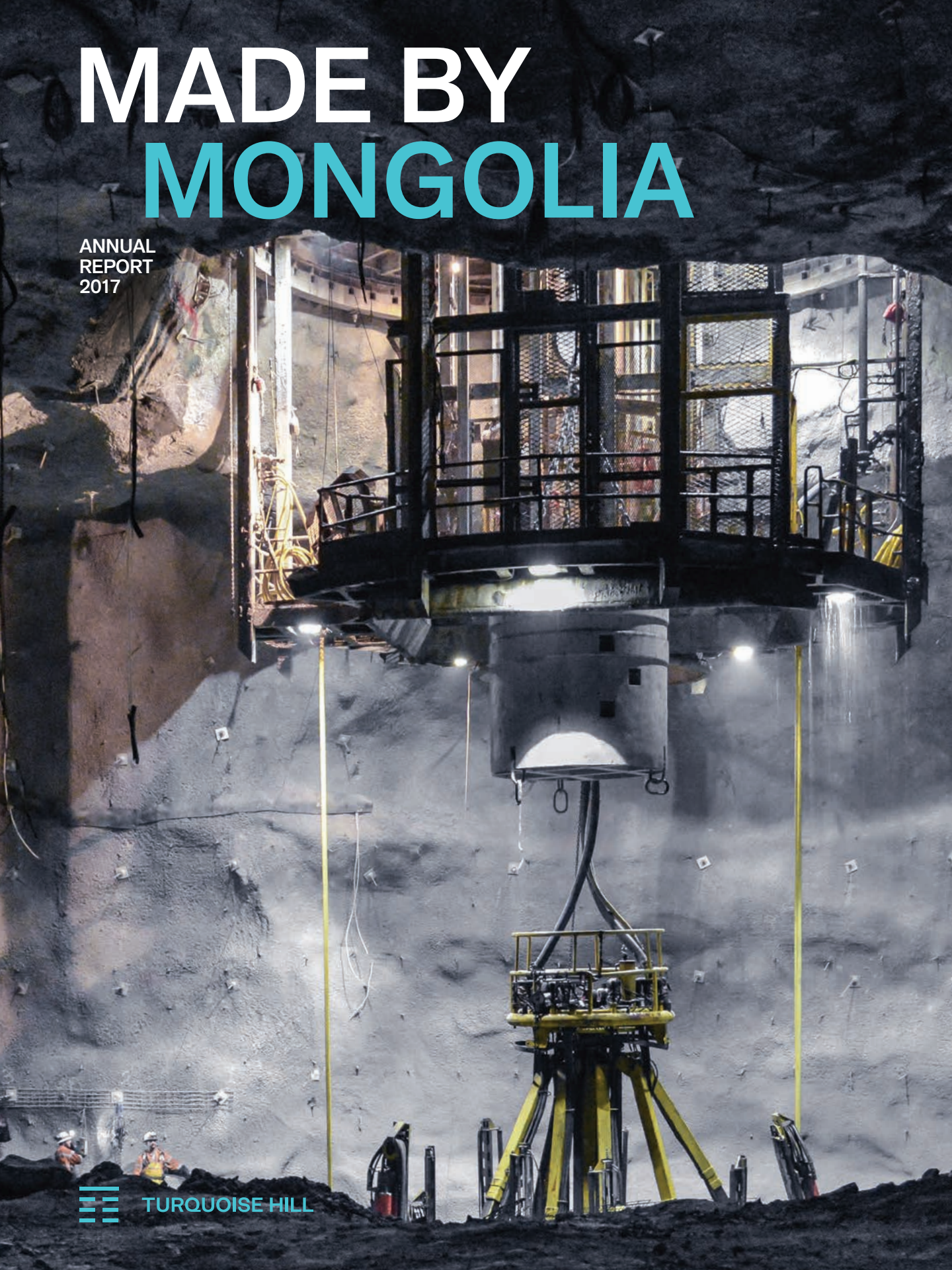


MADE BY MONGOLIA

ANNUAL
REPORT
2017



TURQUOISE HILL



Cover: Mass excavation work near the bottom of Shaft #2, the main production shaft for the Oyu Tolgoi underground mine.

Below: Two-tonne bags of copper-gold concentrate being prepared for shipping.



MADE BY MONGOLIA

ANNUAL
REPORT
2017



TURQUOISE HILL

05	INTRODUCTION
06	A RARE, WORLD-CLASS ASSET
22	LETTER FROM THE CHAIRMAN
24	LETTER FROM THE CEO
26	OPEN-PIT OPERATIONS
30	UNDERGROUND DEVELOPMENT PROGRESS
32	SUSTAINABILITY
36	SAFETY
38	WATER
42	BIODIVERSITY
44	GREENHOUSE GAS EMISSIONS
48	COOPERATION AGREEMENT WITH LOCAL COMMUNITIES
50	ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT MANAGEMENT



During 2017, Oyu Tolgoi's open-pit operation continued to set records and the underground project progressed toward becoming the third-largest copper mine in the world. The year was also filled with more Oyu Tolgoi success stories and confirming its status as a Mongolian national treasure. From a total workforce that is 94% Mongolian to collaborating with more than 1,100 local suppliers, concentrate from Oyu Tolgoi is truly made by Mongolia and helping propel the national economy forward.

In addition to the economic aspects of the mine, Oyu Tolgoi also has a robust and industry-leading sustainability program that encompasses health, safety, environment and community engagement. From superior safety performance to cutting-edge water recycling rates, Oyu Tolgoi is a Mongolian bellweather of sustainability.

While 2017 resulted in numerous accomplishments, there is much more to do in 2018 as underground development approaches two years since notice to proceed and the project advances Oyu Tolgoi toward achieving its full potential.

A RARE, WORLD- CLASS ASSET

In early 2018, Oyu Tolgoi completed sinking of Shaft #2 to a depth of 1,284 metres (4,213 feet) below surface.

340%

EXPECTED INCREASE IN COPPER PRODUCTION

Oyu Tolgoi is the best developing copper project globally and is expected to be the world's third-largest copper mine when the underground reaches peak production around 2025. Between 2018 and 2025, copper production is expected to increase more than 340% and gold production is expected to increase more than 150%. Few, if any, of the world's leading copper mines are able to show such significant production growth over a seven-year period.

Lateral development to access the Hugo Dummett ore body is ongoing, with 6.1 equivalent kilometres completed during 2017.

0.27

ALL INJURY FREQUENCY RATE FOR 2017

Oyu Tolgoi's operations had an industry-leading safety performance for 2017 with an All Injury Frequency Rate (AIFR) of 0.27 per 200,000 hours worked. The mine's AIFR has decreased more than 37% since production began in 2013.

Safety is the cornerstone of Oyu Tolgoi's culture. Workers undertake mass excavation work in Shaft #2.

13,000+

TOTAL WORKFORCE

Oyu Tolgoi is Mongolia's largest private-sector employer with a total workforce of more than 13,000 at the end of 2017, which were 94% Mongolian.

Approximately 6,000 workers currently are contributing to the development of the underground mine.



\$2.1B

OPERATING CASH FLOW

Between 2014 and 2017, Oyu Tolgoi has produced more than 780,000 tonnes of copper, more than 1.8 million ounces of gold and generated almost \$2.1 billion of operating cash flow (before interest and tax). Significant cash flow is expected following sustainable underground production in 2021. From 2022 to 2026, Oyu Tolgoi is expected to generate approximately \$9.5 billion in free cash flow.

Long-term, Oyu Tolgoi's resources provide the mine with development optionality, which is expected to generate over 50-plus years of production. Additionally, there is untapped exploration potential at Oyu Tolgoi offering possible upside to long-term production capacity.

During 2017, Oyu Tolgoi set operational records for total material mined and concentrator throughput.



\$335M

SPENT WITH MONGOLIAN SUPPLIERS IN 2017

Oyu Tolgoi is committed to building and promoting a localized, sustainable, quality-assured supply chain within Mongolia as well as developing a competitive and skilled Mongolian supplier community. During 2017, Oyu Tolgoi collaborated with more than 1,100 Mongolian suppliers and spent more than \$335 million, which accounted for approximately 70% of total operations procurement spend. Between 2010 and 2017, Oyu Tolgoi has spent approximately \$2.3 billion on national procurement.

A Gobi sunrise paints the sky over the concentrator complex.



\$25M

INVESTED IN THE SOUTH GOBI COMMUNITY

Oyu Tolgoi is committed to strengthening sustainable, neighbourly relationships with local communities based on mutual respect, active partnerships, and long-term agreements to maintain our social license to operate. From 2014 to 2017, Oyu Tolgoi invested more than \$25 million in sustainable long-term projects in the South Gobi community.

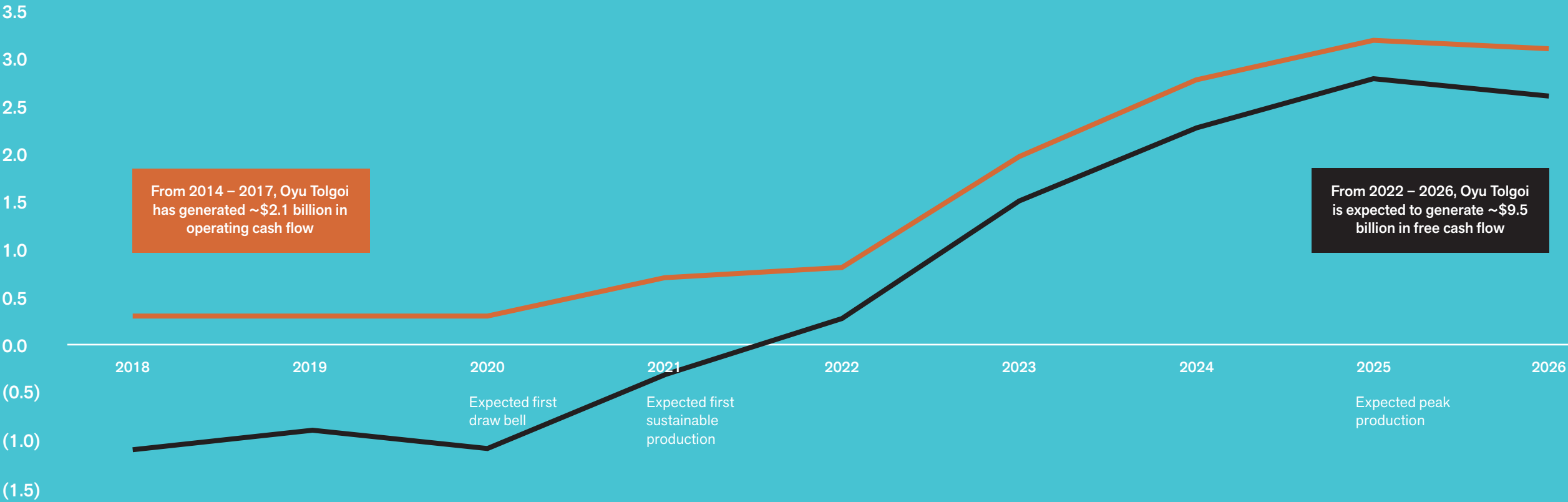
The Khanbogd Bulk Water Facility, financed by Oyu Tolgoi, now provides safe, clean drinking water to the citizens of Khanbogd Soum center.

SIGNIFICANT CASH FLOW EXPECTED

Indicative Oyu Tolgoi Cash Flow
\$3.00/lb. Copper and \$1,300/oz. Gold

Estimated values in billions; see footnotes for assumptions

Billions (\$)



Source: 2016 Oyu Tolgoi Technical Report, Reserves Case.
Free cash flow = operating cash flow – CAPEX; does not include financing costs.
Assumes \$3.00/lb. copper and \$1,300/oz. gold beginning in 2018 and represents Oyu Tolgoi-level cash flow.
Production in 2018 assumes additional 100,000 ounces of gold from 2016 technical report projection and 50,000 less ounces from 2019 and 2020 technical report projections.
Operating cash flow for 2018 – 2020 incorporates operational improvements/cost savings implemented after publication of the 2016 technical report cash flow model (Table 22.11).

LETTER FROM THE CHAIRMAN

DEAR SHAREHOLDERS:

It has been my privilege to serve as Chairman of Turquoise Hill during 2017. It has been gratifying to see the successful progression of underground development as well as the continuing record setting performance of open-pit operations. The board held its annual strategy session in Mongolia in September and the directors were extremely impressed with our underground tour to witness first-hand the notable advancements taking place.

On behalf of the Turquoise Hill board, I want to convey our sincere gratitude to all Turquoise Hill employees and the entire Oyu Tolgoi workforce for a successful 2017. Without the dedication to safety, operational efficiency and development momentum of these employees, the year's accomplishments would not have been possible.

The Company was keenly focused on underground development during 2017, given it drives our long-term value. It was pleasing to see lateral development advancements as well as the near-complete sinking of Shaft 2 by year's end. The sinking of Shaft 2 was completed in January 2018, which was part of the critical path timetable.

Open-pit operations also had a strong year and set operational records. I am continually impressed with the ability of the Oyu Tolgoi workforce to consistently deliver on performance targets.

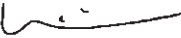
Your company is wholly committed to its corporate social responsibility and license to operate in Mongolia. I am always proud to see Oyu Tolgoi's significant contributions to the country. Be it safety, employment, vocational training or water stewardship. These commitments shall continue. The Government of Mongolia as a 34% owner of Oyu Tolgoi LLC as well as host government is a critical component in both operations and development.

Corporate governance at Turquoise Hill is an important matter in view of the complexity and uniqueness of the Company's arrangements with Rio Tinto. The Board, which has a majority of independent directors, continuously considers and monitors governance issues and works on behalf of all Turquoise Hill shareholders. We welcome engagement with all shareholders and appreciate any governance discussion that advances the Company's goal of enhancing shareholder value. We maintain an active dialogue with major shareholders with the intent of enhancing our overall governance practices. The board has engaged constructively with shareholders in the past and we are committed to doing so in the future. The Turquoise Hill board is working to enhance transparency, governance and create value for all shareholders.

During 2017, we welcomed new directors Maryse Saint-Laurent, Ulf Quellmann and Stephen Jones and bid farewell to Rowena Albones and Craig Stegman. I have enjoyed collaborating with our new directors and greatly appreciated the numerous contributions of Rowena and Craig during their term. Also during the year, Steeve Thibeault stepped down and Luke Colton was appointed to the CFO position. We wish Steeve the best in his future endeavors and are grateful for his contributions to the success of Turquoise Hill. We look forward to working with Luke.

The board is grateful to the full Turquoise Hill management team and the Oyu Tolgoi workforce for making the successes of 2017 a reality and we look forward to continued development momentum and operational achievements in 2018.

Sincerely,



R Peter Gillin



LETTER FROM THE CEO

DEAR SHAREHOLDERS:

This past year was a major step forward for Oyu Tolgoi in advancing value for Turquoise Hill shareholders. I think it is important to step back and reflect on what Oyu Tolgoi achieved during the year, how the workforce advanced and how Mongolia benefited from this world-class asset.

During 2017, underground development made good progress meeting our project guidance spend and moving us closer to first draw bell in 2020. It is wonderful to see the underground project's momentum and I know many of you share my enthusiasm for Oyu Tolgoi nearing its full potential as one of the world's largest copper mines.

Oyu Tolgoi had another strong year of safety performance with an AIFR of 0.27 per 200,000 hours worked for 2017. Oyu Tolgoi's workforce for operations and underground construction totaled more than 13,000 at year end. Safety is at the heart of Oyu Tolgoi's culture and the workforce is a leader in both Mongolia and the mining sector for their safety achievements. When I visit site, I am extremely proud of Oyu Tolgoi's safety accomplishments, their focus on the environment and commitment to local communities.

Also throughout 2017, Oyu Tolgoi's open-pit operation performed well in a year with challenging ore grades and set a number of operational records. We started the year expecting neutral cash flow from the operation, and by year end achieved over \$300 million. I am continually impressed with the achievements of the operational workforce, which was over 95% Mongolian at year end.

Part of my role involves marketing Turquoise Hill to analysts, shareholders and potential investors. I enjoy each opportunity I have to promote Oyu Tolgoi because I believe it is truly an amazing asset that will be at the forefront of the industry with the

addition of the underground. During 2017, I participated in more than 100 face-to-face meetings with existing and potential shareholders. One of the best ways to fully appreciate the size and scale of Oyu Tolgoi is to see it first-hand. During the year, we hosted a number of shareholders and analysts for a site visit that included seeing underground development progress and open-pit operations.

UNDERGROUND DEVELOPMENT PROGRESS

Approximately 80% of Oyu Tolgoi's value resides in the underground with copper grades in Hugo North Lift 1 roughly four times that of the open pit. Even more exciting, copper grades in the first five years of underground production are over 2% copper. Moving forward, first sustainable underground production is planned in 2021, peak underground copper production around 2025 and full underground mine production in 2027.

During 2017, the four major components of underground construction included lateral development, construction of Shafts 2 and 5 and building of the convey-to-surface system. Total underground spend in 2017 was over \$800 million and Oyu Tolgoi had further capital commitments of \$1.2 billion. By the end of 2017, the project had committed over 50% of direct project contracts and over 70% of those were to Mongolian companies. Oyu Tolgoi has worked extremely hard to ensure that Mongolia benefits from the underground project construction.

Lateral development is a critical component of underground construction because it advances the project closer to mining Hugo North Lift 1. During 2017, strong progress was made with 6.1 equivalent kilometres of lateral development completed, in line with expectations.

Shaft 2 is a production and ventilation shaft that allows increases in lateral development. At the end of 2017, Shaft 2 sinking had reached final depth of 1,284 metres and shaft sinking was complete in January 2018. Fit out of Shaft 2 is expected to occur throughout 2018.

Shaft 5 will be used for ventilation and at the end of 2017 there were approximately 100 metres of shaft sinking remaining. Shaft 5 is expected to be operational in early 2018.

The convey-to-surface system is the eventual route of the full 95,000 tonnes per day underground ore delivery system. Completion of the system is expected in 2022, which will facilitate full underground ore production ramp-up by 2027. During 2017, development of the convey-to-surface decline made good progress.

Development of Oyu Tolgoi's underground is a complex undertaking. Good construction progress was made during 2017 and we remain on target for first draw bell in 2020 and sustainable production in 2021.

OPEN-PIT OPERATIONS SETS RECORDS

Open-pit operations set several records during 2017, including open pit material mined and concentrator throughput. Open pit material mined increased almost 10% over 2016 and concentrator throughput increased nearly 8% over 2016. For 2017, the mine produced 157,400 tonnes of copper and 114,000 ounces of gold in concentrates, which met our production guidance.

Oyu Tolgoi has made great strides in reducing operating costs through implementation of numerous efficiency initiatives. As a result, since 2014 the mine team has removed approximately 20% from operating costs. I am exceptionally proud of what Oyu Tolgoi achieved with open-pit operations during 2017. Looking ahead to 2018, Oyu Tolgoi is expected to produce 125,000 to 155,000 tonnes of copper and 240,000 to 280,000 ounces of gold in concentrates.

MONGOLIA BENEFITTING FROM OYU TOLGOI

Concentrate from Oyu Tolgoi is made in Mongolia and the business is now part of the country's fabric. The Mongolian economy is benefitting from Oyu Tolgoi in many ways, listed below are just a few:

- Oyu Tolgoi is Mongolia's largest private sector employer with a total workforce that is over 90% Mongolian;
- Since 2010, Oyu Tolgoi has paid roughly \$1.7 billion in taxes and royalties to the Government of Mongolia and was the country's top corporate taxpayer in 2015 and 2016;
- Since 2010, Oyu Tolgoi has spent nearly \$7.2 billion in Mongolia on salaries, local supplier payments, taxes and other payments to the Government of Mongolia;
- Since 2010, Oyu Tolgoi has spent more than \$2.2 billion on procurement with national businesses; and
- Since 2014, Oyu Tolgoi has invested more than \$25 million in sustainable long-term projects in the South Gobi community.

Oyu Tolgoi is also making significant contributions to Mongolia through its many sustainability initiatives. One of the best examples is Oyu Tolgoi's approach to water, which is a precious natural resource in the South Gobi. Oyu Tolgoi operates some of the best water conservation standards worldwide, using less than half the global average of water per tonne of ore processed for similar mines.

It has been gratifying to see all that Oyu Tolgoi accomplished during 2017. Underground development continues to gain momentum and the open pit set several operational records. I look forward to the completion of underground development and Oyu Tolgoi taking its place as one of the top producing copper mines in the world.

Regards,



Jeff Tygesen

OPEN-PIT OPERATIONS



Turquoise Hill met its 2017 production guidance with 157,400 tonnes of copper and 114,000 ounces of gold produced during the year.

Oyu Tolgoi's open-pit operations set a number of operational records during 2017. Open pit material mined set a record with more than 105 million tonnes of ore mined. The concentrator also set a record with more than 41 million tonnes of ore treated, which equates to an average daily rate of almost 113,000 tonnes per day. During the fourth quarter, the concentrator operated at its highest level since the beginning of operations. In June, Oyu Tolgoi shipped its three millionth tonne of concentrate.

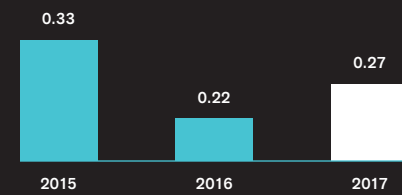
During 2016, the mine plan for Phase 4 was divided into two parts, 4A and 4B, in expectation of reaching the high-grade gold zone of Phase 4 around mid-2018.

During 2017, open-pit mining focused on Phase 6, which contained low-grade ore, as well as the continued stripping of Phase 4. Stockpiled ore was also processed during the year. Despite the lower grades, Turquoise Hill met 2017 production guidance.

Oyu Tolgoi is expected to produce 125,000 to 155,000 tonnes of copper and 240,000 to 280,000 ounces of gold in concentrates for 2018. Open-pit operations are expected to mine in Phase 6 in early 2018 and Phase 4 throughout the year. In addition, stockpiled ore will be processed during 2018. Due to the splitting of Phase 4 into two parts, gold production is being brought forward into 2018 from future years.

All Injury Frequency Rate

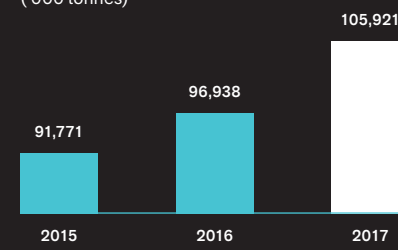
(Per 200,000 hours worked)



Oyu Tolgoi's industry-leading safety performance has declined more than 18% since 2015.

Open Pit Material Mined

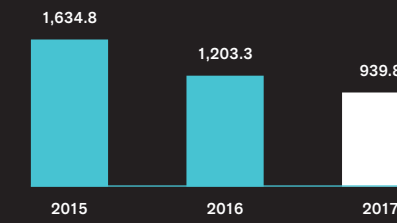
('000 tonnes)



Open pit material mined reached a record high in 2017 and has increased more than 15% since 2015.

Revenue

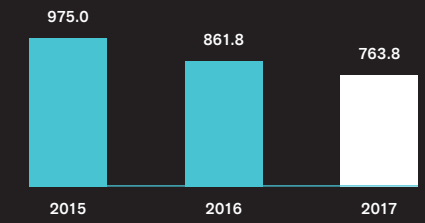
(\$ in millions)



Revenue in 2017 was impacted by lower sales volumes due to reduced copper and gold grades.

Cost of Sales

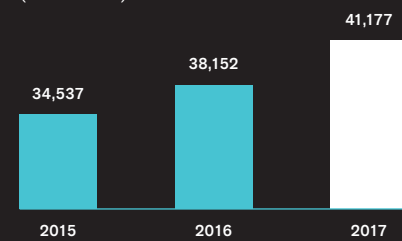
(\$ in millions)



Cost of sales in 2017 reflected lower concentrates sold as well as lower production costs from cost savings.

Ore Treated

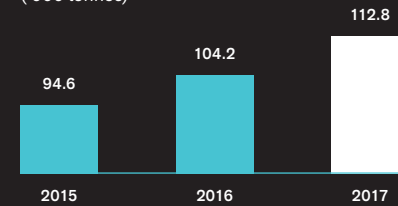
('000 tonnes)



Oyu Tolgoi's concentrator performed extremely well in 2017 benefitting for softer Phase 6 ore.

Average Daily Concentrator Rate

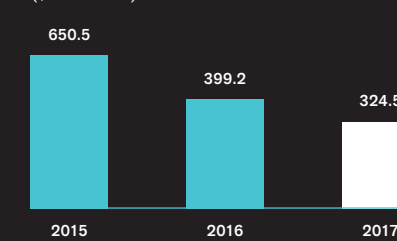
('000 tonnes)



For the second year in a row, Oyu Tolgoi's average daily concentrator rate exceeded nameplate capacity of 100,000 tonnes per day.

Operating Cash Flow

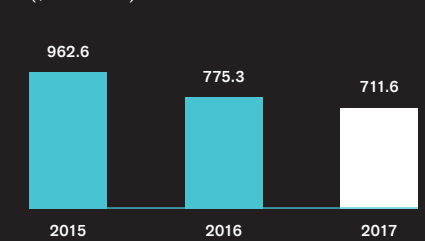
(\$ in millions)



Operating cash flow in 2017 benefitted from an improving copper price environment.

Operating Cash Costs

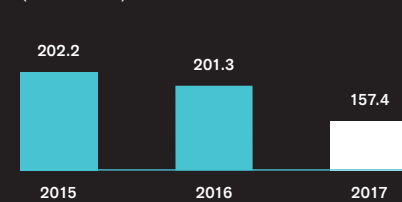
(\$ in millions)



Lower operating cash costs in 2017 reflects efficiency improvements as well as cost reduction programs.

Production of Copper in Concentrates

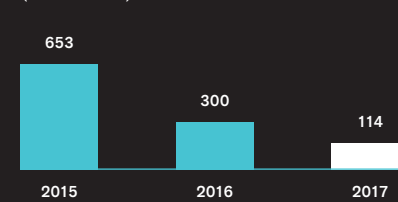
('000 tonnes)



In 2017, copper production met the Company's annual guidance of 130,000 to 160,000 tonnes of copper in concentrates.

Production of Gold in Concentrates

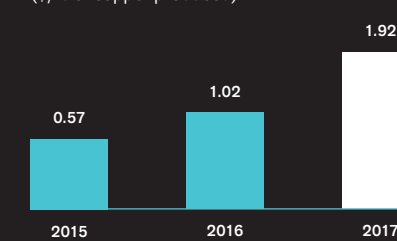
('000 ounces)



Gold production in 2017 met the Company's annual guidance of 100,000 to 140,000 ounces of gold in concentrates.

C1 Cash Costs

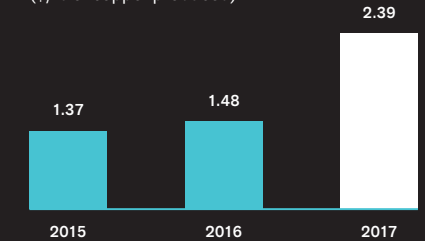
(\$/lb of copper produced)



The increase in C1 cash costs in 2017 reflect lower grades throughout the year, particularly gold.

All-In Sustaining Costs (AISC)

(\$/lb of copper produced)



The increase in AISC for 2017 reflects lower gold credits per pound of copper produced.

UNDERGROUND DEVELOPMENT PROGRESS

Two-metre-long rock stabilizing bolts are drilled into the walls of Shaft #2 during sinking.

Progress of underground development during 2017 advanced the long-term value of Turquoise Hill as approximately 80% of Oyu Tolgoi's value resides underground. The main focus of underground development during 2017 was underground lateral development, sinking of Shafts 2 and 5, support infrastructure and the convey-to-surface system, which all progressed during the year. Approximately 89% of the underground workforce were Mongolian nationals at the end of 2017. Turquoise Hill continues to expect first draw bell in mid-2020 and sustainable first production in 2021.

During Q4'17, Rio Tinto undertook a schedule and cost review. Rio Tinto has provided Turquoise Hill with a high-level overview of the review's outcomes, in which Rio Tinto concluded there were no material changes in project scope, cost or schedule.

Underground lateral development made strong progress during 2017 with 6.1 equivalent kilometres complete, which was in line with the development timeline in the 2016 Oyu Tolgoi Technical Report (2016 Technical Report). Since the re-start of development, a total of 7.7 equivalent kilometres of lateral development has been completed. By the end of 2017, the newly installed 3,500 tonne per day development crusher was consistently operating above nameplate capacity. Lateral development is expected to advance approximately 10.0 kilometres during 2018.

Shaft 2 will be used for both production and ventilation. By the end of 2017, Shaft 2 sinking reached final depth of 1,284 metres and shaft sinking was completed in January 2018. The shaft bottom station was approximately 50% complete at the end of 2017 and headframe works progressed with the positioning of hoist equipment. Fit out of Shaft 2 is expected to occur throughout 2018. Shaft 2 is key to future increases in lateral development activity.

Shaft 5 had approximately 100 metres of remaining shaft sinking at the end of 2017 and is expected to be complete in Q1'18. Installation of the shaft exhaust fan commenced by the end of 2017 and is on target to be completed in early

Q2'18. When complete, Shaft 5 will be dedicated to ventilation thereby increasing the capacity for underground activities.

Supporting infrastructure progressed during 2017. Construction of the new camp was approximately 70% complete at the end of Q4'17, including completion and occupancy of the first two buildings. At the end of 2017, the camp's four remaining buildings were mechanically complete and approved for occupancy by the state commissioning authorities.

Development of the convey-to-surface decline also continued to progress during 2017 with month-on-month improvement resulting from the use of project-wide process optimization techniques. The convey-to-surface system is the eventual route of the full 95,000 tonne per day underground ore delivery system to the concentrator; however, it is not a critical path item for first draw bell planned in mid-2020. Expected completion of the convey-to-surface system is 2022, which will facilitate the ramp up to full production by 2027.

Oyu Tolgoi spent \$835.7 million on underground expansion during 2017. Total underground project spend from January 1, 2016 to December 31, 2017 was approximately \$1.1 billion. In addition, Oyu Tolgoi had further capital commitments of \$1.2 billion as of December 31, 2017. At the end of 2017, the underground project had committed 56% of direct project contracts and procurement packages, of which 71% were to Mongolian companies.

SUSTAINABILITY

In 2017, Oyu Tolgoi used an average of 0.4 cubic metres of water per tonne of ore processed – significantly better than the global average of 1.2 cubic metres per tonne, and achieved a recycling rate of 86.2 per cent.



Turquoise Hill is committed to protecting the environment and to safeguarding the health, safety and welfare of all employees, contractors and communities who are affected by Turquoise Hill and Oyu Tolgoi. The Company is dedicated to performing its duties in a safe, environmentally responsible and effective manner.

Turquoise Hill supports and respects human rights consistent with the Universal Declaration of Human Rights and seeks to ensure that we are not complicit in human rights abuses committed by others. The Company respects and supports the dignity, well-being and rights of our employees, their families and the communities in which we operate. Turquoise Hill also sets out to build enduring relationships with our neighbours that demonstrate mutual respect, active partnership, and long-term commitment. The Company 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.

Oyu Tolgoi's commitment to operating in a sustainable way is unshakable. Oyu Tolgoi is also committed to minimizing and mitigating the mine's operational impact on the environment while continuing to uphold the highest environment standards and drawing of the advice of environmental experts as well as local communities.

Since 2010, Oyu Tolgoi has been developing a Health, Safety and Environmental management system in compliance with IOS 14001 Environmental and OHSAS 18001 Occupational Health and Safety management standards. In 2013, Oyu Tolgoi was independently audited and received certification on these standards.

In meeting its sustainability commitments, Oyu Tolgoi complies with the following regulations and requirements:

- All relevant environmental laws, regulations and standards of Mongolia;
- Internationally recognized mining standards;
- Environmental requirements and standards of the Oyu Tolgoi project finance lenders (e.g. International Finance Corporation, European Bank of Reconstruction and Development);
- Rio Tinto's environmental policies, strategies and standards; and
- Regular monitoring of environmental performance and Oyu Tolgoi's internal environmental monitoring programs.



SUSTAINABILITY

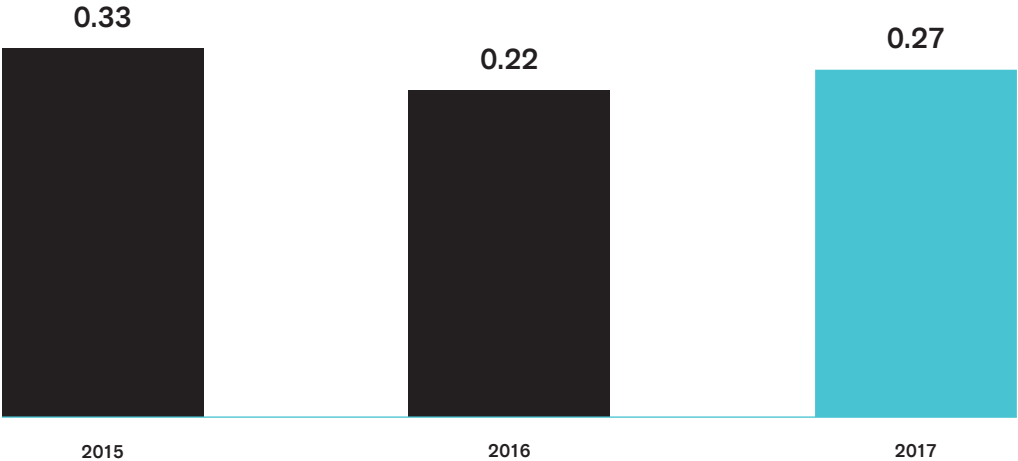
Approximately \$2.5 million was invested during 2017 to ensure that Oyu Tolgoi has a net positive environmental impact in the South Gobi region.

SAFETY

SUSTAINABILITY

One of the most important means of safeguarding the health, safety and welfare of Oyu Tolgoi's workforce is through a dynamic and robust safety program. The All Injury Frequency Rate (AIFR) is an indicator of workplace health and safety and provides insight into an organization's efforts to protect its workforce from work-related hazards. Oyu Tolgoi's 2017 AIFR of 0.27 per 200,000 hours worked was an industry-leading achievement. Since 2015, Oyu Tolgoi's AIFR has declined more than 18%, which is the result of the constant work by the mine's management team to improve safety performance.

All Injury Frequency Rate
Per 200,000 Hours Worked



WATER

Water is the most precious natural resource in the South Gobi. To ensure ongoing availability of surface water, Oyu Tolgoi 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 operates some of the best water conservation standards worldwide, using less than half the global average of water per tonne of ore processed for similar mines. This means all of the water at Oyu Tolgoi is used and reused until it is lost through evaporation. This has been achieved through a number of measures:

- High-efficiency tailings reclaim;
- 100% cooling water reuse;
- 100% mine water recovery and reuse;
- 100% treated domestic waste water reuse;
- 100% truck wash water reuse;
- Measures to prevent evaporation;
- Ongoing water conservation measures; and
- A zero direct discharge policy, meaning that no waste water will be directly released into the environment.

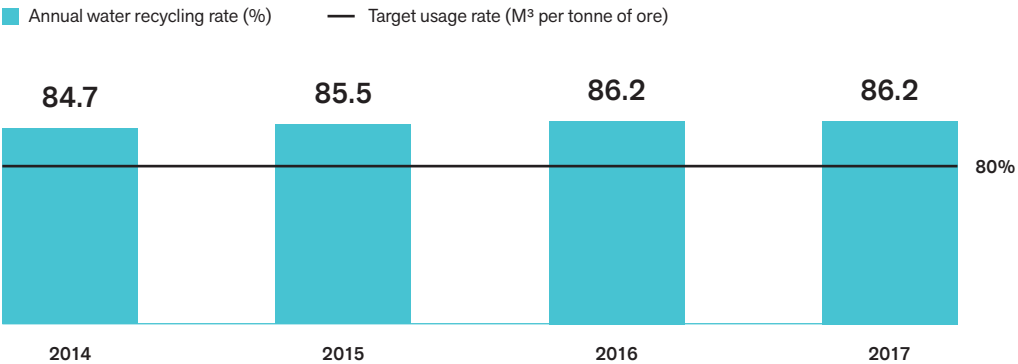
Given the dry nature of the South Gobi region, coupled with the requirements of an operational mine and growing population, Oyu Tolgoi has undertaken detailed hydrogeological investigations

in the region since 2003. Through these programs Oyu Tolgoi has identified two large aquifers, geological formations containing underground water, which are at least 150 metres below the surface - far deeper than the surface water sources used by local people and animals.

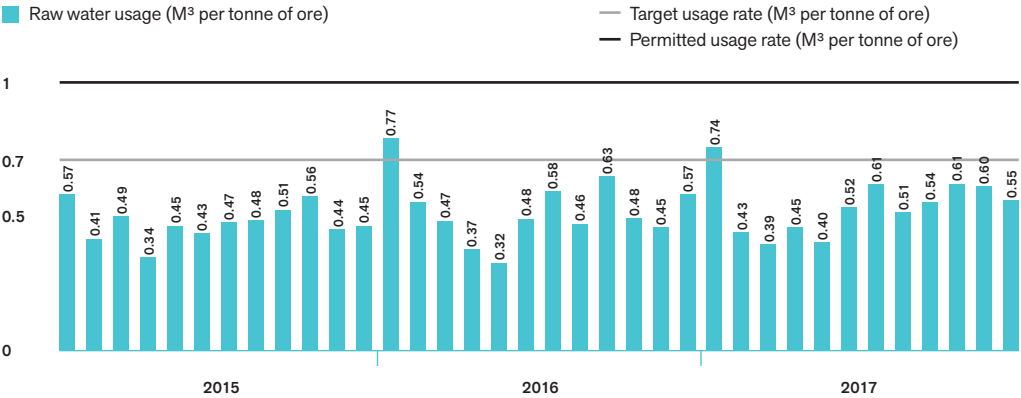
Detailed hydrogeological investigations of the Gunii Hooloi aquifer have concluded that it has water reserves of 6,800,000,000 cubic metres. Under Oyu Tolgoi's water permits, the mine can only use less than 20% of the aquifer over 40 years, ensuring that the majority of the water remains underground for future generations.

Oyu Tolgoi's reserves have also been identified by hydrogeological surveys and water exploration efforts. With proper water management at Oyu Tolgoi, sufficient water resources will be available for the needs of both the mine and local communities. Oyu Tolgoi operates a comprehensive water monitoring program that incorporates hydrogeological modeling and prediction of water drawdown of the Gunii Hooloi aquifer.

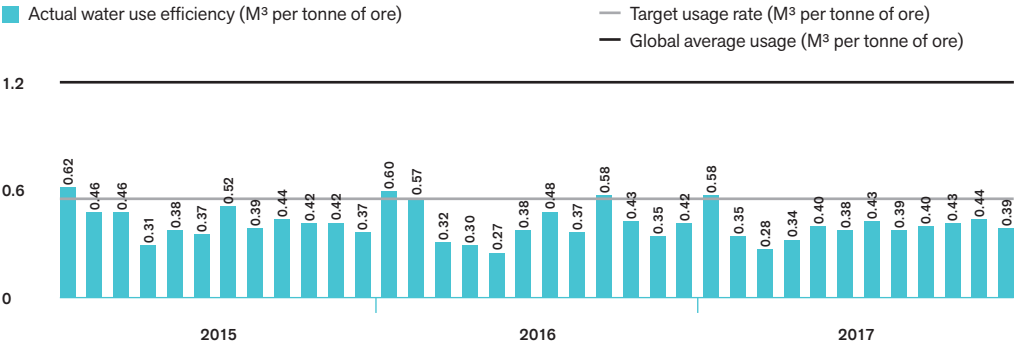
Annual Water Recycling Rate



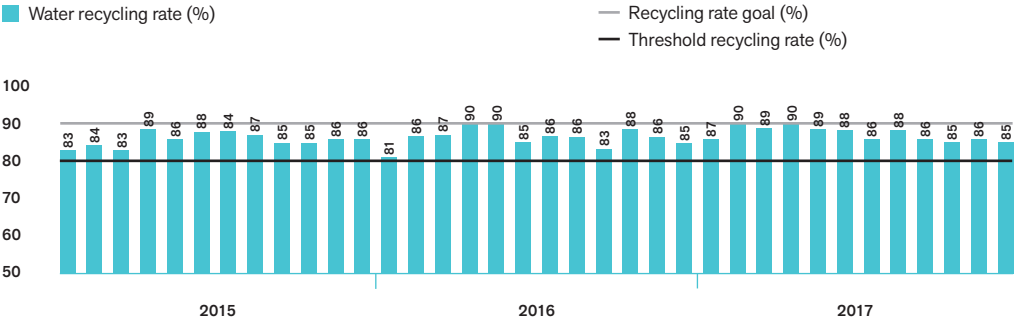
Raw Water Usage



Raw Water Use Efficiency



Water Recycling Rate



In April 2017, Oyu Tolgoi inaugurated the Khanbogd Bulk Water Facility, which was fully funded by Oyu Tolgoi and grew out of the mine's water exploration program. The \$6.9 million bulk water facility will provide safe, clean drinking water to Khanbogd, with a 6.6 kilometre network of pipeline distributing water across the town. The facility will support future development of Khanbogd, with a capacity to supply water to over 13,000 residents and has the potential to be further expanded. The facility includes:

01	02	03
Four boreholes	Raw water tank (1,500m³)	Water purification plant
04	05	06
Water transmission pipeline (6.6km)	Treated water reservoir (2,000m³)	10kV Electrical substation, lines (8.8km)

SUSTAINABILITY



BIODIVERSITY

Oyu Tolgoi is committed to achieving a net positive impact to offset the mine's activities. Oyu Tolgoi has received approval from the Government of Mongolia for its offset program, which includes a sustainable cashmere project and an anti-poaching initiative, that is in its fourth year of operation. Oyu Tolgoi has established Mongolia's first Khulan and black-tailed gazelle satellite monitoring program. The mine also has an environmental, water and biodiversity monitoring program with local herders. Oyu Tolgoi undertook a powerline insulation pilot project that resulted in the successful reduction in mortality of raptors by 85%. The mine expects to expand the insulation project to non-Oyu Tolgoi powerlines and continue working with the national powerline committee in order to offset impacts on local bird populations.

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.

The following table highlights Oyu Tolgoi's emissions intensity per unit of production and total emissions.

SUSTAINABILITY

	2014a	2015a	2016a	2017a	2018e	2019e	2020e
Emissions Intensity target (tCO ₂ -e/unit of production)	N/A	1.90	1.76	2.46	2.12	1.96	2.75
Emissions intensity (actual)	2.40	1.85	1.70	2.18	—	—	—
Total emissions actual (tonnes CO ₂ -e)	1,353,130	1,463,002	1,429,626	1,572,355	—	—	—

a = actual, e = expected

Oyu Tolgoi uses the highest-quality fuel available in Mongolia in order to reduce gaseous emissions. Other measures implemented to reduce greenhouse gas emissions include:

- Use of high-efficiency motors;
- Replacing high-efficiency lighting with LED;
- Addition of expert control automation to maximize concentrator throughput and reducing the power requirements per tonne of concentrate produced;
- Adopting new lime automation processes for pH control to improve slacking efficiency and reduce lime consumption;
- Increased water recycling rates through the use of expert control automation leading to reduced power at the thickener that would otherwise require water being pumped to and from the tailings storage facility;
- Use of closed loop heating in the concentrator, which is designed to utilize the heat generated from the mills;
- Recycling of SAG mill ball media;
- Reduction in food waste from smaller plate sizes in mess facilities; and
- Progressive rehabilitation implementation immediately following land disturbing activities completion or as soon as practicable on land that is no longer needed for current or future operational use.

Oyu Tolgoi incorporates a rigorous process of avoiding and minimizing land clearance. The mine's land disturbance permit process keeps the footprint as low as possible and Oyu Tolgoi's comprehensive inventory and Geographical Information System (GIS) is in place. Based on baseline and GIS data, Oyu Tolgoi's rehabilitation process has progressed well with completion of 99% of available offsite areas (excluding facilities footprint). Onsite waste rock dump progressive rehabilitation is in the study and preparation process.

Through the preparation and study of native plants for biological rehabilitation, Oyu Tolgoi has developed a Native Plant Propagation Centre. One significant benefit of the facility is to provide free tree and shrub saplings to local communities for landscaping and greening. As of the end of 2017, the centre had provided over 65,000 saplings to local towns and communities.



Water going through the recycling process outside the concentrator.

COOPERATION AGREEMENT WITH LOCAL COMMUNITIES

In April 2015, Oyu Tolgoi signed a Cooperation Agreement with the mine’s local communities, which was the first of its kind in Mongolia. The agreement sets out how the parties will work together toward sustainable development in areas such as water, environment, pastureland management, cultural heritage, tourism as well as local business development and procurement.

Subsequently in September 2015, Oyu Tolgoi established the Gobi Oyu Development Support Fund agreeing to make a \$5 million contribution annually for expenditure on South Gobi sustainable development. The fund board consists of four Oyu Tolgoi management representatives and three community representatives. Funding has been approved for numerous projects, including a completed healthcare centre, an animal health centre, an animal disinfection program and the building of several schools. In 2015, the Tripartite Council was established consisting of local herders, local community representatives and Oyu Tolgoi.

Since its creation in 2015, the development fund has invested more than \$11 million in 65 sustainable development projects and programs, which have resulted in the creation of more than 200 permanent jobs, benefits to over 65,000 community members, including scholarships for 57 students, among many other achievements. Examples of projects implemented through the funds includes:

01	02	03
The construction of a school and kindergarten to provide a convenient, comfortable learning and teaching environment to 640 students and 200 children;	The protection of 42 historical sites, along with local ranger’s education, to ensure continuing protection and preservation of those sites;	A heating plant in Manlai soum to provide heat to 2,400 residents;
04	05	
A Gobi grove in Manlai soum with 1,000 trees and a watering system over five hectares; and	Three high output breeds of camels protection and creation of a local brand of cashmere.	

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

In 2012 as part of project finance requirements, Oyu Tolgoi undertook a comprehensive Environmental and Social Impact Assessment (ESIA), which was performed independently. The process involved consultations with local and regional authorities, local businesses, community organizations and local community representatives.

The study provides 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 describes how Oyu Tolgoi expects to minimize and manage the mine's environmental and social impact as well as maximizing positive benefits over the mine's life. It also demonstrates a process to ensure local communities are consulted in decisions to be made throughout the life of Oyu Tolgoi's operation.

The first ESIA was published in 2013 showing a 91% compliance rate. A subsequent independent audit published in 2016 showed a 98% compliance rate. Oyu Tolgoi has no areas of non-compliance requiring immediate corrective action.

BOARD OF DIRECTORS

Peter Gillin – Chairman
Corporate Director

Jeff Tygesen³
Chief Executive Officer

Dr. James Gill^{1, 2, 3}
Corporate Director and
Mining Consultant

Stephen Jones³
Chief Advisor – Surface
Mining and Geosciences
Rio Tinto

Ulf Quellmann⁴
Vice President, Strategic
Projects Copper & Diamonds
Rio Tinto

Russel Robertson^{1, 2, 4}
Corporate Director

Maryse Saint-Laurent^{1, 2, 4}
Corporate Director

¹ Member of Audit Committee
² Member of Compensation and
Benefits Committee
³ Member of Health, Safety,
Environment and Communities
Committee
⁴ Member of Nominating and
Corporate Governance Committee

The 96-metre-tall (315 feet) headframe over Shaft #2 dominates the skyline around Oyu Tolgoi.





TURQUOISE HILL

Annual Report 2017

Turquoise Hill Resources Ltd.
Suite 354 - 200 Granville Street
Vancouver, BC, Canada V6C 1S4

TRQ: TSX, NYSE & NASDAQ

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

turquoisehill.com