



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

# **BMO Global Metals & Mining Conference**

**March 2021**



**TURQUOISE HILL**  
**TSX-NYSE: TRQ**



**Note:** All dollar amounts are expressed in United States dollars and references to "dollars" or "\$" are to US dollars, unless otherwise stated

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: discussions with, and the nature of the Company's relationship and interaction with, the Government of Mongolia on the continued operation and development of Oyu Tolgoi, including with respect to the definitive estimate and the potential termination, amendment or replacement of the Oyu Tolgoi Underground Mine Development and Financing Plan (the "Underground Plan"); the willingness and ability of the parties to the Underground Plan to amend or replace the Underground Plan; the arbitration proceedings (including any related interim relief) initiated with respect to certain agreements with RTIH, including the potential benefits, impact, timing and outcome thereof (including any related interim relief); the expectations set out in 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 complaints filed against the Company in October 2020 and January 2021, respectively; liquidity, funding sources, funding requirements and planning and the status and nature of the Company's ongoing discussions with Rio Tinto plc and its subsidiaries ("Rio Tinto") with respect to future funding plans and requirements (including as contemplated by the Memorandum of Understanding dated September 9, 2020 (the "MoU")); the amount of any funding gap to complete the Oyu Tolgoi underground 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 reprofiling 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 a 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; mill and concentrator throughput; the outcome of formal international arbitration proceedings; 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 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 and nature of the Company's relationship and interaction with the Government of Mongolia on the continued operation and development of the Oyu Tolgoi mine and Oyu Tolgoi LLC internal governance (including the outcome of any such interactions or discussions); the willingness and ability of the parties to the Underground Plan to amend or replace the Underground Plan; the nature and quantum of the current and projected economic benefits to Mongolia resulting from the continued operation of Oyu Tolgoi; the status and nature of the Company's ongoing discussions with Rio Tinto 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 any related interim relief), including the potential benefits, impact, timing and outcome thereof (including any related interim relief). 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 Company; the outcome of the arbitration proceedings, including any related interim relief; 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 Company's annual information form for the year ended December 31, 2019 ("AIF"), as supplemented by the "Risks and Uncertainties" section of the Company's third quarter 2020 management's discussion and analysis dated 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 "Risks and Uncertainties" section of the Company's 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. Furthermore, the forward-looking statements and information contained herein are made as of the date of this document.

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").

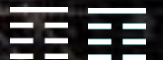
This presentation contains certain non-GAAP (Generally Accepted Accounting Principles) measures such as C1 cash costs and Operating cash costs. Such measures have non-standardised meaning under International Financial Reporting Standards ("IFRS") and may not be comparable to similar measures used by 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.





**Ulf Quellmann**

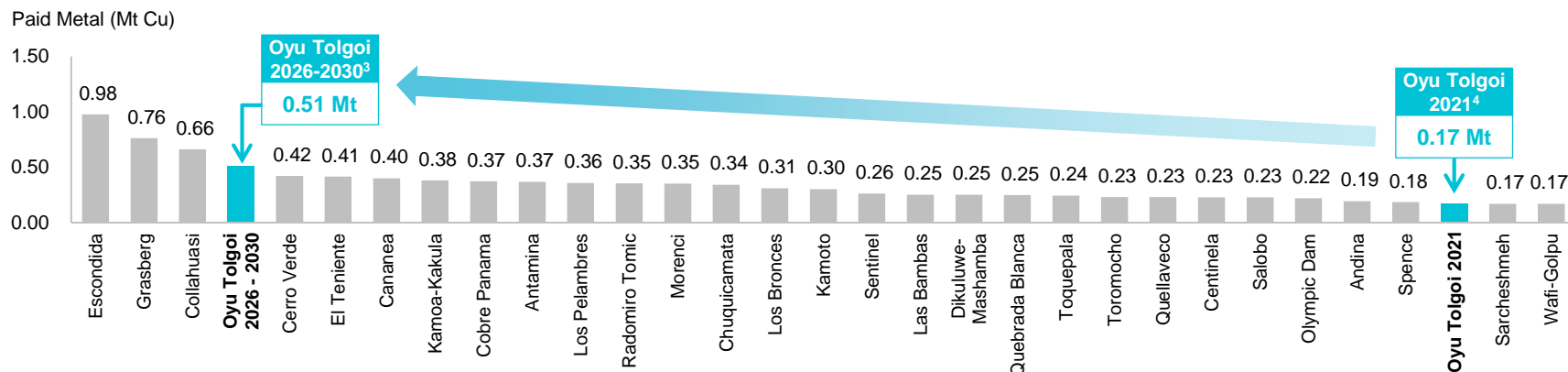
**Chief Executive Officer**



# Oyu Tolgoi Is a Tier 1 Copper Asset

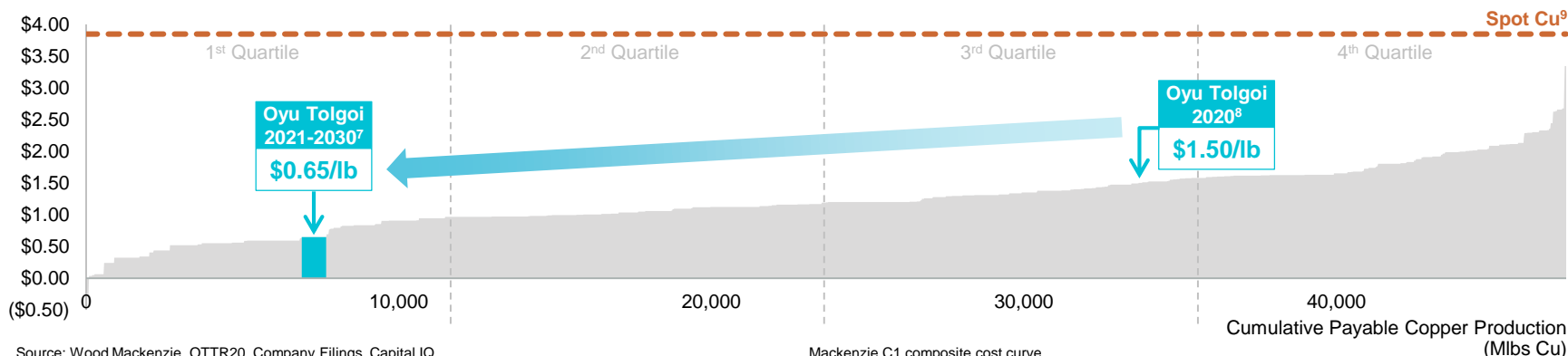
On Track to Become the World's 4th Largest Copper Producer With 1st Quartile Cash Costs

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



## 2025 Cash Cost by Mine<sup>1 2 5</sup>

C1 Cash Cost<sup>6</sup> (\$ / lb) (Composite)



Source: Wood Mackenzie, OTTR20, Company Filings, Capital IQ

1. Wood Mackenzie estimate as of Q1 2021
2. OTTR20 excludes any impacts of COVID-19
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. Reflects mid-point of management guidance, as previously disclosed on January 18, 2021
5. First quartile C1 cash costs based on Oyu Tolgoi forecast production and peer data using 2025 Wood

Mackenzie C1 composite cost curve

6. C1 cash costs is a non-GAAP measure which is not intended to replace measures prepared in accordance with IFRS. Please refer to the Non-GAAP Measures section of the Company's Q3'20 MD&A
7. OTTR20 forecast of average annual C1 post by-product cash costs for first 10 years. Refer to Table 1.18 in OTTR20
8. Midpoint of 2020 guidance as reported on November 13, 2020
9. Spot copper price, data as of February 16, 2021



# Oyu Tolgoi Open Pit Has Been Producing Since 2012

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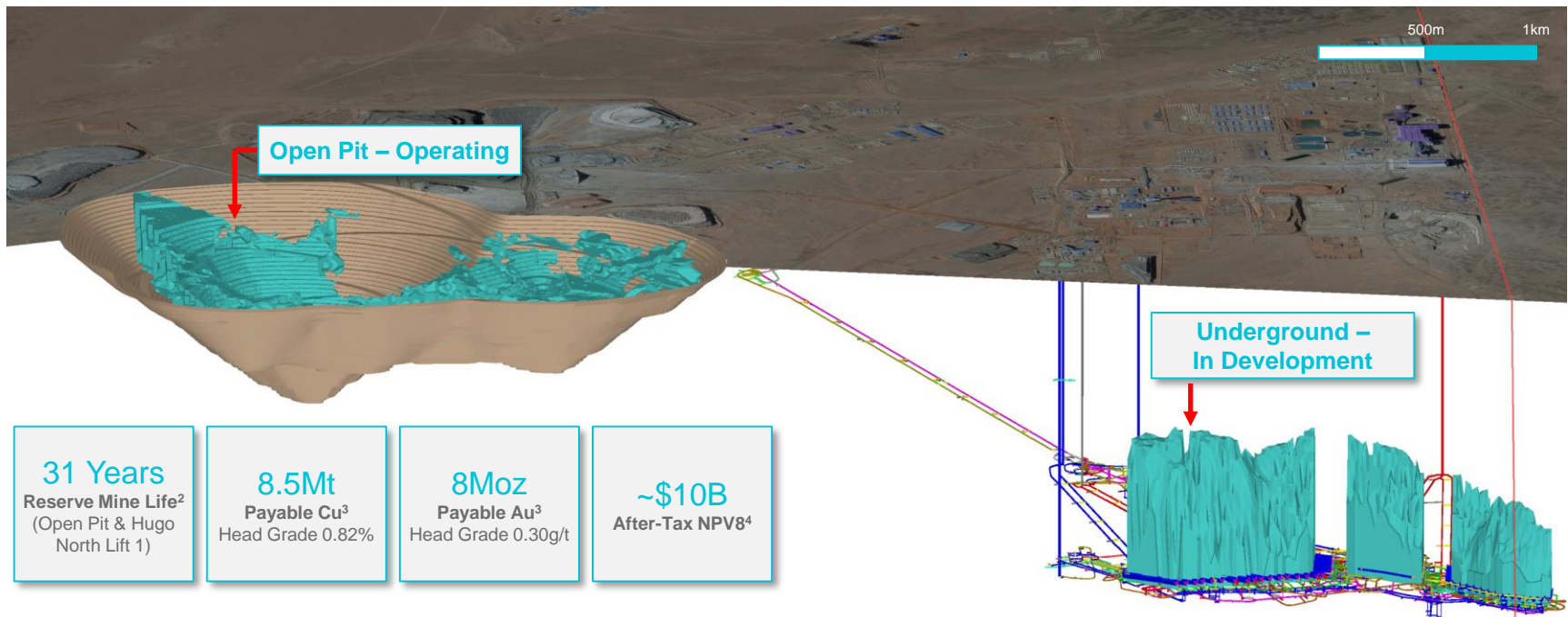




# Oyu Tolgoi Underground On Track for First Sustainable Production October 2022

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- ✓ First sustainable production expected in October 2022<sup>1</sup>
- ✓ All requisite surface infrastructure to support first sustainable production of Hugo North Lift 1 is complete
- ✓ Base case underground development capital of \$6.75B<sup>1</sup>
- ✓ The project has exceeded one million tonnes of underground material moved through Shaft 2 since commissioning



Source: Company Filings, OTTR20, Wood Mackenzie

1. Key assumptions underlying this information remain materially aligned with OTTR20
2. Mine life is calculated from January 1, 2021 and only reflects Mineral Reserves

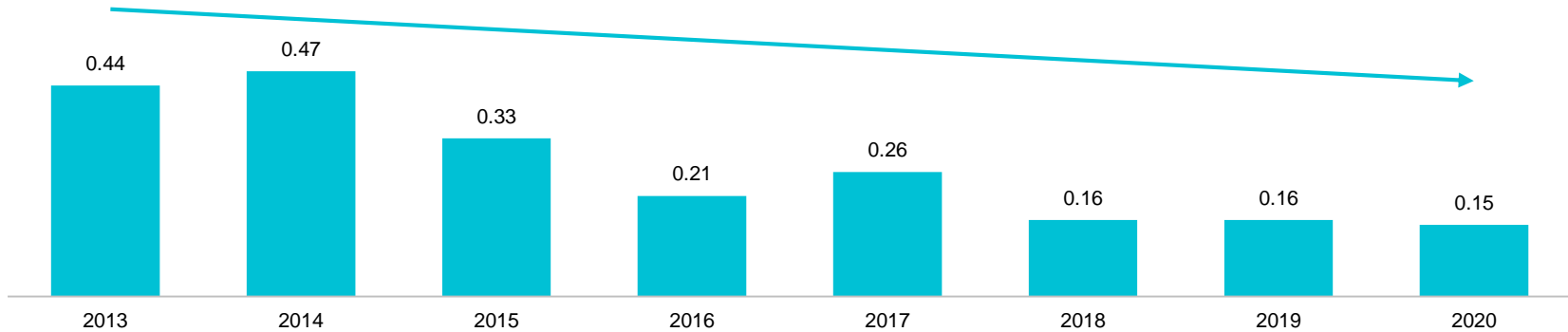
3. Payable Cu and Au reflect life-of-mine values, based only on Mineral Reserves
4. NPV8 is the net present value of Mineral Reserves at a discount rate of 8% for all years, calculated at January 1, 2021, based on expected cash flows from and after that date, on a pre-finance basis

# Continued Track Record of Excellence in Safety and Operational Performance

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## All Injury Frequency Rate

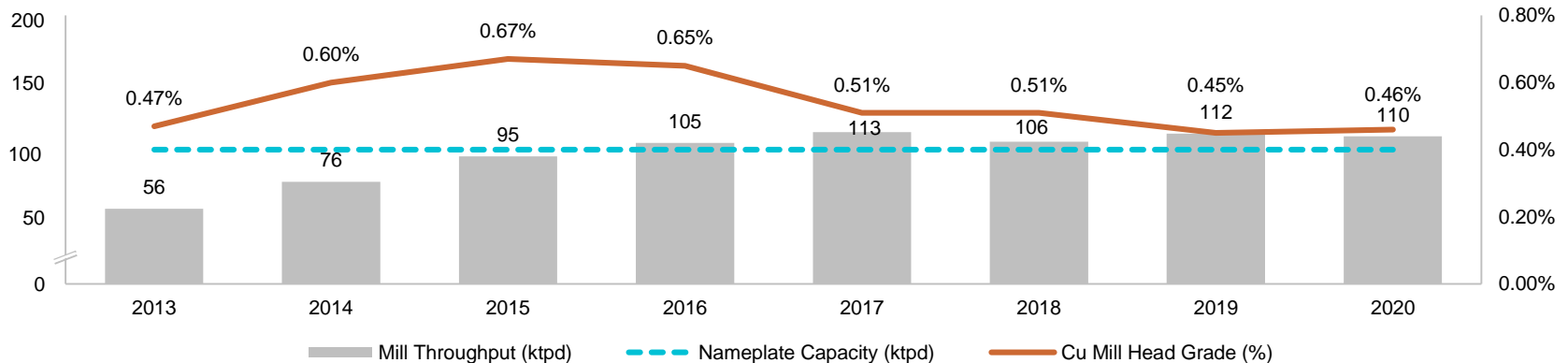
Based on 200,000 Hours of Work Exposure



## Oyu Tolgoi Ore Throughput Consistently Above Nameplate Capacity<sup>1</sup>

Processing Rate (ktpd)

Cu Grade (%)



Source: Company Filings

1. Nameplate capacity is based on an average ore type. Ore hardness variability will influence processing rates achieved year to year in addition to other operating factors



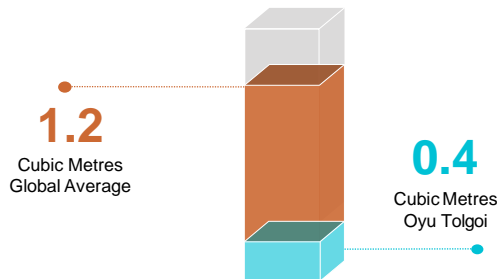


# Oyu Tolgoi is Recognized for its Commitment to Environmental Standards

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## Water Use Efficiency

Cubic Metres of Water per Tonne of Ore Processed



- ✓ Oyu Tolgoi awarded the IFC's Volunteer Code of Practice Water Stewardship Award in 2018
- ✓ Global leader in water use efficiency

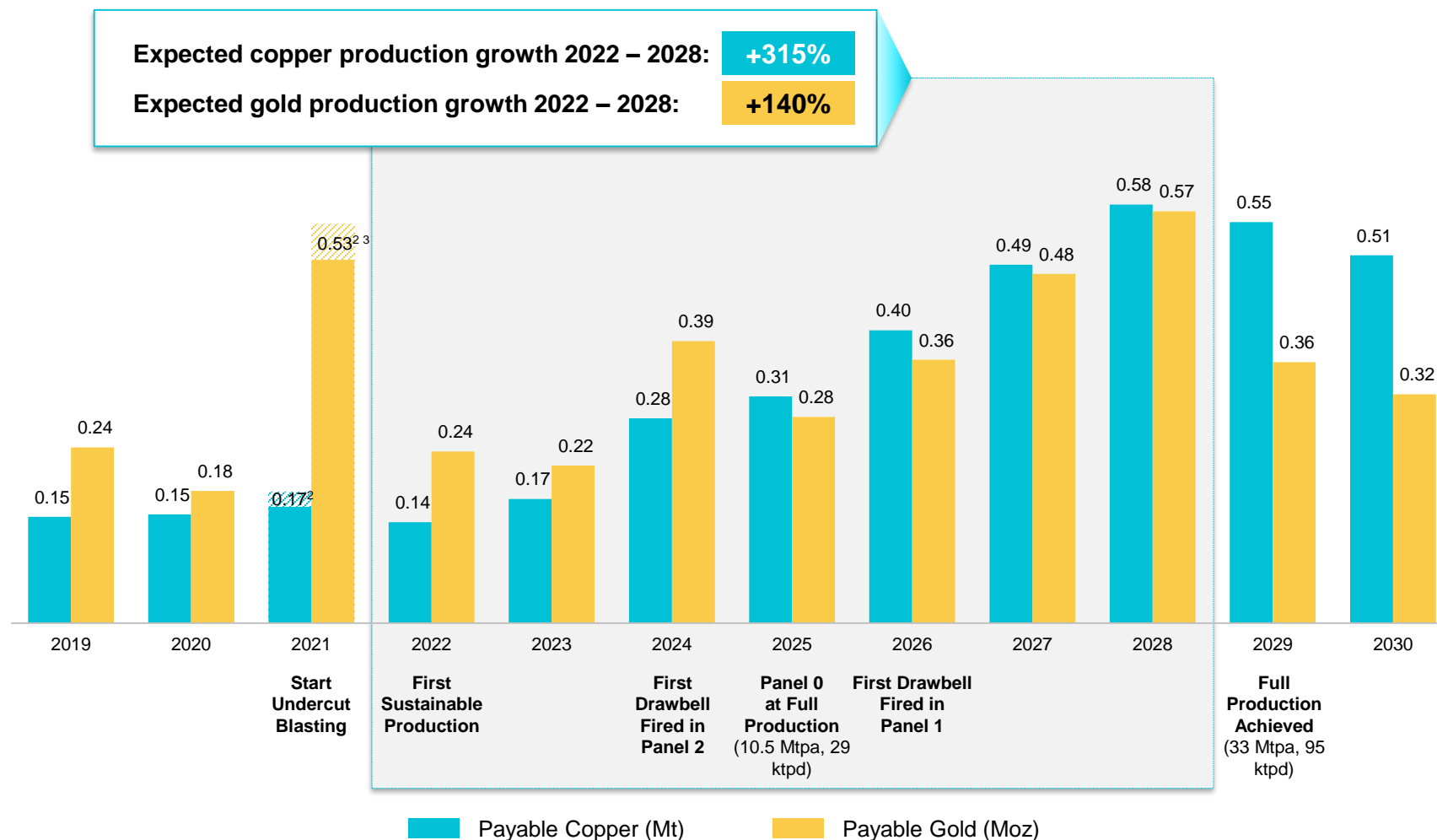


- ✓ In 2020, Oyu Tolgoi LLC was awarded the Copper Mark, the copper industry's new independently assessed responsible production program
- ✓ The Copper Mark is the first and only program for responsible production in the copper industry, developed by the International Copper Association (ICA) with inputs from a broad range of stakeholders including customers, NGOs and producers
- ✓ Oyu Tolgoi Met Over 30 Criteria for Responsible Environmental, Social and Governance (ESG) Operating Practices



# Underground Development Drives the Production Growth...<sup>1 2 3 4</sup>

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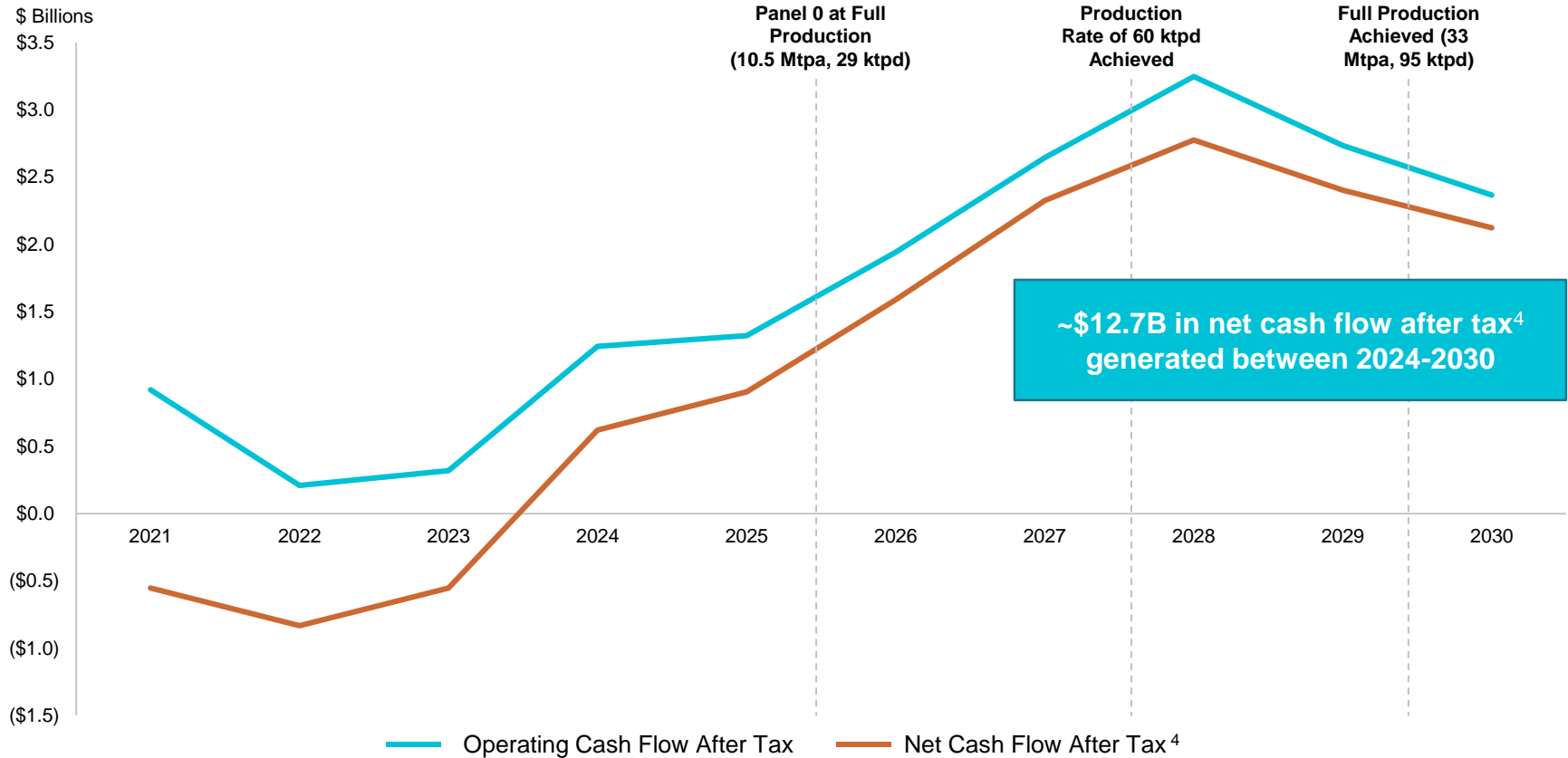
Source: OTTR20, Company Filings

1. See payable metal in concentrate production. Refer to Table 22.5 in OTTR20. OTTR20 excludes any impacts of COVID-19
2. Midpoint of 2021 guidance as reported on January 18, 2021
3. Expected gold production increase in 2021 driven by the transition to processing ore from lower benches in the high grade zone of the southwest pit
4. The Company will update guidance ranges on Monday, 8 March 2021, when it will announce its fourth quarter and full year 2020 financial results after markets close in North America



# ...And Significant Cash Flow Generation

## Indicative Oyu Tolgoi Cash Flow<sup>1 2 3 4</sup>



Source: OTTR20

1. Amounts are rounded and exclude any impacts of COVID-19
2. Refer to Table 22.5 in OTTR20 for cash flow data; refer to Table 16.26 for production milestones
3. Realization costs are inclusive of Government royalties, treatment and refining charges freight costs and penalties. Indirect costs are inclusive of operating cost VAT, management fees, property taxes and other fees. Capital expenditure is presented inclusive of associated VAT. Total capital in nominal terms is \$2.3 billion as presented in Section 21 of OTTR20
4. Net cash flow after tax is exclusive of any expenses related to financing. Net cash flow after tax is presented on a pre-finance basis



# Liquidity and Funding to Complete the Underground Development

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As At:  
30-Sep-20

## Q3'20 Liquidity and Outlook<sup>1 2 3</sup>

- ✓ Continued focus on operating cost savings and other optimization efforts

Available Liquidity

\$1.3Bn

End of Liquidity Period

Q2 2022

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

- ✓ Expected funding gap has been reduced
- ✓ Supportive commodity prices, and improved assumptions regarding impact of COVID-19

Base Case Estimate

\$3.0Bn

## Funding Strategy

- ✓ Identification, market testing and evaluation of funding options completed in first stage of review
- ✓ Range of funding options being pursued, including a gold streaming transaction, a gold pre-sale transaction, and a bond offering (GMTN)
- ✓ TRQ is committed to finding a path forward with project partners to implement the proposed re-profiling of project debt and the sourcing of an additional \$500 million in supplemental senior debt

### Base Case Underground Development Forecasts:

- Development Cost: **\$6.75Bn**<sup>3</sup>
- First Sustainable Production: **October 2022**<sup>3</sup>

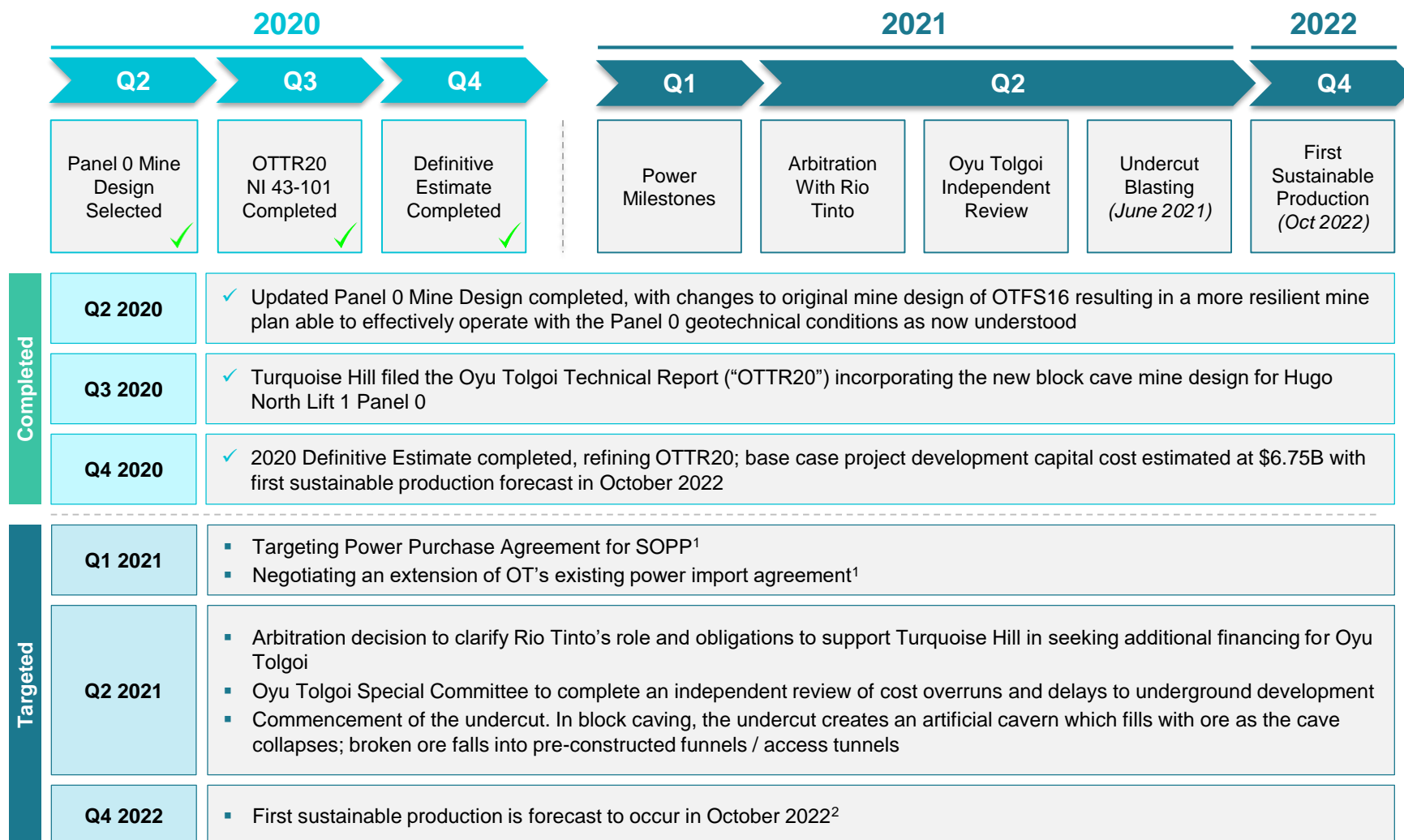
1. Forecasts incorporate principal and interest payments and do not assume any re-profiling of existing principal repayments or additional external financing  
 2. Liquidity outlook and incremental funding requirement impacted by various factors. Please refer to section – Funding of Oyu Tolgoi LLC By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





# Key Milestones to First Sustainable Production of Panel 0

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Source: Company Filings, Definitive Estimate

1. Rio Tinto, Oyu Tolgoi LLC and the Company are engaging with the Government of Mongolia to agree to a standstill period to provide sufficient time for the PSFA Amendment milestones to be met
2. Key assumptions underlying this information remain materially aligned with OTTR20



# Oyu Tolgoi – A True World Class Asset

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- ✓ A tier one Copper asset
- ✓ Underground ramp-up well-advanced to benefit from strong near and long term copper supply/demand fundamentals
- ✓ Oyu Tolgoi has a proven track record of excellence in safety and operational performance
- ✓ 2020 witnessed:
  - Full year copper production within guidance
  - Full year gold production exceeding guidance
  - Updated Panel 0 mine design
  - Oyu Tolgoi Technical Report
  - Definitive Estimate
- ✓ Superior growth profile to peers



# APPENDIX



## 2021 Guidance

### Operational guidance

#### Mill throughput (million tonnes)

Copper production (tonnes)	160,000 – 180,000
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Gold production (ounces)	500,000 – 550,000
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### Financial guidance

Operating cash costs (\$ million) <sup>1</sup>	800 – 850
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C1 cash costs (\$/lb) <sup>1 2</sup>	(0.50) – (0.80)
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#### Capital expenditure

Open pit (\$ million)	120 – 160
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Underground (\$ billion)	1.1 – 1.2
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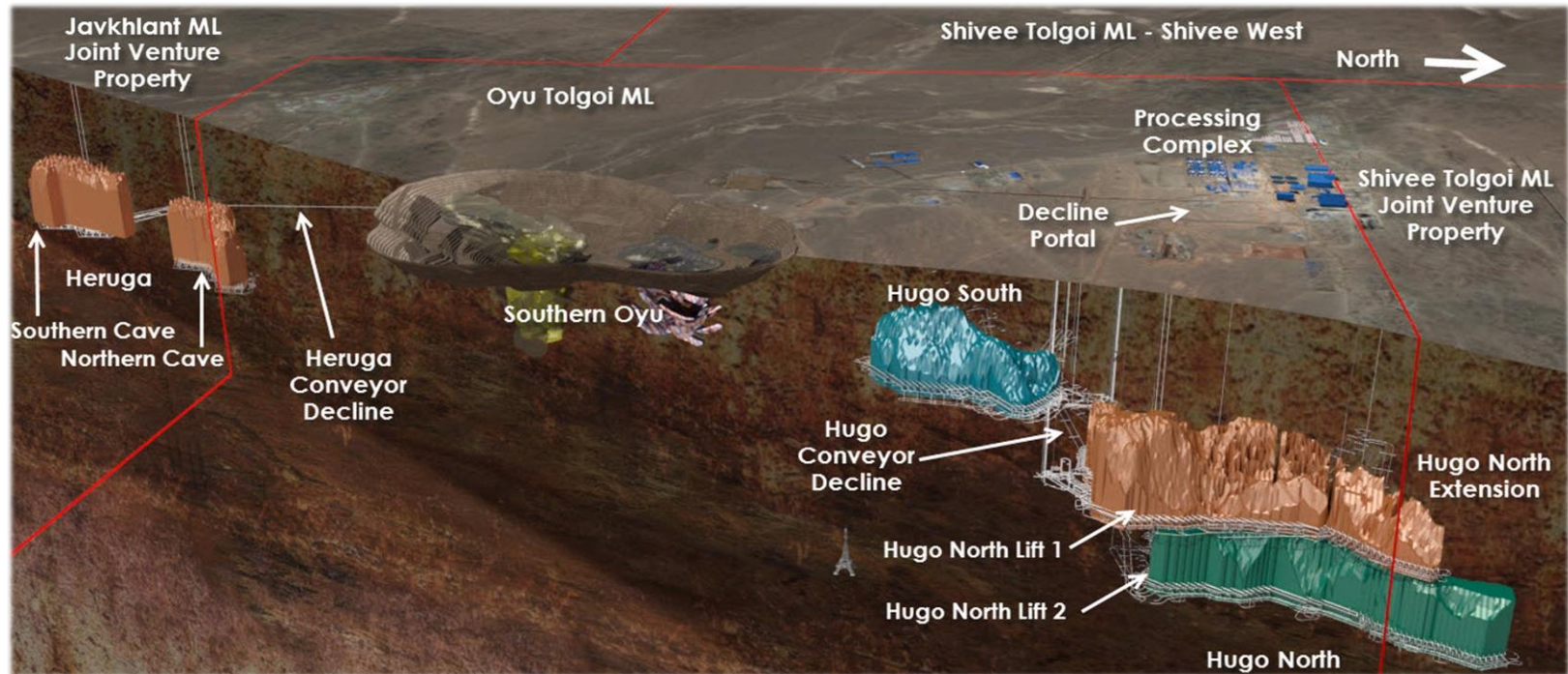


1. Refer to section - Non-GAAP Measures - of the MD&A at December 31, 2020
2. Unit cost guidance assumes the midpoint of expected 2021 copper and gold production ranges and gold commodity price assumptions of \$1,880 per ounce.





# A World-Class Asset: Oyu Tolgoi

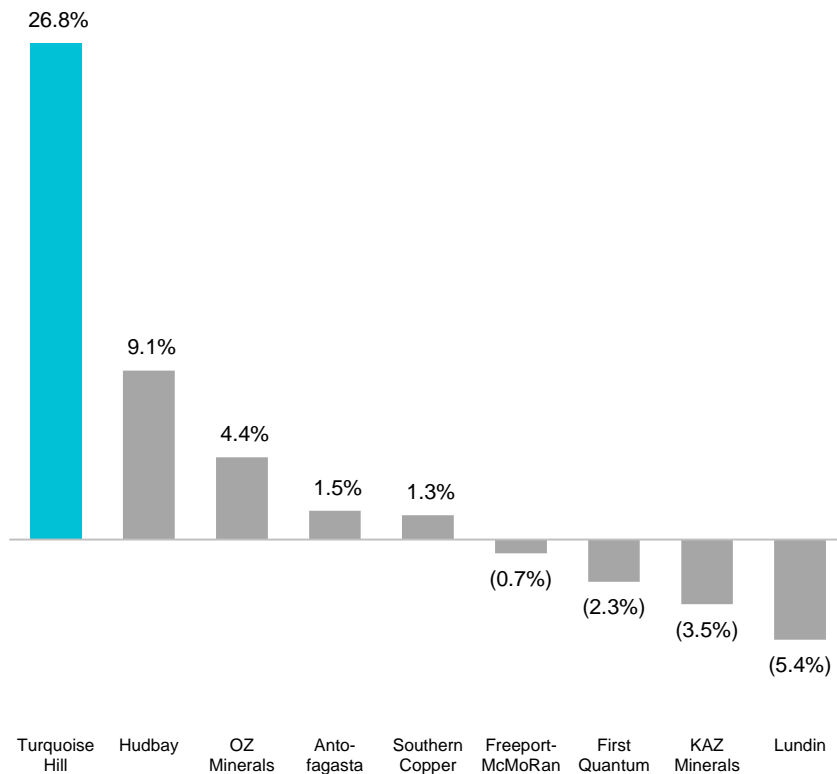


# Turquoise Hill Offers Leading Growth, but Is Currently Trading at a Deep Discount Relative to Peers

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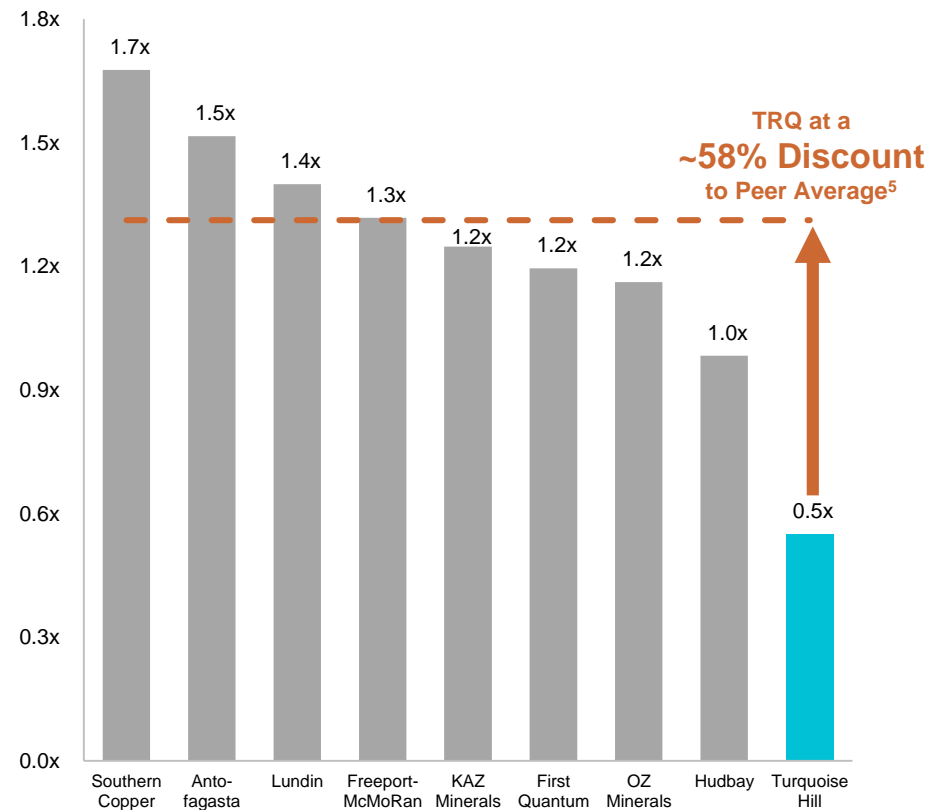
## 2022 – 2028 Copper Production Growth<sup>1 2 3</sup>

CAGR (%)



## Share Price / NAV per Share<sup>4</sup>

Peers



Source: Wood Mackenzie, OTTR20, Capital IQ

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 Q1 2021

3. OTTR20 excludes any impacts of COVID-19
4. Market data as of February 16, 2021; P/NAV calculations use broker consensus NAV as reported by Capital IQ
5. Peer average P/NAV excludes TRQ

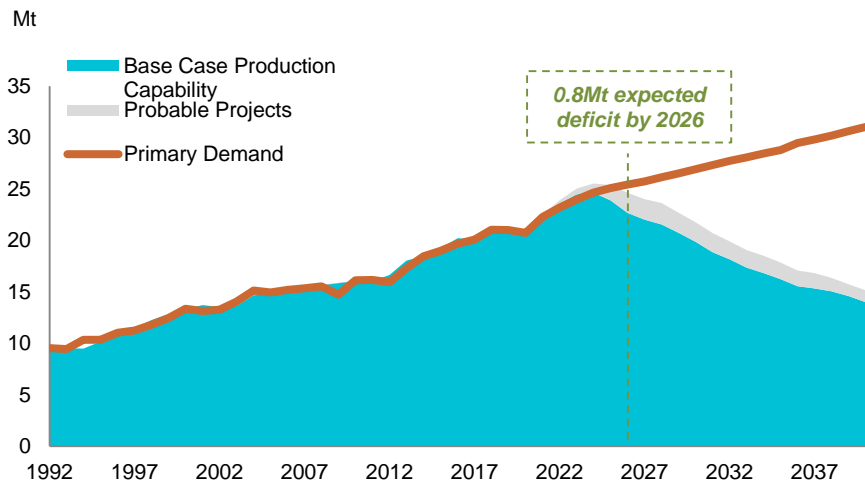


# Long-Term Copper Supply-Demand Fundamentals Remain Strong

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## OT Underground Ramp-Up Expected to Coincide With Pricing Tailwinds From Forecast Supply Deficit

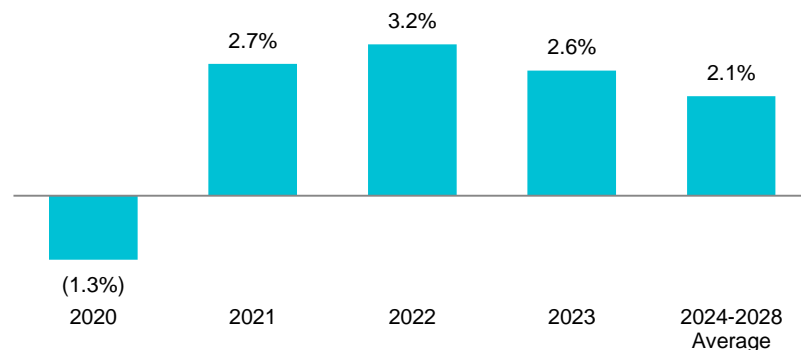
### Long Term Undersupply Coincides with OT Ramp-Up



- ✓ Market for mined copper expected to be in a deficit beginning in 2026
- ✓ Long lead times required to bring new mines into production
- ✓ Many growth projects delayed due to COVID-19

### Long Term Copper Demand Fundamentals Remain in Place

Global Refined Copper Consumption Growth (%)



- ✓ Strong recovery in Chinese demand is providing demand support in near term despite COVID-19 impact on global demand
- ✓ In the medium term, there is continued optimism of a green, copper intensive recovery that has attracted significant investor interest
- ✓ Long term copper demand outlook constructive due to secular growth in electric vehicles, renewable power generation, and broader electrification trends



# Gold and Copper Prices Remain Elevated

## Copper Prices Benefitting From COVID-19 Supply Side Challenges and Strong Long-Term Demand Outlook

Copper Price – Jan 1, 2015 to Feb 16, 2021, \$ / lb



## Gold Prices Supported by Negative Real Interest Rates and Market Uncertainty

Gold Price – Jan 1, 2015 to Feb 16, 2021, \$ / oz



Source: Capital IQ

1. COMEX spot copper and gold prices, data as of February 16, 2021





# Turquoise Hill's Management Team: Proven Operator and Developer of World Class Mines

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**Ulf Quellmann**  
Chief Executive Officer

Appointed as CEO effective August 1, 2018, Mr. Quellmann has more than 20 years of experience in corporate finance, strategy, treasury and investor relations at General Motors, Alcan and Rio Tinto



**Luke Colton**  
Chief Financial Officer

Appointed CFO on October 9, 2017. Mr. Colton has more than 15 years of mining experience and worked for Rio Tinto beginning in 2004 before joining Turquoise Hill. While at Rio Tinto, he worked in various business units including minerals, iron ore and energy. Mr. Colton was also a Senior Accountant at E&Y



**Jo-Anne Dudley**  
Chief Operating Officer

Appointed Chief Operating Officer in June 2019, Ms. Dudley has 25 years of mining industry experience. Since 2005, Ms. Dudley has been working on Rio Tinto underground projects in Australia, South Africa, the U.S., and Asia, including nine years at Oyu Tolgoi, where she led the Strategic Mine and Resources Planning unit



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

