

**A Leading Copper and Gold Producer  
Developing a Tier-1 Copper Asset**

**Third Quarter 2020 Financial Results**

**November 16, 2020**



**TURQUOISE HILL**

**TSX-NYSE: TRQ**

# Cautionary Notes

Certain statements made herein, including statements relating to matters that are not historical facts and statements of Turquoise Hill Resources Ltd.'s (the "Company", "Turquoise Hill" or "TRQ") 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 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", "could", "should", "expect", "seek", "may", "intend", "likely", "plan", "estimate", "will", "believe" and similar expressions suggesting future outcomes or statements regarding an outlook. These include, but are not limited to, statements and information regarding: the arbitration proceedings, including the potential benefits, timing and outcome of the arbitration proceedings; the expectations set out in the OTTR20; the timing and amount of future production and potential production delays; statements in respect of the impacts of any delays on the Company's cash flows; expected copper and gold grades; the merits of the class action complaint filed against the Company; liquidity; funding sources, funding requirements and planning and the status and nature of the Company's ongoing discussions with Rio Tinto and its subsidiaries with respect to future funding plans and requirements (including as contemplated by the Memorandum of Understanding dated September 9, 2020 entered into between the Company and Rio Tinto plc (the "MOU")); the amount of any funding gap to complete the Oyu Tolgoi Project; the amount and potential sources of additional funding; the Company's ability to re-profile its existing project debt in line with current cash flow projections; the amount by which a successful re-profiling of the Company's existing debt would reduce the Company's currently projected funding requirements; the Company's and Rio Tinto's understanding regarding the raising of supplemental senior debt and the Company's ability to raise supplemental senior debt; the Company's and Rio Tinto's understanding regarding the process for identifying and considering other funding options; the Company's and Rio Tinto's understanding regarding the scope and timing for an equity offering by the Company to address any remaining funding gap; the Company's intention to prioritise funding by way of debt and/or hybrid financing over equity funding; the Company's expectation of the anticipated funding gap; the timing of studies, announcements and analyses; status of 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 the State Owned Power Plant ("SOPP") and related amendments to the Power Source Framework Agreement ("PSFA") as well as power purchase agreements; the timing of construction and commissioning of the potential SOPP; sources of interim power; the potential impact of COVID-19 on the Company's business, operations and financial condition; capital and operating cost estimates, timing of completion of the definitive estimate review and the scope thereof; mill and concentrator throughput; the outcome of formal international arbitration proceedings; the outcome of formal international arbitration proceedings; anticipated business activities, planned expenditures, corporate strategies, and any and all 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 Company 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 Company 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 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; the willingness of third parties to extend existing power arrangements; the status of the Company's relationship and interaction with the Government of Mongolia on the continued operation and development of Oyu Tolgoi and Oyu Tolgoi LLC internal governance; the status and nature of the Company's ongoing discussions with Rio Tinto and its subsidiaries with respect to future funding plans and requirements (including as contemplated by the MOU) as well as the commencement and conclusion of the arbitration proceedings, including the potential benefits, timing and outcome of the arbitration proceedings.





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; the outcome of the definitive estimate review; 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 complaint filed against the Company; 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; communications with local stakeholders and community relations; activities, actions or assessments, including tax assessments, by governmental authorities; events or circumstances (including strikes, blockades or similar events outside of the Company's control) that may affect the Company's ability to deliver its products in a timely manner; currency fluctuations; the speculative nature of mineral exploration; the global economic climate; 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; and defective title to mineral claims or property. Although the Company 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 Company'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.

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 Company'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 in the Company's Annual Information Form dated as of March 18, 2020 in respect of the year ended December 31, 2019 (the "AIF"), as supplemented by our Management's Discussion and Analysis of Financial Condition and Results of Operations for the three and nine months ended September 30, 2020 ("MD&A"). Readers are further cautioned that the list of factors enumerated in the "Risk Factors" section of the AIF and in the MD&A that may affect future results is not exhaustive. When relying on the Company's forward-looking statements and information to make decisions with respect to the Company, investors and others should carefully consider the foregoing factors and other uncertainties and potential events.

Disclosure of information of a scientific or technical nature in this presentation in respect of the Oyu Tolgoi mine was approved by Jo-Anne Dudley (FAusIMM(CP)), Chief Operating Officer of Turquoise Hill. Ms. Dudley is a "qualified person" as that term is defined in National Instrument 43-101 –Standards of Disclosure for Mineral Projects. Reference is made to the Oyu Tolgoi 2020 Technical Report dated August 28, 2020 and available on SEDAR at [www.sedar.com](http://www.sedar.com)("OTTR20").

This presentation contains certain non-GAAP (Generally Accepted Accounting Principles) measures such as C1 Cash Costs. Such measures have non-standardised meaning under International Financial Reporting Standards ("IFRS") and may not be comparable to similar measures used by other issuers. These measures are presented in order to provide investors and other stakeholders with additional understanding of performance and operations at the Oyu Tolgoi mine and are not intended to be used in isolation from, or as a replacement for, measures prepared in accordance with IFRS. See the MD&A for more information about non-GAAP measures reported by the Company.



# Presenters

**Ulf Quellmann**

**Chief Executive Officer**

**Luke Colton**

**Chief Financial Officer**

**Jo-Anne Dudley**

**Chief Operating Officer**





# Q3'20 Highlights



- ✓ All Injury Frequency Rate (AIFR) of 0.03 in Q3
- ✓ Oyu Tolgoi produced 36.3 kt of copper and 36.7 koz of gold
- ✓ Forecast 2020 gold production is trending towards the higher end of the previously announced 155 to 180 koz range
- ✓ \$1.3 billion of available liquidity<sup>1</sup>, sufficient to fund the Company's requirements into Q2 2022<sup>2</sup>
- ✓ Base case incremental funding requirement has decreased from \$3.6 billion to \$3.0 billion<sup>2</sup>
- ✓ Sustainable first production for Panel 0 is trending towards the earlier months of the previously guided range of October 2022 to June 2023, including a base case of October 2022, while the development capital base case remains \$6.8 billion
- ✓ Turquoise Hill is building an in-house exploration team and program focused on the prospective South Gobi region

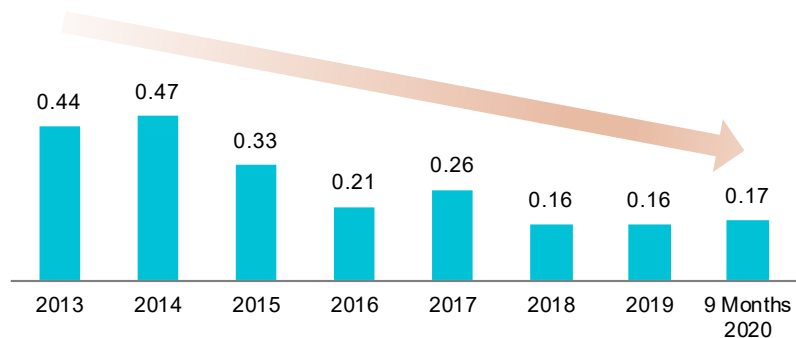
1. As at September 30, 2020. Refer to section - Liquidity and Capital Resources - of the MD&A at September 30, 2020  
2. Based on current projections and subject to change



# Q3'20 Safety and Operations Update

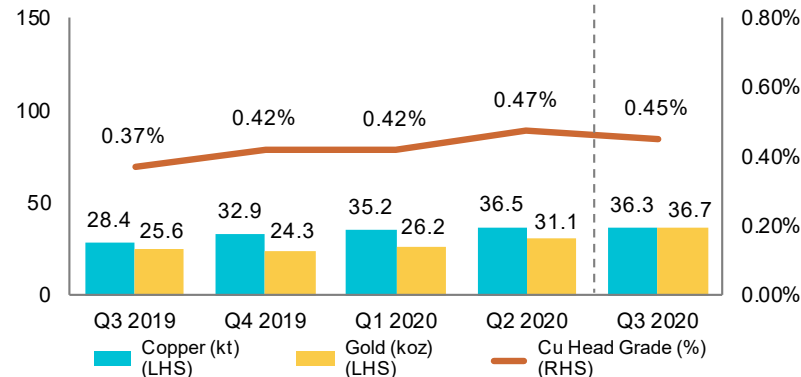
## All Injury Frequency Rate

Based on 200,000 Hours of Work Exposure



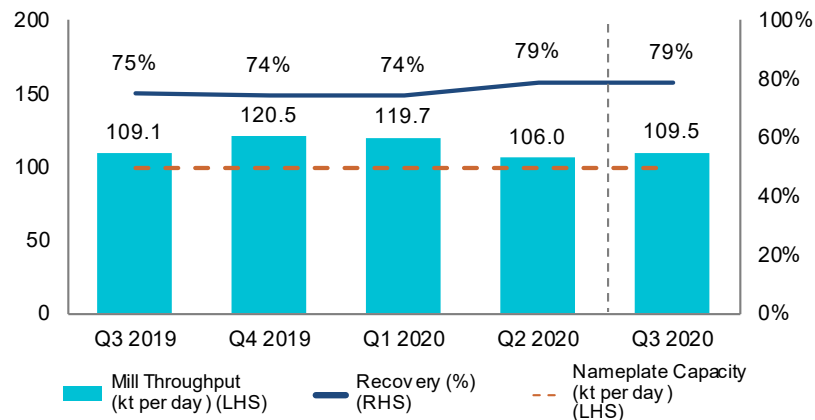
## Oyu Tolgoi Metal Production

Production (kt Cu, koz Au)



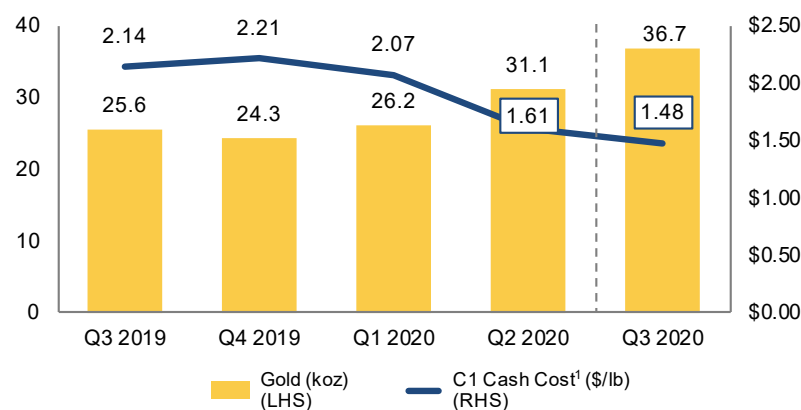
## Oyu Tolgoi Throughput Consistently Above Nameplate Capacity

Processing Rate (ktpd)



## Gold Impact on C1 Cash Cost<sup>1</sup>

Gold Production (koz)



Source: Company Filings

1. Refer to section - Non-GAAP Measures - of the MD&A at September 30, 2020



# Financial Performance Overview

## Key Financial Metrics of Turquoise Hill

All values on a consolidated basis and in millions of United States dollars unless otherwise stated

	Third Quarter of 2020	Third Quarter of 2019	Change
<b>Revenue</b>	<b>264.5</b>	209.2	26.4%
<b>Cash generated from (used in) operating activities before interest and tax</b>	<b>89.2</b>	(13.1)	780.9%
<b>Basic and diluted income per share attributable to owners of Turquoise Hill (\$ / share)</b>	<b>0.64</b>	0.36	-
<b>C1 cash costs<sup>1</sup> (\$ / lb)</b>	<b>1.48</b>	2.14	(30.8%)
<b>All-in-sustaining unit costs<sup>1</sup> (\$ / lb)</b>	<b>1.88</b>	2.84	(33.8%)
<b>Capital expenditure</b>	<b>254.5</b>	329.2	(22.7%)
<b>Liquidity (\$ billions)<sup>2</sup></b>	<b>1.3</b>		

Source: Company Filings

1. Refer to section - Non-GAAP Measures - of the MD&A at September 30, 2020
2. Refer to section - Liquidity and Capital Resources - of the MD&A at September 30, 2020



# Liquidity and Funding

## Current Liquidity and Outlook<sup>1 2 3</sup>

- ✓ Increased 2021 gold production forecast
- ✓ Continued focus on operating cost savings and other optimization efforts
- ✓ Improved commodity price estimates



As At: <u>30-Sep-20</u>	
Available Liquidity	\$1.3Bn
End of Liquidity Period	Q2 2022

## Incremental Funding Requirement<sup>1 2 3</sup>

- ✓ Expected funding gap has been reduced
- ✓ Sustainable production trending towards earlier end of previously disclosed range
- ✓ Supportive commodity prices, and updated assumptions regarding impact of COVID-19



Base Case Estimate	\$3.0Bn
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## Funding Strategy

- ✓ September MOU with Rio Tinto reflects parties' understanding to pursue a re-profiling of existing project debt<sup>4</sup> and seek up to \$500 million in supplemental debt
- ✓ TRQ continues to prioritize debt and/or hybrid financing over equity for incremental funding requirement
- ✓ Additional debt, medium term notes, and gold stream among options under consideration

**Base Case Underground Development Forecasts:**

- Development Cost: **\$6.8Bn<sup>3</sup>**
  - Range: \$6.6Bn to \$7.1Bn
- First Sustainable Production: **October 2022<sup>3</sup>**
  - Range: October 2022 to June 2023

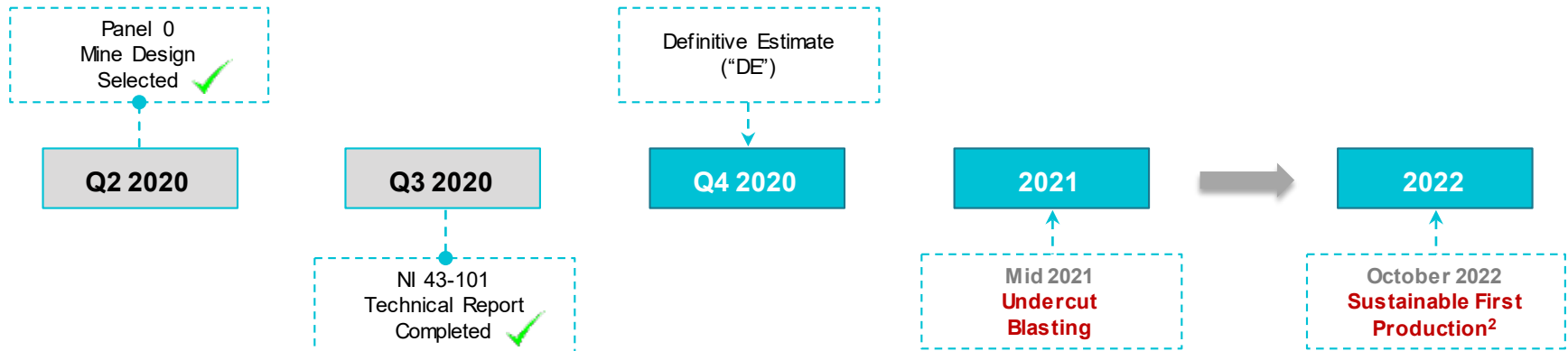
1. Forecasts incorporate principal and interest payments and do not assume any re-profiling of existing principal repayments or additional external financing  
 2. Liquidity outlook and incremental funding requirement impacted by various factors. Please refer to section – Funding of Oyu Tolgoi LLC By Turquoise Hill – of the MD&A at September 30, 2020  
 3. Based on current projections and subject to change  
 4. A successful re-profiling would reduce the currently projected incremental funding requirements of Oyu Tolgoi by up to US\$1.4 billion





# Infrastructure and Underground Development<sup>1</sup>

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- Sustainable first production is trending towards the earlier months of the previously guided range (October 2022 – June 2023)<sup>2</sup> with a base case of October 2022
- Anticipated base case development capital cost of \$6.8 billion, with a range of \$6.6 - \$7.1 billion<sup>2</sup>
- TRQ is undertaking an independent technical review of the definitive estimate communicated by the project manager
- Lateral development and construction of the underground material handling system continues to progress favourably towards first sustainable production from Panel 0, despite challenges of COVID-19
- Next phase of design review will reflect Panel 0 learnings and be based on additional data collection and analysis from an ongoing drilling program to inform design reviews for Panel 2 and Panel 1. Panel 2 North and Central studies are expected to progress significantly in H2'21. Broader studies for P1 and P2 South are also ongoing and include assessments of recoverability of the structural pillars incorporated into OTT20

1. Timeline is subject to change

2. Cost and schedule range based on preliminary indications from the definitive estimate process and assume an easing of travel restrictions and COVID-19-related controls from the time of reporting, which will continue to be monitored and reviewed. Subject to completion of TRQ's assurance process



## Shafts and Materials Handling



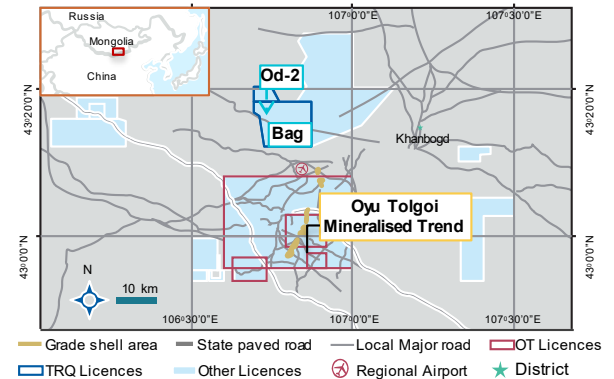
- ✓ Shaft 2: Ore handling, people and logistics transport operating normally
- ✓ Shafts 3 and 4: Preparation for sinking work to commence continues with remote support
- ✓ Work on Primary Crusher 1 and Materials Handling System 1 continues with recent productivity improvements
- ✓ On-site personnel numbers still capped to manage COVID-19 risks, however there has been recent easing

## Mine Development



- ✓ Conveyor decline continues to progress well with 0.9 total eq. km completed during the quarter
- ✓ In Q3, underground development progressed 4.7 eq. km and completed 14.3 thousand cubic metres of mass excavation
- ✓ Average advancement of 1,571 eqm per month for the quarter as resource numbers redeployed to critical construction work

## Exploration Update

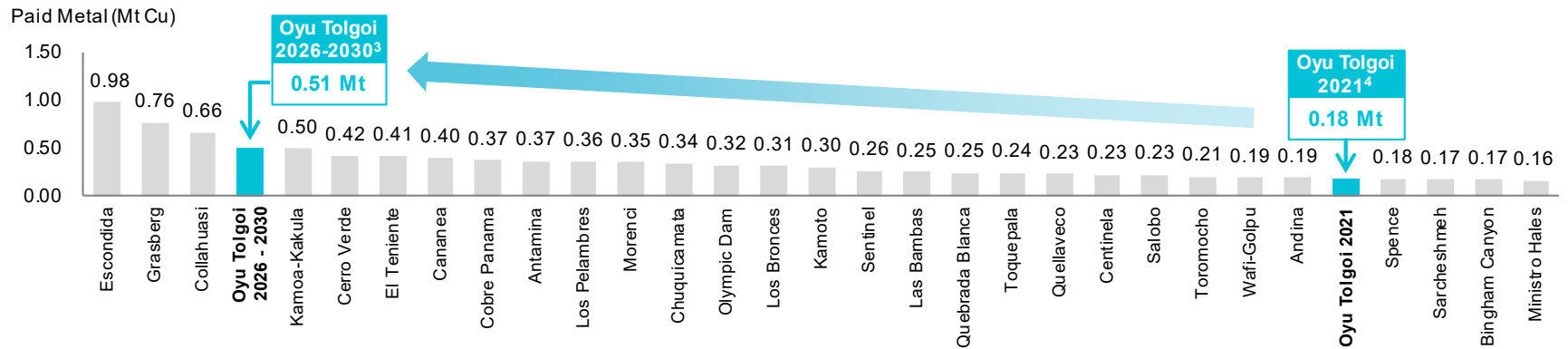


- ✓ Significant potential in the under-explored South Gobi region
- ✓ TRQ currently holds 2 Exploration Licenses: Bag and Od-2
- ✓ TRQ well-positioned for regional exploration opportunities
  - Meaningful infrastructure in place and proven in-country expertise
- ✓ New exploration team created in Q3'20 to add to Ulaanbaatar-based technical services team

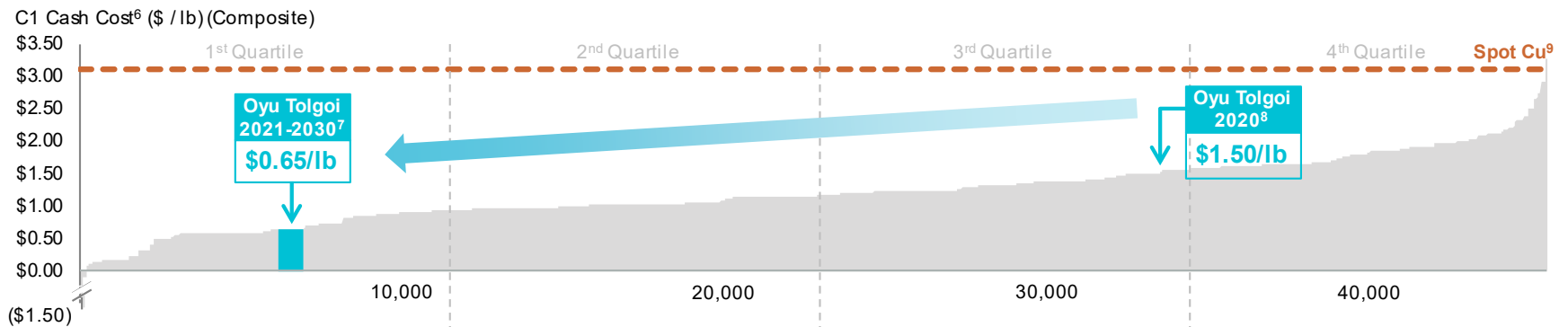


# Oyu Tolgoi – On track to become a Tier 1 Copper Asset <sup>11</sup>

## Top 30 Copper Producing Mines in 2028<sup>1 2</sup>



## 2025 Cash Cost by Mine<sup>2 5</sup>



Source: Wood Mackenzie, OTTR20

1. Wood Mackenzie estimate as at Q3 2020
2. OTTR20 excludes any impacts of COVID-19 and estimates are subject to further study and assessment as part of Oyu Tolgoi LLC's cost and schedule estimation update which is expected later in 2020 and subject to further study and analysis on Panels 1 and 2
3. Reflects OTTR20 forecast of average payable copper in concentrate production over 5 years from 2026 to 2030. Refer to Table 22.5 in OTTR20

4. See payable copper in concentrate production forecast for 2021. Refer to Table 22.5 in OTTR20
5. First quartile C1 cash costs based on Oyu Tolgoi production using 2025 Wood Mackenzie C1 composite cost curve
6. Refer to section - Non-GAAP Measures - of the MD&A at September 30, 2020
7. OTTR20 forecast of average annual C1 cash costs for first 10 years. Refer to Table 1.18 in OTTR20
8. Midpoint of 2020 guidance as reported in the MD&A at September 30, 2020
9. Spot copper price, data as of November 4, 2020





# Turquoise Hill: Investment Highlights

## TRQ Operates Oyu Tolgoi – a Tier 1 Asset...

- ✓ Forecast to be the world's 4<sup>th</sup> largest copper producer when fully ramped up
- ✓ First quartile C1 cash costs<sup>1</sup> expected when underground production ramps up with multi-decade mine life and significant resource base

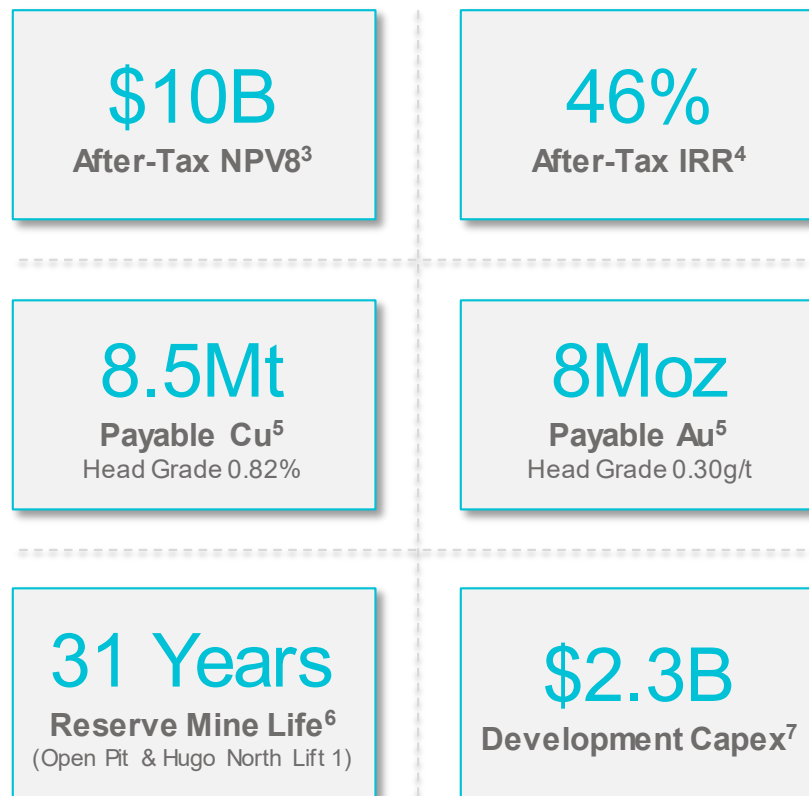
## ...with A Demonstrated Track Record of Operational Excellence

- ✓ Consistently met production guidance with outstanding safety performance
- ✓ History of optimisation to enhance open pit cash flows
- ✓ Lateral development to support Panel 0 near complete with over 48.6 eqkm achieved to date

## Compelling Value Proposition

- ✓ Superior growth profile to other copper producers
- ✓ Timing of the underground ramp-up well-positioned to benefit from strong long-term copper demand-supply fundamentals

## Technical Report Highlights<sup>2</sup>



Source: OTTR20, Wood Mackenzie, Capital IQ

1. Refer to section – Non-GAAP Measures – of the MD&A at September 30, 2020
2. Financial analysis uses long-term metal prices of \$3.03/lb copper, \$1,474/oz gold, and \$17.85/oz silver; excludes any impacts of COVID-19 and estimates are subject to further study and assessment as part of Oyu Tolgoi LLC's cost and schedule estimation update which is expected later in 2020 and subject to further study and analysis on Panels 1 and 2
3. NPV8 is the net present value of Mineral Reserves at a discount rate of 8% for all years, calculated at January 1, 2021, based on expected cash flows from and after that date
4. Calculated based on net cash flows after tax from Mineral Reserves at January 1, 2021, based on expected net cash flows after tax from and after that date
5. Payable Cu and Au reflect life-of-mine values
6. Mine life is calculated from January 1, 2021 and only reflects Mineral Reserves
7. Presented in nominal terms. Economic analysis is calculated as of January 1, 2021 and excludes development capital spend up to December 31, 2020. Underground project spend includes development capital and VAT and excludes capitalized interest



# APPENDIX





# Operation and Finance

## 2020 Guidance

Operational guidance	
<b>Copper production (tonnes)</b>	140,000 – 170,000
<b>Gold production (ounces)</b>	155,000 – 180,000

Financial guidance	
<b>Operating cash costs (\$ million)<sup>1</sup></b>	780 – 830
<b>C1 cash costs (\$ / lb)<sup>1 2</sup></b>	1.30 – 1.70
<b>Capital expenditure</b>	
<b>Open pit (\$ million)</b>	60 – 70
<b>Underground (\$ billion)</b>	1.0 – 1.1

## 2021 Outlook

Operational guidance	
<b>Copper production (tonnes)</b>	170,000 – 200,000
<b>Gold production (ounces)</b>	500,000 – 550,000



1. Refer to section - Non-GAAP Measures - of the MD&A at September 30, 2020

2. Unit cost guidance assumes the midpoint of expected 2020 copper and high end of 2020 gold production ranges and commodity price assumptions of \$2.74/lb copper and \$1,837/oz gold

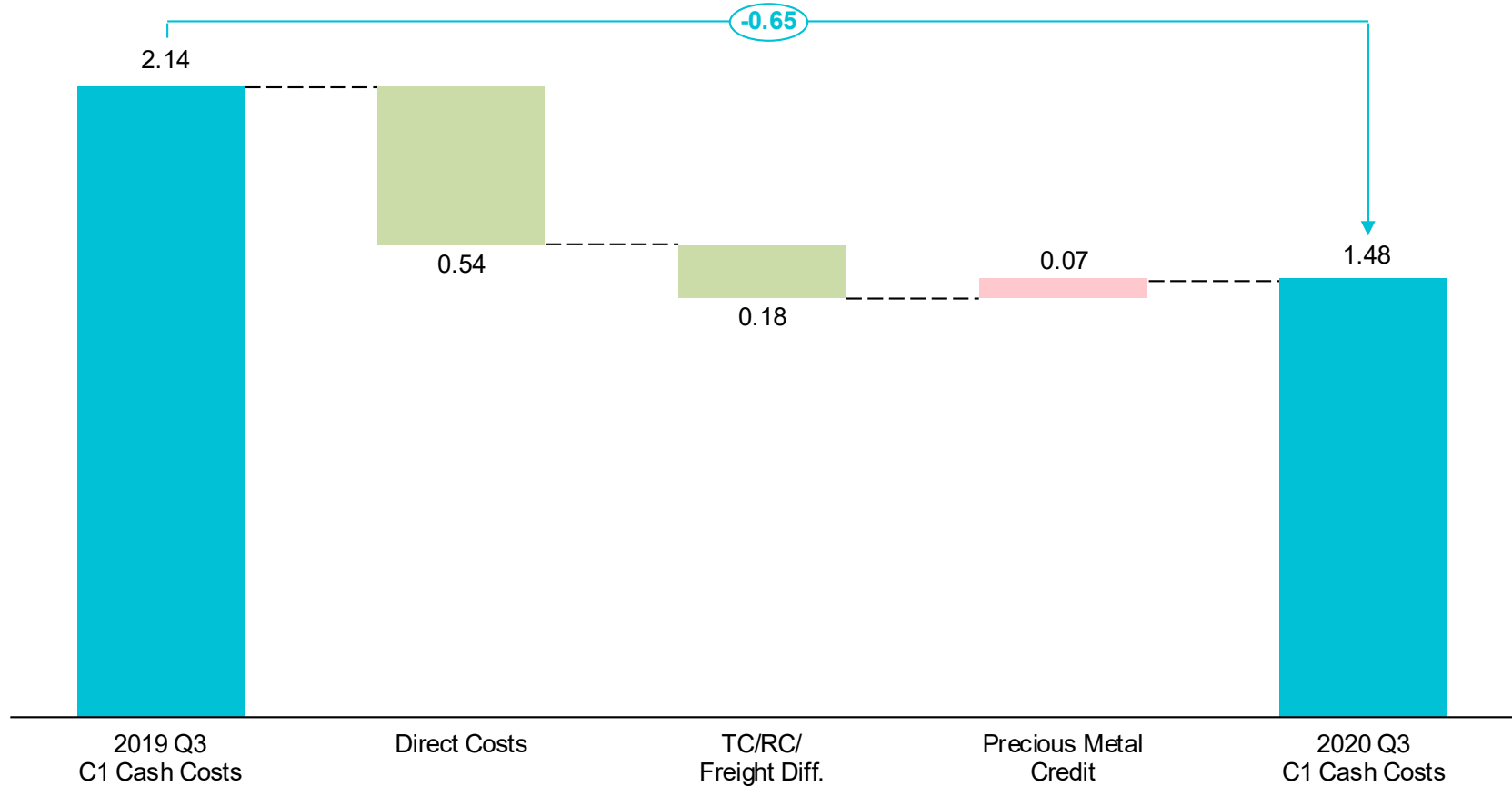




# C1 Cash Costs Over Q3'19

## Reconciliation of C1 Cash Costs<sup>1</sup>

\$ / lb, All values on a consolidated basis unless otherwise stated and in United States dollars per pound of copper produced



1. Based on the reconciliation of C1 cash costs in the MD&A. Refer to section - Non-GAAP Measures - of the MD&A at September 30, 2020

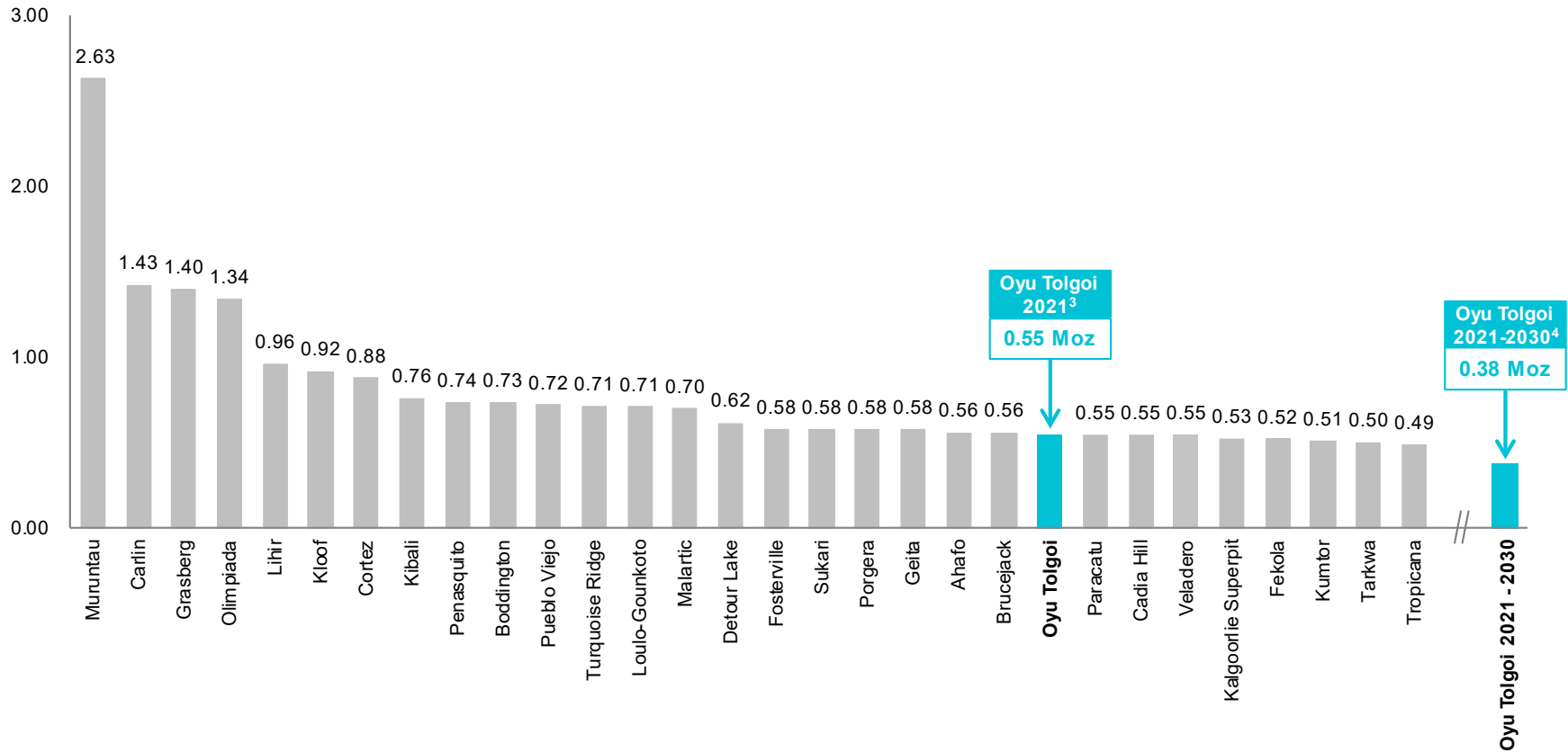


# TRQ Is Also a Substantial Producer of Gold

## Forecast to be Among the Top 30 Producers in 2021

### Top 30 Gold Producing Mines in 2021<sup>1</sup> 2

Paid Metal (Moz Au)



Source: Wood Mackenzie, OTTR20, Company Filings

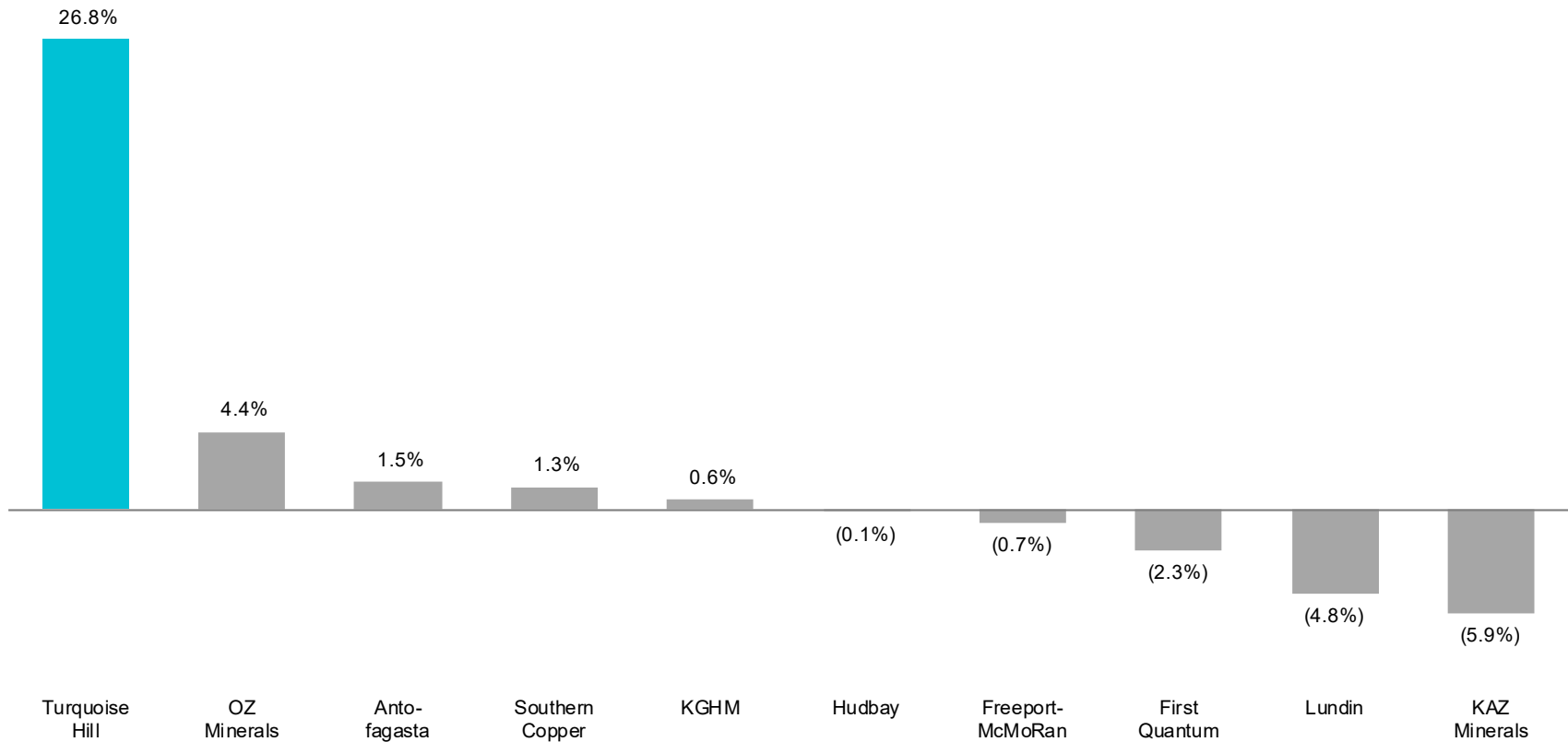
1. Wood Mackenzie estimate as at Q3 2020
2. OTTR20 excludes any impacts of COVID-19 and estimates are subject to further study and assessment as part of Oyu Tolgoi LLC's cost and schedule estimation update which is expected later in 2020 and subject to further study and analysis on Panels 1 and 2
3. See payable gold in concentrate production forecast for 2021. Refer to Table 22.5 in OTTR20
4. Reflects OTTR20 forecast of average payable gold in concentrate production over 10 years from 2021 to 2030. Refer to Table 22.5 in OTTR20



# Turquoise Hill Offers Superior Growth Compared to Peer Copper Companies...

## 2022 – 2028 Copper Production Growth<sup>1 2 3</sup>

CAGR (%)



Source: Wood Mackenzie, OTTR20

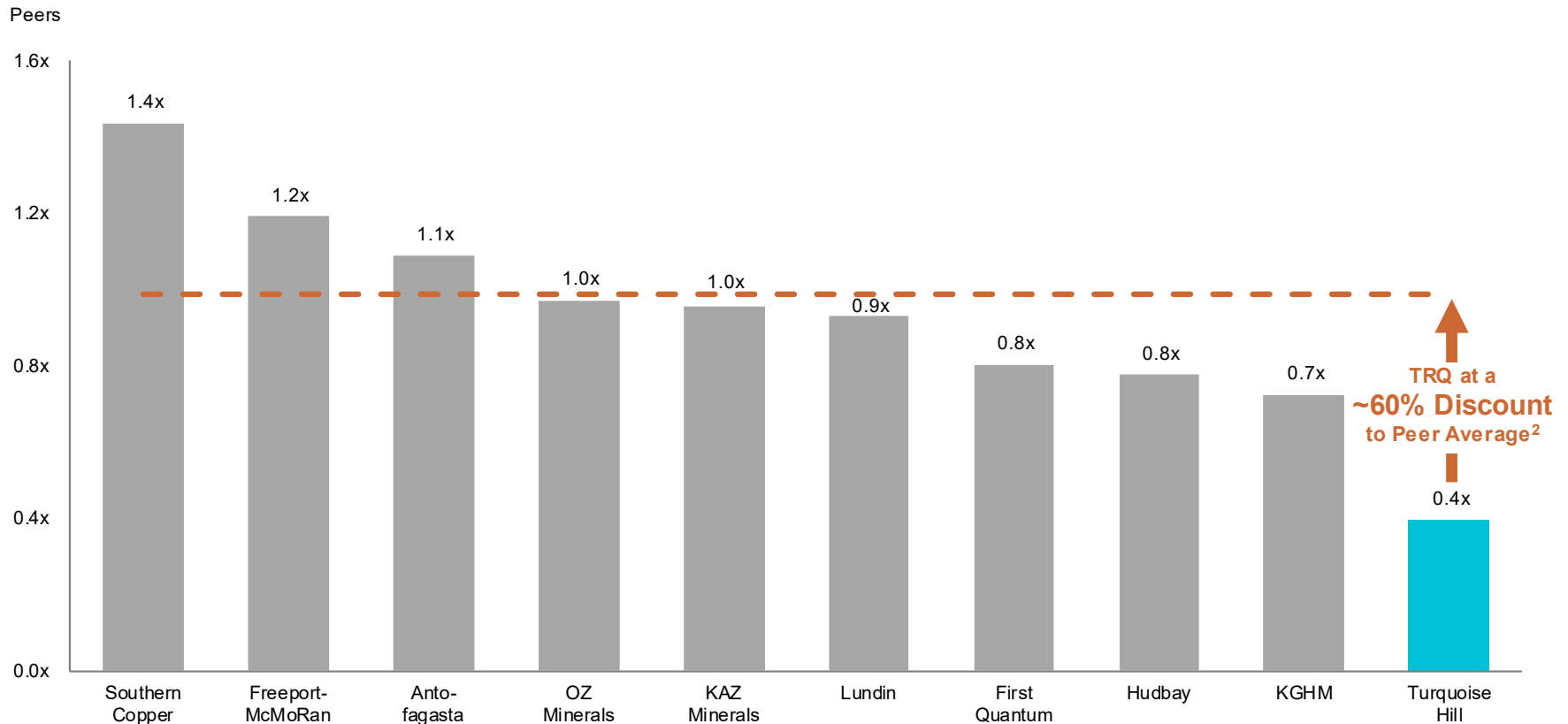
1. Based on payable, attributable copper production
2. TRQ's 2022 and 2028 production based on OTTR20, peer copper production data based on Wood Mackenzie estimates as at Q3 2020
3. OTTR20 excludes any impacts of COVID-19 and estimates are subject to further study and assessment as part of Oyu Tolgoi LLC's cost and schedule estimation update which is expected later in 2020 and subject to further study and analysis on Panels 1 and 2





# ...But Is Trading at a Deep Discount Relative to Copper Peers

## Share Price / NAV per Share<sup>1</sup>



Source: Capital IQ

1. Data as of November 4, 2020; P/NAV calculations use broker consensus NAV as reported by Capital IQ
2. Peer average P/NAV excludes TRQ





- On June 28, 2020, Oyu Tolgoi LLC (OT) and the Government of Mongolia (GOM) reached an agreement to jointly prioritise and progress a State Owned Power Plant (SOPP) at Tavan Tolgoi
- The existing Power Source Framework Agreement (PSFA) has been amended to reflect joint prioritisation and progression of SOPP, as the domestic source of power for the Oyu Tolgoi mine, in accordance with agreed milestones, including but not limited to:
  - ✓ Reaching agreement with IMPC on an extension to the existing power import agreement by March 1, 2021
  - ✓ Commencement of construction no later than July 1, 2021 and commissioning of SOPP within four years thereafter
- If certain agreed milestones are not met in a timely manner (subject to extension for force majeure and like events) then Oyu Tolgoi LLC will be entitled under the PSFA (as amended) to select and implement one of the prescribed alternatives outlined in the agreement, including a Oyu Tolgoi LLC-led coal fired power plant and a primary renewables solution, and the Government of Mongolia would be obliged to support such decision



# OTTR20 Summary

## Production and Financial Evaluation Summary<sup>1 2 3</sup>

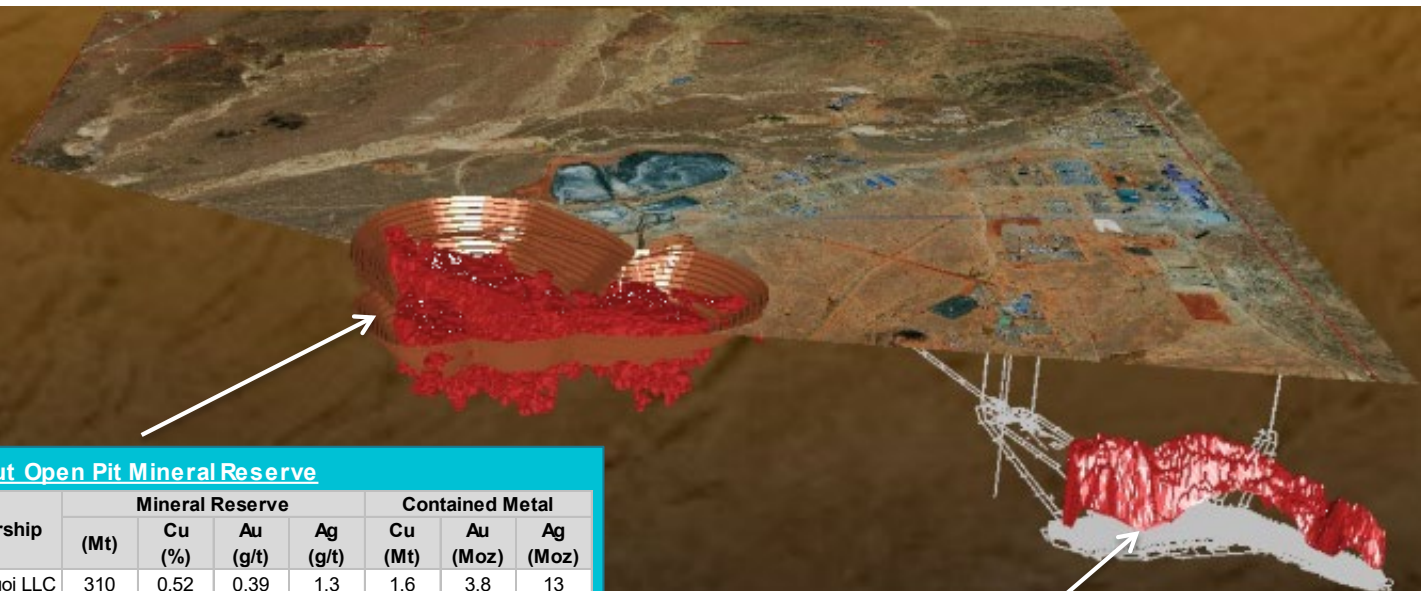
Description	Units	Life-of-Mine Value
Material Processed	Billion Tonnes	1.2
Copper (Cu) Head Grade	%	0.82
Gold (Au) Head Grade	g/t	0.30
Silver (Ag) Head Grade	g/t	1.89
Cu in Concentrate	Mt (Billion Pounds)	8.8 (19.5)
Au in Concentrate	Moz	8.4
Ag in Concentrate	Moz	51.7
Concentrate	Mt	31.1
Payable Cu	Mt (Billion Pounds)	8.5 (18.8)
Payable Au	Moz	8.0
Payable Ag	Moz	46.5
Mine Life <sup>4</sup>	Years	31
Development Capital <sup>5</sup>	\$ Billions (Nominal)	2.3
Development Capital <sup>5</sup>	\$ Billions (Real)	2.2
Payback Period <sup>6</sup>	Years	6
Internal Rate of Return (Unlevered, After Tax) <sup>7</sup>	%	46%
NPV8 (After Tax) <sup>8</sup>	\$ Billions	10.0

Source: OTTR20

1. Cost estimates are prepared in 2020 real terms
2. 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 the AIF and other filings made with Canadian securities regulatory authorities. These updated estimates differ from those reported in the AIF and reflect incorporation of changes in the Hugo North Panel 0 design and incorporated into OTTR20
3. The financial analysis uses long-term metal prices of \$3.03/lb copper, \$1,474/oz gold, and \$17.85/oz silver. The analysis was calculated with assumptions for smelter refining and treatment charges, deductions, and payment terms, concentrate transport, metallurgical recoveries, and royalties
4. Mine life is calculated from January 1, 2021 and only reflects Mineral Reserves
5. Presented in nominal terms. Economic analysis is calculated as of January 1, 2021 and excludes development capital spend up to December 31, 2020. Underground project spend includes development capital and VAT and excludes capitalized interest
6. Payback period is calculated from January 1, 2021 and is rounded to years. Payback is calculated on undiscounted real cash flows including interest and similar charges associated with the in-place project finance facility
7. IRR is the discount rate that makes the net present value of all net cash flows after tax from Mineral Reserves equal to zero, calculated at January 1, 2021, based on expected net cash flows after tax from and after that date
8. NPV8 is the net present value of Mineral Reserves at a discount rate of 8% for all years, calculated at January 1, 2021, based on expected cash flows from and after that date



# Oyu Tolgoi Mineral Reserves as at December 31, 2019 (Updated on June 30, 2020)



**Oyu Open Pit Mineral Reserve**

Classification	Ownership	Mineral Reserve				Contained Metal		
		(Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Cu (Mt)	Au (Moz)	Ag (Moz)
Proven	Oyu Tolgoi LLC	310	0.52	0.39	1.3	1.6	3.8	13
Probable	Oyu Tolgoi LLC	480	0.39	0.23	1.1	1.9	3.5	17
Total (Proven + Probable)	Oyu Tolgoi LLC	780	0.44	0.29	1.2	3.5	7.2	30

**Oyu Surface Stockpile Mineral Reserve**

Classification	Ownership	Mineral Reserve				Contained Metal		
		(Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Cu (Mt)	Au (Moz)	Ag (Moz)
Proven	Oyu Tolgoi LLC	48	0.33	0.12	0.93	0.16	0.19	1.40

**Hugo North Lift 1 Mineral Reserve**

Classification	Ownership	Mineral Reserve				Contained Metal		
		(Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Cu (Mt)	Au (Moz)	Ag (Moz)
Probable	Oyu Tolgoi LLC	400	1.5	0.29	3.1	6.0	3.8	40
Probable	Entrée LLC	40	1.5	0.53	3.6	0.6	0.7	4.6
Total Probable		440	1.5	0.32	3.2	6.7	4.5	45

Source: OTTR20

- Totals may not match due to rounding to two significant figures in line with industry best practice
- CIM Definition Standards (2014) are used for reporting of Mineral Reserves
- The effective date of the Oyu open pit and surface stockpile Mineral Reserve is December 31, 2019. The effective date of the Hugo North Mineral Reserve is December 31, 2019 (updated on June 30, 2020)
- The Oyu Mineral Reserve is currently being mined by open pit mining methods. The Stockpile Mineral Reserve is on surface close to the Oyu open pit. The Hugo North Mineral Reserve will be mined by underground mining methods
- Net Smelter Return ("NSR") values used for estimating Mineral Reserves are based on forecast long-term copper, gold, and silver prices of \$3.08/lb, \$1,292/oz, and \$19.00/oz, respectively
- Assumptions for smelting refining and treatment, charges, deductions, and payment terms, concentrate transport, metallurgical recoveries and royalties are included in the NSR values
- For the Oyu Mineral Reserve processing and general and administration (G&A) costs used to determine NSR cut-off values vary between \$7.18/t and \$10.14/t depending on the ore type processed
- 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
- For the Oyu deposit, the Proven Mineral Reserve is derived only from Measured Mineral Resources. The Probable Mineral Reserve is derived only from Indicated Mineral Resources
- For the Hugo North deposit, the Probable Mineral Reserve is derived from a combination of Measured and Indicated Mineral Resources
- The Shivee Tolgoi Licence and the Jawkhilant Licence are held by Entrée LLC. The Shivee Tolgoi Licence and the Jawkhilant 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 550m and 70% above this depth TRQ holds a 7.9% interest in Entrée Resources Ltd
- The term Entrée LLC refers to ownership by the proposed joint venture arrangement between Oyu Tolgoi LLC and Entrée LLC
- The Hugo North Mineral Reserve has been updated from that reported in TRQ's AIF dated March 18, 2020 and reflects changes in the Hugo North Lift 1 Panel 0 design. No mineral reserves were mined from Hugo North between December 31, 2019 and June 30, 2020 other than a small (non-material) quantity of development ore
- Shapes shown in this diagram are approximate representations of the Mineral Resources
- 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 technical report and in other filings made by TRQ with Canadian securities regulatory authorities and available at [www.sedar.com](http://www.sedar.com)

 Reserves





# Oyu Tolgoi Mineral Resources as at December 31, 2019 (Updated on June 30, 2020)

## Heruga Deposit Underground Mineral Resources Summary

Classification	Ownership	Tonnage (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Mo (ppm)	Contained Metal			
							Cu (Mt)	Au (Moz)	Ag (Moz)	
Inferred	Oyu Tolgoi LLC	110	0.42	0.30	1.6	110	0.4	1.0	5.3	26
Inferred	Entrée LLC	1400	0.41	0.40	1.5	120	6.0	19	68	390
Inferred	All Heruga	1600	0.42	0.39	1.5	120	6.5	20	73	410

## Hugo North Deposit Underground Mineral Resources Summary

Classification	Ownership	Tonnage (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Contained Metal		
						Cu (Mt)	Au (Moz)	Ag (Moz)
Measured	Oyu Tolgoi LLC	58	1.9	0.48	4.2	1.1	0.9	7.8
	Entrée LLC	-	-	-	-	-	-	-
	All Hugo North	58	1.9	0.48	4.2	1.1	0.9	7.8
Indicated	Oyu Tolgoi LLC	401	1.3	0.34	3.1	5.4	4.4	41
	Entrée LLC	87	1.6	0.54	4.1	1.4	1.5	12
Measured + Indicated	All Hugo North	488	1.4	0.38	3.3	6.8	5.9	52
	Oyu Tolgoi LLC	459	1.4	0.36	3.3	6.5	5.3	48
	Entrée LLC	87	1.6	0.54	4.1	1.4	1.5	12
Inferred	All Hugo North	546	1.4	0.39	3.4	7.8	6.8	60
	Oyu Tolgoi LLC	765	0.8	0.28	2.4	6.1	6.9	59
	Entrée LLC	167	1.0	0.36	2.8	1.7	1.9	15
	All Hugo North	932	0.8	0.29	2.5	7.8	8.8	74

## Oyut Deposit Open Pit Mineral Resources Summary

Classification	Ownership	Tonnage (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Contained Metal		
						Cu (Mt)	Au (Moz)	Ag (Moz)
Measured	Oyu Tolgoi LLC	16	0.39	0.41	1.2	0.1	0.2	0.6
Indicated	Oyu Tolgoi LLC	80	0.34	0.29	1.2	0.3	0.8	3.0
Total Measured + Indicated	Oyu Tolgoi LLC	95	0.35	0.31	1.2	0.3	1.0	3.6
Inferred	Oyu Tolgoi LLC	320	0.29	0.17	1.0	0.9	1.8	10

## Oyut Deposit Underground Mineral Resources Summary

Classification	Ownership	Tonnage (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Contained Metal		
						Cu (Mt)	Au (Moz)	Ag (Moz)
Measured	Oyu Tolgoi LLC	14	0.47	0.88	1.3	0.1	0.4	0.6
Indicated	Oyu Tolgoi LLC	69	0.38	0.59	1.1	0.3	1.3	2.5
Total Measured + Indicated	Oyu Tolgoi LLC	83	0.39	0.64	1.1	0.3	1.7	3.0
Inferred	Oyu Tolgoi LLC	180	0.39	0.40	1.2	0.7	2.2	6.8

## Hugo South Deposit Underground Mineral Resources Summary

Classification	Ownership	Tonnage (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Contained Metal		
						Cu (Mt)	Au (Moz)	Ag (Moz)
Inferred	Oyu Tolgoi LLC	720	0.84	0.07	1.9	6.1	1.7	44

Source: OTTR20

- Totals may not match due to rounding to two significant figures in line with industry best practice
- CIM Definition Standards (2014) are used for reporting of Mineral Resources
- The Mineral Resources exclude Mineral Reserves
- The following copper equivalent ("CuEq") formulae have been used for cut-off grade determination in each deposit. Oyut:  $CuEq = Cu + ((Au \times 35.4938) + (Ag \times 0.4101)) / 67.9023$ , Hugo North:  $CuEq = Cu + ((Au \times 35.7175) + (Ag \times 0.5353)) / 67.9023$ , Hugo South:  $CuEq = Cu + ((Au \times 37.7785) + (Ag \times 0.5773)) / 67.9023$ , Heruga:  $CuEq = Cu + ((Au \times 37.0952) + (Ag \times 0.5810) + (Mo \times 0.0161)) / 67.9023$
- The metal prices used in determining the CuEq formulae are: \$3.08/lb for copper, \$1,292/oz for gold, \$19.00/oz for silver, and \$10.00/lb for molybdenum
- The metallurgical recoveries used in determining the CuEq formulae for each deposit are: Oyut deposit: Copper 78%, Gold 67%, Silver 52%. Hugo North deposit: Copper 93%, Gold 80%, Silver 81%. Hugo South deposit: Copper 89%, Gold 81%, Silver 84%. Heruga: Copper 82%, Gold 73%, Silver 78%, Molybdenum 60%
- For the Oyut deposit, a cut-off grade of 0.24% CuEq has been used for Mineral Resources with open pit potential. A cut-off 0.41% CuEq has been used for Mineral Resources with underground mining potential
- For the Hugo North, Hugo South, and Heruga deposits a cut-off grade of 0.41% CuEq grade used based on the assumption that the deposits will be mined using underground mining methods
- The effective date of the Mineral Resources estimates is December 31, 2019 (updated on June 30, 2020). The Mineral Resources do not account for resources mined after the effective date
- The Shivee Tolgoi and Javkhiant licenses are held by Entrée LLC. The Shivee Tolgoi and Javkhiant Licenses 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 500m, and 70% above this depth. TRQ holds a 7.9% interest in Entrée LLC
- 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
- Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability
- The Oyut deposit was formerly known as Southern Oyut Tolgoi
- Molybdenum is excluded from the Total Resources in the Oyut Deposit Open Pit Mineral Resources Summary table
- The contained copper, gold, silver, and molybdenum estimates in the tables have not been adjusted for metallurgical recoveries
- Shapes shown in this diagram are approximate representations of the Mineral Resources
- The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, sociopolitical, marketing, or other relevant issues including risks set forth in this technical report and in other filings made by TRQ with Canadian securities regulatory authorities and available at [www.sedar.com](http://www.sedar.com)

■ Reserves ■ Resources

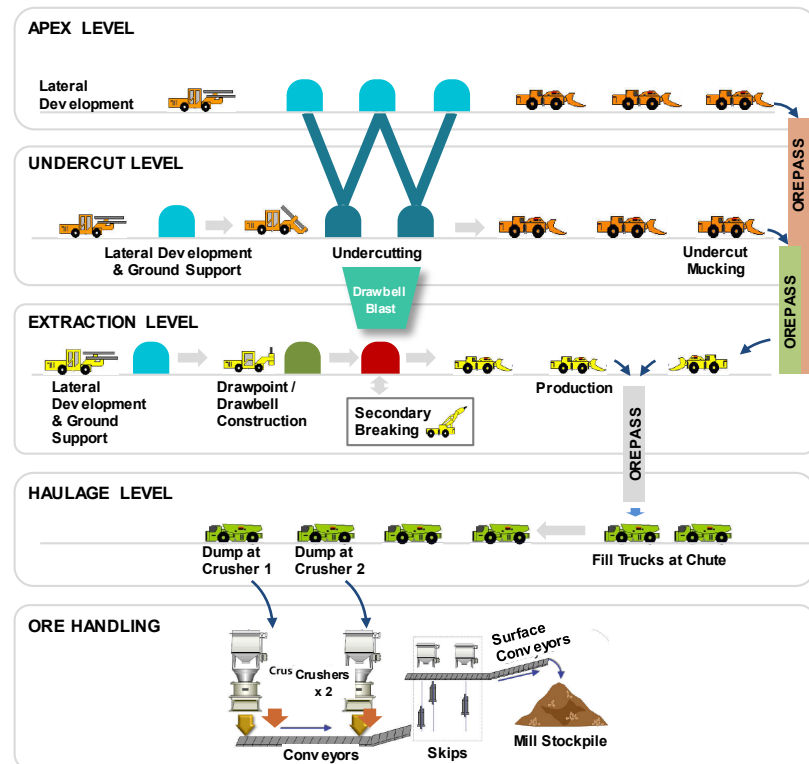


# Block Caving Provides Significant Operational Benefits to Oyu Tolgoi

## Benefits of Block Caving

- ✓ Suited to large, fractured rockmasses such as that encountered at Hugo North
- ✓ Significant safety benefits from long-life, well-engineered excavations and work areas
- ✓ Able to mine significant volumes relative to other underground production methods
- ✓ Low operating costs and amenable for automation
- ✓ Proven mining method used at world-class deposits (Grasberg, Cadia, Chuquicamata, Northparkes, El Teniente, Palabora, Argyle, Andina, Henderson, New Afton, Finsch, Cullinan, Kimberly, Koffiefontein)

## Block Caving Illustration



Turquoise Hill Resources Ltd.  
Suite 3680 1 Place Ville-Marie  
Montreal, Quebec, Canada  
H3B 3P2

TRQ: TSX & NYSE

Turquoise Hill is an international mining company focused on the operation and development of the Oyu Tolgoi copper-gold mine in southern Mongolia

