



TURQUOISE HILL

# Global Steel and Mining Conference

September 9, 2019  
London



# Forward-Looking Statements

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This presentation includes certain “forward-looking information” within the meaning of applicable Canadian securities legislation and “forward-looking statements” within the meaning of the “safe harbour” provisions of the United States Private Securities Litigation Reform Act of 1995.

All statements and information, other than statements of historical fact, are forward-looking statements and information that involve various risks and uncertainties. There can be no assurances that such statements or information will prove accurate and actual results and future events could differ materially from those expressed or implied in such statements. Such statements and information contained herein, which include, but are not limited to, information regarding the timing and amount of production and potential production delays, statements in respect of the impacts of any delays on the Company’s cash flows, liquidity, funding requirements and planning, statements regarding timing and status of underground development, the development options under consideration for the design of Panel O, capital and operating cost estimates, mill throughput, timing and status of the Tavan-Tolgoi based power project, timing of completion of the definitive estimate review, corporate strategies and other statements that are not historical facts, represent the Company’s best judgment as of the date hereof based on information currently available to the Company, including information received from Rio Tinto that is in the process of being independently reviewed by the Company and its Qualified Person. The Company does not assume any obligation to update any forward-looking statements or information or to conform these forward-looking statements or information to actual results, except as required by law.

For a more detailed list of specific forward-looking statements and information applicable to the Company, refer to the “Forward-Looking Information and Forward-Looking Statements” section of the Annual Information Form dated as of March 13, 2019 in respect of the year ended December 31, 2018 as supplemented by our Management's Discussion and Analysis of Financial Condition and Results of Operations for the three months ended March 31, 2019, and the six months ended June 30, 2019.

All amounts are in U.S. dollars, unless otherwise stated.

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, 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 (“NI 43-101”)



# Introduction

# Clear Path to Long-Term Value Creation

- › World-class, high-grade copper and gold deposit supporting a multi-decade life of mine
  - Copper demand expected to grow rapidly over coming decade, driven by EVs and related infrastructure
- › Expect material free cash flow generation from underground
  - Established open pit mine currently generating steady cash flow
- › Strong liquidity position and potential for additional financing to fund underground development and Power Plant
- › Long-term partnership with Government of Mongolia



1. The potential to operate for approximately 92 years is based on a preliminary economic assessment (2016 Resources Case) that is preliminary in nature, and that includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves. There is no certainty that the 2016 Resources Case will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability. For more information about the 2016 Resources Case, readers are referred to the 2016 Oyu Tolgoi Technical Report

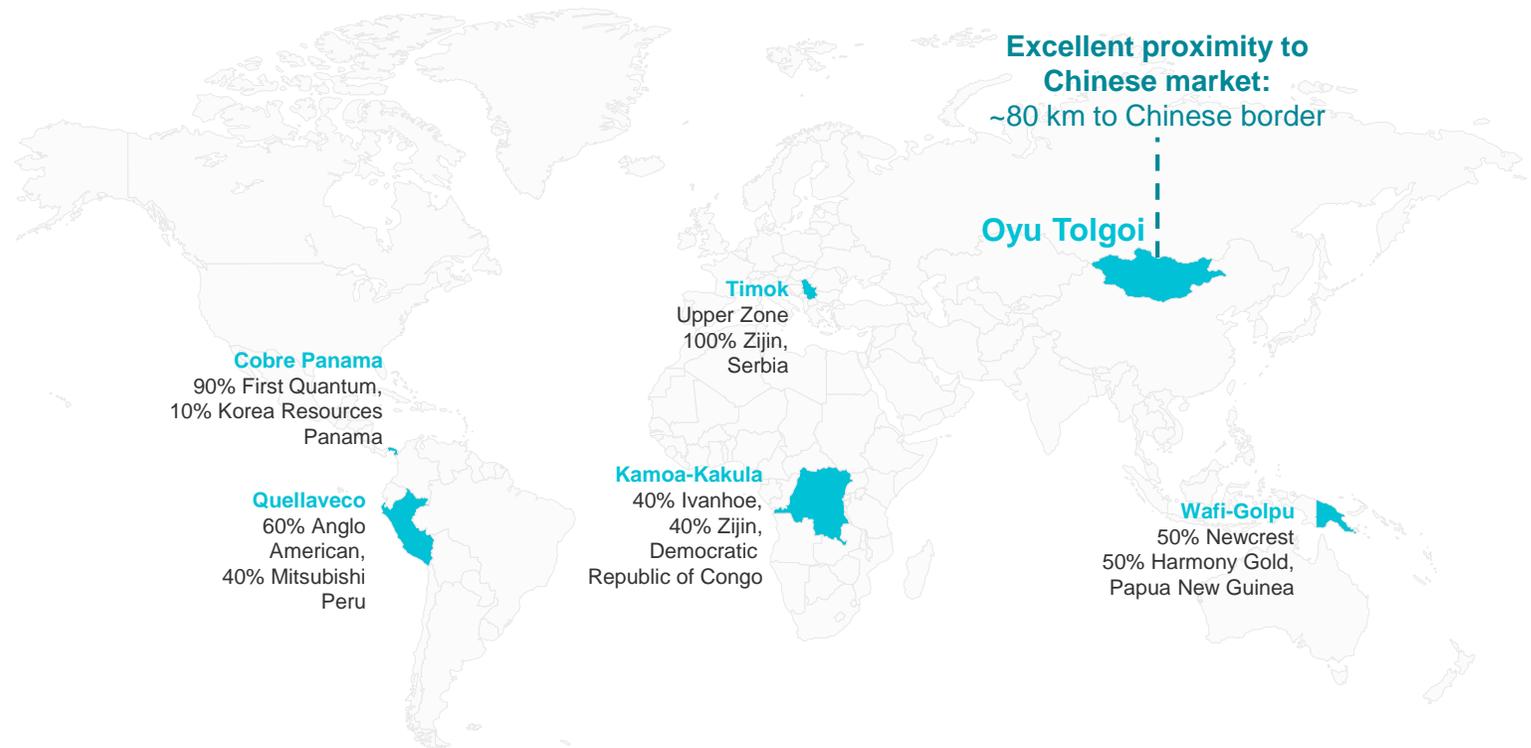
# Attractive Location

## Copper Assets Are Increasingly Located Outside of the OECD

› As assets in traditional mining countries become depleted, new regions are being developed

### Mongolia Highlights

- › Democratically-elected government
  - Nearly three decades of free elections
  - Low crime rate
- › GDP has grown at 10%+ p.a. for the last decade while foreign direct investment grew at almost 15% p.a.<sup>1</sup>
- › Abundant natural resource wealth
- › Developed technical and vocational training centres



Source: World Bank, United Nations Development Program

1. Compound annual growth rate from 2007 – 2017, based on the World Bank GDP data (current US\$)

# Oyu Tolgoi 80km From China Border



A photograph of a mining tunnel. In the foreground, a worker wearing a blue jacket, blue pants, and heavy black boots stands on a rocky floor. To the right, a large piece of machinery, possibly a conveyor or part of a tunneling machine, is visible. The machinery has a bright green light emanating from it. The background shows the rough, textured walls of the tunnel, which appear to be lined with a mesh or wire. The overall lighting is dim, with the green light providing a focal point.

# A World-Class Asset: Oyu Tolgoi

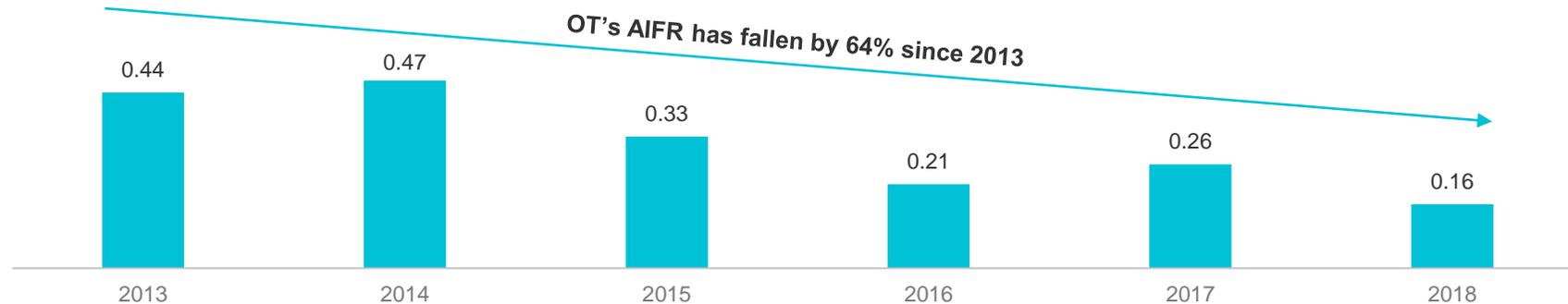
# Commitment to Safety

› Industry-leading safety performance

- All-Injury Frequency Rate of 0.12 per 200,000 hours worked for the six months ended June 30, 2019
- Injury rate steadily declined since 2013, dropping 64% from 2013 through 2018
- Safety is a top priority and is critical to our continued success

## All Injury Frequency Rate

Based on 200,000 Hours of Work Exposure

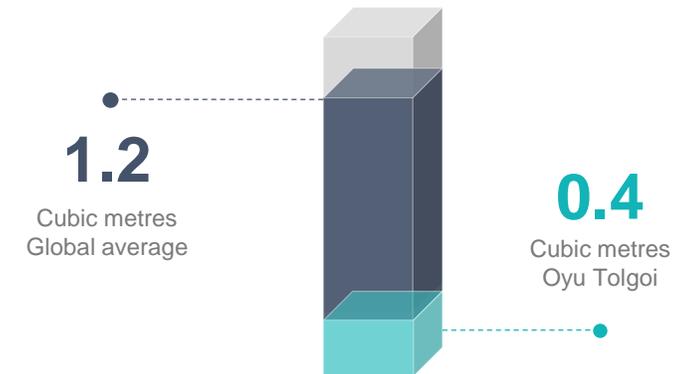


# Commitment to Environmental Standards

- › Commitment to internationally recognized environmental standards
  - Water recycling rate of approximately 88% in 2018
  - Continuous rehabilitation programs - 1,553 hectares of land to date
  - Approximately 230,000 saplings of Gobi desert native species planted to date
- › Oyu Tolgoi awarded the IFC's Volunteer Code of Practice Water Stewardship Award in 2018

## Water Use Efficiency

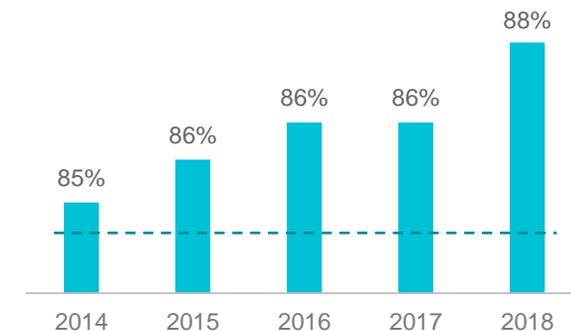
Cubic metres of water per tonne of ore processed



## Annual Water Recycling Rate

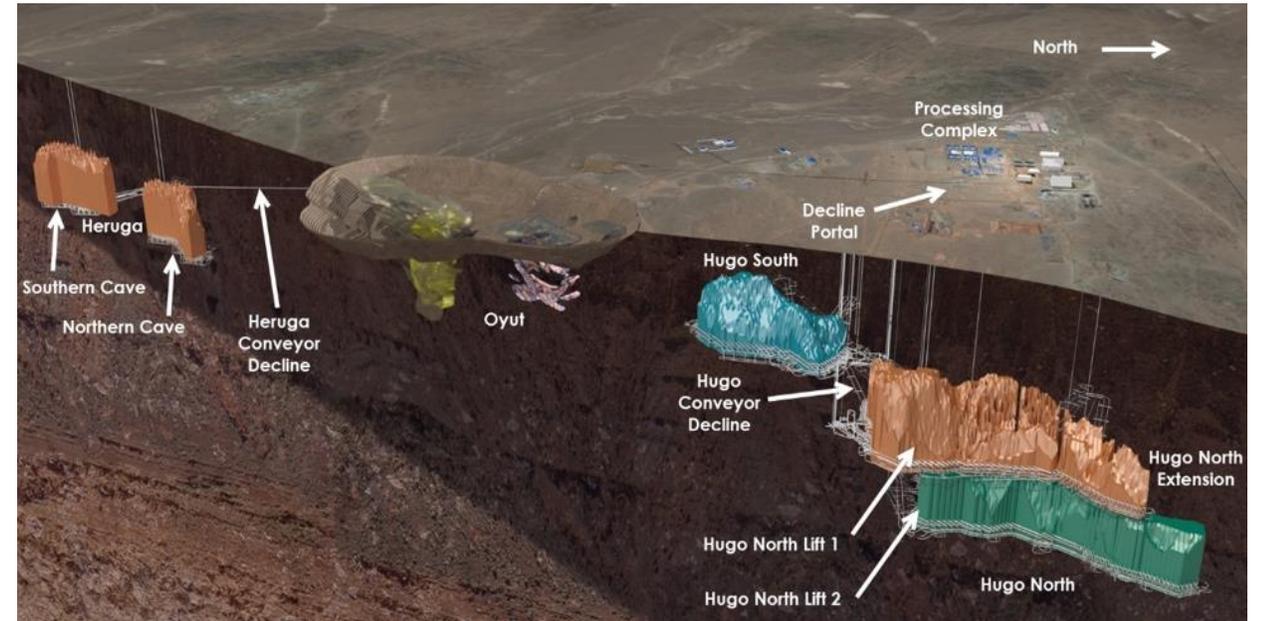
Annual water recycling rate (%)

Target usage rate



# Significant Reserves and Resources

<b>Total Recoverable Reserves<sup>1,2</sup></b>	<b>Proven:</b> <ul style="list-style-type: none"> <li>• 1.5Mt Cu</li> <li>• 2.8Moz Au</li> <li>• 11.8Moz Ag</li> </ul>	<b>Probable:</b> <ul style="list-style-type: none"> <li>• 9.4Mt Cu</li> <li>• 7.8Moz Au</li> <li>• 63Moz Ag</li> </ul>
<b>Total Contained Resources<sup>2</sup></b>	<b>Measured: 3</b> <ul style="list-style-type: none"> <li>• 5Mt Cu Eq.</li> </ul>	<b>Indicated:4</b> <ul style="list-style-type: none"> <li>• 20 Mt Cu Eq.</li> </ul>
<b>Total Contained Inferred Resources<sup>2,5</sup></b>	<ul style="list-style-type: none"> <li>• 31 Mt Cu Eq.</li> </ul>	



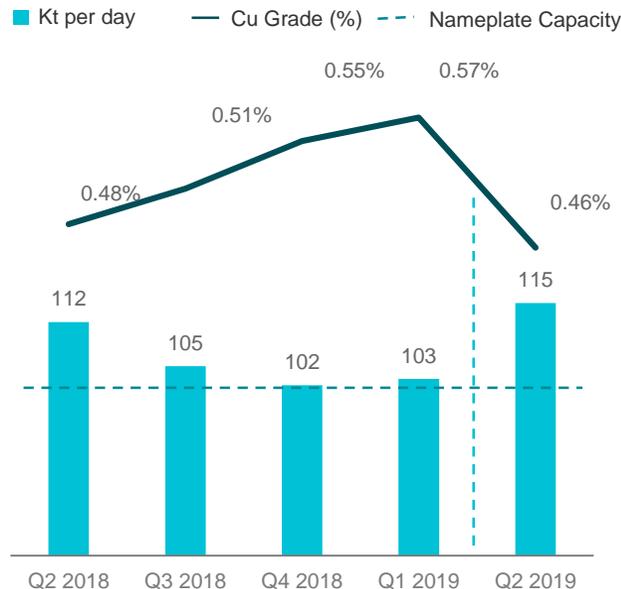
Source: 2016 OTTR

1. Included in reserves: Oyut, Hugo North Lift 1. Not included in reserves: Hugo North Lift 2, Hugo South, Heruga. Proven reserves grades of 0.54% Cu and 0.35 g/t Au. Probable reserves of 0.97% Cu and 0.29 g/t Au.
2. Total reserves and resources from 2016 OTTR, account for depletion to December 31, 2015; total resources inclusive of reserves. Cu Eq. calculated at US\$ 3.01/lb copper, US\$ 1,250/oz gold, US\$ 20.37/oz silver, and US\$ 11.90/lb molybdenum
3. Measured resource grades of 0.81% Cu, 0.38 g/t Au, 1.97 g/t Ag, 48.7 ppm Mo;
4. Indicated resource grades of 1.00% Cu, 0.32 g/t Au, 2.34 g/t Ag, 43.6 ppm Mo; 16.9 Mt Cu, 17.6 Moz Au, 126.84 Moz Ag
5. Inferred resource grades of 0.56% Cu, 0.27 g/t Au, 1.64 g/t Ag, 75.1 ppm Mo; 23.4 MtCu, 36 Moz Au, 221.7 Moz Ag

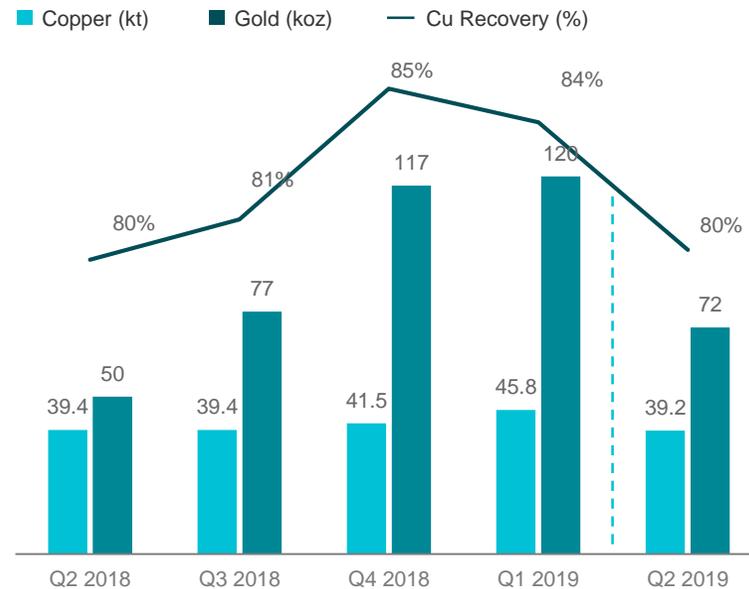
# On Track For 2019 Production Guidance

- › Strong mill performance
- › C1 – robust cost control supported by strong gold production\*
- › Remain on track to achieve 2019 guidance for copper (125,000 – 155,000 tonnes) and increased gold production (up to 230,000 ounces)

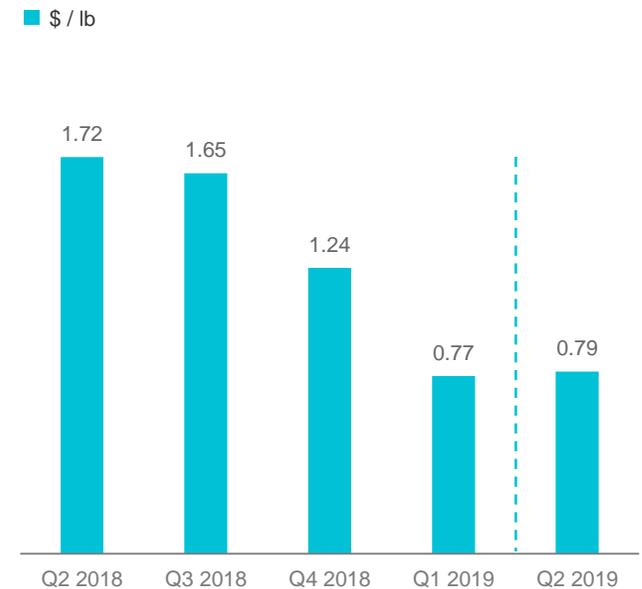
Oyu Tolgoi Cu Production and Feed Grade



Oyu Tolgoi Metal Production (100% Basis)



Oyu Tolgoi C1 Cash Costs

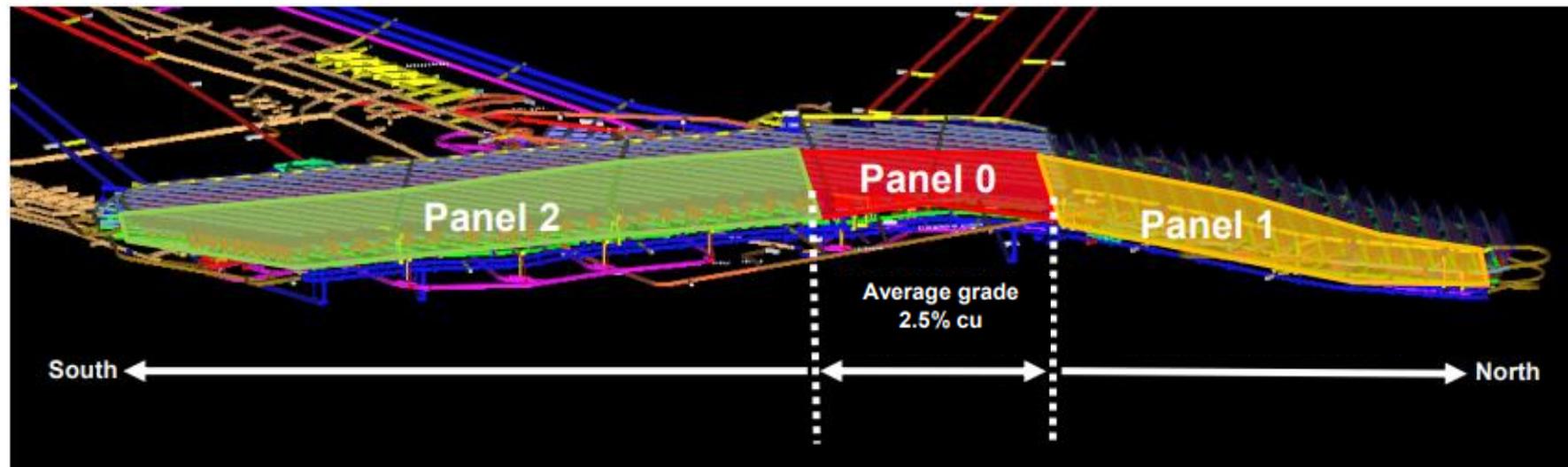


\* Q1 & Q2 C1 cash costs reflect the large increase in gold production as Oyu Tolgoi benefitted from the processing and sale of Phase 4 ore in Q1 & Q2'19 that contained higher gold content

# Preeminent Pure-Play Copper Mine

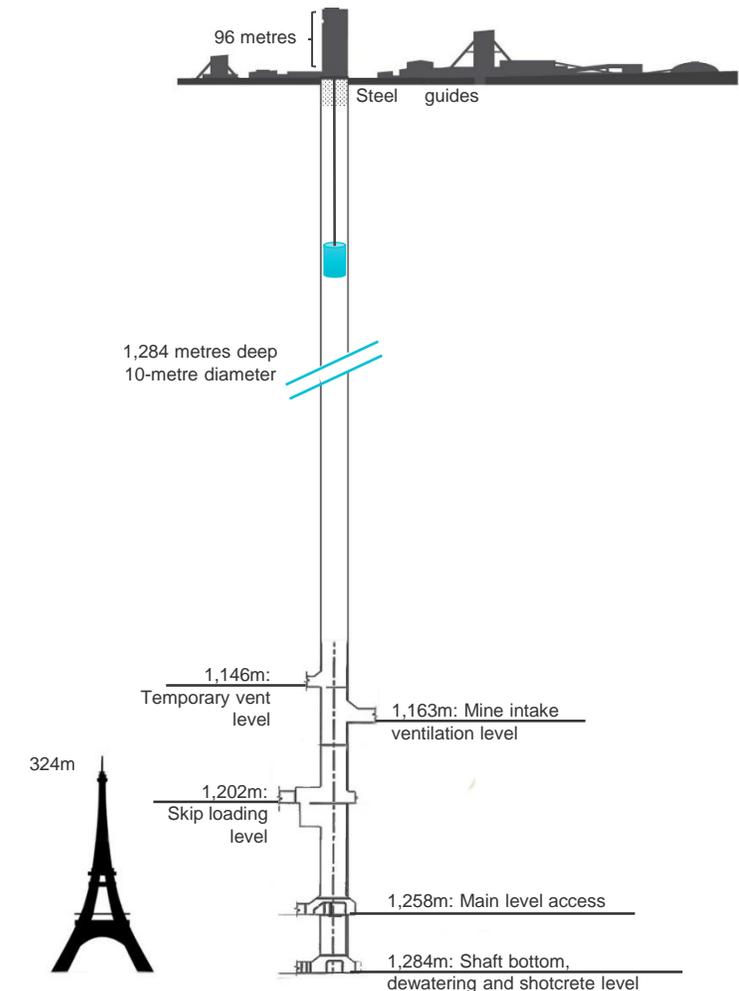
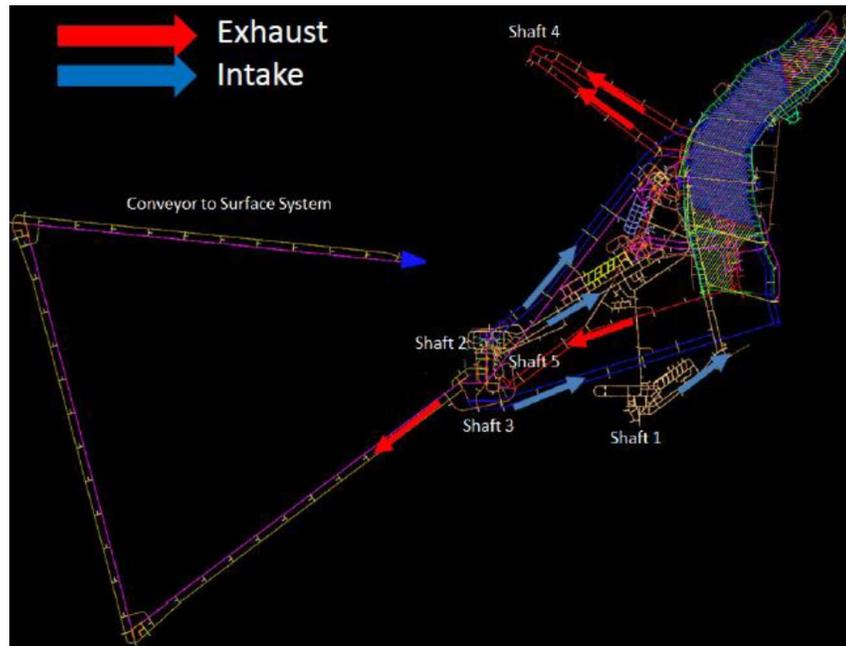
Turquoise Hill is one of few world-class pure-play copper mining companies on the market

- › Projected to be world's third largest copper mine when at full capacity
- › Existing operations continue to maximize concentrator capacity during UG Construction
- › Ability to deliver to multiple customers and smelters in China, just 80 km from mine
- › Long-term development optionality with large Resource base to leverage
- › Initial underground production begins with Panel 0, moving north and south to Panels 1 and 2



# Shaft 2 Commissioning Expected End Oct 19

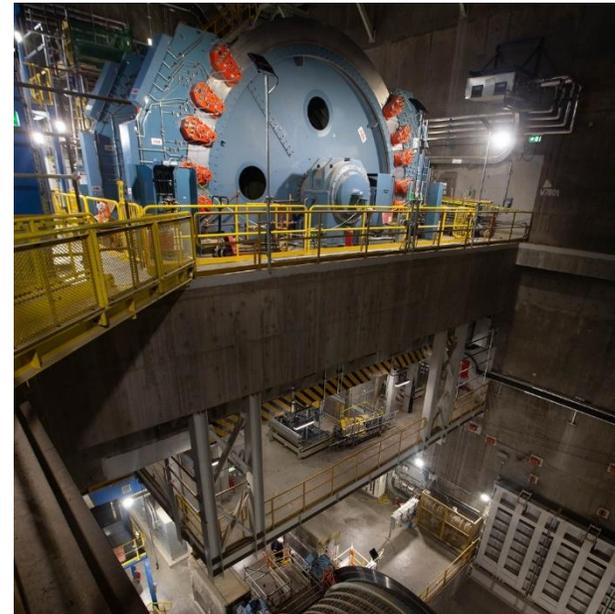
- › Facilitates employee and supply movement, leading to acceleration of development rates
  - Can move 5 x more people per cage cycle
  - Move more supplies UG faster
  - Debottleneck rock handling



# Shaft 2 Work Progressing Well

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- › Shaft 2 construction work is progressing well and holding to October 2019 commissioning schedule, with Service Cage rope-up completed, and Production Hoist rope-up and conveyance installation underway
- › Shaft 2 Jaw Crusher has been no-load commissioned



# Critical Infrastructure Progress

## Above Ground Infrastructure



Mine dry building

- ✓ Mine dry and control center
- ✓ Central heating plant
- ✓ Surface discharge conveyor linking Shaft 2 to existing Overland conveyor
- ✓ Shaft 5 ventilation fans
- ✓ Mine air heaters
- ✓ Batch plant 4 & quarry

## Shafts & Below Ground Hard Infrastructure



Load commissioning of Jaw crusher

- ✓ Shaft 5 sinking to 1.2km
- ✓ Shaft 2 sinking to 1.3km
- ✓ Shaft 2 Jaw Crusher
- ✓ Ore bin 11 & transfer station
- ✓ Excavation of the Primary Crusher 1 chamber
- ✓ Critical underground facilities

## Mine Development



Lateral mine footprint development

- ✓ A record 1,000 m of lateral underground development was achieved in June

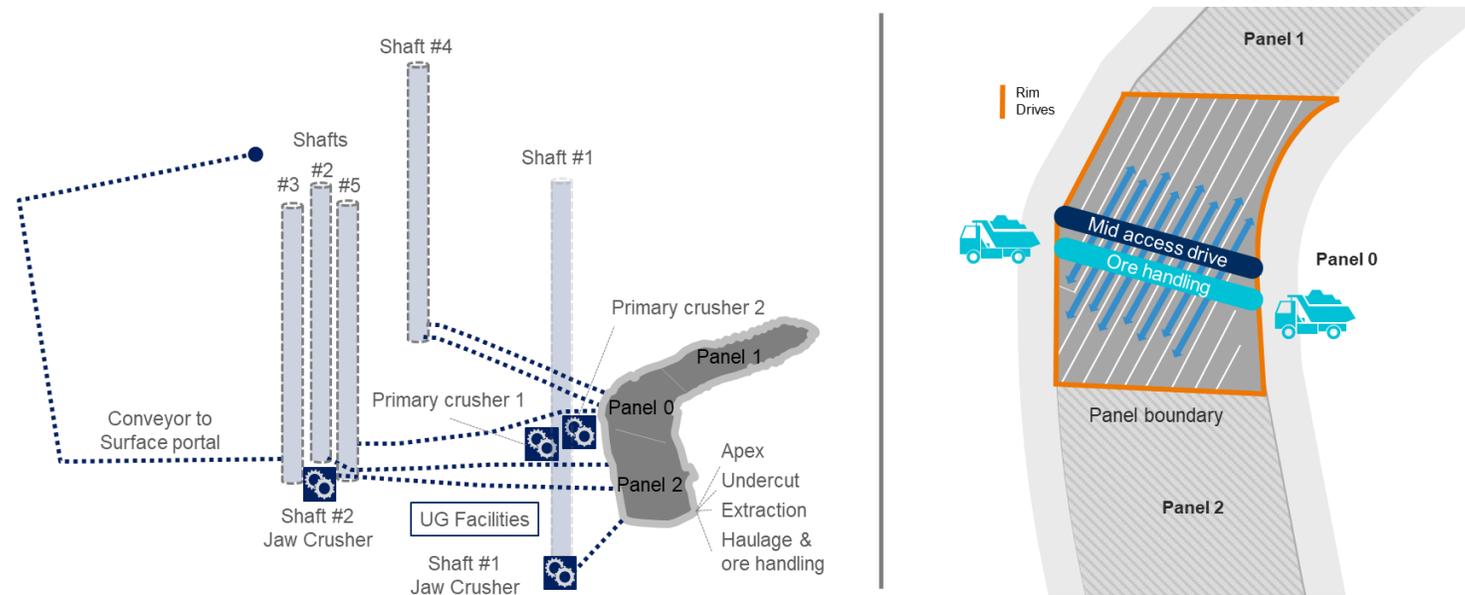
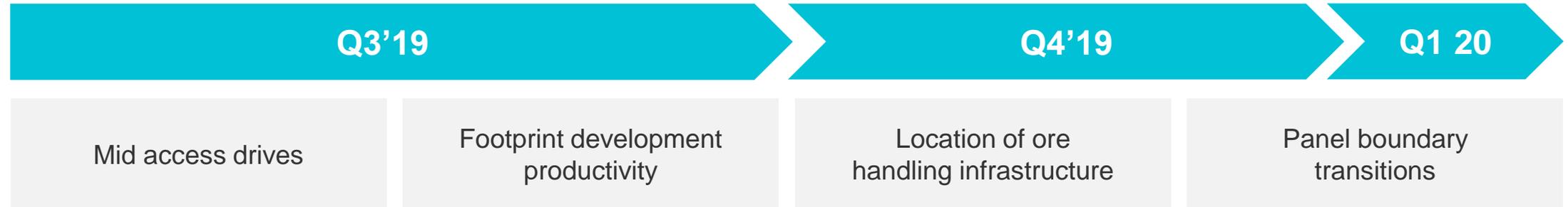
# Underground Development

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- › Refinement of mine design continues
- › Cave initiation still targets for Panel 0
- › No material change to Reserves & Resources anticipated
- › UG Development Capex is forecast to increase by \$1.2 billion to \$1.9 billion
- › 16 – 30 month delay to first sustainable production from feasibility study guidance in 2016
- › Independent consultants engaged to assist on Definitive Estimate work now due H2 2020



# Mine Design Refinement Decision Points



Diagrams are simplified from the underlying technical drawings for presentation purposes

# Update on Timing and Next Steps

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## July 15 update

- › Anticipate the updated mine design and schedule for the underground to result in:
  - An increase of \$1.2 billion to \$1.9 billion on the capital spend for the project
  - A 16-month to 30-month delay from the original feasibility study guidance in 2016

## What we are doing

- › Turquoise Hill COO, Jo-Anne Dudley and her team are:
  - Embedded in planning and estimate process currently underway
  - Providing insight into progress of key construction work at the mine site
  - Engaging independent third-party consultants to provide the company with insight and technical support

## Oyu Tolgoi is a long-term project with tremendous upside

- › All current infrastructure will be used in future, current work being done is de-risking future actions
- › This work is positioning us well to ramp up quickly in the future

# Strong Liquidity Position

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## Strong liquidity position to ensure continued funding of Oyu Tolgoi

- › ~\$2.9 billion: total underground capex spent to date
- › ~\$3 billion: total liquidity available as at June 30, 2019
  - \$1.4 billion: remaining project finance proceeds
  - \$1.6 billion: cash
- › Expect to continue to generate additional cash from ongoing open-pit operations, which will also be available to help fund the underground development. We currently expect to have enough liquidity to fund our operations and underground development through the end of 2020.
- › Engaged external financial advisors to evaluate available sources of capital



# Progress & Infrastructure

# Update on Power Plant

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- › Governance framework established with key stakeholders
- › Will be majority owned by Oyu Tolgoi, and will be situated close to Tavan Tolgoi coalfields
- › Initial licenses and permits received
- › Technical specifications have been developed
- › Commenced competitive tender process for EPC contract





# Proven Relationships & Sustainability

# Government of Mongolia

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- › Parliamentary Working Group Report was presented to the Economic Standing Committee in early May 2019.
- › Following the presentation, a new working group of nine Members of Parliament was established to draft a resolution directing the Cabinet on recommendations related to Oyu Tolgoi.
- › Newly established Working Group is in the process of drafting the resolution with draft resolution expected to be discussed during an extraordinary session to be held until September 30, 2019.
- › In the interim, Turquoise Hill remains engaged with the Government of Mongolia on multiple fronts including the Tavan Tolgoi Power Plant.

# Delivering Value to Host Communities

Oyu Tolgoi Contributes Materially to Expanding the Mongolian Economy

**~17,000**

Oyu Tolgoi's workforce<sup>1</sup>  
at the end of Q4'18.  
**92% Mongolian**

**~\$2.3B**

Taxes<sup>2</sup> and royalties paid  
to the Mongolian Government  
2010 – 2018

**~\$8.7B**

Spent in Mongolia<sup>3</sup>  
2010 – 2018

**618**

Mongolian national  
businesses worked with  
Oyu Tolgoi in 2018

**>\$2.7B**

Spent on operations  
Mongolian procurement  
2010 – 2018

**>\$30M**

Invested in sustainable long-term  
projects in the South Gobi  
2014 – 2018

1. Includes contractors
2. Includes VAT
3. In-country spend includes salaries, payments to Mongolian suppliers, taxes, and other payments to the Government of Mongolia



**Well Positioned for Future Success**

# Well Positioned to Manage Project Areas

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## Financing & CAPEX Budget

- › \$4.4B in project financing from 20 global financial institutions
- › A Definitive Estimate on underground development is expected in 2H 2020.

## Operating Manager

- › Rio Tinto is our operating manager at Oyu Tolgoi; a world-class mining company with extensive block caving experience

## Domestic Power Solution

- › Power Source Framework Agreement signed
- › Comprehensive feasibility studies advancing

## Fiscal Regime / Government Relations

- › Peaceful democracy
- › Frequent engagement with the Government of Mongolia
- › Stable open-pit production since 2013; underground construction resumed 2016
- › Government of Mongolia is a major shareholder (34%) in Oyu Tolgoi

## Path to Market

- › Oyu Tolgoi has exported material volumes since start up
- › Oyu Tolgoi's concentrates known and accepted by smelters

## Local Stakeholders

- › Excellent relationships with nearby communities and businesses
- › Strong local workforce: 19% from South Gobi region

# Clear Path to Long-Term Value Creation

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