul style="list-style-type: none"> <li>• West Heruga</li> <li>• Castle rock target</li> <li>• Bumbat Ulaan</li> <li>• West Mag</li> <li>• SEIP and North-SEIP</li> </ul>

The following is a summary of key exploration activities from January 1, 2016 to December 31, 2021.

From 2016 to 2021, several exploration programmes were conducted to assess the potential for additional exploration targets in Oyu Tolgoi and the surrounding tenements. These surveys included geological mapping, geochemical and geophysical surveys, along with diamond and RC drilling programmes in order to define lithology and structure, test geochemical and geophysical anomalies, determine the continuation of mineralisation trends, and to identify potential resource targets. Comprehensive desktop studies to evaluate potential of the targets and plan further exploration programmes at areas of interest including wholerock-zircon studies, rockchip and soil geochemistry and integrated geological-geophysical 3D modelling were carried out. Targets are assessed and ranked as either high, medium or low potential dependent on various factors including favourable lithology, alteration, and structural setting, geophysical or geochemical signature similar to known mineralisation style of other Oyu Tolgoi deposits, and potential for extension along or down dip of known mineralisation. Detailed exploration activities (including drilling programmes) have mostly been focused on finding shallow resources (less than 300 m) near pit and greenfield opportunities. No drilling programmes were conducted in 2020 and 2021 due to the ongoing COVID-19 pandemic and related restrictions, other than infill drilling conducted on the Oyu Tolgoi licence MV-006709. Exploration activities in 2021 included data integration and interpretation at Manakht (MV-006708) and Khukh Khad (MV-006710) licences, and prospect scale 3D geologicalgeophysical modelling at Javkhlant (MV-015225) and Shivee Tolgoi (MV-015226) licences.

### *High Priority Targets*

**Shallow Hugo West ("SHW")** is the area directly to the north and north-west of the Central Oyu Open Pit. In 2018 through to 2020, multi-phase drilling campaigns comprising 14 diamond-core and 49 RC drill holes, for a total of 15,002 m (diamond 2,833 m; RC 12,170 m), were completed at SHW to further test mineralisation previously identified by geochemistry, geophysics and initial drill testing prior to 2016. Drilling has shown that SHW sits within a downfaulted block from the Western BAT Fault and is likely to be a northern offset extension of the Central Oyu deposit. Due to the fault geometry SHW is located deeper than the currently planned Oyu open pit. Further work will include infill drilling and 3D resource modelling to determine if the zone is economically feasible to include in open pit planning.

**West Oyu** is to the immediate west of the open pit and is characterised by Devonian QMD, augite basalt overlapping high chargeability and gravity features. Several sparsely located RC and diamond holes have been drilled in the past. The results of two holes were 86 m at 0.15% Cu and 56 m at 0.27g/t Au.

**Hugo West** is immediately to the north of SHW on the main Oyu Tolgoi high chargeability, high gravity trend. It is associated with ignimbrite and dacite units. The shallow part of the target has been partially tested with three holes returning: 76 m at 0.23% Cu (246 m to 322 m), 134 m at 0.35% Cu (366 m to 498 m) and 44 m at 0.17% Cu and 98ppm Mo.

**SW Gold** target is immediate south-west extension of the open pit and comprises Devonian augite basalts coinciding with high chargeability and density. Several drill holes have been drilled into this target and have returned elevated Au grade intersection from – 30 m to 120 m. Further drilling is needed to evaluate this possible mine extension.

**Hugo North Extension** has been geologically modelled in 3D using geophysics and geological data for two potential structural geometries that are considered favourable for hosting Oyu Tolgoi style porphyry mineralisation. Drill testing and further work is required.

**At Heruga** a geochemical characterisation study was completed over an initial single cross-section. The mineral association results indicate that the mineralisation is decreasing to the west, however there is potential for high grade mineralisation in the east (although it will most likely be deeper due to the host lithological bedding configuration). Further work is needed to collect more information on the area for further development and modelling.

### *Medium Priority Targets*

**West Manakht** is located in the Manakht licence and is characterised by over a 1 km, east-north-east striking 15 m to 30 m wide shear zone hosted in granodiorite massif. The shear zone is associated with quartz-monzonite dyke, quartz veins with copper oxides and sulphides. Rock chip samples have elevated copper grades along the shear zone associated with quartz veins. The target is a deep Induced Polarisation anomaly which has overlapping elevated copper, molybdenum and silver soil anomalies. Further deep exploration will provide information on the potential of the prospect.

**Ulaan Khud South** target is located in the far north of the Shivee Tolgoi licence, to the south of the Ulaan Khud porphyry deposit (beyond the licence boundary). This area is relatively unexplored between the northern Ulaan Khud porphyry and main Ulaan Khud prospect to the south. Few holes have been drilled in the past which have shown patchy chalcopyrite mineralisation in quartz veins. Further exploration is planned in the area.

**The Airstrip** target area is mostly undercover, concealed by Cretaceous clay and is initially identified as a gravity high anomaly. Shallow percussion drilling was conducted to collect bedrock information (58 holes with depth range of 30 m to 120 m). Two follow-up, deeper diamond holes were undertaken. An east-west oriented Induced Polarisation survey traversing the prospect area revealed two separate chargeability anomalies which were drill tested in 2019 (less than 300 m RC drilling). No noteworthy results were received from the shallow RC drilling programme, but there is still an indication of deeper potential for the target. Recent integrated geological-geophysical modelling work highlighted additional prospective areas within the current target focus zone. Additional work included alteration studies, uranium-lead chronology (21 samples) and ASD spectrometer analysis (368 samples) to test for distance of target to the centre of a porphyry system, porphyry fertility responses and favourable alteration species indicating proximity to a porphyry centre. The results indicated a copper-molybdenum-silver-bismuth-tellurium association and associated copper anomaly that suggest potential for copper mineralisation. This target requires more work.

**West Heruga** is located approximately 1 km to the west of the Heruga deposit and is mostly undercover. Interpreted geological map shows Devonian basalts and sediments coinciding with moderate-high chargeability and moderate-high transitioning gravity towards the Heruga deposit. Further exploration will provide more information on the geological setting of the area and source of the geophysical features.

**The South East IP** target is located in the south-east of the Javkhlant Licence area and is characterised by large gradient array Induced Polarisation anomaly coinciding with Carboniferous units. Geological mapping has been completed and soil sampling has identified three clusters of copper anomalies (Cu-1, Cu-2, and Cu-3) with copper results from surface rock chip samples ranging from 0.18% to 0.77% Cu. RC drilling programme with 10 shallow RC holes (less than 300 m) was conducted in 2019 to test the potential for surface Cu mineralisation. RC holes intersected Carboniferous volcanic-sedimentary rocks with no significant alteration and mineralisation. Although there is a considerable amount of pyrite distribution (less than 2%) in the holes, the source of the anomaly still needs to be tested with Induced Polarisation and deeper drilling. Recent integrated geological-geophysical modelling suggests additional prospective locations/targets at the area which happen to be away from the strong chargeability feature and RC drill holes. Further exploration work will reveal the potential of the prospect.

**The Castle Rock IP** anomaly is located in the south of the Javkhlant Licence and includes some outcrops of dacite with sheeted and network quartz veins. Geological mapping was completed and soil sampling over a 400 m by 200 m grid for a total of 402 samples delineated a north-north-east to south-south-west trending molybdenum-arsenic-antimony-selenium-tellurium anomaly coincident with the Induced Polarisation anomaly in 2018. Two lines (7.2 km) of dipole-dipole Induced Polarisation were completed, followed up with two RC drill holes to test the anomaly. No significant copper or gold assays were returned. RC holes intersected andesite-basalt tuffs with strong pyrite concentration up to 6% which may be causing the chargeability high.



**Bumbat Ulaan** target is located in the far west of the Javkhlant licence and is characterised by argillic-silica zones in Carboniferous volcanics which are in contact with granitic batholite. Discrete smaller high chargeability anomalies are partially coincident with the argillic zones and molybdenum, tellurium, selenium geochemical anomalies.

**West Mag** target is also located in the far west of the Javkhlant licence, to the northeast of the Bumbat Ulaan prospect. The area geology is complex with Carboniferous volcanic sequences being cut by dominantly north-north-east trending intermediate to felsic dykes and porphyries. The target area occupies a contact zone with quartz-granite and the volcanics, chargeability highs, gravity moderate-highs and narrow advanced argillic, phyllic zones with copper-molybdenum-gold soil anomaly.

### *Resource Delineation Drilling*

Infill drilling to increase resource confidence and geotechnical orebody knowledge is part of a longer-term strategy to add incremental resource tonnes and convert resources to reserves, particularly around Oyut (ultimate reserve pit), Hugo North Lift 1 and Lift 2, and Hugo South.

A summary of exploration expenditure by licence from 2016 to 2021 is tabulated below, along with the total drilling metres by year. Expenditure includes drilling defined as resource delineation, orebody knowledge and brownfield exploration.

Licence	Units	2016	2017	2018	2019	2020	2021	Total
<b>MV-006708 (Manakht)</b>	\$ Million	0.1	0.1	0.1	0.1	0.04	0.08	<b>0.4</b>
<b>MV-006709 (Oyu Tolgoi)</b>	\$ Million	0.1	0.0	1.4	1.9	0.0	3.6	<b>7.0</b>
<b>MV-006710 (Khukh Khad)</b>	\$ Million	0.1	0.0	0.2	0.1	0.05	0.06	<b>0.5</b>
<b>MV-015225 (JV-Javkhlant)</b>	\$ Million	0.1	0.1	0.3	0.3	0.1	0.5	<b>1.4</b>
<b>MV-015226 (JV-Shivee Tolgoi)</b>	\$ Million	0.1	0.0	0.2	0.3	0.3	0.3	<b>1.2</b>
<b>Total Expenditure*</b>	\$ Million	0.4	0.3	2.2	2.7	0.5	4.5	<b>10.6</b>
<b>Holes Drilled</b>	Number	30	36	157	247	190	160	<b>820</b>
<b>Metres Drilled</b>	Kilometres	5.2	17.5	57.9	72.7	54.8	44.9	<b>253</b>

Note: Totals may not match due to rounding

Between 2016 and 2021, over \$10.6 million was spent on exploration and resource delineation drilling across the five licences. During 2021, a total of 160 holes for 44 km of drilling was completed. Of this, 12 km was resource definition drilling designed to increase resource confidence inside the Oyut ultimate pit.

### *Sampling, Analysis and Data Verification*

Diamond drill core is the main source of geological and grade data for the Oyu Tolgoi resource models. Key data includes drill collar surveys, downhole surveys, geological logging (including lithology, alteration, structure, mineralisation, and recovery and geotechnical data), bulk density, assays, and magnetic susceptibility. Geological logging is captured digitally and stored in an acquire relational database and exported to a Vulcan ISIS relational database for manipulation and modelling purposes. Validation checks occur at various stages of the data capture process and during the import and export of the data between acquire and Vulcan.

Underground face mapping at Hugo North and open pit mapping at Oyut also capture important geological and structural data that is incorporated into the geological modelling as part of the resource modelling process.

Drill core is stored in labelled core boxes showing the drill hole number, a core box identifier and start and end meterage. Core boxes are transferred from the drill rig to the logging area, and after logging then transferred to the sampling area. Drill core is photographed prior to sampling so there is a permanent record.

Sample intervals are generally half core, two metres in length, with samples cut by a diamond saw. The sample intervals are measured and marked on both the core and the core box, and a sample tag stapled to the core box at the end of each interval. Sample numbers are pre-allocated and allow for the insertion of quality assurance and quality control (QA/QC) samples including duplicates, standards, and blanks. Half core is placed directly into pre-numbered sample bags with internal sample tag, and the remaining half core is returned to the core box and retained. Routine bulk density measurements are taken using the Archimedes water immersion method.

Until September 2011, all routine sample preparation and analyses of the Oyu Tolgoi samples were carried out by SGS Mongolia, an independent sample preparation facility on site and an analytical laboratory in Ulaanbaatar. This laboratory was ISO 9001:2000 accredited and conforms to the requirements of ISO/IEC 17025 for specific registered tests. The laboratory performs all fire assay analyses. Between 2011-2016, the samples were submitted to ALS laboratory (Canada) for analysis. From 2016 to 2019, the sample preparation for exploration have been carried out by ALS located in Ulaanbaatar and assay analysis has been performed at ALS laboratory in Perth, Australia and Canada.

Since 2019, the sample preparation and assay analysis for resource estimation and brownfield exploration have been carried out by SGS Mongolia located in Ulaanbaatar.

Since 2011, ICP-MS has been used for assaying of all routine samples. ALS and SGS act as the check laboratories for each other, which ensures systematic secondary laboratory checks of resource and exploration drilling. The check sample rate is one in 20 samples. Run-of-mine samples from the open pit and concentrator are subject to a separate analytical flowchart at the mine laboratory situated within the concentrator complex on site.

Sample security is supported by the fact that the samples were always attended to or locked in a secure sample dispatch facility. Sample collection and transportation were always undertaken by company or laboratory personnel using company vehicles. Chain-of-custody procedures included filling out sample submittal forms that were sent to the laboratory with the sample shipments to ensure that the laboratory received all the samples.

Standard reference materials ("SRMs") are prepared from Oyu Tolgoi site material of varying matrices and grades to formulate bulk homogenous samples. Ten samples of this material are sent for round-robin testing by at least seven international laboratories. The resulting assay data are analysed statistically to determine a representative mean value and standard deviation necessary for setting acceptance/rejection tolerance limits. Blank samples are also subjected to a round-robin programme to ensure the material is devoid of any of the elements of interest so they can be confidently used to monitor potential contamination.

Five QA/QC samples are routinely included in every batch of 15 samples to make up a batch of 20 samples. QA/QC samples consist of one duplicate split core sample, one uncrushed field blank, a reject or pulp preparation duplicate, and one or two SRM samples (less than 2% Cu and greater than 2% Cu if higher grade mineralisation is present based on visual estimates). The SRMs are matrix-matched to ensure consistency with routine analytical samples.

The split core, reject, and pulp duplicates are used to monitor precision at the various stages of sample preparation. The field blank can indicate sample contamination or sample mix-ups, and the SRM is used to monitor accuracy of the assay results.

### ***Mineral Resources***

The section relates to the construction of the resource models for the Oyut, Hugo North, Hugo South, and Heruga deposits. Each step has been summarised including data acquisition, block model creation, model validation, resource classification and reporting.

### ***Mineral Resources Modelling Methodology***

The geology models for the various deposits are based on logging and mapping data collected since project inception. The geology models include wireframes for lithology, alteration, oxidation, supergene and structure.

For Oyut and Hugo North, the geological wireframes form the basis of the estimation domains for the economic elements (Cu, Au, Ag, Mo), deleterious / penalty elements (F, As), density and geometallurgical variables (used in throughput and recovery calculations). The final estimation domain groupings have been defined from statistical analysis of the box plots, histograms and probability plots. For Hugo South and Heruga, the estimation domains for the economic variables are based on grade shells.

For each deposit, the drill hole assays were composited into fixed-length, down-hole composites at a size that was considered appropriate in consideration of estimation block size, required lithological resolution, and probable mining method. The compositing honours the domains by breaking the composites on the domain boundary. Composite lengths of 8 m (approximately half the 15 m selective mining unit) were used for Oyut. Composite lengths of 5 m lengths were used for Hugo North, Hugo South and Heruga.

For each deposit:

- When appropriate, a high-grade restriction or capping has been used to limit the effect of outliers;
- Contact boundary analysis was completed to determine the treatment of boundaries (hard or soft) for estimation; and
- Spatial continuity analysis (variography) was completed to determine search strategies and variogram models were generally fitted using correlograms.

The block size of the final resource models was chosen based on a number of factors including the mining (or anticipated mining) method. The grade has been estimated into sub-blocked models and regularised for resource reporting and mine planning.

- For Oyut, Hugo South and Heruga the parent block dimensions are 20 m by 20 m by 15 m. The sub-blocked models have block dimensions down to 5 m by 5 m by 5 m, but the actual sub-block sizes vary as necessary to fit the specified boundaries of the wireframes used to tag the block model.
- For Hugo North, the parent block block dimensions are 15 m by 15 m by 15 m. The sub-blocked model has block dimensions down to 5 m by 5 m by 5 m.

For each deposit, grade estimation has been performed using Ordinary Kriging (OK) using a multi-pass kriging strategy. The kriging neighbourhood has been expanded and relaxed with each successive pass while maintaining the same axial ratios for samples searches as in the first pass. The second pass was executed on blocks that did not receive an interpolated grade in the first pass, and the third pass was executed on blocks that did not receive an interpolated grade in the first and second passes.

Density has been estimated either via Simple Kriging (SK) or Inverse Distance Squared (ID2).

In the case of Oyut and Hugo North, the first and second estimation pass kriging neighbourhoods approximately correspond to blocks expected to satisfy Measured and Indicated classification criteria. For Inferred classification, the blocks have been coded based on distance to a drill hole (and this distance varies from deposit to deposit).

Validation of the resource models was completed using several different methods including visual checks of block estimates against the drill composites; statistical analysis of block estimates against the uncapped and capped drill composites; swath plots in northing, easting and elevation; and comparison checks against the nearest neighbour model. At Oyut, the resource model was also validated by checking it against the grade control model.

There has been no change to the resource models for any of the deposits in 2021.

#### *Mineral Resources Classification*

The block models have been classified as Measured, Indicated and Inferred Mineral Resources based on drill spacing with consideration of grade and geological continuity. In general, the resource categories have been assigned based on the first, second and third searches. Oyut and Hugo North are the only deposits to have blocks coded as Measured Mineral Resources.

#### *Mineral Resource Reporting*

The Oyu Tolgoi deposits contain estimated Measured and Indicated Mineral Resources of 8.3 Mt of contained copper, 9.0 Moz of contained gold, and an estimated Inferred Mineral Resource of 21.8 Mt of contained copper and 34.4 Moz of contained gold.

The individual Mineral Resources for Oyu Tolgoi by deposit (Oyut, Hugo North, Hugo South, Heruga) and the total Mineral Resources are shown in the tables below. The detailed Mineral Resource tabulations (including the breakdown of ownership) are included in Schedule D. The Mineral Resources have been

prepared in accordance with the CIM Definition Standards and in accordance with the requirements of NI 43-101. The Mineral Resource estimates have been rounded which is in line with industry best practice.

**Oyut Open Pit Mineral Resources Summary, December 31, 2021**

Classification	Ownership	Mineral Resources				Contained Metal		
		Tonnes	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Measured	Oyu Tolgoi LLC	20	0.41	0.38	1.1	0.1	0.2	0.6
Indicated	Oyu Tolgoi LLC	90	0.33	0.30	1.1	0.3	0.9	3.4
Total (Measured + Indicated)	Oyu Tolgoi LLC	110	0.34	0.31	1.1	0.4	1.1	3.9
Inferred	Oyu Tolgoi LLC	340	0.29	0.19	1.0	1.0	2.0	11.1

**Oyut Underground Mineral Resources Summary, December 31, 2021**

Classification	Ownership	Mineral Resources				Contained Metal		
		Tonnes	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Measured	Oyu Tolgoi LLC	10	0.48	0.91	1.3	0.0	0.3	0.4
Indicated	Oyu Tolgoi LLC	50	0.38	0.61	1.2	0.2	1.0	1.9
Total (Measured + Indicated)	Oyu Tolgoi LLC	60	0.40	0.66	1.2	0.2	1.3	2.3
Inferred	Oyu Tolgoi LLC	140	0.41	0.42	1.2	0.6	1.9	5.8

**Hugo North Mineral Resources Summary, December 31, 2021**

Classification	Ownership	Mineral Resources				Contained Metal		
		Tonnes	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Measured	Oyu Tolgoi LLC	60	1.89	0.49	4.24	1.1	0.9	7.6
Indicated	Oyu Tolgoi + Entrée LLC	470	1.42	0.38	3.38	6.6	5.8	50.8
Total (Measured + Indicated)	Oyu Tolgoi + Entrée LLC	520	1.47	0.40	3.47	7.7	6.7	58.4
Inferred	Oyu Tolgoi + Entrée LLC	880	0.87	0.30	2.54	7.6	8.6	71.8

**Hugo South Mineral Resources Summary, December 31, 2021**

Classification	Ownership	Mineral Resources				Contained Metal		
		Tonnes	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Inferred	Oyu Tolgoi LLC	730	0.83	0.07	1.9	6.1	1.7	44.0

**Heruga Mineral Resources Summary, December 31, 2021**

Classification	Ownership	Mineral Resources				Contained Metal		
		Tonnes	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Inferred	Javkhlant EJV	1500	0.41	0.40	1.4	6.1	19.2	69.4
	Oyu Tolgoi LLC	110	0.42	0.30	1.6	0.4	1.0	5.4
	All Heruga	1610	0.41	0.39	1.4	6.6	20.2	74.9

**Total Oyu Tolgoi Mineral Resources Summary, December 31, 2021**

Classification	Mineral Resources				Contained Metal		
	Tonnes	Cu	Au	Ag	Copper	Gold	Silver
	(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Measured	82	1.42	0.52	3.3	1.2	1.4	8.6
Indicated	610	1.17	0.39	2.9	7.1	7.7	56.1
<b>Total (Measured + Indicated)</b>	<b>692</b>	<b>1.20</b>	<b>0.41</b>	<b>2.9</b>	<b>8.3</b>	<b>9.0</b>	<b>64.7</b>
Inferred	3700	0.59	0.29	1.7	21.8	34.4	207.5

Notes to the Mineral Resources:

- Totals may not match due to rounding.
- CIM Definition Standards are used for reporting of Mineral Resources.
- The Mineral Resources exclude Mineral Reserves.
- The following CuEq formulae have been used for cut-off grade determination in each deposit.
  - Oyu:  $CuEq = Cu + ((Au * 40.9679) + (Ag * 0.4227)) / 70.6140$
  - Hugo North:  $CuEq = Cu + ((Au * 40.9098) + (Ag * 0.5418)) / 70.6140$
  - Hugo South:  $CuEq = Cu + ((Au * 43.2704) + (Ag * 0.5843)) / 70.6140$
  - Heruga:  $CuEq = Cu + ((Au * 42.4871) + (Ag * 0.5880) + (Mo * 0.0150)) / 70.5478$
- The metal prices used in determining the CuEq formulae are:
  - \$3.203/lb for copper, \$1,479.82/oz for gold, \$19.23/oz for silver, and \$9.29/lb for molybdenum.
- The metallurgical recoveries used in determining the CuEq formulae for each deposit are:
  - Oyu: Copper 78%, Gold 67%, Silver 52%.
  - Hugo North: Copper 93%, Gold 80%, Silver 81%.
  - Hugo South: Copper 89%, Gold 81%, Silver 84%
  - Heruga: Copper 82%, Gold 73%, Silver 78%, Molybdenum 60%.
- For the Oyu deposit, a cut-off grade of 0.25% CuEq has been used for Mineral Resources with open pit potential.
- For Hugo North and Oyu underground, a cut-off grade of 0.46% CuEq grade was used based on the assumption that the deposits will be mined using underground mass mining methods.
- For Hugo South and Heruga, a cut-off grade of 0.41% CuEq grade which is unchanged from previous reporting.
- The effective date of the Mineral Resources estimates is December 31, 2021.

11. The Shivee Tolgoi and Javkhlant licences are held by Entrée LLC. The Shivee Tolgoi and Javkhlant Licences are planned to be operated by Oyu Tolgoi LLC. Oyu Tolgoi LLC will receive 80% of cash flows after capital and operating costs for material originating below 560 m, and 70% above this depth. The Corporation holds a 7.9% interest in Entrée LLC.
12. See Schedule D for more detailed information including with respect to ownership of Oyu Tolgoi LLC and Entrée LLC as well as Oyut mineral resources in the open pit and underground.
13. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
14. Molybdenum is excluded from the Total Resources and is shown in Schedule D.
15. The contained copper, gold, silver, and molybdenum estimates in the tables have not been adjusted for metallurgical recoveries.
16. Hugo North contains 1.7Mt of stockpile material for which there are reasonable prospects for eventual economic mineral extraction.

The Mineral Resources have been reported based on a copper equivalent (“CuEq”) cut-off grade. For reporting for the year ended December 31, 2021, the CuEq formulas were updated based on new metal price assumptions of \$3.203/lb for copper, \$1,479.82/oz for gold, \$19.23/oz for silver, and \$9.29/lb for molybdenum. The CuEq formulas used for reporting of the Mineral Resources are provided in the table below.

#### Mineral Resource CuEq formulas

Deposit	CuEq formula
Oyut	$Cu + ((Au * 40.9679) + (Ag * 0.4227)) / 70.6140$
Hugo North	$Cu + ((Au * 40.9098) + (Ag * 0.5418)) / 70.6140$
Hugo South	$Cu + ((Au * 43.2704) + (Ag * 0.5843)) / 70.6140$
Heruga	$Cu + ((Au * 42.4871) + (Ag * 0.5880) + (Mo * 0.0150)) / 70.5478$

The CuEq cut-off grade for each deposit is based on the estimated value recovered from the subsidiary metals (gold, silver and molybdenum<sup>3</sup>) relative to the estimated recovered value of the contained copper. The anticipated metallurgical recoveries for each deposit are shown in the table below. The recovery estimates are based on metallurgical test work, and, in the case of the Oyut deposit, actual concentrator performance. Gold and silver are expected to be recovered in all the deposits. There has been no change to the recovery assumptions for each of metals since previously reported.

#### Mineral Resource metallurgical recoveries

Deposit	Anticipated metallurgical recovery			
	Cu	Au	Ag	Mo
Oyut	78%	67%	52%	-
Hugo North	93%	80%	81%	-
Hugo South	89%	81%	84%	-
Heruga	82%	73%	78%	60%

In consideration of reasonable prospects of eventual economic extraction, the Mineral Resources are typically constrained using a spatial constraint that reflects the proposed or actual mining method. For Hugo North the constraining shell was prepared on vertical sections using economic criteria that would

<sup>3</sup> At current prices and costs, revenue may not be expected from molybdenum in concentrate.

pay for primary and secondary development, block-cave mining, ventilation, tramming, hoisting, processing, and G&A costs. There has been no change to the reporting shapes in 2021.

### *Mineral Resource Discussion*

This year, all Mineral Resources for the Oyu Tolgoi Project have been re-reported due to:

- Depletion due to mining (Oyut open pit and Hugo North only);
- Change in metal price assumptions; and
- Updated cost basis (Oyut and Hugo North only).

Pit optimisation limits or spatial constraints have not been updated and as such the stated impacts do not include overall volume changes that may be realised if they were re-optimised.

For Oyut and Hugo North Mineral Resources, the CuEq cut-off has been updated to reflect changes in current actual costs. This has resulted in an increase to both the Oyut open pit cut-off (from 0.24 to 0.25 CuEq) and the underground CuEq cut-off (from 0.41 to 0.46 CuEq).

The CuEq cut-off is unchanged for Hugo South and Heruga as there has been no further work undertaken on these deposits (or mine plans) which would provide any additional confidence in the cost basis. In the case of these deposits there has been a minor increase in stated resources due to the higher metal price assumptions making resource blocks more valuable while the cut-off hurdle remained the same.

The Mineral Resources for Oyut comprise open pit, stockpile and underground resources (as detailed in Schedule D). The Oyut Measured and Indicated Mineral Resources are estimated at 0.6 Mt of contained copper and 2.4 Moz of contained gold. This is a decrease in Measured and Indicated Mineral Resources of 4% contained copper and 2% contained gold from the Measured and Indicated Mineral Resources reported in the Corporation's Annual Information Form for the year ended December 31, 2020 (the "2020 AIF"). The Oyut Inferred Mineral Resources are estimated at 1.6 Mt of contained copper and 4.0 Moz of contained gold. This is a decrease in Inferred Mineral Resources of 6% contained copper and 3% contained gold from Inferred Mineral Resources reported in the 2020 AIF.

The Hugo North Mineral Resources are based on bulk underground mining of the Hugo North deposit in two lifts (Lift 1 and Lift 2). The Hugo North Mineral Resources include 1.7Mt of stockpile material for which there are reasonable prospects for eventual economic mineral extraction. The Hugo North Measured and Indicated Mineral Resources are estimated at 7.7 Mt of contained copper and 6.7 Moz of contained gold. This is a decrease in Measured and Indicated Mineral Resources of 1% contained copper and 1% contained gold from the Measured and Indicated Mineral Resources reported in the 2020 AIF. The Hugo North Inferred Mineral Resources are estimated at 7.6 Mt of contained copper and 8.6 Moz of contained gold. This is a decrease in Inferred Mineral Resources of 2% contained copper and 3% contained gold from the Inferred Mineral Resources reported in the 2020 AIF.

Factors that could materially affect the Mineral Resource estimates include the following: (i) commodity pricing, (ii) interpretations of fault geometries, (iii) effect of alteration as a control on mineralisation, (iv) lithological interpretations on a local scale, including dyke modelling and discrimination of different host rock phases, (v) pit slope angles, (vi) geotechnical assumptions related to the proposed block cave design and material behaviour, (vii) metal recovery assumptions, (viii) dilution considerations and other



environmental, permitting, legal, title, socio-political, marketing, or other relevant risks set forth in this AIF.

The resource classifications of Measured, Indicated, and Inferred are Mineral Resource classification confidence categories defined by the CIM Definition Standards and the SEC's S-K 1300 guide. Measured and Indicated Mineral Resources may not be Mineral Reserves until they have demonstrated economic viability based on a feasibility study or pre-feasibility study. In the Mineral Resource tabulations, the term Entrée LLC refers to ownership by the proposed joint venture arrangement between Oyu Tolgoi LLC and Entrée LLC. See "Cautionary Note to U.S. Investors".

### ***Mineral Reserves***

The Oyu Tolgoi deposits contain estimated Proven and Probable Mineral Reserves of 10.3 Mt of contained copper and 11.5 Moz of contained gold. Mineral Reserves have been estimated for the Oyut deposit and for the Lift 1 of the Hugo North deposit. No Mineral Reserves have yet been estimated for the Hugo South and Heruga deposits.

The Mineral Reserves for Oyu Tolgoi by deposit (Oyut & Hugo North) and the total Mineral Reserves are shown in the tables below. A comparison to the Mineral Reserves as at December 31, 2020, is included in Schedule C. The Mineral Reserves have been prepared in accordance with the CIM Definition Standards and the requirements of NI 43-101.

Reporting of the Mineral Reserves is based on NSR. NSR is an estimate of the revenue generated by the sale of concentrate at the "mine gate" that would be derived from a parcel of in situ mineralisation if it were mined and processed. NSR accounts for the metallurgical recovery of metals to concentrate and all off-site costs associated with concentrate transportation, smelter deductions, treatment and refining charges, and royalties. The cost of mining and processing the parcel of mineralisation, and the site G&A costs that can be assigned to the parcel are not included in NSR calculation. NSR is used to rank the value of the parcel and defines ore and waste through application of a cut-off NSR value for each ore type.

The metal prices and concentrate transport, smelting, and refining costs used for estimating NSR for the 2021 Oyu Tolgoi Mineral Reserves are based on updated long-term metal prices and cost assumptions prepared by Oyu Tolgoi LLC. The difference between the updated metal prices and costs and those used to prepare the 2020 Mineral Reserve are summarised below:

- Increase in metal prices (5.8% increase in Cu price and 2.4% increase in Au price)
- Increase in power price (from 7.13c/kWh to 8.8c/kWh based on SOPP Model)
- Increase in underground mining cost from \$7.03/t to \$9.04/t.

In addition, there has been further refinements to metallurgical assumptions, including:

- Updated Au recovery response for Oyut open pit
- Updated Au ore blend gold recovery response for Oyut open pit dependant on the Cu:S ratio of the combined ore feed
- Updated copper in concentrate model for geomet oretypes 1-4 in the Oyut open pit

- Addition of a Hugo North Development Ore type with a Cu recovery downgrade in response to fibre crete impacts on process chemistry

These changes result in minimal overall change to the previously reported Mineral Reserve estimates.

The economic viability of the Mineral Reserves was demonstrated using the same updated cost and revenue assumptions used to determine the NSR values.

### Oyut Open Pit Mineral Reserves, December 31, 2021

Classification	Ownership	Mineral Reserves				Contained Metal		
		Tonnes	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Proven	Oyu Tolgoi LLC	260	0.52	0.37	1.30	1.4	3.1	10.9
Probable	Oyu Tolgoi LLC	450	0.40	0.24	1.13	1.8	3.4	16.4
Total (Proven + Probable)	Oyu Tolgoi LLC	710	0.44	0.29	1.19	3.1	6.6	27.3

### Oyut Stockpile Mineral Reserves, December 31, 2021

Classification	Ownership	Mineral Reserves				Contained Metal		
		Tonnes	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Probable	Oyu Tolgoi LLC	50	0.31	0.13	0.96	0.2	0.2	1.6

### Hugo North Mineral Reserves, December 31, 2021

Classification	Ownership	Mineral Reserves				Contained Metal		
		Tonnes	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Probable	Oyu Tolgoi LLC	410	1.55	0.30	3.19	6.4	4.0	42.1
Probable	Entrée LLC	40	1.55	0.54	3.68	0.6	0.7	4.6
Total Probable		450	1.55	0.32	3.23	7.0	4.7	46.8

### Oyu Tolgoi Project Total Mineral Reserves, December 31, 2021

Classification	Mineral Reserves				Contained Metal		
	Tonnes	Cu	Au	Ag	Copper	Gold	Silver
	(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Proven	260	0.52	0.37	1.30	1.4	3.1	10.9
Probable	950	0.94	0.27	2.12	8.9	8.3	64.8
Total (Proven + Probable)	1210	0.85	0.29	1.94	10.3	11.5	75.7

Notes to the Mineral Reserves tables above:

1. Totals may not match due to rounding.
2. CIM Definition Standards are used for reporting of Mineral Reserves.
3. The effective date of the Mineral Reserves is December 31, 2021.
4. The Oyut Mineral Reserve is currently being mined by open pit mining methods. The Stockpile Mineral Reserve is on surface close to the Oyut open pit.
5. The Hugo North Mineral Reserve is being mined by underground mining methods. The Hugo North Mineral Reserve includes 1.7Mt of underground development material which has been stockpiled at surface and is awaiting processing.
6. NSR values used for estimating Mineral Reserves are based on forecast long-term copper, gold, and silver prices of \$3.203/lb, \$1,479.82/oz, and \$19.23/oz, respectively.
7. Assumptions for smelting refining and treatment, charges, deductions, and payment terms, concentrate transport, metallurgical recoveries and royalties are included in NSR values.
8. For the Oyut Mineral Reserve, processing and G&A costs used to determine NSR cut-off values vary between \$7.67/t and \$11.12/t depending on the ore type processed.
9. For the Hugo North Mineral Reserve, NSR shut off grade of \$20.79/t is used to determine the point at which each underground drawpoint is closed. This NSR value is based on estimated mining, processing and G&A costs which range from \$20.40/t to \$21.20/t across the five different ore types with \$20.79/t being the weighted average of the ore types.
10. For the Oyut deposit, the Proven Mineral Reserve is derived only from Measured Mineral Resources. The Probable Mineral Reserve is derived from Measured and Indicated Mineral Reserves.
11. For the Hugo North deposit, the Probable Mineral Reserve is derived from a combination of Measured and Indicated Mineral Resources.
12. The Shivee Tolgoi Licence and the Javkhlant Licence are held by Entrée LLC. The Shivee Tolgoi Licence and the Javkhlant Licence are planned to be operated by Oyu Tolgoi LLC. Oyu Tolgoi LLC will receive 80% of cash flows after capital and operating costs for material originating below 560 m and 70% above this depth. The Corporation holds a 7.9% interest in Entrée Resources Ltd.
13. The term Entrée LLC refers to ownership by the proposed joint venture arrangement between Oyu Tolgoi LLC and Entrée LLC.

The estimate of Mineral Reserves may be materially affected by environmental, permitting, legal, title, sociopolitical, marketing, or other relevant issues including risks set forth in this AIF.

It is noted that Oyu Tolgoi LLC registered Mineral Reserves with the Government of Mongolia in 2009. Up until recently, Mongolia has had its own system for reporting mineral reserves and mineral resources which differs from the CIM Definition Standards.

#### *Oyut Open Pit Mineral Reserves*

The 2021 Oyut Mineral Reserves are based on mining the Oyut deposit using open pit mining methods. The Oyut Mineral Reserves have been estimated from the same block model that forms the basis of 2021 Oyut Mineral Resources.

The Oyut Mineral Reserves are defined by an ultimate pit design developed using industry standard Lerchs-Grossmann (LG) pit optimisation. The pit optimisation process used Measured and Indicated resource classification blocks only for potential revenue generation. The Mineral Reserve pit contains Inferred Resources that are ignored in the reporting of Mineral Reserves.

NSR cut-off grades by ore type used for the Oyut Mineral Reserve are summarised in the table below. NSR cut-off increased in 2021 for all ore types.

**Oyut NSR Cut-Off Grade by Ore Type**

Ore Type	Ore Description	2021 NSR cut-off (\$/t)	2020 NSR cut-off (\$/t)	Difference (%)
Hard Gold	Hard chalcopryrite / bornite, high copper and gold recovery, low arsenic bearing	11.12	10.14	9.6%
Hard	Hard chalcopryrite / bornite, high copper and low to moderate gold recovery, low arsenic bearing	11.05	10.09	9.6%
Moderate Gold	Moderate hardness chalcopryrite / bornite, high copper and gold recovery, low arsenic bearing	9.91	9.06	9.4%
Moderate	Moderate hardness chalcopryrite / bornite, high copper and low to moderate gold recovery, low arsenic bearing	9.58	8.77	9.2%
Soft Supergene Enargite	Soft chalcocite, low to moderate copper and gold recovery, high copper-arsenic sulfosalts	7.67	7.18	6.9%
Soft Supergene	Soft chalcocite, low to moderate copper and gold recovery, copper-arsenic sulfosalts	7.82	7.31	7.0%
Soft Hypogene Enargite	Soft covellite / chalcopryrite, high copper and low to moderate gold recovery, high copper-arsenic sulfosalts	8.20	7.66	7.1%
Soft Hypogene	Soft covellite / chalcopryrite, high copper and low to moderate gold recovery, copper-arsenic sulfosalts	7.91	7.39	7.1%
Soft Hypogene Gold	Soft covellite / chalcopryrite, high copper and gold recovery, copper-arsenic sulfosalts	7.81	7.29	7.1%

The Oyut Proven and Probable Mineral Reserves are estimated at 3.3 Mt of contained copper and 6.8 Moz of contained gold. The Oyut Mineral Reserve includes 52 Mt (0.2 Mt contained copper and 0.2 Moz of contained gold) of stockpile material which has been downgraded to Probable this year. The Oyut Stockpile is currently the focus of additional studies and this downgrade reflects the current understanding with respect to uncertainty around oxidation and recovery.

Total Oyut Mineral Reserves have decreased 5% in contained copper and 9% in contained gold from the Mineral Reserves reported in the 2020 AIF, which largely reflects the increase in NSR cut-off and depletion due to mining.

*Hugo North Mineral Reserves*

The 2021 Hugo North Mineral Reserves are based on mining part of the Hugo North deposit (Lift 1) using the block/panel cave mining method described in the 2020 OTTR. Hugo North Mineral Reserves have been estimated from the same block model that forms the basis of 2021 Hugo North Mineral Resources.

The boundary of the mining footprint<sup>3</sup> is based on an analysis of the NPV generated from numerous production schedules generated by applying a range of footprint boundaries and cut-off values. The final reserve footprint boundary was selected based on consideration of the constructability and operability aspects of the footprint and the overall NSR value generated by the footprint. NSR values also consider the various metallurgical recovery formulas developed from test work on the Hugo North mineralisation and ongoing process plant operations.

The width of the footprint in the northern area of the cave is designed at a minimum mining width of 180 m to ensure adequate cave propagation. Some low value drawpoints have been added to the footprint in this area to meet this minimum width criteria. The height of draw in these drawpoints has been limited to minimise the amount of waste drawn, while ensuring full cave propagation.

To account for ore losses during mining, an estimated 20% of drawpoints are assumed to permanently fail before the full column is drawn from them, in addition, a further 6% of drawpoints are assumed to fail early in the lower fault area of Panel 0. The estimate is based on a geotechnical assessment of rock mass conditions on the extraction level and an assessment of the risk. The Mineral Reserves are based on a break-even shut-off policy which defines the draw column heights. The shut-off parameters are based on the unit cost estimates shown in the table below. The processing cost is the tonnage weighted average cost of processing each ore type.

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<sup>3</sup> The mining footprint is the horizontal projection of the part of the deposit that is to be mined to recover the Mineral Reserves. The size and shape of the mining footprint is established by analysing the value of the material that can be recovered by making the footprint either larger or smaller.

<b>Site Operating Costs</b>	<b>(\$/t)<sup>1</sup></b>
Milling cost per tonne <sup>4</sup>	8.54
G&A costs per tonne <sup>5</sup>	3.21
Mining costs per tonne <sup>6</sup>	9.04
Total	20.49

Totals may not match due to rounding adjustments

The 2021 Hugo North Mineral Reserves include updates to both metal price and cost basis. Based on updated forecast costs, the underground mining cost has increased from \$7.03 to \$9.04/tonne. This is related to increases in mine production costs, shared services and overheads. A range of sensitivities has demonstrated that the Hugo North Lift 1 Mineral Reserve is relatively insensitive to changes in mining cost.

In addition to the changes in metal price assumptions and cost basis, the updated Hugo North Mineral Reserves also includes:

- Additional tonnage and grade of development ore from Panel 1 and Panel 2 resulting from ongoing studies; and
- A decrease in metallurgical recovery from development ore because of the adverse impact of shotcrete in the ore mix.

The Hugo North Probable Mineral Reserves are estimated at 67.0 Mt of contained copper and 4.7 Moz of contained gold. Even though a portion of the Mineral Reserves originates from Measured Mineral Resources, the entire Mineral Reserves are classified as a Probable Mineral Reserves due to the mixing of material during the caving process.

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4 Milling costs per tonne of ore treated is a non-GAAP ratio which is not a standardized financial measure and is not intended to replace measures prepared in accordance with IFRS and might not be comparable to similar financial measures disclosed by other issuers. Additional details and information for this non-GAAP ratio can be found in the section titled "Non-GAAP and Other Financial Measures" between pages 52 and 55 of the Corporation's MD&A, which section and pages are incorporated by reference herein. The MD&A is available under the Corporation's profile on SEDAR at [www.sedar.com](http://www.sedar.com). In the MD&A these non-GAAP ratios are used for the reporting of full year and quarterly actuals. The ratios reported in this AIF are the life-of-mine assumptions used in the determination of economic reserves and resources

5 G&A costs per tonne of ore treated is a supplementary financial measure which is not a standardized financial measure and is not intended to replace measures prepared in accordance with IFRS and might not be comparable to similar financial measures disclosed by other issuers. Additional details and information for this supplementary financial measure can be found in the section titled "Non-GAAP and Other Financial Measures" between pages 52 and 55 of the Corporation's MD&A, which section and pages are incorporated by reference herein. The MD&A is available under the Corporation's profile on SEDAR at [www.sedar.com](http://www.sedar.com). In the MD&A these non-GAAP ratios are used for the reporting of full year and quarterly actuals. The ratios reported in this AIF are the life-of-mine assumptions used in the determination of economic reserves and resources

6 Mining costs per tonne of ore treated is a non-GAAP ratio which is not a standardized financial measure and is not intended to replace measures prepared in accordance with IFRS and might not be comparable to similar financial measures disclosed by other issuers. Additional details and information for this non-GAAP ratio can be found in the section titled "Non-GAAP and Other Financial Measures" between pages 52 and 55 of the Corporation's MD&A, which section and pages are incorporated by reference herein. The MD&A is available under the Corporation's profile on SEDAR at [www.sedar.com](http://www.sedar.com). In the MD&A these non-GAAP ratios are used for the reporting of full year and quarterly actuals. The ratios reported in this AIF are the life-of-mine assumptions used in the determination of economic reserves and resources.

Approximately 5% of the tonnage included in the Mineral Reserves is dilution originating from Inferred Mineral Resources. The grades of this material have been set to zero to ensure that only metal originating from Measured and Indicated resources is included in the Mineral Reserve estimate.

The Hugo North Mineral Reserves contain ore that is on the Oyu Tolgoi Licence and on the Entrée Joint Venture Shivee Tolgoi Licence. The portion of the Hugo North Probable Mineral Reserves owned by Oyu Tolgoi LLC includes 1.7 Mt of development ore grading 0.57% Cu, 0.18 g/t Au, and 1.41 g/t Ag that is stockpiled on surface awaiting processing.

A comparison to the previously reported Hugo North Mineral Reserves is included in Schedule C. Since the last disclosure in the 2020 AIF, the Mineral Reserves for Hugo North have increased by 3% in contained copper and 4% in contained gold.

### ***Metallurgical Performance***

The geometallurgical characteristics of the different ore types in the Oyut and Hugo North deposits are based on a reconciliation of a large database of metallurgical testwork completed to date. The database includes eight years of Phase 1 operating data.

In 2018, the geometallurgical ore types were redefined for the Oyut deposit. Nine ore types were identified based largely on the geological domains used to define the earlier five ore types used. The nine ore types provide an increased level of definition relating to ore hardness, flotation recovery and flotation concentrate grade. Five geometallurgical ore types were identified for the Hugo North deposit, compared with the one ore type used prior to 2018. The ore types are based on the observed differences in flotation recoveries from samples with varying chalcopyrite and bornite content and on the influence of pyrite on concentrate grade.

Following the start of underground development ore processing, a test work programme was commenced to define the impact on flotation performance due to contaminants from the mine ground support system (shotcrete). The testing identified the need to define an additional ore type for headings with heavy ground support, where flotation recovery is reduced. Good agreement was seen between the performance of contaminated ore in bench scale testing and during full scale processing.

The initial metallurgical testwork programmes on Oyu Tolgoi mineralisation were carried out between 2001 and 2007. The testwork formed the basis for the design of the Phase 1 concentrator. The testwork programmes were carried out on drillcore samples from various deposits. The focus was on the Oyut and Hugo North deposits. The testwork programmes identified the mineralogical characteristics and the metallurgical response of the individual deposits and the various blends of ore to be processed through the concentrator at different periods in the planned production schedule. The testwork programmes included:

- Comminution testwork, including semi autogenous grinding (SAG) pilot plant tests using a 250 t bulk sample of mined rock from the Southwest Zone, the sample of which was shipped to SGS Lakefield in 2005;
- Gravity concentration testwork to estimate gold recovery;
- Flotation testwork to determine copper and gold recoveries;
- Laboratory bench-scale and pilot plant flotation testwork programmes; and
- Confirmatory cleaner flotation testwork on the Southwest and Central ore zones.

Further testwork was completed in 2013, to assess the impact of a change in the expected feed blend to the concentrator. In 2016-2017, a further testwork programme was completed at ALS to confirm and update metallurgical predictions for the Hugo North Lift 1 ore. The testwork programme was performed on drill core from the 2011-2013 drilling programmes. The objectives of the programme were to:

- Complete further and more extensive locked cycle flotation testwork of the first 10 years of underground ore production;
- Confirm or update current assumptions regarding the flotation scale-up factors;
- Carry out limited comminution tests to improve the density and coverage of the Hugo North Lift 1 hardness data;
- Conduct limited alternative comminution tests;
- Confirm the effect of grind size P80 (the 80% passing size of grinding circuit product) on flotation performance;
- Increase the density of quantitative mineralogy; and
- Quantify any differences in tailings rheology and thickening performance between Hugo North Lift 1 ore and the Southwest Zone ore.

Additional testing was carried out in 2021 to define the expected performance of ore from areas with heavy ground support, where shotcrete contamination was expected. The outcomes from this testing programme were used to inform the predicted performance of Hugo North development ore from areas where heavy ground support is expected to be used. The testing work programme looked at flotation performance and investigated:

- The expected recovery on contaminated ore;
- The impact of a number of reagents on performance; and
- The contaminant(s) that was causing reduced flotation recovery.



## *Recovery*

Copper recovery for the Oyut open pit varies based on copper grade and ore type. Ore type defines the expected copper speciation and the relationship between copper grade and copper recovery is different for each ore type. Gold and silver recovery are predicted based on observed performance in the concentrator, supported by metallurgical testwork.

Copper recovery for Hugo North varies based on the copper grade and ore types. Both gold and silver recovery vary with copper recovery and ore type. It is noted that silver only makes a small contribution to the value of the mineral reserve.

After processing, the estimated recovery of metal to copper concentrate from the Oyu Tolgoi Mineral Reserves are estimated as follows:

### **Estimate of metal contained in concentrate from each ore source**

Mineral Reserve	Ownership	Recovery			Metal in concentrate		
		Cu (%)	Au (%)	Ag (%)	Cu (Mt)	Au (Moz)	Ag (Moz)
Oyut open pit	Oyu Tolgoi LLC	78	67	52	2.7	4.8	16
Stockpiles	Oyu Tolgoi LLC	73	44	47	0.1	0.1	1
Hugo North	Oyu Tolgoi LLC	93	79	80	5.6	3.0	32
Hugo North	Entrée LLC	92	81	83	0.6	0.5	4
Total Hugo North	Oyu Tolgoi LLC + Entrée LLC	93	79	80	6.2	3.5	36
Total Project	Oyu Tolgoi LLC + Entrée LLC	87	71	69	9.0	8.5	52

## *Description of the Oyu Tolgoi Operation and Ongoing Development*

### *Open pit mining*

The initial investment decision to construct Phase 1 of Oyu Tolgoi was made in 2010. Phase 1 consisted of the Oyut open pit mine, a concentrator, and supporting infrastructure. Mining began in the South West zone of the Oyut deposit in 2012 with production capacity ramped up to more than 100,000 tonnes of ore processed per day.

The Oyut open pit is mined using conventional drill, blast load and haul methods. Mining operations are conducted 24 hours per day, 365 days per year.

Five platform production drill rigs, three diesel-hydraulic and two electric-drive drills are used to drill 311 mm diameters holes for 15 m bench height blasts. Three surface crawler drill rigs support the operation undertaking presplit and smaller surface drilling activities.

A blasting contractor provides a down-the-hole charging and firing service, including the supply and storage of explosives, with conventional and high-density explosives being used to suit production requirements.

The primary loading fleet consists of two 56 m<sup>3</sup> bucket capacity electric rope-shovels and two 34 m<sup>3</sup> bucket capacity diesel-hydraulic shovels. Two 18 m<sup>3</sup> bucket capacity front-end loaders support the primary mining loading fleet as required.

Material is loaded into a fleet of thirty 290 t payload rigid-body trucks, where material is hauled to the primary crusher, ore stockpiles, and waste dumps according to the material type and schedule requirements.

An ancillary fleet supports the primary mining equipment facilitating the production process.

Since open pit mining commenced, five pit phases have been mined to a depth of 430 m. The planned pit has a total of ten phases and a final depth exceeding 600 m.

In 2021, approximately 106.1 Mt of material was moved in the Oyut open pit operation.

### *Ore Processing*

Ore processing operations commenced through the completed Phase 1 concentrator in December 2012, Commercial Production was achieved in September 2013, and first concentrate exported in October 2013.

The Phase 1 concentrator is designed to process ore from the Oyut open pit at a nominal throughput rate of 36 Mtpa. This throughput rate has been consistently exceeded, peaking 40.8 Mtpa in 2019. The comminution circuit uses two conventional crushing, grinding lines, each consisting of a semi-autogenous grinding mill, two parallel ball mills and associated downstream equipment. Cyclone overflow from the circuit at 80% passing 140–180 µm passes to rougher flotation cells. The rougher concentrate is then reground in vertical tower mills to 35 µm before delivery to the first stage cleaners. The concentrate from the first stage cleaners is pumped to the column cells, which produce the final grade concentrate. Tailings from the cleaner-scavenger and rougher flotation cells are combined, thickened, and pumped to the tailings storage facility. Concentrate is thickened, filtered, bagged, and shipped to market.

The Phase 2 concentrator development programme will optimise the Phase 1 concentrator circuits to maximise recovery from a blend of ores from the Hugo North underground mine and the Oyut open pit. Engineering design is ongoing to modify the flowsheet to cater for the anticipated underground and open pit ore mix. The additions to the flow sheet will include the following:

- Installation of a fifth ball mill to achieve a finer primary grind;
- Installation of additional roughing and column flotation capacity to process the higher level of concentrate production; and
- Additional concentrate dewatering and bagging capacity.

The intent of the Phase 2 development programme is to optimise the plant to treat all the higher grade Hugo North ore delivered by the mine, supplemented by lower grade ore from the open pit ore to fill the mill to its capacity limit.

A summary of the Oyu open pit and process plant production since start-up is summarised in the following table

**Summary of Oyu Open Pit and Process Plant Production to December 31, 2021**

Oyu Tolgoi Production Data <sup>1</sup>	Unit	2013	2014	2015	2016	2017	2018	2019	2020	2021 <sup>2</sup>
Open pit material mined (ore + waste)	Mt	72.0	76.9	91.8	96.9	105.9	91.3	101.3	97.7	85.0
Ore treated	Mt	20.3	27.9	34.5	38.2	41.2	38.7	40.8	40.2	39.1
Average mill head grades:										
Copper head grade	% Cu	0.47	0.60	0.67	0.65	0.51	0.51	0.45	0.46	0.50
Gold head grade	g/t Au	0.36	0.86	0.78	0.36	0.17	0.36	0.29	0.24	0.54
Silver head grade	g/t Ag	1.39	1.60	1.56	1.83	1.39	1.22	1.13	1.18	1.26
Concentrate produced	kdmt	290.0	563.6	788.5	846.6	722.5	724.9	674.6	693.1	749.6
Average concentrate grade	% Cu	26.4	26.3	25.6	23.8	21.8	21.9	21.7	21.6	21.7
Production of metals in concentrate:										
Copper in concentrate	kt	76.7	148.4	202.2	201.3	157.4	159.1	146.3	149.6	163.0
Gold in concentrate	koz	157	589	653	300	114	285	242	182	468
Silver in concentrate	koz	489	893	1,223	1,420	974	914	867	876	977
Metal recovery:										
Copper Recovery	%	81.6	89.1	87.6	81.0	75.4	81.4	78.7	79.6	82.8
Gold Recovery	%	66.1	76.6	74.4	68.5	49.7	65.2	63.6	58.6	68.4
Silver Recovery	%	54.2	62.3	69.9	63.1	52.9	60.9	58.1	56.4	61.6

Notes:

<sup>1</sup> Totals may not match due to rounding

<sup>2</sup> 2021 production includes approximately 1Mt of underground development material that was processed in the latter half of 2021.

*Underground mine development*

Part of the initial investment decision for Oyu Tolgoi included continued investment into the development of the Hugo North underground mine in parallel with mining the Oyu open pit.

Hugo North underground development work is ongoing, and when underground production reaches full capacity, it is anticipated that this will form the primary source of ore to the concentrator at 33 Mtpa, with the Oyu open pit ore providing the balance of 5 to 9 Mtpa.

On July 15, 2019, the Corporation provided an update on underground development and announced that Turquoise Hill, in conjunction with Rio Tinto, continues to review mine design options for the completion of the underground development of the Oyu Tolgoi mine and assess the impact on overall cost and schedule for the underground development. Improved rock mass information and geotechnical data modelling have confirmed that there are stability risks associated with components of the existing mine design. Therefore, to address these risks, a number of mine design options were under consideration to complete the project.

In May 2020, the updated Panel 0 mine design was approved, based on a block cave method and includes two pillars, one to the north and one to the south of Panel 0. The MSS20 incorporating the new mine design for Hugo North Lift 1 Panel 0 was delivered to the Government of Mongolia in July 2020 and the 2020 OTTR was filed in August 2020.

In July 2021, the Corporation announced that the underground development progress was impacted during the second quarter of 2021 by the COVID-19 constraints on site and in Mongolia, including restrictions on movement of international expertise. Despite such constraints, the Corporation announced that the construction of Material Handling System 1 was greater than 90% complete and that all development and technical readiness activities pertaining to the initiation of the undercut were met or were on track to being met. However, the Corporation announced that it, along with Rio Tinto, was continuing to engage with various Mongolian governmental bodies with a view to resolving outstanding non-technical undercut issues. The Corporation warned that any significant delay to the initiation of the undercut would have a material impact on project schedule, including the timing of sustainable production for Panel 0 as well as the timing and quantum of underground capital expenditure, which would materially adversely impact the timing of expected cash flows from the Oyu Tolgoi underground project thereby increasing the amount of the Corporation's incremental funding requirement.

In October 2021, the Corporation announced that it expected sustainable production for Panel 0 to be delayed until at least January 2023 due to a number of factors, including:

- The cumulative and ongoing impacts of COVID-19;
- Continued delayed commitments resulting from the Definitive Estimate not yet having received the support of all directors of the board of directors of Oyu Tolgoi LLC;
- The outstanding unresolved non-technical undercut issues, including the support of all Oyu Tolgoi LLC board directors to increase the underground development capital investment and to commence discussions with the project finance lenders;
- Obtaining outstanding required regulatory approvals; and
- Agreeing on a pathway to meet Oyu Tolgoi LLC's long-term power requirements.

The Corporation also announced that Oyu Tolgoi had advised that a 9-month delay on Shafts 3 and 4 due to the impact of COVID-19 was forecast which, in combination with the reduced underground development progress, would result in delays to the start of Panel 2. In November 2021, the Corporation elaborated that it then expected sustainable production for Panel 0 to be delayed to the first half of 2023, broadly in line with the then forecast 6-month delay to undercut commencement, and that the previously announced 9-month delay on Shafts 3 and 4, in combination with the COVID-related reduced underground development progress and expected changes to mining scope, would result in delays to the start of Panel 2 by approximately 14-16 months compared to the Definitive Estimate, and to the start of Panel 1 by approximately 11 months compared to the Definitive Estimate.

In October 2021, the Corporation announced that COVID-19 restrictions had adversely impacted both open pit operations and underground development progress, which, through the end of the third quarter

of 2021, had resulted in a cumulative increase of \$140 million to the estimate of underground development capital included in the Definitive Estimate.

In November 2021, the Corporation announced that the board of directors of Oyu Tolgoi LLC approved a bridging budget of \$75 million to continue to progress critical activities in the Oyu Tolgoi underground mine development project.

In January 2022, the Corporation announced that it had entered into the GoM Agreements, and that the board of directors of Oyu Tolgoi LLC had unanimously approved the commencement of the undercut. The Corporation began caving operations in January 2022. With this decision, the Corporation continues to expect that the underground mine will achieve sustainable production for Panel 0 in the first half of 2023. Below is a schedule of key production milestones in light of the foregoing:

### Key Milestone Dates

Milestone	2020 OTTR	Actual or Currently Projected Dates
Start Undercut blasting	July 2021	January 2022 (Actual)
Material Handling System 1 (including Crusher 1) commissioning	Q4'21	February 2022 (Actual)
First drawbell blasted	May 2022	Q3'22
Sustainable Production (sustainable cave propagation)	February 2023 (~30 drawbellss active*)	H1'23 (~21 drawbells active*)
First drawbell Panel 2	Q4'24	H1'26
First drawbell Panel 1	H2'26	H1'27
Shaft 3 commissioned	H1'22	H2'23
Shaft 4 commissioned	H1'22	H2'23

\*Design refinements identified that a minor modification to undercut sequence changed estimated number of drawbells to reach critical hydraulic radius, the point at which sustainable production is anticipated to commence. Critical hydraulic radius is an estimated factor, based on the best available data but some variability in the exact number of drawbells needed to reach critical hydraulic radius is expected to occur with the potential for the number to be higher or lower than 21 drawbells.

### *Summary Description of the Hugo North Lift 1 Project*

The Hugo North deposit is planned to be mined in two panel cave mining lifts – Lift 1 followed by a deeper Lift 2. The Lift 1 extraction level is approximately 1,300 m below surface and has footprint dimensions of approximately 2,000 m long x 280 m wide. To aid mine planning and production scheduling, the Lift 1 footprint has been divided into three panels (Panel 0, Panel 1, and Panel 2). Panel 0 is in the central part of the footprint. Panel 1 is to the north and Panel 2 is to the south.

To support mining of Lift 1, two declines, five shafts and substantial underground infrastructure are required and are currently in an advanced stage of development.

The position, extent and design of the Lift 1 footprint was established in a series of studies carried out prior to 2016. The design includes an El Teniente style extraction level layout, an undercut level and an apex drive level. Ore from drawpoints on the extraction level is tipped to ore passes then trucked to an underground crushing and conveying system before being transferred to surface via the shaft hoisting and conveying systems.

The current cave design parameters are summarised in the following table:

- Extraction drive and drawpoint spacing — 31 m and 18 m;
- Undercutting sequence — advanced undercut;
- Number of drawpoints and extraction drives — 1,439 drawpoints in 48 extraction drives;
- Minimum footprint width — 180 m;
- Draw column heights — Average 360 m, maximum 650 m, minimum 100 m; and
- Structural pillars – incorporation of two pillars greater than 120m to the north and south of Panel 0 enabling independent mining of Panel 0, Panel 1 and Panel 2.

*Progress from Underground Restart in 2016 to December 31, 2021*

The following points highlight the timeline of key decisions and achievements in developing the Hugo North underground project since the restart of development in 2016.

2016

- Notice to Proceed received May 5, 2016;
- Oyu Tolgoi 2016 Technical Report published on October 21, 2016;
- Conveyor-to-Surface bulk excavation completed;
- Site infrastructure office established; and
- Contracts signed for the sinking of Shaft 2 and Shaft 5, EPCM; and twin decline development.

2017

- 3,500 tpd development crusher installed;
- Eleven underground workshops completed; and
- Underground dewatering system installed.

2018

- Shaft 2 – sinking and stripping completed, collar doors and controls commissioned and mechanical installation of rock breaker;
- Shaft 5 sinking and commissioning;
- Lining installed and handover for final fit-out and commissioning of Ore Bin 11;
- Shaft 3 & Shaft 4 box-cuts completed;
- Permanent ventilation commissioned for conveyor-to-surface; and
- Completion of a new camp to house over 5,500 workers.

2019

- Completion and commissioning of Shaft 2 together with supporting development and construction activities;
- Completion of a Shaft 2 ore handling system trial that saw approximately 20,000 t of underground ore report to the mill;
- Completion of the two-storey 13,700 m<sup>2</sup> Chandmani mine operations centre;
- Expansion of the central heating plant to 58 MW;
- The installation of Shaft 2 stage 1 and 2 mine air heaters;
- Completion of the Shaft 2 jaw crusher ore handling system with capacity of 9,500 tpd including construction of a 10 m diameter, 40 m high surge bin with conveyor loading system;
- Primary crusher excavation of over 30,000 m<sup>3</sup>;
- Continued Shaft 3 and 4 pre-sinking work;

- Commissioning of the load-out conveyor, surface discharge conveyor, and Shaft 2 integrated materials handling system enabling delivery to the processing plant; and
- Over 7,000 employees engaged in project execution with over 300 contractors.

## 2020

- Approval of the design change to Panel 0 with subsequent completion of the 2020 OTTR and the Definitive Estimate;
- Submission of updated Mineral Reserves and Mineral Resources prepared by Oyu Tolgoi LLC for the Minerals Council of Mongolia pursuant to Mongolian regulatory requirements;
- Advocated for legislation amendments to allow females to work underground, consequently gender participation increased to 300 female miners and professionals;
- Successful completion of routine Shaft 2 rope shortening using remote presence technology to assist onsite teams to safely perform the task;
- Installed the first fully independently certified Safety Integrity Level 3 mine hoist braking system on Shaft 2, which has two of the largest production and service hoists in the world;
- Exceeded one million tonne of material moved through Shaft 2 since commissioning;
- Completion of all surface infrastructure required for first sustainable production;
- Advanced preparation activities for Shaft 3 with installation of equipment ahead of planning commencement of sinking commencing in 2021. Shaft 4 rope installation and commissioning of equipment ahead of sinking which commenced in early February 2021;
- Completed all concrete civil works for Primary Crusher 1; and
- Pre-production on footprint lateral development nearly completed.

## 2021

- Despite challenges dealing with COVID-19 and delayed budget approvals at the Oyu Tolgoi LLC level, work on the underground project continued;
- Material Handling System 1 construction was completed by the end of 2021;
- Breakthrough of both Conveyor and Service Declines in the conveyor to surface project components consisting of 6km twin tunnels;
- Construction of the first on-footprint truck chute progressed;
- Work on Shafts 3 and 4 was hampered by limited workforce availability (both domestic and international). However, as at the end of the year, Shaft 4 sinking activities recommenced in October and Shaft 3 readiness works advanced significantly;
- The project committed over 79% of direct contract and procurement packages to Mongolian companies;
- Underground project progress was at over 70% complete at the end of 2021 and total underground spend since January 1, 2016 was approximately \$5.4 billion, including 0.3 billion of underground sustaining capital;
- All technical criteria for commencement of the undercut were completed at the beginning of the third quarter of 2021. Undercut commencement was delayed until the necessary non-technical criteria were resolved;

- In September 2021, the updated 2019 Resources and Reserves<sup>7</sup> was approved for registration by the Minerals Council of Mongolia;
- In December 2021, the 2022 Annual Mine Plan for Underground was approved by the Mining and Research department of the Mineral Resources and Petroleum Authority of Mongolia;
- In the fourth quarter of 2021, MSS20 was submitted to the Mongolian Minerals Council pursuant to Mongolian regulatory requirements and the expert review by the Professional Minerals Council of Mongolia commenced; and
- On December 30, 2021, the board of directors of Oyu Tolgoi LLC approved the operating programme and budget for the 2022 financial year, including additional commitments for the Oyu Tolgoi underground project to allow the project to progress to undercutting and sustainable production and beyond.

## 2022

- Undercut blasting commenced on January 25, 2022, following the entering into of the GoM Agreements. See "General Development of the Business – Three Year History – 2022 to Date";
- Material Handling System 1 as well as the first on-footprint truck chute commissioning was completed in February; and
- In January 2022, new labour laws impacting the working rosters at Oyu Tolgoi were implemented.

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<sup>7</sup> It is noted that Oyu Tolgoi LLC registers Resources and Reserves with the Government of Mongolia pursuant to local laws and regulations which differ from the CIM Definition Standards.



The following tables summarise the amount of development work carried out since 2016. The development is reported in equivalent development metres, which includes the volume of mass excavations, as crusher chambers, converted to development metres. It excludes shafts and other vertical excavations. The 2021 development of the conveyor and access declines to surface, which total 15.0 km of equivalent development, are shown separately.

<b>Oyu Tolgoi Underground Project Development Progress Excluding Conveyor Declines</b>			
<b>Year</b>	<b>Total Equivalent Development (Km)</b>	<b>Lateral Development (Km)</b>	<b>Mass Excavation ('000' (m<sup>3</sup>))</b>
<b>2016</b>	<b>1.6</b>	<b>1.5</b>	<b>3.0</b>
Q1'17	1.0	0.8	5.2
Q2'17	1.4	0.9	9.2
Q3'17	1.4	1.2	8.3
Q4'17	2.2	1.9	8.9
<b>2017</b>	<b>6.1</b>	<b>4.8</b>	<b>31.6</b>
Q1'18	2.6	2.1	11.6
Q2'18	2.4	2.1	8.6
Q3'18	3.0	2.1*	23.3*
Q4'18	2.3	1.6	16.0
<b>2018</b>	<b>10.3</b>	<b>7.9</b>	<b>59.5</b>
Q1'19	3.2	2.3	21.4
Q2'19	3.2	2.4	19.3
Q3'19	3.6	3.2	11.4
Q4'19	4.8	4.5	9.0
<b>2019</b>	<b>14.9</b>	<b>12.4</b>	<b>61.1</b>
Q1'20	5.5	5.3	3.2
Q2'20	5.5	5.1	10.6
Q3'20	4.7	4.1	14.3
Q4'20	4.2	3.8	8.5
<b>2020</b>	<b>19.9</b>	<b>18.4</b>	<b>36.6</b>
Q1'21	3.5	2.9	13.5
Q2'21	1.7	1.2	11.6
Q3'21	2.2	1.8	8.1
Q4'21	3.3	2.7	14.9
2021	10.6	8.7	48.1
<b>Total</b>	<b>63.4</b>	<b>53.7</b>	<b>240.1</b>

Notes:

Totals may not match due to rounding

\* Lateral development and mass excavation amount for Q3'18 have been updated to reflect revised results.

<b>Oyu Tolgoi Conveyor Decline Project Development Progress</b>			
<b>Year</b>	<b>Total Equivalent Development (Km)</b>	<b>Lateral Development (Km)</b>	<b>Mass Excavation ('000' (m<sup>3</sup>))</b>
<b>2016</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Q1'17	0.1	0.1	0.0

Q2'17	0.4	0.4	0.2
Q3'17	0.9	0.9	0.5
Q4'17	0.9	0.8	0.5
<b>2017</b>	<b>2.3</b>	<b>2.3</b>	<b>1.2</b>
Q1'18	0.8	0.8	0.1
Q2'18	0.8	0.8	0.1
Q3'18	0.8	0.8	0.3
Q4'18	0.6	0.6	0.1
<b>2018</b>	<b>3.0</b>	<b>3.0</b>	<b>0.6</b>
Q1'19	0.8	0.8	0.8
Q2'19	0.9	0.9	0.8
Q3'19	0.9	0.7	4.9
Q4'19	1.1	0.7	8.3
<b>2019</b>	<b>3.7</b>	<b>3.1</b>	<b>14.7</b>
Q1'20	1.0	0.7	7.5
Q2'20	1.0	0.9	2.6
Q3'20	0.9	0.9	0.0
Q4'20	1.0	1.0	0.0
<b>2020</b>	<b>4.0</b>	<b>3.6</b>	<b>10.1</b>
Q1'21	0.8	0.8	0.0
Q2'21	0.7	0.6	3.2
Q3'21	0.6	0.6	1.6
Q4'21	0.7	0.3	10.2
<b>2021</b>	<b>2.9</b>	<b>2.3</b>	<b>15.0</b>
<b>Total</b>	<b>15.9</b>	<b>14.2</b>	<b>41.7</b>

### *Infrastructure*

Oyu Tolgoi is a remote brownfields project and extensive infrastructure has been constructed in addition to the concentrating facilities. The major initial infrastructure elements included:

- Water borefields;
- Water treatment;
- Housing;
- Airport;
- Supporting facilities; and
- Power transmission lines and sub-station.

Most of the infrastructure facilities required for the Oyu Tolgoi project are complete. See also "Description of the Business – Oyu Tolgoi Project – Description of the Oyu Tolgoi Operation and Ongoing Development - Underground Mine Development".

### *Underground studies update*

Several mining studies are in progress for Hugo North Lift 1. The studies are focused on the evaluation of different design and sequencing options and will continue through to 2023. The studies currently in progress include:

- Design optimisation for Panel 2;
- Design optimisation for Panel 1; and
- Pillar recovery assessment.

To support the mining studies, additional data has been collected via a surface and underground drilling programme. During 2021, a total of 38,247 m was drilled into the Hugo North deposit which was a considerable achievement given the COVID-19 situation. Of the total metres drilled, the vast majority were designed to increase orebody knowledge in Panel 1 (10,494 m) and Panel 2 (11,188 m). From 2022 onwards, the focus of drilling will shift to Lift 2 and peripheral areas of Lift 1. The data collected from the drilling programme has been used to refine the structural and geotechnical models which form the basis of the mine design.

For more details on the drilling completed in 2021, refer to the table below.

Hugo North Mining Area	Monitoring	Spiling/Operational Support	Orebody Knowledge	Total
Lift 1, Panel 0	4,633	5,091		9,724
Lift 1, Panel 1			10,494	10,494
Lift 1, Panel 2			11,188	11,188
Off Footprint		3,426		3,426
Lift 2, Panel 1			1,009	1,009
Lift 2, Panel 2			2,406	2,406
<b>Total (All Area)</b>	<b>4,633</b>	<b>8,517</b>	<b>25,097</b>	<b>38,247</b>

Notes: Summary of Hugo North metres drilled for 2021. Holes that were started in 2021, but not completed until 2022 have been excluded.

Preliminary results from the Panel 2 study are expected in the first half of 2022. The scope of this study includes a review of the base case including optimisation of the extraction drive orientation and the undercut strategy. The immediate focus is on the northern section of Panel 2 (where additional data is already available) and will be expanded to include the southern section in the second half of 2022. The Panel 1 and Pillar recovery studies are scheduled for completion in the first half of 2023.

See "General Development of the Business – Three Year History – 2021" for further detail.

### ***Permitting and Compliance Activities***

Oyu Tolgoi LLC has completed a comprehensive ESIA for Oyu Tolgoi. The ESIA undertaken as part of the project finance process was publically disclosed in August 2012. As the culmination of nearly ten years of independent work and research carried out by both international and Mongolian experts, the ESIA identifies and assesses the potential environmental and social impacts of the project, including cumulative impacts, focusing on key areas such as biodiversity, water resources, cultural heritage, and resettlement.

The ESIA also sets out measures through all project phases to avoid, minimise, mitigate, and manage potential adverse impacts to acceptable levels established by Mongolian regulatory requirements and good international industry practice, as defined by the requirements of the Equator Principles, and the standards and policies of the International Finance Corporation ("IFC"), European Bank for Reconstruction and Development ("EBRD"), and other financing institutions.

Corporate commitment to sound environmental and social planning for the project is based on the Corporation's values, responsibilities and support for human rights, social justice, and sound environment management, including the United Nations Universal Declaration of Human Rights (1948), and is described in *The Way We Work*, Rio Tinto's global code of business conduct that defines the way Rio Tinto manages the economic, social, and environmental challenges of its global operations.

Oyu Tolgoi LLC has implemented and audited an environmental management system ("EMS") that conforms to the requirements of ISO 14001:2004. Implementation of the EMS during the construction phases focuses on the environmental policy, significant environmental aspects and impacts and their risks prioritisation, legal and other requirements, environmental performance objectives and targets, environmental management programmes, and environmental incident reporting. The Oyu Tolgoi ESIA builds upon an extensive body of studies and reports, and DEIAs that have been prepared for project design and development purposes, and for Mongolian approvals under the following laws:

- The Environmental Protection Law (1995);
- The Law on Environmental Impact Assessment (1998, as amended in 2001); and
- The Minerals Law (2006).

These initial studies, reports, and DEIAs were prepared over a six-year period between 2002 and 2008, primarily by the Mongolian company Eco-Trade LLC, with input from Aquaterra on water issues.

The original DEIAs provided baseline information for both social and environmental issues. These DEIAs covered impact assessments for different project areas and were prepared as separate components to facilitate technical review as requested by the Government of Mongolia.

The original DEIAs were in accordance with Mongolian standards and while they incorporated World Bank and IFC guidelines, they were not intended to comprehensively address overarching IFC policies such as the IFC Policy on Social and Environmental Sustainability, or the EBRD Environmental and Social Policy.

Following submission and approval of the initial DEIAs, the Government of Mongolia requested that Oyu Tolgoi LLC prepare an updated comprehensive ESIA whereby the discussion of impacts and mitigation measures was project-wide and based on the latest project design. The ESIA was also to address social issues, meet Government of Mongolia legal requirements, and comply with current IFC good practice.

For the ESIA, the baseline information from the original DEIAs was updated with recent monitoring and survey data. In addition, a social analysis was completed through the commissioning of a Socio-Economic Baseline Study and the preparation of a Social Impact Assessment ("SIA") for the project.

The requested ESIA, completed in 2012, combines the DEIAs, the project SIA, and other studies and activities that have been prepared and undertaken by and for Oyu Tolgoi LLC. Independent reports on progress were subsequently submitted in 2013 and 2016. The DEIAs are subject to periodic review on five-year cycles or when there are significant changes to the project description.

### *Human Resources and Training Strategy*

The human resources and training strategy of Oyu Tolgoi LLC provides a framework of policies, procedures, and processes that are well defined and aligned to support the achievement of the overall business objectives of Oyu Tolgoi LLC. Oyu Tolgoi LLC is working in partnership with relevant Mongolian government agencies and NGOs to ensure that a suitably qualified workforce is available to meet the requirements of Oyu Tolgoi. Oyu Tolgoi LLC's policies and procedures for human resources and training

meet all applicable Mongolian Labour and Social Security Laws and regulations, including those contained within the Labour Law of Mongolia (July 1999). International conventions and standards, including applicable International Labour Organisation conventions, IFC Performance Standards, and the EBRD guide the human resources and training strategy and activities.

Oyu Tolgoi LLC prioritises employment of local residents from the soums within the Project Area of Influence (as such term is defined in the 2020 OTTR), which include Khanbogd, Manlai, Bayan Ovoo, and Dalanzadgad, as well as from other areas in the South Gobi region. Oyu Tolgoi LLC has a requirement that not less than 90% of its employees consist of citizens of Mongolia. Oyu Tolgoi LLC meets this requirement.

### *Occupational Health, Hygiene and Safety*

Oyu Tolgoi LLC's health, safety and environment management system ("HSE MS") has been implemented and audited as compliant against AS/NZS ISO 14001:2004 Environmental Management System and OHSAS 18001:2007 Occupational Health and Safety management system. The HSE MS was developed to provide management with clear direction on HSE management, means to ensure compliance, and a basis for driving improvements. The Oyu Tolgoi HSE MS applies to all persons working for or on behalf of Oyu Tolgoi LLC, including contractors, suppliers, the general public, special interest groups, and government representatives, and covers the health, safety, and environmental management of all Oyu Tolgoi LLC's activities, assets, products, and services. Oyu Tolgoi LLC achieved an excellent safety performance for 2021 with an AIFR of 0.14 per 200,000 hours worked.

The Oyu Tolgoi LLC HSE Policy has been developed and is regularly reviewed in consultation with key stakeholders. Such policy is intended to reflect a best practice approach to health, safety, and environment with the underlying principle that all people are accountable for health and safety.

The Oyu Tolgoi LLC HSE Policy is seen as an enabler for the entire HSE MS. It provides high-level principles that are intended to be implemented through the application of all parts of the HSE MS. The Oyu Tolgoi LLC HSE Policy is endorsed by the chief executive officer of Oyu Tolgoi LLC to ensure the appropriate priority is placed on implementation and compliance.

### *Capital and Operating Costs*

A breakdown of the major incurred cost areas for the Phase 2 development capital is shown in the table below. Costs are reported on a 100% project basis. Actual project cash to December 31, 2021, is \$4.9 billion of the \$6.75 billion Definitive Estimate development capital forecast plus \$175 million of the known costs related to the ongoing COVID-19 pandemic as at December 31, 2021<sup>8</sup>.

Description	Spent from 1 January 2015 to 31 December 2021 (\$ billion)	Forecast to complete from 1 January 2022 (\$ billion)	Total Phase* 2 (\$ billion)
Underground mine (Hugo North Lift 1)	2.2	0.7	2.9
Site development	0.0	0.0	0.1
Concentrator Modifications	0.0	0.2	0.2
Utilities and ancillaries	0.2	0.0	0.2
Offsite facilities	0.1	0.0	0.1
<b>Subtotal direct costs</b>	<b>2.5</b>	<b>0.9</b>	<b>3.4</b>
Indirect costs	1.2	0.3	1.5
Owner's costs, escalation, growth, forex, contingency	1.3	0.6	2.0
<b>Subtotal – indirect costs</b>	<b>2.5</b>	<b>1.0</b>	<b>3.5</b>
<b>Total</b>	<b>5.0</b>	<b>1.9</b>	<b>6.9</b>

\*Totals may not match due to rounding.

The forecast development capital expenditure estimate targets an accuracy of  $\pm 20\%$  in line with Mongolian regulatory requirements. The estimate is subject to further study and assessment as part of Oyu Tolgoi LLC's ongoing cost estimation and project management processes, including preparation of a cost and schedule update and ongoing studies for Panels 1 and 2.

The forecast development capital includes contingency and escalation but excludes interest costs during construction.

The total sustaining capital estimate over the life of the project from January 1, 2021 is summarised in the table below. The estimate has been prepared by Oyu Tolgoi LLC. Sustaining capital costs are expressed in 2020 US dollars based on fixed exchange rates. The costs are un-escalated and are presented on a 100% project basis.

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<sup>8</sup> Note to readers: The \$6.75 billion Definitive Estimate development capital estimate does not include the known costs related to the ongoing COVID-19 pandemic as of December 31, 2021, being \$175 million, as disclosed in the Corporation's MD&A. The capital estimate also excludes the unknown costs related to COVID-19 as well as costs relating to the delayed approval of the full project budget by the board of directors of Oyu Tolgoi LLC. An estimate is underway that is expected to provide an update in Q2'22.

Description	Total (\$ billion)*
Open Pit	0.8
Hugo North Lift 1	2.7
Concentrator	0.1
Tailings	0.8
Infrastructure	0.3
Other	0.2
<b>Sub-total</b>	<b>5.0</b>
Value Added Tax (VAT) and duties	0.5
<b>Total</b>	<b>5.5</b>

\*The 2020 OTTR sustaining capital estimate, which has not materially changed in subsequent work. An update of the sustaining capital estimate will be provided upon completion of the Panel 1 and 2 studies which are ongoing in 2022.

The total operating cost over the life of the project from January 1, 2021, onwards are summarised in the table below. Operating costs are un-escalated and are expressed on a 100% project basis in real 2020 US dollars based on fixed exchange rates.

The estimates include all expenses required to operate and maintain the open pit mine, the underground mine, the concentrator, and the project support activities. The following are excluded from the operating cost estimates: (i) escalation, (ii) financing costs, (iii) royalties, and (iv) selling costs.

The estimates are built up on the fundamental principle of centrality, giving them an equal probability of upside and downside. The cost estimate for the open pit includes an adjustment for deferred waste stripping.

Description	Total (\$ billion) <sup>1</sup>
Oyut open pit <sup>2</sup>	3.5
Hugo North	3.4
Concentrator	7.7
Infrastructure	2.5
Administrative expenses, including exploration and evaluation, and technical support costs	2.3
<b>Sub-total</b>	<b>19.4</b>
VAT and duties	1.8
<b>Total</b>	<b>21.1</b>

<sup>1</sup> The 2020 OTTR operating cost estimate, which has not materially changed in subsequent work. An update of the operating cost estimate will be provided upon completion of the Panel 1 and 2 studies which are ongoing in 2022.

<sup>2</sup> Excludes costs associated with deferred stripping of \$1.3 billion (pre-tax) which are capitalised.

Power is a significant component of the project's operating cost. The project currently sources its power under an agreement from IMPIC via NPTG. This agreement is due to expire in July 2023. On January 24, 2022, the Corporation announced that, as part of the entering into of the GoM Agreements, the Oyu Tolgoi LLC board of directors had approved the signing of the ESA to provide Oyu Tolgoi with a long-term source of power from the Mongolian grid on terms fully agreed with the Government of Mongolia.

As part of the GoM Agreements, an agreement-in-principle has been reached between NPTG and IMPIC for a three-year fixed term extension of the power sources agreement to July 2026, potentially followed by an extension to up to 2030, if required. See “General Development of the Business – Agreements with the Government of Mongolia – Investment Agreement – Power Supply”.

## Other Projects

### *Regional Exploration Overview*

Turquoise Hill, through its wholly owned subsidiaries, Asia Gold Mongolia LLC, Heruga Exploration LLC and SGLS LLC, operates an exploration programme in Mongolia on licences that are not part of Oyu Tolgoi.

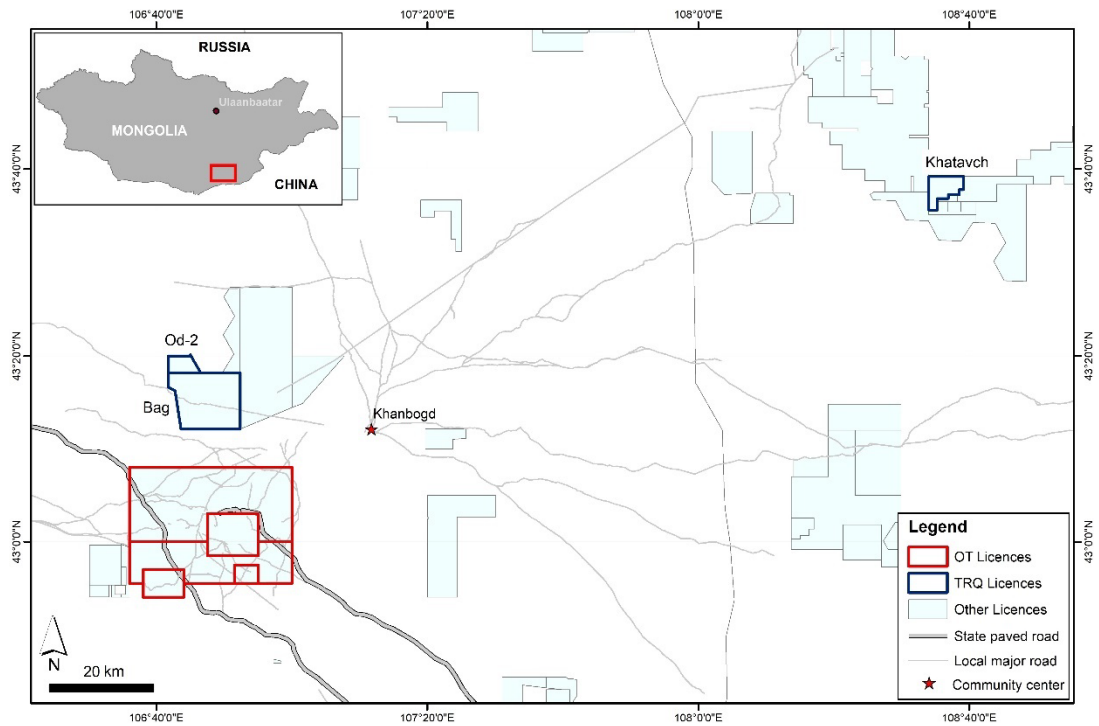
In early 2021, Heruga Exploration LLC acquired a new exploration licence named Khatavch. With the addition of this licence, Turquoise Hill now has three exploration licences in the South Gobi region of Mongolia, totalling 19,441 ha.

- The Bag and Od-2 licences are located approximately 25 km north of the Oyu Tolgoi Cu-Au deposit and approximately 17 km north-west of Khanbogd soum in the Ömnögovi province.
- The Khatavch licence is located approximately 200 km east of the Bag licence and approximately 90 km south of Mandakh soum in the Dornogovi province.

All three Turquoise Hill licences are located within the Gurvansaikhan island arc tectonic terrain. This belt is predominantly comprised of Devonian to Carboniferous magmatic formations which host known porphyry copper deposits e.g., Oyu Tolgoi, Tsagaan Suvarga, Kharmagtai.

Licence Name	Licence #	Status	Province	Owner	Year Granted	Hectares
<b>Bag</b>	XV-019315	EL	Ömnögovi	HEX	2016	14,575
<b>Od-2</b>	XV-020357	EL	Ömnögovi	SGLS	2016	3,051
<b>Khatavch</b>	XV-021737	EL	Dornogovi	HEX	2021	1,815





In 2021, exploration activities were undertaken on all three licences. At Bag and Od-2, the team completed a geophysics programme. At Khataavch, the team completed various geological surveys including mapping, sampling, ground gravity, topography and magnetics.

### *Bag and Od-2 Licences*

The district geology is comprised of Devonian and Carboniferous volcano-sedimentary packages intruded by Permian plutons. Regional arcuate faults form basin and ridge topography, with depressions or valleys in-filled by young cover includes Jurassic, Cretaceous volcano-sedimentary rocks and Quaternary loose sediments.

The local geology is dominated by andesitic rocks, tuffaceous and laminated siltstones, and agglomerates with clasts of granitoid xenoliths and pumice fragments. These rocks lie unconformably above, or are in fault contact with monzonite, monzodiorite, granite and syenite stocks intruding along and controlled by WNW – ENE trending faults. Interpretive work suggests the volcanic sequences are uppermost Carboniferous or Permian in age. Palaeozoic outcrops are exposed in the south-western and southern part of the Bag licence, approximately 13 km away from Bag conceptual target and anomalies.

In 2021, Turquoise Hill completed a Pole-Dipole-Induced Polarisation (“PDIP”) geophysical survey on the Bag and Od-2 licences. A total of 7 lines were completed, totalling 36 km. The geophysical survey was initially planned for 2020, but much of the work had to be postponed to 2021 due to COVID-19.

Low to moderate and deep chargeable anomalies associated with low to moderate resistive anomalies were detected on four of the PDIP lines. The most promising anomaly is interpreted to be approximately 0.7 x 3 km in size, at a depth of approximately 500 m and aligned with the main fault orientation. The anomaly partly coincides with a broad, moderate gravity-high and is represented by a low-to-moderate transition on gravity anomaly map.

Drill testing is planned for 2022 to test the strongest chargeability anomaly and its potential extensions.

Company	Exploration Licence	Medium priority
Heruga Exploration LLC	Bag (XV-019315)	<ul style="list-style-type: none"> <li>• Drill target 1 – Moderate chargeability (20-25 millivolts) anomaly associated with low (60-100ohm) resistivity, at depth of below 550m.</li> <li>• Drill target 2 – Weak chargeability (11-12 millivolts) anomaly associated with low (100-130ohm) resistivity, at depth of below 600m.</li> </ul>
SGLS LLC	Od-2 (XV-020357)	<ul style="list-style-type: none"> <li>• No known targets</li> </ul>

#### *Khatavch Licence*

The project area is comprised of two metamorphic complexes which are Paleo-Proterozoic to Meso-Proterozoic in age. The southern half of the project area is interpreted to be predominantly Paleo-Proterozoic coarse grained, metamorphosed granite and granite-gneiss. The younger northern half of the project area is comprised of quartzite, gneiss, meta-sandstone, limestone, mica-schist and minor marble, amphibolite and skarn, and meta-agglomerate with abundant milky white quartz veins. The two metamorphic complexes are separated by a south-west-north-east fault structure.

The area is not well studied, and very little information exists on the Proterozoic basement rocks. The area is considered to have potential for skarn metasomatic Cu mineralisation (with a previously registered Cu skarn type copper occurrence).

In 2021, Turquoise Hill completed a ground gravity and magnetic survey and rock-chip geochemical sampling at Khatavch. A total of 806 gravity station with 200 m x 200 m grid gravity survey used CG5 gravimeter and 152-line km of ground magnetic data with 14.6-line km of tie line data were acquired with GSM-19TW magnetometers. The lines were spaced 200 metres apart and tie lines were 2000 metres apart. The survey results showed main structures orientated north-east; however, the minor structures were not clearly mapped due to the wide line spacing. The survey identified six areas of interest including five high magnetic responses and one demagnetised zone. High magnetic responses M1- M5 are circular magnetic units (core) that are continuous at depth, surrounded by low magnetic responses (shell) and likely related to multi-phase intrusions.

During mapping, two additional zones of interest were identified which coincided with mapped alteration. However, surface rock-chip geochemistry results did not identify any copper mineralisation associated with these zones.

In 2022, various exploration activities are planned to follow-up on the identified alteration zones and magnetic anomalies.

Company	Exploration Licence	Medium priority
Heruga Exploration LLC	Khatavch (XV-021737)	<ul style="list-style-type: none"> <li>• A1-Alteration zone. Patchy silica-sericite alteration interpreted to be structurally controlled vein-related. Exposed in area of approximately 150 x 250m, associated with granitic intrusive. Low gravity and low magnetic responses.</li> <li>• A2-Alteration zone. Mapped amphibole-skarn zone associated with contact metamorphism. No visible mineralisation, but potential for Fe, Ni, Co +/- Mn element association based on rock-chip geochemistry. The zone has a dyke-like high magnetic response (1.5 km x 0.2 km) that corresponds with a mapped south-west-north-east major fault structure and a gravity anomaly which splits the main lithology. The potential target is concealed but interpreted to be at shallow depth.</li> <li>• M1-M5 High magnetic anomalies. These high magnetic anomalies are likely related to intermediate to mafic intrusion. Magnetic responses occur from the near surface to the maximum depth of 200-300 m and continuous at depth.</li> </ul>

## Other Information

### *Equity Investments*

Turquoise Hill holds equity investments in one publicly traded, non-subsidiary mineral exploration and development company. The following table outlines the equity investments held by the Turquoise Hill Group and, in respect of each such equity investment involving securities that are listed on a stock exchange, their quoted market value as at December 31, 2021:

Company	Number of Shares	Value
Entrée Resources Ltd. (TSX)	14,539,333	C\$ 11,776,860

### *Employees*

As at December 31, 2021, Turquoise Hill and Oyu Tolgoi LLC collectively had a total of 3,478 employees.

## DIVIDENDS

Turquoise Hill has not declared or paid any dividends on its outstanding Common Shares since its incorporation and does not anticipate that it will do so in the foreseeable future. The declaration of dividends on the Common Shares is, subject to certain statutory restrictions described below, within the discretion of the Board of Directors based on their assessment of, among other factors, Turquoise Hill's earnings or lack thereof, its capital and operating expenditure requirements and its overall financial condition. Under the YBCA, the discretion of the Board of Directors to declare or pay a dividend on the Common Shares is restricted if reasonable grounds exist to conclude that Turquoise Hill is, or after payment of the dividend would be, unable to pay its liabilities as they become due or that the realizable value of its assets would, as a result of the dividend, be less than the aggregate sum of its liabilities and the stated capital of the Common Shares.

## DESCRIPTION OF CAPITAL STRUCTURE

The authorized share capital of Turquoise Hill consists of an unlimited number of Common Shares without par value and an unlimited number of Preferred Shares. As of the date hereof, there are 201,231,446 Common Shares and no Preferred Shares issued and outstanding. Rights and restrictions in respect of the Common Shares and the Preferred Shares are set out in Turquoise Hill's restated articles of incorporation, Turquoise Hill's by-laws and in the YBCA and its regulations.

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### Common Shares

The holders of Common Shares are entitled to one vote per Common Share at all meetings of shareholders except meetings at which only holders of another specified class or series of shares of Turquoise Hill are entitled to vote separately as a class or series. Subject to the prior rights of the holders of Preferred Shares, the holders of Common Shares are entitled to receive dividends as and when declared by the directors, and to receive a *pro rata* share of the remaining property and assets of Turquoise Hill in the event of liquidation, dissolution or winding up of Turquoise Hill. The Common Shares have no pre-emptive, redemption, purchase or conversion rights, however, under the Private Placement Agreement, RTIH has pre-emptive rights entitling RTIH to participate, subject to certain specific exceptions, in future issuances of Common Shares on a basis sufficient to maintain its percentage shareholding interest in Turquoise Hill on economic terms equivalent to those upon which any such Common Shares (including securities convertible into or exercisable for Common Shares) are issued to third parties. Neither the YBCA nor the constating documents of Turquoise Hill impose restrictions on the transfer of Common Shares on the register of Turquoise Hill, provided that Turquoise Hill receives the certificate representing the Common Shares to be transferred together with a duly endorsed instrument of transfer and payment of any fees and taxes which may be prescribed by the Board of Directors from time to time. There are no sinking fund provisions in relation to the Common Shares and they are not liable to further calls or to assessment by Turquoise Hill. The YBCA provides that the rights and provisions attached to any class of shares may not be modified, amended or varied unless consented to by special resolution passed by a majority of not less than two-thirds of the votes cast in person or by proxy by holders of shares of that class.

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### Preferred Shares

The Preferred Shares are non-voting and issuable in one or more series, each consisting of such number of Preferred Shares as may be fixed by Turquoise Hill's directors. Turquoise Hill's directors may from time to time, by resolution passed before the issuance of any Preferred Shares of any particular series, alter

the constating documents of Turquoise Hill to determine the designation of the Preferred Shares of that series, to fix the number of Preferred Shares therein and alter the constating documents to create, define and attach special rights and restrictions to the shares of that series including, without limitation, the following: (i) the nature, rate or amount of dividends and the dates, places and currencies of payment thereof; (ii) the consideration for, and the terms and conditions of, any purchase of the Preferred Shares for cancellation or redemption; (iii) conversion or exchange rights; (iv) the terms and conditions of any share purchase plan or sinking fund; and (v) voting rights and restrictions.

Under the terms of the restrictive covenants contained in the Turquoise Hill Financing Support Agreement, the Corporation is prohibited from amending its constating documents to create and issue Preferred Shares without the prior written consent of Rio Tinto.

Registered holders of both the Preferred Shares and Common Shares are entitled, at their option, to a certificate representing their shares of Turquoise Hill.

## MARKET FOR SECURITIES

The Common Shares of Turquoise Hill are traded in Canada on the TSX, and in the U.S. on the NYSE. The closing price of Turquoise Hill's Common Shares on the TSX on March 1, 2022 was C\$26.58. The closing price listed on the NYSE on March 1, 2022 was \$20.83.

The following table indicates the monthly range of high and low closing prices of a Common Share and the total monthly volumes traded on the TSX and the NYSE during the period beginning on January 1, 2021 and ending on December 31, 2021:

	<u>NYSE<sup>(1)</sup></u>			<u>TSX<sup>(2)</sup></u>		
	<u>High</u>	<u>Low</u>	<u>Volume</u>	<u>High</u>	<u>Low</u>	<u>Volume</u>
	\$	\$		C\$	C\$	
<b>2021</b>						
January	\$14.62	\$10.14	21,363,881	\$18.58	\$12.97	7,164,393
February	\$16.86	\$11.30	19,458,332	\$21.09	\$14.43	7,019,796
March	\$18.20	\$13.13	26,907,330	\$22.58	\$16.67	12,274,110
April	\$19.64	\$16.14	20,550,976	\$24.65	\$20.31	4,856,746
May	\$21.89	\$16.04	28,232,039	\$26.45	\$19.41	7,260,926
June	\$18.56	\$15.64	17,117,526	\$22.32	\$19.35	4,140,155
July	\$17.41	\$12.57	20,811,943	\$21.67	\$16.06	4,999,477
August	\$16.85	\$13.25	11,564,237	\$20.59	\$17.01	3,626,760
September	\$16.00	\$13.98	8,486,134	\$20.13	\$17.92	3,501,281
October	\$15.70	\$11.92	15,450,899	\$19.42	\$14.74	5,783,835
November	\$15.59	\$9.75	26,417,368	\$19.80	\$12.15	7,617,860
December	\$17.19	\$13.60	23,102,531	\$22.00	\$17.41	3,682,946

(1) Information is presented on a consolidated basis for all of the U.S. as reported by Bloomberg under "TRQ US".

(2) Information is presented on a consolidated basis for all of Canada as reported by Bloomberg under "TRQ CN".

## DIRECTORS AND OFFICERS

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### Name and Occupation

The name, province or state, and country of residence of each director and executive officer of Turquoise Hill, as of the date hereof (except as otherwise disclosed), as well as their respective positions and offices held with Turquoise Hill and their respective principal occupations during the immediately preceding five years is as follows:

Name and Municipality of Residence	Position with Turquoise Hill	Principal Occupation During Past Five Years
GEORGE R. BURNS Vancouver, British Columbia, Canada	Director (since January 2020)	President and Chief Executive Officer, Eldorado Gold Inc. (2017 to present); Executive Vice President and Chief Operating Officer, Goldcorp Inc. (2012 to 2017).
LUKE COLTON Montréal, Québec, Canada	Chief Financial Officer (since October 2017)	Chief Financial Officer, Turquoise Hill (2017 to present); Interim Chief Executive Officer, Turquoise Hill (2018); Chief Financial Officer, Richards Bay Minerals (2013 to 2017).
JO-ANNE DUDLEY Brisbane, Queensland, Australia	Chief Operating Officer (since June 2019)	Chief Operating Officer, Turquoise Hill (2019 to present); Manager Strategic Mine & Resources Planning, Studies & Technical, Oyu Tolgoi LLC (2017 to 2019); Manager Strategic Mine Planning, Oyu Tolgoi LLC (2014 to 2017).
R. PETER GILLIN Toronto, Ontario, Canada	Director and Chairman (Director since May 2012 and Chairman since January 2017)	Advisory Board and Independent Review Committee member, Strathbridge group of investment funds (2021); Deputy Chairman, Dundee Precious Metals Inc. (2021); Director, TD Mutual Funds Corporate Class Ltd. (2010 to 2020); Director, Sherritt International (2010 to 2019); Lead Director, Dundee Precious Metals Inc. (2009 to 2021); Wheaton Precious Metals Corp. (2004 to present).
ALFRED P. GRIGG Brisbane, Queensland, Australia	Director (since September 2020)	Acting General Manager, Energy & Joint Ventures, Aluminium, Rio Tinto (2021 to present); Chief Counsel, Aluminum and Strategic Partnerships (2021); Chief Counsel, Pacific Aluminum Rio Tinto (2013 to 2021).
DUSTIN ISAACS Montréal, Québec, Canada	Chief Legal Officer and Corporate Secretary (since December 2020)	Chief Legal Officer and Corporate Secretary, Turquoise Hill (2020 to present); Vice President, General Counsel and Corporate Secretary (2017 to 2020); General Counsel and Corporate Secretary (2013 to 2017).
STEPHEN JONES City Beach, Western Australia, Australia	Director (since December 2017)	Managing Director, Planning, Integration & Assets, Rio Tinto Iron Ore (2021); Technical Director, Copper & Diamonds, Rio Tinto (2019 to 2020); Head of Technical Review, Rio Tinto (2018 to 2019); Chief Advisor Surface Mining and Geosciences, Rio Tinto (2018); Chief Operating Officer, Oyu Tolgoi LLC (2017);



Name and Municipality of Residence	Position with Turquoise Hill	Principal Occupation During Past Five Years
		Acting Chief Executive Officer, Oyu Tolgoi LLC (2016 to 2017).
RUSSEL C. ROBERTSON Toronto, Ontario, Canada	Director (since June 2012)	Director, Hydro One Inc. (2018 to present); Director, Bausch Health Inc. (2016 to present).
MARYSE SAINT-LAURENT Calgary, Alberta, Canada	Director (since January 2017)	Director, Pretivm Resources Inc. (2021 to present); Director, North American Construction Group Ltd. (2019 to present); Director, Guyana Goldfields Inc. (2019 to 2020); Board member, Alberta Securities Commission (2016 to present).
STEVE THIBEAULT Lac Delage, Québec, Canada	Interim Chief Executive Officer (since March 2021)	Interim Chief Executive Officer, Turquoise Hill (2021 to present); Chief Financial Officer, Canada Steamship Line Group (2017 to 2020); Chief Financial officer, Turquoise Hill (2014 to 2017).

Each director's term of office expires at the next annual general meeting of Turquoise Hill.

### Shareholdings of Directors and Executive Officers

As of the date hereof, the directors and executive officers, as a group, own, directly or indirectly, 19,468 Common Shares, which represents less than 0.01% of the Corporation's Common Shares.

### Committees of the Board of Directors

The committees of the Board of Directors consist of the following standing committees: Audit Committee, Compensation and Benefits Committee, Nominating, Corporate Governance and Sustainability Committee and Health, Safety, Environment, Communities and Operations Committee. The current members of the Audit Committee are Russel C. Robertson (Chair), George R. Burns and Maryse Saint-Laurent. The current members of the Compensation and Benefits Committee are Maryse Saint-Laurent (Chair), George R. Burns and Russel C. Robertson. The current members of the Nominating, Corporate Governance and Sustainability Committee are Maryse Saint-Laurent (Chair), Alfred P. Grigg and Russel C. Robertson. The current members of the Health, Safety, Environment, Communities and Operations Committee are Stephen Jones (Chair), George R. Burns and Steve Thibeault. Additionally, under the Board Mandate, the Board has the right to appoint committees and delegate to any such committee powers of the Board. The Board currently has the Special Committee (Operations), solely comprised of independent directors of the Corporation, which was formed for the purposes of, among other things, assisting with the investigation and review of sustainable first production delays and project development capital spend increases in relation to the Oyu Tolgoi underground mine development. On December 3, 2021, the mandate of the Special Committee (Operations) was expanded to include duties that were initially delegated to the previously existing Special Committee (Financing), which ceased to exist on May 12, 2021, namely matters relating to the funding plan for the completion of the Oyu Tolgoi underground project and the raising of capital for the Corporation's funding of same. Upon the Board's

determination that the Special Committee (Operations)'s mandate was fulfilled, it was dissolved on March 1, 2022. The members of the Special Committee (Operations) were George R. Burn (Co-Chair), Maryse Saint-Laurent (Co-Chair), Russel C. Robertson (Co-Chair), who was appointed Co-Chair with the expansion of the Special Committee's duties, and R. Peter Gillin.

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## Legal Proceedings

In February 2020, the Corporation announced that Oyu Tolgoi LLC was unable to reach a resolution of its dispute with the Mongolian Tax Authority with respect to a tax assessment for approximately \$155 million relating to an audit on taxes imposed and paid by Oyu Tolgoi LLC between 2013 and 2015, and was proceeding with the initiation of a formal international arbitration proceeding in accordance with the dispute resolution provisions of the Investment Agreement and the UDP. Further, in December 2020, the Corporation announced that Oyu Tolgoi LLC had received and was evaluating a tax assessment for approximately \$228 million cash tax from the Mongolian Tax Authority relating to an audit on taxes imposed and paid by Oyu Tolgoi LLC between 2016 and 2018. Most of the matters raised in respect of the \$228 million cash tax assessment for the 2016 to 2018 years are of a similar nature to the matters that were referred to international arbitration for the 2013 to 2015 years, as announced in February 2020.

In January 2021, Oyu Tolgoi LLC gave notice of its intention to apply to the UNCITRAL tribunal to amend its statement of claim to include the issues raised in the tax assessment for the 2016 to 2018 years, as many of the matters raised in the tax assessment of the Mongolian Tax Authority for the 2016 to 2018 years were of a similar nature to those raised in the tax assessment for the 2013 to 2014 years. In February 2021, Oyu Tolgoi LLC's application to include these matters was accepted.

In February 2021, Oyu Tolgoi LLC received a notice of payment for \$83 million from the Capital City tax department relating to a partial payment of the amounts disputed under the tax assessment for the 2016 to 2018 years, as well as a notice of payment for \$147 million from the Mongolian Tax Authority relating to the remaining portion of the amounts disputed under the 2016 to 2018 Tax Assessment. In March 2021, Oyu Tolgoi received notices of payment totalling \$126 million relating to amounts disputed under an audit on taxes imposed and paid between 2013 and 2015. Under article 43.3 of the Mongolian General Tax Law, the amounts were due and paid by Oyu Tolgoi LLC within 10 business days from the date of the notices of payment. Under the same legislation, the Corporation is entitled to a refund in the event of a favorable decision from the relevant dispute resolution authorities.

In May 2021, the Corporation announced that the Government of Mongolia filed its Defence and Counterclaim in relation to the tax arbitration proceeding. Although not a party to that arbitration, the Corporation announced that the Defence and Counterclaim included a request that the arbitral tribunal add both the Corporation and a member of Rio Tinto as parties to the tax arbitration and that the Defence and Counterclaim was sought to reject Oyu Tolgoi LLC's tax claims in their entirety. As part of the counterclaim, the Government of Mongolia made assertions surrounding previously-reported allegations of historical improper payments made to Mongolian officials and sought unquantified damages. Also, in the event Oyu Tolgoi LLC's tax claims are not dismissed in their entirety, the Government of Mongolia was seeking in the counterclaim an alternative declaration that the Investment Agreement is void. The Corporation denied the allegations relating to it in the Defence and Counterclaim and announced its intention to oppose the Government of Mongolia's request that it be added to the tax arbitration as and when that application was formally served on the Corporation. In January 2022, the Corporation announced that following a hearing, the arbitral tribunal had issued a ruling deciding that the Corporation would not be added as a party to the arbitration. On February 11, 2022, the arbitral tribunal issued a Partial Award confirming its earlier ruling that Turquoise Hill not be added as a party to the tax

arbitration. On the same day, at the request of the parties to the tax arbitration, the arbitral tribunal issued an order suspending the tax arbitration for six months (until August 11, 2022) or until 21 days from when the tribunal receives notice from Oyu Tolgoi LLC or the Government of Mongolia to terminate the suspension.

In October 2020, a class action complaint was filed in the U.S. District Court, Southern District of New York against the Corporation, certain of its current and former officers as well as Rio Tinto and certain of its officers. The complaint alleges that the defendants made material misstatements and material omissions with respect to, among other things, the schedule, cost and progress to completion of the development of Oyu Tolgoi in violation of Section 10(b) of the *U.S. Securities Exchange Act* and Rule 10b-5 thereunder. Under the schedule established by the court, a first amended complaint was filed on March 16, 2021, and a second amended complaint was filed on September 16, 2021. Defendants moved to dismiss the operative amended complaint on October 19, 2021, under Rule 12(b)(6) of the Federal Rules of Civil Procedure and the Private Securities Litigation Reform Act of 1995, for failure to state a claim. As of December 17, 2021, the motion is fully briefed and pending before the Court. The Corporation believes that the complaint against it is without merit.

In January 2021, a proposed class action was initiated in the Superior Court in the District of Montréal against the Corporation and certain of its current and former officers. An amended complaint was filed on July 27, 2021 which did not substantially alter the claim. The claim alleges that the Corporation and its current and former officers named therein as defendants made material misstatements and material omissions with respect to, among other things, the schedule, cost and progress to completion of the development of Oyu Tolgoi in violation of, among other things, sections 225.8, 225.9 and 225.11 of the Quebec Securities Act. On January 7, 2022 the plaintiff re-amended the claim to include allegations relating to developments arising since the previous amended complaint was filed. The Corporation and the other defendants expect to produce their evidence to contest certification of the class action at the end of March 2022. No hearing has been scheduled yet. The Corporation believes that the complaint against it is without merit and is preparing to defend the application for leave and certification of the proceeding.

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## Conflicts of Interest

Certain directors and executive officers of Turquoise Hill and its subsidiaries are associated with other reporting issuers or other corporations. These relationships may give rise to conflicts of interest from time to time. For example, Messrs. Grigg and Jones, are nominated by RTIH to act as directors of the Corporation, and are officers of Rio Tinto, which has a controlling interest in the Corporation.

The Corporation's commitment to diversity and inclusion aligns with its values of accountability, respect, teamwork and integrity and is reflected in its Code of Business Conduct, *The Way We Work*. The Code of Business Conduct is applicable to all employees, consultants, officers and directors regardless of their position in the organisation, at all times and everywhere the Corporation does business. The Code of Business Conduct provides that the Corporation's employees, consultants, officers and directors will uphold its commitment to a culture of honesty, integrity and accountability and the Corporation requires the highest standards of professional and ethical conduct from its employees, consultants, officers and directors. The Corporation takes any violation of applicable Anti-Corruption Legislation very seriously and any employee, consultant, officer or director who violates these laws will be subject to disciplinary measures up to and including termination of employment.

The Corporation believes that its Code of Business Conduct is responsive to the potential issues such policies are meant to address and clearly demonstrates the Corporation's full commitment to all of its stakeholders to act at all times as a responsible social and corporate citizen.

The Corporation has a confidential whistleblower programme. Employees are encouraged to report any suspicion of unethical or illegal practices.

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## Audit Committee Information

Information concerning the Audit Committee of Turquoise Hill, as required by National Instrument 52-110 – *Audit Committees*, is provided in Schedule A to this AIF.

## INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Other than as disclosed below or elsewhere in this AIF, no director or executive officer of the Corporation, or person or company that beneficially owns, or controls or directs, directly or indirectly, more than 10% of the issued and outstanding Common Shares, nor any associate or affiliate of the foregoing, has any material interest, direct or indirect, in any transaction within the Corporation's three most recently completed financial years, or during the current financial year, that has materially affected, or is reasonably expected to materially affect, the Corporation.

RTIH, together with its affiliates, is the Corporation's majority shareholder, holding 50.8% of the issued and outstanding Common Shares. Within the Corporation's three most recently completed financial years, and within the current financial year, Rio Tinto has been party to a series of transactions that have materially affected, or could materially affect, the Corporation. See "General Development of the Business – Agreements with Rio Tinto". During the year ended December 31, 2021, Rio Tinto provided services to the Corporation for Oyu Tolgoi on a cost-recovery basis which amounted to \$78.2 million (2020 - \$94.5 million and 2019 – \$83.5 million). In addition, various other transactions were entered into between the Corporation and Rio Tinto in fiscal 2021, as further described under the heading "Related-Party Transactions" of the Corporation's MD&A.

## TRANSFER AGENT AND REGISTRAR

The registrar and transfer agent for the Common Shares is TSX Trust Company in Canada at its principal offices in Montréal, Toronto and Vancouver and American Stock Transfer & Trust Company, LLC in the United States at its principal office in Brooklyn, New York.

## MATERIAL CONTRACTS

Material contracts under National Instrument 51-102 *Continuous Disclosure Obligations* are contracts, other than contracts entered into in the ordinary course of the Corporation's business, that are material to the Corporation. The following is a list of: (i) material contracts entered into since January 1, 2021; and (ii) material contracts entered into prior to January 1, 2021 but after January 1, 2002 that remain in effect:

1. Entrée Earn-in Agreement.<sup>9</sup> See "Description of the Business – Oyu Tolgoi Project – Project Description, Location and Access".

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<sup>9</sup> Under the terms of the Investment Agreement, Turquoise Hill agreed to transfer its interest in the Entrée Joint Venture to Oyu Tolgoi LLC.

2. Private Placement Agreement. See "General Development of the Business – Agreements with Rio Tinto – Private Placement Agreement".
3. Investment Agreement. See "General Development of the Business – Agreements with the Government of Mongolia – Investment Agreement".
4. ARSHA. See "General Development of the Business – Agreements with the Government of Mongolia – ARSHA".
5. 2010 HoA. See "General Development of the Business – Agreements with Rio Tinto – 2010 HoA".
6. 2012 MoA. See "General Development of the Business – Agreements with Rio Tinto – 2012 MoA".
7. 2013 MoA. See "General Development of the Business – Agreements with Rio Tinto – 2013 MoA".
8. UDP. See "General Development of the Business – Agreements with the Government of Mongolia – UDP".
9. Turquoise Hill Financing Support Agreement. See "General Development of the Business – Agreements with Rio Tinto – Agreements in Connection with Oyu Tolgoi Project Financing".
10. Oyu Tolgoi Financing Support Agreement. See "General Development of the Business – Agreements with Rio Tinto – Agreements in Connection with Oyu Tolgoi Project Financing".
11. Sponsor Debt Service Undertaking. See "General Development of the Business – Agreements with Rio Tinto – Agreements in Connection with Oyu Tolgoi Project Financing".
12. PSFA. See "General Development of the Business – Agreements with the Government of Mongolia – Investment Agreement – Power Supply".
13. A&R HoA. See "General Development of the Business – Agreements with Rio Tinto – A&R HoA".

## INTERESTS OF EXPERTS

KPMG LLP, Chartered Professional Accountants, are the independent auditors of the Corporation who have issued an independent auditor's report dated March 2, 2022 in respect of the consolidated financial statements of the Corporation as at December 31, 2021 and December 31, 2020 and for the years then ended and the Corporation's internal control over financial reporting as of December 31, 2021. KPMG LLP has advised that they are independent within the meaning of the relevant rules and related interpretations prescribed by the relevant professional bodies in Canada and any applicable legislation or regulations and also that they are independent accountants with respect to the Corporation under all relevant US professional and regulatory standards. Turquoise Hill has relied on the work of the qualified persons listed in the section of this AIF titled "Description of the Business – Current Technical Report and Qualified Persons" in connection with the scientific and technical information presented in this AIF in respect of its material mineral property, Oyu Tolgoi, which is based in part upon the 2020 OTTR, which report is available for review on SEDAR at [www.sedar.com](http://www.sedar.com).

To the knowledge of Turquoise Hill, none of the qualified persons listed in the section of this AIF titled "Description of the Business – Current Technical Report and Qualified Persons" nor any of the companies listed therein that employ those individuals, hold Common Shares or securities exercisable to acquire Common Shares equal to or greater than 1% of the issued and outstanding Common Shares.

## **ADDITIONAL INFORMATION**

Additional information, including directors' and officers' remuneration and indebtedness, principal holders of Turquoise Hill securities and options to purchase Common Shares is contained in the management proxy circular for the annual meeting of Turquoise Hill held on May 12, 2021, filed on SEDAR at *www.sedar.com*. Additional financial information is contained in Turquoise Hill's comparative financial statements and MD&A as at and for the years ended December 31, 2021 and 2020. Copies of the management proxy circular, financial statements and MD&A (when filed) are available on SEDAR at *www.sedar.com*, and may also be obtained upon request from Turquoise Hill at 1 Place Ville-Marie, Suite 3680, Montréal, Québec, H3B 3P2.

Additional information relating to Turquoise Hill may be found on SEDAR at *www.sedar.com*.

## **SCHEDULE A**

### **AUDIT COMMITTEE INFORMATION**

#### ***Composition of Audit Committee***

Turquoise Hill's Audit Committee consists of Russel C. Robertson, George R. Burns and Maryse Saint-Laurent. Mr. Robertson has been Chair of the Audit Committee since January 1, 2015. The Board of Directors has determined that all members of the Audit Committee satisfy the independence, financial literacy, expertise and financial experience requirements under applicable securities laws, rules and regulations, stock exchange and any other regulatory requirements applicable to Turquoise Hill. In addition, in accordance with the *Sarbanes-Oxley Act* of 2002 (the "Sarbanes-Oxley Act"), the Board of Directors has determined that Russel C. Robertson is an audit committee financial expert.

#### ***Relevant Education and Experience***

##### *Russel C. Robertson*

Mr. Robertson holds a Bachelor of Arts degree (Honours) from the Richard Ivey School of Business at the University of Western Ontario, is a Chartered Professional Accountant (FCPA, FPA) and a Fellow of the Institute of Chartered Professional Accountants (Ontario). He is a member of the Institute of Corporate Directors. From June 2013 to August 2016, Mr. Robertson served as Executive Vice-President, and Head, Anti-Money Laundering at BMO Financial Group. Mr. Robertson previously held various senior positions with two major accounting firms, including holding the positions of Vice-Chair, Deloitte & Touche LLP (Canada), and Canadian Managing Partner, Arthur Andersen LLP (Canada).

##### *George R. Burns*

Mr. Burns holds a Bachelor of Science Degree in Mining Engineering with a focus on Business from Montana Technological University in Butte, Montana USA. Mr. Burns has spent most of his career in Senior Management and Executive positions with public companies requiring multijurisdictional and complex management of results and financial statements. Mr. Burns was involved in management implementation and oversight and participated in audit committee meetings for over a decade as the Chief Operating Officer of Centerra Gold, Chief Operating Officer of Goldcorp and most recently as President and Chief Executive Officer of Eldorado Gold.

##### *Maryse Saint-Laurent*

Ms. Saint-Laurent holds a Master of Laws (securities and finance), from York University, Osgoode Hall Law School, and LL.B., BA and Certification in Human Resources from the University of Alberta as well as her Institute of Corporate Directors (ICD.D) designation. Ms. Saint-Laurent is an accomplished executive and corporate director with over 25 years' experience as a business-oriented corporate, transactional and securities lawyer in the energy, power, and mining sectors. She has led several M&A and multi-faceted financing transactions and has a strong governance background. Ms. Saint-Laurent also possesses several years' experience in human resources, compensation, and benefits/pension management. Ms. Saint-Laurent is a member of the board of the Alberta Securities Commission, where she serves as chair of the Human Resources Committee, North American Construction Group Ltd. where she serves as Chair of the Nominating, Governance and Sustainability Committee, and Pretivm Resources Inc. where she serves as a member of both the Human Resources Committee and the

Governance and Nominating Committee.

***Fees for audit and other services***

KPMG LLP is the Corporation's auditor since March 20, 2020. PricewaterhouseCoopers LLP was the Corporation's auditor from April 2012 to March 2020. Deloitte LLP was the Corporation's auditor from January 1995 to April 2012.

The aggregate fees incurred by KPMG LLP and its affiliates in fiscal 2021 and 2020 are detailed below:

	<b>2021</b>	<b>2020</b>
Audit Fees (a)	C\$ 2,338,625	C\$ 2,094,422
Audit Related Fees (b)	C\$ 78,765	C\$ 60,990
Tax Fees	C\$ Nil	C\$ Nil
Other Fees	C\$ Nil	C\$ Nil
Total	C\$ 2,417,390	C\$ 2,155,412

(a) Fees for audit services relating to fiscal 2021 and 2020 consist of:

- Audit of the Corporation's annual consolidated financial statements;
- Audit of the Corporation's subsidiaries in Mongolia, Singapore, Australia and the Netherlands;
- Reviews of the Corporation's interim financial statements; and
- Auditor involvement in prospectus and other securities filings

(b) Audit related fees billed relating to fiscal 2021 and 2020 consist of translation services.

In addition, in 2021 and 2020, fees were paid for services provided pursuant to section 404 of the Sarbanes-Oxley Act, applicable Canadian securities laws and the required attestations relating to the effectiveness of the Corporation's internal control on financial reporting.

The Audit Committee's charter requires the pre-approval by the Audit Committee of all services provided by the external auditor. Pre-approval from the Audit Committee can be sought for planned engagements based on budgeted or committed fees. The Audit Committee has adopted a procedure whereby the Chair of the Audit Committee shall pre-approve any non-audit services totalling segments of \$50,000 or less per occurrence, up to a total of \$100,000 per year, and shall be required to report on this at the first scheduled Audit Committee meeting following such pre-approval. Any amounts exceeding the \$100,000 threshold must be pre-approved by the Audit Committee, according to the procedure. Pre-approval from the Audit Committee can be sought for planned engagements based on budgeted or committed fees. No further approval is required to pay pre-approved fees. Additional pre-approval is required for any increase in scope or in final fees.

Pursuant to these procedures, all of the services provided by the Corporation's external auditor requiring pre-approval relating to the fees reported as audit, audit-related, tax and other fees were pre-approved by the Audit Committee.



## ***Audit Committee Charter***

### **1 Purpose**

The primary objective of the Audit Committee (the "Committee") of Turquoise Hill Resources Ltd. (the "Corporation") is to act as a liaison between the Board of Directors of the Corporation (the "Board") and the Corporation's independent auditors (the "Auditors") and to assist the Board in fulfilling its oversight responsibilities with respect to: (a) the accounting and financial reporting processes of the Corporation, including the integrity of the financial statements and other financial information provided by the Corporation to its shareholders, the public and others, (b) the Corporation's compliance with legal and regulatory requirements, (c) the audit of the Corporation's financial statements, (d) the qualifications, independence and performance of the Auditors, (e) the Corporation's risk management and internal financial and accounting controls, and management information systems, including the performance of the Corporation's internal audit function, and (f) such other matters as shall be mandated under applicable laws, rules and regulations.

### **2 Organization of the Audit Committee**

The Committee shall consist of three or more directors and shall satisfy the independence, financial literacy, expertise and financial experience requirements of applicable securities laws, stock exchanges and any other regulatory requirements. The members of the Committee shall be appointed by the Board on the recommendation of the Nominating, Corporate Governance and Sustainability Committee and serve at the pleasure of the Board. A majority of the members of the Committee shall constitute a quorum. Where a vacancy occurs at any time in the membership of the Committee, it may be filled by the Board on the recommendation of the Nominating, Corporate Governance and Sustainability Committee.

Members of the Committee must be financially literate as the Board interprets such qualification in accordance with applicable Canadian and U.S. securities legislation and regulations, as well as the New York Stock Exchange ("NYSE") standards relating to corporate governance and Nasdaq Capital Market ("Nasdaq") standards relating to corporate governance.

No member of the Committee may serve simultaneously on the audit committees of more than three public companies, including the Corporation, unless the Board determines that such simultaneous service would not limit or impair the ability of such member to effectively serve on the Committee. The basis for such determination shall be disclosed as required by law or stock exchange regulation.

The Committee has at all times a direct line of communication with the internal auditors and the Auditors.

### **3 Meetings of the Audit Committee**

The Committee shall meet as many times as the Committee deems necessary to carry out its duties effectively, but not less frequently than four times per year. The Committee will meet with management, the Corporation's internal auditors and the Auditors in separate executive sessions to discuss any matters that the Committee or each of these groups believe should be discussed privately. Meetings shall be called by the chair of the Committee or by a majority of the members of the Committee.

The Board, or failing such selection, the members of the Committee, shall select from the Committee members a chair who will preside at each meeting of the Committee.

The chair of the Committee shall ensure that the agenda for each upcoming meeting of the Committee is circulated to each member of the Committee on a timely basis in advance of such meeting.

The Corporation's internal auditors shall attend any meeting when requested to do so by the chair of the Committee.

#### 4 Responsibilities of the Committee

The Committee shall have the following responsibilities:

(a) *With respect to the Auditors*

- Be directly responsible for the appointment, compensation, retention (including termination) and oversight of the work of any independent registered public accounting firm engaged by the Corporation (including for the purposes of preparing or issuing an audit report or performing other audit, review or attestation services or other work for the Corporation and including the resolution of disagreements between management and the Corporation's independent registered public accounting firm regarding financial reporting) and ensure that such firm shall report directly to it; recommend to the Board the independent auditors to be nominated for appointment as Auditors of the Corporation at the Corporation's annual meeting, the remuneration to be paid to the Auditors for services performed during the preceding year; and recommend to the Board and the shareholders the termination of the appointment of the Auditors, if and when advisable. The Committee shall have the sole authority to determine the terms of engagement and the extent of funding necessary (and to be provided by the Corporation) for payment of compensation to the Auditors retained to advise the Committee and ordinary administrative expenses of the Committee that are necessary or appropriate in carrying out its duties.
- Annually review the Auditor's audit plan with the Auditor and management and approve the scope, extent and schedule of such audit plan.
- Evaluate on an annual basis the performance of the Auditors, including the lead audit partner.
- Take reasonable steps to confirm the independence of the Auditors, which include:
  - Reviewing the annual written statement of the Auditors regarding all of their relationships with the Corporation and other engagements that may reasonably be thought to bear on the independence of the Auditors, and discussing any relationships or services that may impact on their objectivity or independence;
  - Approving and overseeing the disclosure of all audit services provided by the external advisors to the Corporation or any of its subsidiaries, pre-approving all non-audit services provided by the Auditors and, exceptionally, approving and overseeing the disclosure of permitted non-audit services to be performed by the Auditors; and
  - As necessary, taking or recommending that the Board take appropriate action to oversee the independence of the Auditors.

- Review and approve any disclosures required to be included in periodic reports under applicable securities laws, rules and regulations and stock exchange and other regulatory requirements with respect to non-audit services.
- Consider the tenure of the lead audit partner on the engagement in light of applicable securities laws, stock exchange or applicable regulatory requirements.
- Review all reports required to be submitted by the Auditors to the Committee under applicable securities laws, rules and regulations and stock exchange or other regulatory requirements.
- Review and approve policies for the hiring of employees, partners, former employees or former partners of the Auditors or the Corporation's former independent auditors.

(b) *With respect to accounting and financial reporting*

- Review and discuss with management, the financial and accounting officer(s) and the Auditors, the Corporation's annual audited financial statements and accompanying notes, the Auditors' report thereon and the related press release, including disclosures made in management's discussion and analysis, and obtain explanations from management on all significant variances with comparative periods, prior to recommending approval by the Board and the release thereof.
- Review and discuss with management, the financial and accounting officer(s) and the Auditors, the Corporation's interim financial statements (and the interim profit or loss press release associated therewith), management's discussion and analysis and the Auditor's review thereof, before recommending the approval by the Board and the release thereof.
- Be satisfied that adequate procedures are in place for the review and approval, if required, of the Corporation's disclosure of financial information extracted or derived from the Corporation's financial statements and periodically assess the adequacy of these procedures.
- Review with management and the Auditors the quality and not just the acceptability of the Corporation's accounting policies and any changes that are proposed to be made thereto, including: (i) all critical accounting policies and practices used, (ii) any alternative treatments of financial information that have been discussed with management, the ramification of their use and the Auditors' preferred treatment, and (iii) any other material communications with management with respect thereto, and reviewing the disclosure and impact of contingencies and the reasonableness of the provisions, reserves and estimates that may have a material impact on financial reporting.
- Discuss with the Auditors the matters required to be discussed by applicable auditing standards requirements relating to the conduct of the audit.
- Discuss with management and the Auditors major issues regarding accounting principles used in the preparation of the Corporation's financial statements, including any significant changes in the Corporation's selection or application of accounting principles. Review and discuss analyses prepared by management and/or the Auditors setting forth significant

financial reporting issues and judgments made in connection with the preparation of the financial statements, including analyses of the effects of alternative approaches under generally accepted accounting principles.

- Review the Corporation's Annual Information Form and Form 40-F and recommend these for approval by the Board.

(c) *With respect to risk management, internal controls*

- Take all reasonable measures to ensure that management has designed and implemented effective systems of risk management and internal controls and, at least annually, review the effectiveness of the implementation of such systems.
- In consultation with management, the Auditors and the internal audit group, review the adequacy of the Corporation's internal controls, its disclosure processes and its procedures designed to ensure compliance with laws and regulations, and any special audit steps adopted in light of material control deficiencies.
- Establish procedures for (a) the receipt, retention and treatment of complaints received by the Corporation with respect to any matter, including accounting, internal accounting controls or auditing matters and (b) the confidential, anonymous submission by employees of the Corporation of concerns respecting any aspect of the Corporation's business, including questionable accounting or auditing matters.

(d) *With respect to the internal auditors*

- Monitor the qualifications of the internal auditors.
- Maintain a direct report relationship with the internal auditors and review: (i) the internal control reports prepared by management, including management's assessment of the effectiveness of the Corporation's internal control structure and procedures for financial reporting; and (ii) the performance of the internal auditors on an annual basis.
- Discuss with management, the internal auditors and the Auditors any changes in internal control over financial reporting considered for disclosure in the Corporation's public filings.
- Review the internal audit plan periodically and monitor its execution.

(e) *With respect to the Committee*

- Review and assess annually its own performance and the adequacy of this Charter and recommend to the Nominating, Corporate Governance and Sustainability Committee any changes to this Charter deemed appropriate by the Committee.

In fulfilling its duties and responsibilities under this Charter, the Committee will be entitled to reasonably rely on (a) the integrity of those persons within the Corporation and of the professionals and experts (such as the Auditors) from which it receives information, (b) the accuracy of the financial and other information provided to the Committee by such persons, professionals or experts, and (c) the representations made by the Auditors as to any services provided by it to the Corporation.

## 5 Reporting

The chair of the Committee reports regularly to the Board on the business of the Committee as well as at such time and in such manner as the Board may otherwise require.

The Committee shall review with the full Board any issues that have arisen with respect to the quality or integrity of the Corporation's financial statements, the Corporation's compliance with legal or regulatory requirements, the performance or independence of the Auditors or the performance of the Corporation's financial and accounting group.

## 6 Retention of Independent Advisors

In performing its responsibilities, the Committee may, as required and subject to advising the chairman of the Board, engage an outside advisor for advice and assistance at the expense of the Corporation.

## 7 Charter Review

The Committee shall review and update this charter annually and present it to the Nominating, Corporate Governance and Sustainability Committee for approval.

## 8 Additional

Note that the Corporation is subject to the requirements set forth in the following agreements which may affect the above:

- The Private Placement Agreement dated October 18, 2006 among the Corporation and Rio Tinto International Holdings Limited;
- The Heads of Agreement dated December 8, 2010 among the Corporation and Rio Tinto International Holdings Limited;
- The Memorandum of Agreement dated April 17, 2012 among the Corporation, Rio Tinto International Holdings Limited and Rio Tinto South East Asia Limited, as amended pursuant to an Amending Agreement dated May 22, 2012;
- The Memorandum of Agreement dated August 23, 2013 among the Corporation, Rio Tinto International Holdings Limited and Rio Tinto South East Asia Limited, as amended pursuant to an Amending Agreement dated November 14, 2013; and
- The Financing Support Agreement dated December 15, 2015 among the Corporation and Rio Tinto plc;

Nothing contained in this Charter is intended to expand applicable standards of conduct under statutory, regulatory or exchange requirements for the directors of the Corporation or the members of the Committee.

## SCHEDULE B

### GLOSSARY OF TECHNICAL TERMS AND ABBREVIATIONS

**Ag:** silver. A metal element of economic interest.

**anomaly:** a departure from the norm which may indicate the presence of mineralisation in the underlying bedrock.

**As:** arsenic.

**Au:** gold. A metal element of economic interest.

**augite:** a monoclinic mineral of the pyroxene group. It appears dark-green to black with prismatic cleavage. It is a common rock-forming mineral in igneous and metamorphic rocks.

**basalt:** a dark-coloured mafic igneous rocks, commonly extrusive but locally intrusive (e.g., as dikes). It is composed chiefly of calcic plagioclase and clinopyroxene. Nepheline, olivine, orthopyroxene, or quartz may be present in the rocks.

**biotite:** a monoclinic mineral of the mica group. It is dark brown, dark green, black and is a common rock-forming mineral in crystalline rocks, either as an original crystal in igneous rocks or as a metamorphic product in gneisses and schists.

**bornite:** an isometric mineral which is metallic. It appears brownish bronze tarnishing to iridescent blue and purple. It is a valuable source of copper.

**chalcocite:** a form of copper mineral ore that generally contains a high copper content.

**chalcopyrite:** a form of copper mineral ore that generally contains a low copper content.

**concentrate:** a product containing valuable metal from which most of the waste material in the ore has been eliminated.

**concentrator:** a plant for recovery of valuable minerals from ore in the form of concentrate. The concentrate must then be treated in some other type of plant, such as a smelter, to effect recovery of the pure metal.

**covellite:** a supergene mineral found in copper deposits; a source of copper.

**Cu:** copper. A metal element of economic interest.

**CuEq:** a copper equivalent grade, calculated using assumed metal prices for copper, gold and, where applicable, molybdenum.

**cut-off grade:** the lowest grade of mineral resources considered economic; used in the calculation of reserves and resources in a given deposit.

**dacite:** a light gray volcanic rock containing a mixture of plagioclase and other crystalline minerals in glassy silica, similar in appearance to rhyolite.

**dyke:** a tabular igneous intrusion that cuts across the bedding or foliation of the country rock.

**fault:** a fracture in rock along which the adjacent rock surfaces are differentially displaced.

**fold:** a curve or bend of a planar structure such as rock strata, bedding planes, foliation, or cleavage. A fold is a product of deformation, although its definition is descriptive and not genetic and may include primary structures.

**g:** SI unit symbol for gram (one one-thousandth of a kilogram).

**gangue:** valueless rock or mineral in ore.

**granodiorite:** a group of coarse-grained plutonic rocks intermediate in composition between quartz diorite and quartz monzonite, containing quartz, plagioclase (oligoclase or andesine), and potassium feldspar, with biotite, hornblende, or, more rarely, pyroxene, as the mafic components.

**g/t:** grams per tonne.

**Ha:** SI symbol for hectare.

**hypogene:** primary mineralisation formed by mineralising solutions emanating up from a deep magmatic source.

**intrusive:** rock which while molten, penetrated into or between other rocks but solidified before reaching the surface.

**IP:** induced polarisation.

**km:** SI unit symbol for kilometre.

**koz:** thousand ounces.

**ktpd:** thousand tonnes per day.

**lb:** pound (mass).

**leach:** to dissolve minerals or metals out of ore with chemicals.

**lithology:** the general physical characteristics of rocks in a particular area.

**m:** SI unit symbol for metre.

**Mlb:** million pounds.

**mm:** SI symbol for millimetre.

**Mo:** molybdenum. A metal element of economic interest.

**monzodiorite:** a coarse-grained igneous rock consisting of essential plagioclase feldspar, orthoclase feldspar, hornblende, and biotite, with or without pyroxene.

**Moz:** million troy ounces.

**Mt:** million tonnes.

**oz:** troy ounce (mass).

**porphyry:** any igneous rock in which relatively large, conspicuous crystals (called phenocrysts) set in a fine-grained ground mass.

**ppm:** parts per million.

**pyrite:** an isometric mineral. It is an accessory in igneous rocks, and in metamorphic rocks, in sedimentary rocks including coal seams and is a source of sulphur which may have included gold.

**quartz:** a general term for a variety of cryptocrystalline varieties of silica.

**QMD:** quartz monzodiorite.

**RC:** reverse circulation method of drilling.

**rhyolite:** a group of extrusive igneous rocks, typically porphyritic and commonly exhibiting flow texture, with phenocrysts of quartz and alkali feldspar in a glassy to cryptocrystalline groundmass and

also refers to any rock in that group. Rhyolite grades into rhyodacite with decreasing alkali feldspar content and into trachyte with a decrease in quartz.

**shear zones:** volumes of rock deformed by shearing stress under brittle-ductile or ductile conditions, typically in subduction zones at depths down to 10-20 km.

**stratigraphic sequence:** a chronologic succession of sedimentary rocks from older below to younger above, essentially without interruption.

**strike:** the direction, or course or bearing, of a vein or rock formation measured on a level surface.

**supergene:** ore minerals that have been formed by the effects (usually oxidisation and secondary sulphide enrichment) of descending ground water.

**t:** metric tonne (1000kg).

**tailings:** the gangue and other refuse material resulting from the washing, concentration, or treatment of ground ore.

**tpd:** tonnes per day.

**tuff:** consolidated pyroclastic rocks.

**vein:** a zone or belt of mineralised rock lying within boundaries clearly separating it from neighbouring rock. It includes all deposits of mineral matter found through a mineralised zone or belt coming from the same source, impressed with the same forms and appearing to have been created by the same processes.



## SCHEDULE C

### CHANGE IN MINERAL RESERVES FROM DECEMBER 31, 2020 TO DECEMBER 31, 2021

The following is a comparison between the Oyu Tolgoi Mineral Reserves as at December 31, 2020 and the Mineral Reserves as at December 31, 2021.

#### Oyut Open Pit Mineral Reserves Change

	Classification	Ownership	Mineral Reserve				Contained Metal		
			Tonnage	Cu	Au	Ag	Cu	Au	Ag
			(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Oyut Mineral Reserve at December 31, 2020	Proven	Oyu Tolgoi LLC	280	0.52	0.40	1.32	1.5	3.7	12.0
	Probable	Oyu Tolgoi LLC	460	0.39	0.24	1.13	1.8	3.5	16.7
	Total (Proven + Probable)	Oyu Tolgoi LLC	740	0.44	0.30	1.20	3.3	7.2	28.7
Oyut Mineral Reserve at December 31, 2021	Proven	Oyu Tolgoi LLC	260	0.52	0.37	1.30	1.4	3.1	10.9
	Probable	Oyu Tolgoi LLC	450	0.40	0.24	1.13	1.8	3.4	16.4
	Total (Proven + Probable)	Oyu Tolgoi LLC	710	0.44	0.29	1.19	3.1	6.6	27.3
Difference	Proven	Oyu Tolgoi LLC	-20	-0.01	-0.03	-0.02	-0.1	-0.6	-1.1
	Probable	Oyu Tolgoi LLC	-10	0.00	0.00	0.00	0.0	-0.1	-0.4
	Total (Proven + Probable)	Oyu Tolgoi LLC	-30	0.00	-0.01	-0.01	-0.2	-0.6	-1.5
Percentage Change	Proven	Oyu Tolgoi LLC	-8%	-1%	-8%	-2%	-9%	-15%	-9%
	Probable	Oyu Tolgoi LLC	-2%	0%	0%	0%	-2%	-2%	-2%
	Total (Proven + Probable)	Oyu Tolgoi LLC	-4%	-1%	-5%	-1%	-5%	-9%	-5%

### Oyut Stockpile Change

Stockpile	Classification	Ownership	Mineral Reserve				Contained Metal		
			Tonnage	Cu	Au	Ag	Cu	Au	Ag
			(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Oyut Stockpiles at December 31, 2020	Proven	Oyu Tolgoi LLC	60	0.32	0.13	0.93	0.2	0.2	1.7
	Probable	Oyu Tolgoi LLC	0	0.00	0.00	0.00	0.0	0.0	0.0
	Total (Proven + Probable)	Oyu Tolgoi LLC	60	0.32	0.13	0.93	0.2	0.2	1.7
Oyut Stockpiles at December 31, 2021	Proven	Oyu Tolgoi LLC	0	0.00	0.00	0.00	0.0	0.0	0.0
	Probable	Oyu Tolgoi LLC	50	0.31	0.13	0.96	0.2	0.2	1.6
	Total (Proven + Probable)	Oyu Tolgoi LLC	50	0.31	0.13	0.96	0.2	0.2	1.6
Difference	Proven	Oyu Tolgoi LLC	-60	-0.32	-0.13	-0.93	-0.2	-0.2	-1.7
	Probable	Oyu Tolgoi LLC	50	0.31	0.13	0.96	0.2	0.2	1.6
	Total (Proven + Probable)	Oyu Tolgoi LLC	0	-0.01	0.00	0.03	0.0	0.0	-0.1
Percentage Change	Proven	Oyu Tolgoi LLC	-	-	-	-	-	-	-
	Probable	Oyu Tolgoi LLC	-	-	-	-	-	-	-
	Total (Proven + Probable)	Oyu Tolgoi LLC	-8%	-2%	2%	3%	-10%	-6%	-5%

### Hugo North Mineral Reserves Change

Stockpile	Classification	Ownership	Mineral Reserve				Contained Metal		
			Tonnage	Cu	Au	Ag	Cu	Au	Ag
			(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Hugo North Total Mineral Reserves at December 31, 2020	Probable	Oyu Tolgoi LLC	410	1.51	0.29	3.12	6.2	3.8	41.0
	Probable	Entrée LLC	40	1.56	0.54	3.69	0.6	0.7	4.6
	Total Probable		450	1.52	0.31	3.17	6.8	4.5	45.6
Hugo North Total Mineral Reserves at December 31, 2021	Probable	Oyu Tolgoi LLC	410	1.55	0.30	3.19	6.4	4.0	42.1
	Probable	Entrée LLC	40	1.55	0.54	3.68	0.6	0.7	4.6
	Total Probable		450	1.55	0.32	3.23	7.0	4.7	46.8
Difference	Probable	Oyu Tolgoi LLC	0	0.04	0.01	0.07	0.2	0.2	1.2
	Probable	Entrée LLC	0	0.00	0.00	-0.01	0.0	0.0	0.0
	Total Probable		0	0.03	0.01	0.07	0.2	0.2	1.2
Percentage Change	Probable	Oyu Tolgoi LLC	0%	2%	4%	2%	3%	5%	3%
	Probable	Entrée LLC	1%	0%	0%	0%	0%	1%	0%
	Total Probable		0%	2%	4%	2%	3%	4%	3%

**Notes to the Mineral Reserves at December 31, 2020 and to the Mineral Reserves at December 31, 2021.**

1. Totals may not match due to rounding.
2. CIM Definition Standards are used for reporting of Mineral Reserves.
3. The effective date of the Mineral Reserves is 31 December 2021.
4. Assumptions for smelting refining and treatment, charges, deductions, and payment terms, concentrate transport, metallurgical recoveries and royalties are included in the NSR values.
5. The Oyut Mineral Reserve is currently being mined by open pit mining methods. The Stockpile Mineral Reserve is on surface close to the Oyut open pit.
6. For the Hugo North deposit, the Probable Mineral Reserve is derived from a combination of Measured and Indicated Mineral Resources.
7. The Shivee Tolgoi Licence and the Javkhlant Licence are held by Entrée LLC. The Shivee Tolgoi Licence and the Javkhlant Licence are planned to be operated by Oyu Tolgoi LLC. Oyu Tolgoi LLC will receive 80% of cash flows after capital and operating costs for material originating below 560 m and 70% above this depth. The Corporation holds a 7.9% interest in Entrée Resources Ltd.
8. The term Entrée LLC refers to ownership by the proposed joint venture arrangement between Oyu Tolgoi LLC and Entrée LLC.

**Notes to the Mineral Reserves at December 31, 2021.**

1. NSR values used for estimating Mineral Reserves are based on forecast long-term copper, gold, and silver prices of \$3.03/lb, \$1,441/oz, and \$19.10/oz, respectively.
2. The Hugo North Mineral Reserve includes 1.5Mt of underground development material which has been stockpiled at surface and is awaiting processing.
3. For the Oyut Mineral Reserve, processing and general administration costs used to determine cut-off NSR values vary between \$7.18/t and \$10.14/t depending on the ore type processed.
4. For the Hugo North Mineral Reserve, an NSR shut off grade of \$17.84/t is used to determine the point at which each underground drawpoint is closed. This NSR value is based on estimated mining, processing and G&A costs which range from \$17.27/t to \$17.90/t across the five different ore types.
5. For the Oyut deposit, the Proven Mineral Reserve is derived only from Measured Mineral Resources. The Probable Mineral Reserve is derived only from Indicated Mineral Reserves.

**Notes to the Mineral Reserves at December 31, 2021**

1. NSR values used for estimating Mineral Reserves are based on forecast long-term copper, gold, and silver prices of \$3.203/lb, \$1,479.82/oz, and \$19.23/oz, respectively.
2. The Hugo North Mineral Reserve is being mined by underground mining methods. The Hugo North Mineral Reserve includes 1.7Mt of underground development material which has been stockpiled at surface and is awaiting processing.
3. For the Oyut Mineral Reserve, processing and G&A costs used to determine NSR cut-off values vary between \$7.67/t and \$11.12 /t depending on the ore type processed.
4. For the Hugo North Mineral Reserve, an NSR shut off grade of \$20.79/t is used to determine the point at which each underground drawpoint is closed. This NSR value is based on estimated mining, processing and G&A costs which range from \$20.40/t to \$21.20/t across the five different ore types with \$20.79/t being the weighted average of the ore types.
5. For the Oyut deposit, the Proven Mineral Reserve is derived only from Measured Mineral Resources. The Probable Mineral Reserve is derived only from Measured and Indicated Mineral Reserves.

## SCHEDULE D

### DETAILED MINERAL RESOURCES AS AT DECEMBER 31, 2021

The following provides further detail for the Oyu Tolgoi Mineral Resources as at December 31 2021, including with respect to ownership of Oyu Tolgoi LLC and Entrée LLC as well as Oyu Mineral Resources in the open pit and underground.

#### Oyu (Open Pit) Mineral Resources as of December 31, 2021

Classification	Ownership	Mineral Resources				Contained Metal		
		Tonnes	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Measured	Oyu Tolgoi LLC	20	0.41	0.38	1.1	0.1	0.2	0.6
Indicated	Oyu Tolgoi LLC	90	0.33	0.30	1.1	0.3	0.9	3.4
Total (Measured + Indicated)	Oyu Tolgoi LLC	110	0.34	0.31	1.1	0.4	1.1	3.9
Inferred	Oyu Tolgoi LLC	340	0.29	0.19	1.0	1.0	2.0	11.1

#### Oyu (Underground) Mineral Resources as of December 31, 2021

Classification	Ownership	Mineral Resources				Contained Metal		
		Tonnes	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Measured	Oyu Tolgoi LLC	10	0.48	0.91	1.3	0.0	0.3	0.4
Indicated	Oyu Tolgoi LLC	50	0.38	0.61	1.2	0.2	1.0	1.9
Total (Measured + Indicated)	Oyu Tolgoi LLC	60	0.40	0.66	1.2	0.2	1.3	2.3
Inferred	Oyu Tolgoi LLC	140	0.41	0.42	1.2	0.6	1.9	5.8

#### Hugo North (Oyu Tolgoi LLC) Mineral Resources as of December 31, 2021

Classification	Ownership	Mineral Resources				Contained Metal		
		Tonnes	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Measured	Oyu Tolgoi LLC	60	1.89	0.49	4.2	1.1	0.9	7.6
Indicated	Oyu Tolgoi LLC	380	1.37	0.35	3.2	5.3	4.3	39.5
Total (Measured + Indicated)	Oyu Tolgoi LLC	440	1.44	0.37	3.3	6.3	5.2	47.1
Inferred	Oyu Tolgoi LLC	720	0.83	0.29	2.5	6.0	6.7	57.1

### Hugo North (Entrée LLC) Mineral Resources as of December 31, 2021

Classification	Ownership	Mineral Resources				Contained Metal		
		Tonnes	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Measured	Entrée LLC	-	-	-	-	-	-	-
Indicated	Entrée LLC	80	1.62	0.55	4.2	1.4	1.5	11.4
Total (Measured + Indicated)	Entrée LLC	80	1.62	0.55	4.2	1.4	1.5	11.4
Inferred	Entrée LLC	160	1.05	0.37	2.8	1.7	1.9	14.6

### Hugo South Mineral Resources as of December 31, 2021

Classification	Ownership	Mineral Resources				Contained Metal		
		Tonnes	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Inferred	Oyu Tolgoi LLC	730	0.83	0.07	1.9	6.1	1.7	44.0

### Heruga Mineral Resources as of December 31, 2021

Classification	Ownership	Mineral Resources					Contained Metal			
		Tonnes	Cu	Au	Ag	Mo	Copper	Gold	Silver	Mo
		(Mt)	(%)	(g/t)	(g/t)	(ppm)	(Mt)	(Moz)	(Moz)	(Mlbs)
Inferred	Javkhlant EJV	1500	0.41	0.40	1.4	118	6.1	19.2	69.4	390
	Oyu Tolgoi LLC	110	0.42	0.30	1.6	112	0.4	1.0	5.4	30
	All Heruga	1610	0.41	0.39	1.4	118	6.6	20.2	74.9	420

#### Notes to the Mineral Resources:

- Totals may not match due to rounding.
- CIM Definition Standards are used for reporting of Mineral Resources.
- The Mineral Resources exclude Mineral Reserves.
- The following CuEq formulae have been used for cut-off grade determination in each deposit.
  - Oyut:  $CuEq = Cu + ((Au * 40.9679) + (Ag * 0.4227)) / 70.6140$
  - Hugo North:  $CuEq = Cu + ((Au * 40.9098) + (Ag * 0.5418)) / 70.6140$
  - Hugo South:  $CuEq = Cu + ((Au * 43.2704) + (Ag * 0.5843)) / 70.6140$
  - Heruga:  $CuEq = Cu + ((Au * 42.4871) + (Ag * 0.5880) + (Mo * 0.0150)) / 70.5478$
- The metal prices used in determining the CuEq formulae are:
  - a. \$3.203/lb for copper, \$1,479.82/oz for gold, \$19.23/oz for silver, and \$9.29/lb for molybdenum.
- The metallurgical recoveries used in determining the CuEq formulae for each deposit are:
  - a. Oyut: Copper 78%, Gold 67%, Silver 52%.
  - b. Hugo North: Copper 93%, Gold 80%, Silver 81%.
  - c. Hugo South: Copper 89%, Gold 81%, Silver 84%
  - d. Heruga: Copper 82%, Gold 73%, Silver 78%, Molybdenum 60%.
- For the Oyut deposit, a cut-off grade of 0.25% CuEq has been used for Mineral Resources with open pit potential.
- For Hugo North and Oyut underground, a cut-off grade of 0.46% CuEq grade was used based on the assumption that the deposits will be mined using underground mass mining methods
- For Hugo South and Heruga, a cut-off grade of 0.41% CuEq grade which is unchanged from previous reporting.
- The effective date of the Mineral Resources estimates is December 31, 2021.
- The Shivee Tolgoi and Javkhlant licences are held by Entrée LLC. The Shivee Tolgoi and Javkhlant Licences are planned to be operated by Oyu Tolgoi LLC. Oyu Tolgoi LLC will receive 80% of cash flows after capital and operating costs for material originating below 560 m, and 70% above this depth. The Corporation holds a 7.9% interest in Entrée LLC.

12. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
13. The contained copper, gold, silver, and molybdenum estimates in the tables have not been adjusted for metallurgical recoveries.
14. Hugo North contains 1.7Mt of stockpile material for which there are reasonable prospects for eventual economic mineral extraction.