

Turquoise Hill announces completion of 2020 Oyu Tolgoi Feasibility Study, updated Mineral Reserves and Mineral Resources, and an improved liquidity outlook

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MONTREAL, July 2, 2020 - [Turquoise Hill Resources Ltd.](#) ("Turquoise Hill" or the "Company") today announced its updated Mineral Resources and Mineral Reserves, prepared in accordance with the requirements of National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and CIM definition standards for Mineral Resources and Mineral Reserves, and an improved liquidity outlook and deferral of the Company's interim financing discussions.

The Company's updated Mineral Resources and Mineral Reserves are being announced further to the completion of an Oyu Tolgoi Feasibility Study ("OTFS20") that incorporates the new mine design for Hugo North Lift 1 Panel 0. This new design reduces the Mineral Reserve estimate for the Hugo North underground mine due to the inclusion of two structural pillars north and south of Panel 0 to protect ore handling infrastructure.

The Company's project manager has advised that it is expected that part of the ore contained in these pillars will be recovered at a later stage following additional studies which are currently underway. Pending the completion of this work in 2021, the ore contained in the pillars has been converted from Mineral Reserves to Mineral Resources.

The Mineral Resources and Mineral Reserves also include minor updates to the Oyu open pit resource model and account for mineral depletions to December 31, 2019, as disclosed in the Company's Annual Information Form for the year ended December 31, 2019 ("2019 AIF").

In support of the changes, an updated technical report ("2020 OTTR") prepared in accordance with the requirements of NI 43-101 will be filed on SEDAR within 45 days of this news release under Turquoise Hill's profile at www.sedar.com.

Turquoise Hill notes that Oyu Tolgoi LLC is in the process of submitting OTFS20 with the Government of Mongolia in order to comply with local regulatory requirements. OTFS20 incorporates an update to the first sustainable production schedule and cost estimates for the underground mine development based on the updated Panel 0 mine design announced by the Company on May 13, 2020. Estimated total expansion capital for the underground project is in line with the recently disclosed range of US\$1.8 billion to US\$3.8 billion in excess of the Oyu Tolgoi 2016 Feasibility Study ("OTFS16") estimate, of which US\$3.8 billion has been spent as of March 31, 2020. A further, more detailed cost and schedule update will be provided in connection with the OTFS20 estimate review, expected to be completed before the end of the year.

OTFS20 does not reflect the impacts of the COVID-19 pandemic which are ongoing and continue to be assessed. A number of work fronts are directly impacted including Shafts 3 and 4 being put on care and maintenance and work on Primary crushing slowed due to the lack of availability of critical resources and restrictions on site workforce numbers.

"With the updated Mineral Resources and Mineral Reserves now completed, we remain focused first and foremost on completing the underground project safely and remaining within the guidance ranges on cost and schedule we have previously announced," said Ulf Quellmann, Chief Executive Officer of Turquoise Hill. "At the same time, the team is looking carefully at options for recovering material within the structural pillars and to optimise the mine plan for Panels 1 and 2 to maximise value for our shareholders."

The following table provides a summary of key outputs from OTFS20. Unless otherwise stated, all items are presented on an after-tax basis and only include Mineral Reserves.

Description	Units	OTFS20
Material Processed	bt	1.2
Copper Headgrade	%	0.82
Gold Headgrade	g/t	0.30
Silver Headgrade	g/t	1.89
Recoverable Copper	blb	19.5
Recoverable Gold	Moz	8.4
Recoverable Silver	Moz	51.7
Mine Life	Years	31
Expansion Capital	US\$b	2.2
Payback Period	Years	6
NPV ₈ After Tax	US\$b	10.0

Notes:

1. All financial metrics reflect the Company's financial analysis of OTFS20 metrics.
2. NPV₈ is 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.
3. For mine planning the metal prices used as part of OTFS20 to calculate block model Net Smelter Returns (NSR) were copper at \$3.08/lb; gold at \$1,292/oz and silver at \$19.00/oz. For the open pit processing and general administration, the following operating costs have been used to determine cut-off grades: Southwest at \$8.37/t, Central Chalcocite, Central Covellite, and Central Chalcopyrite at \$7.25/t and the underground costs are based on \$15.34/t.
4. OTFS20 NPV₈ uses long-term metal prices of: copper at \$3.03/lb; gold at \$1,474/oz; and silver at \$17.85/oz. The analysis has been calculated with assumptions for smelter refining and treatment charges, deductions and payment terms, concentrate transport, metallurgical recoveries and royalties.
5. NPV₈ and Payback period analysis uses the Mineral Reserves reported in OTFS20 that are set out in this announcement.
6. NPV₈ is calculated as of January 1, 2021 and excludes expansion capital up December 31, 2020 of approximately \$4.6b. Expansion capital costs include only direct project costs and exclude interest expense, capitalised interest, debt repayments, tax pre-payments and forex adjustments.
7. The estimate of Mineral Reserves may be materially affected by environmental, permitting, legal, title, socio-political, marketing, or other relevant issues including risks set forth in the 2019 AIF and other filings made with Canadian securities regulatory authorities and available at www.sedar.com. These updated estimates differ from those reported in the 2019 AIF and reflect incorporation of changes in the Hugo North Panel 0 design.
8. Payback period and mine life are calculated from January 1, 2021 and are rounded to years.
9. OTTR16 can be accessed under Turquoise Hill's profile at www.sedar.com.
Refined Hugo North Lift 1 Mine Design Lowers Execution Risk
10. Expansion capital numbers are presented inclusive of VAT.

On May 13, 2020, Turquoise Hill announced a new block cave mine design for Panel 0 with an anticipated delay to sustainable production of approximately 25 months (with a range of 21 to 29 months), and an

increase in development capital cost of approximately US\$1.5 billion (with a range of US\$1.3 billion to US\$1.8 billion), subject to further studies and any additional scheduling delays or increases in capital costs arising from the impacts of the COVID-19 pandemic.

For the development of the Panel 0 mine design, Turquoise Hill engaged subject matter experts to undertake an external and independent assurance process that focused on a technical review of the proposed mine re-design options, and a review of the schedule and estimating process.

The Hugo North Lift 1 mine plan incorporates the development of three panels and in order to reach the full sustainable production rate of 95,000 tonnes per day from the underground operations, all three panels need to be in production. During the ramp-up phase through to full capacity of the underground operations, the Oyut open pit will continue to provide the incremental ore to achieve the expected 105,000 to 115,000 tonnes per day throughput for the life of Hugo North Lift 1.

The design change results in a more resilient mine plan able to effectively operate within the Panel 0 geotechnical conditions as now understood. The 2020 OTTR will incorporate and reflect these updates.

The block cave design incorporated in OTFS20 varies from the OTFS16 design through:

- 120m structural pillars included to the north and south of Panel 0, protecting ore handling infrastructure and increasing the optionality of sequencing Panel 1 and Panel 2;
- Ore handling facilities moved into the structural pillars, improving excavation stability;
- Drawpoint spacing updated from 28m x15m to 31m x 18m, improving extraction level stability; and
- Modified panel initiation approach for Panel 0, minimising stress damage to extraction level.

The Company believes the existing feasibility study designs for Panel 1 and Panel 2 remain executable based on the current orebody understanding. However, with the introduction of structural pillars, the remaining panels become independent, allowing for much greater operational flexibility. This provides an opportunity to:

- Optimise the extraction level elevation for each panel independently;
- Evaluate the potential to convert Measured and Indicated Mineral Resources below the current Lift 1 extraction level into Probable Mineral Reserves;
- Complete additional confirmatory drilling and data collection in support of potential Panel 1 and Panel 2 design review and
- Include structural pillar recovery level(s) in the integrated Hugo North Lift 1 mine design.

Panel 1 and Panel 2 design optimisation studies have been initiated to explore these opportunities. These studies are not expected to delay the ramp up of Panel 1 or Panel 2 Drilling work is underway and the resulting updates to geotechnical modelling and mine design review are expected to continue into 2021.

Sensitivity Estimates

Economic sensitivity of the project relating to a number of key variables set forth in OTFS20 are outlined in the figures below:

Reserve Case Price Sensitivities

NPV₈ \$billions Copper Price

\$US, 2020 Real -15% -10% -5% Base Case +5% +10% +15%

Gold Price	-15%	5.9	7.1	8.3	9.3	10.3	11.3	12.3
	-10%	6.2	7.4	8.5	9.5	10.5	11.5	12.5
	-5%	6.4	7.6	8.8	9.8	10.7	11.7	12.7
	Base Case	6.7	7.9	9.0	10.0	11.0	12.0	12.9
	+5%	7.0	8.1	9.2	10.2	11.2	12.2	13.1
	+10%	7.2	8.4	9.4	10.4	11.4	12.4	13.3
	+15%	7.5	8.6	9.7	10.6	11.6	12.6	13.6

Notes:

1. NPV₈ is Net Present Value at a discount rate of 8%, valued as of January 1, 2021.
2. All values are presented on a \$US, real 2020 basis.
3. Base case copper price is based on consensus estimates with a long-term forecast of \$3.03/lb.
4. Base case gold price is based on consensus estimates with a long-term forecast of \$1,474/oz.

Oyu Tolgoi Reserve Case Sensitivities						
Impact on NPV ₈ (\$m)		Cu Price	Au Price	Opex	CAPEX	+/- 1% Discount Rate
	+10%	1,990	466	663	186	1,016
	-10%	(2,096)	(434)	(657)	(186)	(912)

Notes:

1. NPV₈ is Net Present Value at a discount rate of 8%, valued as of January 1, 2021.
2. All values are presented on a \$US, real 2020 basis.
3. Base case copper price is based on consensus estimates with a long-term forecast of \$3.03/lb.
4. Base case gold price is based on consensus estimates with a long-term forecast of \$1,474/oz.
5. Costs considered are forward as of January 1, 2021.

Updated Mineral Resources and Mineral Reserves

OTFS20 incorporates updated Mineral Resource and Mineral Reserve estimates for Hugo North Lift 1 and there has been no change to the Oyut open pit Mineral Reserves relative to those set forth in the 2019 AIF. Mineral Resource estimates for Hugo North have been updated since the 2019 AIF, while the Mineral Resources for Hugo South, Oyut open pit and Heruga remain unchanged.

2020 Oyu Tolgoi Mineral Reserves

Oyut Deposit Open Pit Mineral Reserves as of December 31st, 2019

Classification	Ownership	Mineral Reserves				Contained Metal		
		Ore	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Proven	Oyu Tolgoi LLC	307	0.52	0.39	1.32	1.6	3.8	13.0
Probable	Oyu Tolgoi LLC	477	0.39	0.23	1.14	1.9	3.5	17.4
Total (Proven + Probable)	Oyu Tolgoi LLC	783	0.44	0.29	1.21	3.5	7.2	30.5

Oyut Stockpile Mineral Reserves as of December 31st, 2019

Classification	Ownership	Mineral Reserves				Contained Metal		
		Ore	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Proven	Oyu Tolgoi LLC	48	0.33	0.12	0.93	0.2	0.2	1.4

Hugo North Deposit Underground Mineral Reserves as of December 31st, 2019 (updated June 30th, 2020)

Classification	Ownership	Mineral Reserves				Contained Metal		
		Ore	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Probable	Oyu Tolgoi LLC	400	1.51	0.29	3.11	6.0	3.8	40.0
Probable	EJV	40	1.54	0.53	3.63	0.6	0.7	4.6
Total Probable		440	1.51	0.32	3.16	6.7	4.5	44.7

Oyu Tolgoi Project Mineral Reserves as of December 31st, 2019 (updated June 30th, 2020)

Classification		Mineral Reserves				Contained Metal		
		Ore	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Proven		355	0.49	0.35	1.27	1.7	4.0	14.5
Probable		917	0.93	0.27	2.11	8.5	7.9	62.1
Total (Proven + Probable)		1272	0.81	0.29	1.87	10.3	11.9	76.6

Notes:

1. CIM Definition Standards for Mineral Resources and Mineral Reserves (2014) were used for reporting of Mineral Reserves.
 2. NSR values used for Mineral Reserves estimation are based on forecast long-term copper, gold, and silver prices of \$3.08/lb; \$1,292/oz; and \$19.00/oz respectively.
 3. Assumptions for smelting refining and treatment charges, deductions and payment terms, concentrate transport, metallurgical recoveries and royalties are included in the NSR values.
 4. Processing and general administration costs used to determine cut-off NSR values vary between \$7.18/t and \$10.87/t depending on the ore type processed.
 5. For the Hugo North Mineral Reserves, a 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 ranging from \$17.27/t to \$17.90/t across five independent ore types.
 6. For the Oyut Mineral Reserves, only measured Mineral Resources were used to report proven Mineral Reserves, and only indicated Mineral Resources were used to report Probable Mineral Reserves.
 7. For the Hugo North Mineral Reserves, Measured and Indicated Mineral Resources were used to report probable Mineral Reserves.
 8. The effective date of the Mineral Reserve estimates is December 31, 2019.
 9. EJV is the Entrée Joint Venture. The Shivee Tolgoi License and the Javkhant License are held by Entrée. The Shivee Tolgoi License and the Javkhant License are planned to be operated by Oyu Tolgoi LLC. Oyu Tolgoi LLC will receive 80% of cash flows after capital and operating costs for material originating below 560 m, and 70% above this depth. The Company holds a 7.9% interest in Entrée Resources Ltd.
 10. The estimate of Mineral Reserves may be materially affected by environmental, permitting, legal, title, socio-political, marketing, or other relevant issues including risks set forth in the 2019 AIF and other filings made with Canadian securities regulatory authorities and available at www.sedar.com. These updated estimates differ from those reported in the 2019 AIF and reflect changes in the Hugo North Panel 0 design.
 11. Totals may not add due to rounding.
- Hugo North Lift 1 Mineral Reserve Comparison 2019 AIF to OTFS20

The Hugo North Lift 1 Mineral Reserves have been updated to reflect the new Panel 0 design. The new design resulted in the conversion of the material contained in the structural pillars from mineral reserves to mineral resources. Principally as a result of the conversion, the estimated probable Mineral Reserves at December 31, 2019 at Hugo North are approximately 6.7 million tonnes of copper and 4.5 million ounces of gold, compared with the previously disclosed 7.9 million tonnes of copper and 5.4 million ounces of gold.

While this update reflects the current Panel 0 mine status, it does not reflect any opportunities that may arise from the recovery of the structural pillars or Panel 1 and Panel 2 optimisation studies, expected to continue into 2021.

Hugo North Deposit Underground Mineral Reserves Comparison

Classification & Report Ownership		Mineral Reserves				Contained Metal		
		Ore	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
OTFS20 Probable	Oyu Tolgoi LLC	400	1.51	0.29	3.11	6.0	3.8	40.0
	EJV	40	1.54	0.53	3.63	0.6	0.7	4.6
	Total	440	1.51	0.32	3.16	6.7	4.5	44.7
2019 AIF Probable	Oyu Tolgoi LLC	447	1.64	0.34	3.35	7.3	4.8	48.1
	EJV	32	1.64	0.57	3.84	0.5	0.6	4.0
	Total	479	1.64	0.35	3.38	7.9	5.4	52.1
Difference Probable	Oyu Tolgoi LLC	-47	-0.13	-0.04	-0.24	-1.3	-1.0	-8.1
	EJV	8	-0.10	-0.04	-0.21	0.1	0.1	0.7
	Total	-39	-0.13	-0.04	-0.22	-1.2	-0.9	-7.4
% Difference Probable	Oyu Tolgoi LLC	-11%	-8%	-12%	-7%	-18%	-21%	-17%
	EJV	24%	-6%	-6%	-5%	16%	16%	17%
	Total	-8%	-8%	-10%	-7%	-15%	-17%	-14%

Notes:

1. CIM Definition Standards for Mineral Resources and Mineral Reserves (2014) were used for reporting of Mineral Reserves.
2. NSR values used for OTFS20 and 2019 AIF Mineral Reserves estimation are based on forecast long-term copper, gold, and silver prices of \$3.08/lb; \$1,292/oz; and \$19.00/oz respectively.
3. Assumptions for smelting refining and treatment charges, deductions and payment terms, concentrate transport, metallurgical recoveries and royalties are included in the NSR values.
4. Processing and general administration costs used for both OTFS20 and the 2019 AIF to determine cut-off NSR values vary between \$7.18/t and \$10.87/t depending on the ore type processed.
5. For the Hugo North Mineral Reserves in both OTFS20 and the 2019 AIF, a 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 an estimated mining, processing and G&A costs ranging from \$17.27/t to \$17.90/t across five independent ore types.
6. For the Hugo North Mineral Reserves in both OTFS20 and 2019 AIF, Measured and Indicated Mineral Resources were used to report Probable Mineral Reserves.
7. The effective date of the Mineral Reserve estimates is December 31, 2019 (updated on June 30, 2020 for OTFS20 estimates).
8. EJV is the Entrée Joint Venture. The Shivee Tolgoi License and the Javkhlant License are held by Entrée. The Shivee Tolgoi License and the Javkhlant License are planned to be operated by Oyu Tolgoi LLC. Oyu Tolgoi LLC will receive 80% of cash flows after capital and operating costs for material originating below 560 m, and 70% above this depth. The Company holds a 7.9% interest in Entrée Resources Ltd.
9. The estimate of Mineral Reserves may be materially affected by environmental, permitting, legal, title, socio-political, marketing, or other relevant issues including risks set forth in the Company's Annual Information Form for the year ended December 31, 2019 AIF and other filings made with Canadian securities regulatory authorities and available at www.sedar.com. These updated estimates differ from those reported in the 2019 AIF and reflect changes in the Hugo North Panel 0 design.
10. Totals may not add due to rounding.

Oyut Deposit Open Pit Mineral Resources as of December 31st, 2019

Classification	Ownership	Mineral Resources				Contained Metal		
		Ore	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Measured	Oyu Tolgoi LLC	16	0.39	0.41	1.21	0.1	0.2	0.6
Indicated	Oyu Tolgoi LLC	80	0.34	0.29	1.17	0.3	0.8	3.0
Total (Measured + Indicated)	Oyu Tolgoi LLC	95	0.35	0.31	1.17	0.3	1.0	3.6
Inferred	Oyu Tolgoi LLC	318	0.29	0.17	1.03	0.9	1.8	10.5

Oyut Deposit Underground Mineral Resources as of December 31st, 2019

Classification	Ownership	Mineral Resources				Contained Metal		
		Ore	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Measured	Oyu Tolgoi LLC	14	0.47	0.88	1.27	0.1	0.4	0.6
Indicated	Oyu Tolgoi LLC	69	0.38	0.59	1.11	0.3	1.3	2.5
Total (Measured + Indicated)	Oyu Tolgoi LLC	83	0.39	0.64	1.14	0.3	1.7	3.0
Inferred	Oyu Tolgoi LLC	175	0.39	0.40	1.21	0.7	2.2	6.8

Hugo North Mineral Resources as of December 31st, 2019 (updated June 30th, 2020)

Classification	Ownership	Mineral Resources				Contained Metal		
		Ore	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Measured	Oyu Tolgoi LLC	58	1.86	0.48	4.21	1.1	0.9	7.8
	EJV	0	0.00	0.00	0.00	0.0	0.0	0.0
	All Hugo North	58	1.86	0.48	4.21	1.1	0.9	7.8
Indicated	Oyu Tolgoi LLC	401	1.34	0.34	3.14	5.4	4.4	40.6
	EJV	87	1.59	0.54	4.13	1.4	1.5	11.5
	All Hugo North	488	1.39	0.38	3.32	6.8	5.9	52.1
Total (Measured + Indicated)	Oyu Tolgoi LLC	459	1.41	0.36	3.28	6.5	5.3	48.4
	EJV	87	1.59	0.54	4.13	1.4	1.5	11.5
	All Hugo North	546	1.44	0.39	3.41	7.8	6.8	59.9

Inferred	Oyu Tolgoi LLC	765	0.80	0.28	2.40	6.1	6.9	59.1
	EJV	167	1.02	0.36	2.78	1.7	1.9	14.9
	All Hugo North	932	0.84	0.29	2.47	7.8	8.8	74.0

Hugo South Mineral Resources as of December 31st, 2019

Classification	Ownership	Mineral Resources				Contained Metal		
		Ore	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Inferred	Oyu Tolgoi LLC	724	0.84	0.07	1.88	6.1	1.7	43.7

Heruga Mineral Resources as of December 31st, 2019

Classification	Ownership	Mineral Resources				Contained Metal		
		Ore	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Inferred	Oyu Tolgoi LLC	105	0.42	0.30	1.58	0.4	1.0	5.3
	Javkhlant EJV	1448	0.41	0.40	1.46	6.0	18.7	67.7
	All Heruga	1552	0.42	0.39	1.46	6.5	19.7	73.1

Oyu Tolgoi Project Mineral Resources as of December 31st, 2019 (updated June 30th, 2020)

Classification	Mineral Resources				Contained Metal		
	Ore	Cu	Au	Ag	Copper	Gold	Silver
	(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
Measured	87	1.38	0.53	3.22	1.2	1.5	9.0
Indicated	637	1.15	0.39	2.81	7.3	8.0	57.6
Total (Measured + Indicated)	724	1.17	0.41	2.86	8.5	9.4	66.6
Inferred	3701	0.59	0.29	1.75	21.9	34.2	208.1

Notes:

1. CIM Definition Standards for Mineral Resources and Mineral Reserves (2014) are used for reporting of Mineral Resources.
2. The Mineral Resources exclude Mineral Reserves.
3. The following copper equivalent (CuEq) formulae have been used for cut-off grade determination in each deposit.

$$\text{Oyut CuEq} = \text{Cu} + ((\text{Au} \times 35.4938) + (\text{Ag} \times 0.4101)) / 67.9023$$

$$\text{Hugo North CuEq} = \text{Cu} + ((\text{Au} \times 35.7175) + (\text{Ag} \times 0.5353)) / 67.9023$$

$$\text{Hugo South CuEq} = \text{Cu} + ((\text{Au} \times 37.7785) + (\text{Ag} \times 0.5773)) / 67.9023$$

$$\text{Heruga CuEq} = \text{Cu} + ((\text{Au} \times 37.0952) + (\text{Ag} \times 0.5810) + (\text{Mo} \times 0.0161)) / 67.9023$$
4. The metal prices used in determining the CuEq formulae are as follows: \$3.08/lb for copper, \$1,292/oz for gold, \$19.00/oz for silver, and \$10.00/lb for molybdenum.
5. The metallurgical recoveries used in determining the CuEq formulae for each deposit: 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%.
6. 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.
7. 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 mass mining methods.
8. The effective date of the mineral resource estimates is December 31, 2019 (updated on June 30, 2020).
9. EJV is the Entrée Joint Venture. The Shivee Tolgoi and Javkhlant licenses are held by Entrée. The Shivee Tolgoi and EJV Javkhlant 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 560 m, and 70% above this depth. The Company holds a 7.9% interest in Entrée Resources Ltd.
10. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
11. The Oyut deposit was formerly known as SOT.
12. The contained copper, gold and silver estimates in the tables have not been adjusted for metallurgical recoveries.
13. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, socio-political, marketing, or other relevant issues including risks set forth in the 2019 AIF and other filings made with Canadian securities regulatory authorities and available at www.sedar.com. These updated estimates differ from those reported in the 2019 AIF and reflect changes in the Hugo North Panel 0 design.
14. Molybdenum Mineral Resources are unchanged from the 2019 AIF and have not been provided in the above Hugo North Measured & Indicated Mineral Resource Comparison for 2019 AIF to OTFS20
15. Totals may not add due to rounding.
The estimated Measured and Indicated Mineral Resources at December 31, 2019 at Hugo North are 7.8 million tonnes of copper and 6.8 million ounces of gold compared with the previously disclosed 6.2 million tonnes of copper and 5.5 million ounces of gold. This represents an increase of 27% in copper and 23% in gold, largely representing the reclassification of pillar material from Mineral Reserves to Mineral Resources. Inferred Mineral Resources are unchanged from the disclosure in the 2019 AIF.

Hugo North Deposit Underground Mineral Resources Comparison

Classification & Report Ownership		Mineral Resources Contained Metal						
		Ore	Cu	Au	Ag	Copper	Gold	Silver
		(Mt)	(%)	(g/t)	(g/t)	(Mt)	(Moz)	(Moz)
OTFS20 Measured & Indicated	Oyu Tolgoi LLC	459	1.41	0.36	3.28	6.5	5.3	48.4
	EJV	87	1.59	0.54	4.13	1.4	1.5	11.5
	Total	546	1.44	0.39	3.41	7.8	6.8	59.9
2019 AIF Measured & Indicated	Oyu Tolgoi LLC	390	1.23	0.32	3.01	4.8	4.0	37.7
	EJV	87	1.59	0.54	4.11	1.4	1.5	11.5
	Total	477	1.29	0.36	3.21	6.2	5.5	49.3
Difference Measured & Indicated	Oyu Tolgoi LLC	69	0.18	0.04	0.27	1.7	1.3	10.7
	EJV	-1	0.01	0.00	0.02	0.0	0.0	0.0
	Total	69	0.14	0.03	0.20	1.7	1.3	10.7
% Difference Measured & Indicated	Oyu Tolgoi LLC	18%	15%	12%	9%	35%	32%	28%
	EJV	-1%	0%	1%	0%	0%	0%	0%
	Total	14%	11%	7%	6%	27%	23%	22%

Notes:

1. CIM Definition Standards for Mineral Resources and Mineral Reserves (2014) are used for reporting of Mineral Resources.
2. The Mineral Resources exclude Mineral Reserves
3. The following copper equivalent (CuEq) formulae have been used for cut-off grade determination in each deposit.

$$\text{Oyut CuEq} = \text{Cu} + ((\text{Au} \times 35.4938) + (\text{Ag} \times 0.4101)) / 67.9023$$

$$\text{Hugo North CuEq} = \text{Cu} + ((\text{Au} \times 35.7175) + (\text{Ag} \times 0.5353)) / 67.9023$$

$$\text{Hugo South CuEq} = \text{Cu} + ((\text{Au} \times 37.7785) + (\text{Ag} \times 0.5773)) / 67.9023$$

$$\text{Heruga CuEq} = \text{Cu} + ((\text{Au} \times 37.0952) + (\text{Ag} \times 0.5810) + (\text{Mo} \times 0.0161)) / 67.9023$$
4. The metal prices used in determining the CuEq formulae are as follows: \$3.08/lb for copper, \$1,292/oz for gold, \$19.00/oz for silver, and \$10.00/lb for molybdenum.
5. The metallurgical recoveries used in determining the CuEq formulae for each deposit: 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%.
6. 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.
7. 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 mass mining methods.
8. The effective date of the mineral resource estimates is December 31, 2019.
9. EJV is the Entrée Joint Venture. The Shivee Tolgoi and Javkhlant licenses are held by Entrée. The Shivee Tolgoi and EJV Javkhlant 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 560 m, and 70% above this depth. The Company holds a 7.9% interest in Entrée Resources Ltd.
10. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
11. The Oyut deposit was formerly known as SOT.
12. The contained copper, gold and silver estimates in the tables have not been adjusted for metallurgical recoveries.
13. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, socio-political, marketing, or other relevant issues including risks set forth in the 2019 AIF and other filings made with Canadian securities regulatory authorities and available at www.sedar.com. These updated estimates differ from those reported in the 2019 AIF and reflect changes in the Hugo North Panel 0 design.

Disclosure of a scientific or technical nature in this news release was approved by Jo-Anne Dudley (FAusIMM(CP)), Chief Operating Officer and the Company, who is a "qualified person" as set forth in NI 43-101. The updated mineral resource and mineral reserve estimates were prepared by Michael Thomas (FAusIMM(CP)) (for the Mineral Reserves) and Roderick Carlson (MAusIMM, MAIG(RPGeo)) (for the Mineral Resources), each of AMC Consultants Pty Ltd. and each of whom is a "qualified person" and independent of the Company as set forth in NI 43-101. The qualified persons have verified the data disclosed including sampling, analytical and test data underlying the information contained in this news release. This included review of Mineral Resources and Mineral Reserves reports for the historical Mineral Resources and review of the current Mineral Resources and Mineral Reserves documentation for the updated Mineral Resources and Mineral Reserves.

Update on Liquidity and Funding Requirements

Turquoise Hill continues to monitor its liquidity outlook and its longer-term funding requirements. Based on

updated cashflow projections, which incorporate expected near-term COVID-19 impacts, the recent signing of an amendment to the Power Source Framework Agreement ("PSFA") and other developments, Turquoise Hill now expects to have liquidity available to fund operations and underground development beyond Q3 2021. Based on this improved liquidity outlook, Turquoise Hill has, for the time being, decided to defer further discussions with Rio Tinto regarding possible interim funding arrangements. If it becomes prudent to do so, the Company may re-engage with Rio Tinto and / or third parties regarding possible interim funding. Further information regarding the Company's liquidity outlook will be provided as part of the Company's Q2, 2020 earnings release.

Turquoise Hill remains focused on developing, aligning with key stakeholders on, and implementing a plan to address the longer-term funding requirements of Oyu Tolgoi LLC, which will be based on the updated Panel 0 mine design and supported by information set out in OTFS20 and the Company's planned technical report. Under the PSFA amendment, Oyu Tolgoi LLC has agreed to prioritise development of a State Owned Power Plant at Tavan Tolgoi ("SOPP"), which would be developed and financed by the Government of Mongolia. Incorporation of SOPP as the base case power solution for the Oyu Tolgoi mine impacts positively on the Company's expected incremental funding requirement (i.e., over and above its currently available liquidity). Further information regarding the Company's incremental funding requirement will be provided as part of the Company's Q2 2020 earnings release.

Forward-looking statements and forward-looking information

Certain statements made herein, including statements relating to matters that are not historical facts and statements of the Company's beliefs, intentions and expectations about developments, results and events which will or may occur in the future, constitute "forward-looking information" within the meaning of applicable Canadian securities legislation and "forward-looking statements" within the meaning of the "safe harbor" provisions of the United States 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 expectations set out in the Oyu Tolgoi 2020 Feasibility Study ("OTFS20"); timing and amount of 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; liquidity, funding sources, funding requirements and planning; timing and status of underground development; the mine design for 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 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 SOPP and related amendments to the PSFA as well as power purchase agreements; the timing of construction and commissioning of the potential SOPP; source 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; 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 and 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.

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; 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.

With respect to specific forward-looking information concerning the continued operation and development of Oyu Tolgoi, the Company has based its assumptions and analyses on certain factors which are inherently uncertain. Uncertainties and assumptions include, among others: the timing and cost of the construction and expansion of mining and processing facilities; the timing and availability of a long-term domestic power source (or the availability of financing for the Company or the Government of Mongolia to construct such a source) for Oyu Tolgoi; the ability to secure and draw down on the supplemental debt under the Oyu Tolgoi project financing facility and the availability of additional financing on terms reasonably acceptable to Oyu Tolgoi LLC, Rio Tinto and the Company to further develop Oyu Tolgoi; the potential impact of COVID-19; the impact of changes in, changes in interpretation to or changes in enforcement of, laws, regulations and government practices in Mongolia; the availability and cost of skilled labour and transportation; the obtaining of (and the terms and timing of obtaining) necessary environmental and other government approvals, consents and permits; delays, and the costs which would result from delays, in the development of the underground mine (which could significantly exceed the costs projected in OTFS20); projected copper, gold and silver prices and their market demand; and production estimates and the anticipated yearly production of copper, gold and silver at Oyu Tolgoi.

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

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 2019 AIF, as supplemented by the Company's Q1 2020 MD&A.

Readers are further cautioned that the list of factors enumerated in the "Risk Factors" section of the 2019 AIF and in the "Risks and Uncertainties" section of the Q1 2020 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 and the Company does not undertake any obligation to update or to revise any of the included forward-looking statements or information, whether as a result of new information, future events or otherwise, except as required by applicable law. The forward-looking statements and information contained herein are expressly qualified by this cautionary statement.

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