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Notice to ASX

Oyu Tolgoi mine design confirms project schedule and cost ranges and update to Ore Reserves and Mineral Resources

3 July 2020

Oyu Tolgoi LLC has completed an updated feasibility study (OTFS20) and is in the process of submitting this to the Government of Mongolia. The OTFS20 has been prepared in accordance with Mongolian regulations and standards which require mining companies to submit updated feasibility studies every five years. The updated study incorporates a new mine design for Panel 0 of the Hugo Dummett North underground mine at Oyu Tolgoi. The new design also confirms that the caving method of mining remains valid and that the underground schedule and costs remain within the ranges previously disclosed.

These ranges include a delay of 21 to 29 months for first sustainable production compared to the original feasibility study guidance in 2016 and an increase of $1.3 billion to $1.8 billion from the original $5.3 billion development capital. Detailed study, design, engineering and optimisation work is ongoing to support the definitive estimate of Panel 0 for the development of this world-class orebody, which remains due in the second half of 2020. These estimates are subject to any additional scheduling delays or increases in capital costs arising from the impacts of the ongoing COVID-19 pandemic.

Arnaud Soirat, chief executive of Copper & Diamonds said “This amended mine design is another positive step in the development of the underground mine which will unlock the most valuable part of Oyu Tolgoi. We remain focused on delivering the underground project safely and within the guidance ranges we have announced on both cost and schedule.”

The updated mine design is the result of the review announced by Rio Tinto in July 2019 when enhanced geotechnical and geological information obtained from drilling and mapping at depth suggested there may be some stability risks associated with the original mine design. The updated design retains two in-situ rock pillars on either side of Panel 0 for geotechnical stability. In the original mine design, these pillars were within the mining area. The updated design is supported by extensive geotechnical modelling and industry leading technical assurance.

As a consequence of leaving the pillars in place, the material contained in the pillars has been reclassified from Ore Reserves to Mineral Resources. It is expected that part of the material contained in these pillars will be recoverable at a later stage following additional studies which are currently underway.

Ore handling infrastructure will be relocated to the pillars, located immediately north and south of the current Panel 0 boundaries. Panels 1 and 2 will now be initiated as independent panels or mine blocks.

Optimisation of mine designs for Panels 1 and 2 is ongoing and it is anticipated that this next phase of study may result in further movements in classifications of Ore Reserves and Mineral Resources. Any such movements will be reported following completion of the studies.

Changes in the Hugo Dummett North Ore Reserves are shown below in Table A. Updates to Mineral Resources are shown in Table B. Ore Reserves and Mineral Resources are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012 (JORC Code) and the ASX Listing Rules.

Ore Reserves are presented in this release on a 100 per cent ownership basis. Rio Tinto’s ownership share is 33.5% of Hugo Dummett North and 29.5% of Hugo Dummett North Extension. Mineral Resources are reported exclusive of Ore Reserves and on the same ownership basis.

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Table A: Changes to the Hugo Dummett North and Hugo Dummett North Extension Ore Reserves estimates between 31 December 2019 and 01 July 2020.

Hugo Dummett North										
	Probable Ore Reserves				Average Mill Recovery			Recoverable Metal		
	Tonnes (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Cu (%)	Au (%)	Ag (%)	Cu (Mt)	Au (M oz)	Ag (M oz)
Reserves at end 2019	447	1.64	0.34	3.35	93	79	81	6.81	3.84	39.02
Material removed	-47	2.75	0.68	5.36	94	82	86	-1.22	-0.85	-7.01
Reserves at 1 July 2020	**400**	**1.51**	**0.29**	**3.11**	**93**	**79**	**80**	**5.60**	**2.99**	**32.00**
Hugo Dummett North Extension										
	Probable Ore Reserves				Average Mill Recovery			Recoverable Metal		
	Tonnes (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Cu (%)	Au (%)	Ag (%)	Cu (Mt)	Au (M oz)	Ag (M oz)
Reserves at end 2019	32	1.64	0.57	3.84	93	81	83	0.49	0.47	3.28
Material added	7.7	1.10	0.38	2.75	92	80	81	0.08	0.07	0.55
Reserves at 1 July 2020	**40**	**1.54**	**0.53**	**3.63**	**92**	**81**	**83**	**0.57**	**0.55**	**3.84**

Table B: Changes to the Hugo Dummett North and Hugo Dummett North Extension Mineral Resource estimates between 31 December 2019 and 01 July 2020.

Hugo Dummett North																
	Measured Mineral Resources				Indicated Mineral Resources				Inferred Mineral Resources				Total Mineral Resources			
	Tonnes (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Tonnes (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Tonnes (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Tonnes (Mt)	Cu (%)	Au (g/t)	Ag (g/t)
Resources at end 2019	41	1.58	0.42	3.74	349	1.18	0.31	2.92	765	0.80	0.28	2.40	1155	0.94	0.29	2.61
Material added	17	2.54	0.64	5.34	52	2.39	0.54	4.63					69	2.43	0.57	4.81
Resources at 1 July 2020	**58**	**1.86**	**0.48**	**4.21**	**401**	**1.34**	**0.34**	**3.14**	**765**	**0.80**	**0.28**	**2.40**	**1224**	**1.03**	**0.31**	**2.73**
Hugo Dummett North Extension																
	Measured Mineral Resources				Indicated Mineral Resources				Inferred Mineral Resources				Total Mineral Resources			
	Tonnes (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Tonnes (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Tonnes (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Tonnes (Mt)	Cu (%)	Au (g/t)	Ag (g/t)
Resources at end 2019					87	1.59	0.54	4.11	167	1.02	0.36	2.78	254	1.21	0.42	3.24
No change																
Resources at 1 July 2020					**87**	**1.59**	**0.54**	**4.11**	**167**	**1.02**	**0.36**	**2.78**	**254**	**1.21**	**0.42**	**3.24**

Summary of information to support the Mineral Resource and Ore Reserve estimates

The following summary information is provided in accordance with Rules 5.8 and 5.9 of the ASX Listing Rules. The appendix to this release provides further detailed information in accordance with the Table 1 checklist in the JORC Code that is material to understanding the estimates of Mineral Resources and Ore Reserves.

Geology and geological interpretation

The Hugo Dummett deposit is a typical copper–gold porphyry system with associated high-sulphidisation mineralisation. The surface projection of the deposit shows a north-northeast-trending mineralised corridor hosted by an east-dipping sequence of Upper Devonian or older layered volcanics intruded by quartz monzodiorite and granodiorite stocks and dykes. The more typical copper–gold porphyry-style alteration and mineralisation tend to occur in less structurally complex areas, predominantly within basalt and quartz monzodiorite. High-sulphidation mineralisation and associated advanced argillic alteration are most common within the basaltic tuff, in the upper part of the quartz monzodiorite where it intrudes to levels high in the stratigraphic succession, and in narrow structurally-controlled zones. Chalcopyrite and bornite are the main copper sulphide minerals. Interpretations of fault and late barren dykes geometries are areas of greatest uncertainty in the geological model and underground mapping is being used to refine the modelling.

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Drilling techniques
Diamond drilling from surface and underground has been used to drill out the deposit. Holes are generally collared in PQ and size down through HQ and NQ. Holes are generally drilled triple tube to maximise recovery and core quality and to enable pumping of the core direct from the tube to a V-rail for geotechnical logging. As far as possible all diamond core is oriented. Wedging off daughter holes is common from surface and holes are generally drilled from east to west perpendicular to the strike and dip of the deposit. Drill spacing and distribution is considered sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedures and classifications applied.

Sampling, sub-sampling method and sample analysis method
Half-core (HQ, NQ) or quarter core (PQ) samples taken on continuous 2 m intervals down each drill hole, excluding dykes that extend more than 10 m along the core length. Hanging wall sequence is generally not sampled. Sample preparation protocols for all drill programmes are appropriate for porphyry-style and high-sulphidation deposits, consisting of drying, crushing, splitting, and pulverisation. A 30g sample is analysed for gold using aqua regia followed by fire assay. Samples are also assayed for a multi-element ICP suite and for carbon and sulphur by LECO. Appropriate QA/QC procedures are in place for all assaying.

Estimation methodology
The deposit has been domained using a combination of structure, geology and copper and gold grade shells. Analysis of contact grade profile plots was used to determine if domain boundaries were treated as soft, firm or hard. Data was composited to 5m. Exploratory data analysis looked at histograms, cumulative frequency plots, descriptive statistics and box plots. Variography was undertaken on composite files using correlograms. Interpolation into 15 x 15 x 15m blocks used ordinary kriging and limited to estimating blocks flagged with a mineralised lithological unit. Outlier restriction and thresholds were used to prevent excessive smearing of high grades. Search ellipsoids were oriented preferentially to the orientation of the grade shells. Validation of the model was done using visual inspection of the results, a nearest neighbour estimate to determine potential bias and through histograms, probability plots and swath plots.

Criteria used for classification
Mineral Resource classification is based on a combination of drill spacing, visual inspection of geologic and grade continuity, spatial statistics and determination of confidence limits in predicting planned annual production. The majority of Mineral Resources are in the Inferred category with a proportion of Indicated category. Minor Measured category Mineral Resources occur at Hugo Dummett North with the bulk having been converted to Ore Reserves. Only Probable Ore Reserves are reported due to the nature of caving and uncertainty in the geotechnical modifying factors.

Economic assumptions
Oyu Tolgoi applies consensus pricing in the determination of Ore Reserves and Mineral Resources. This involves generation of long-term price points based on industry capacity analysis, global commodity consumption and economic growth trends. A single long term price point is used in the definition of ore and waste and in the financial evaluations underpinning the Ore Reserves and Mineral Resources statement. The detail of this process and of the price points selected are commercially sensitive and are not disclosed.

Mining and recovery factors
The Ore Reserve is based on a caving mining method for Hugo Dummett North, a large, highly faulted ore body considered ideal for a caving-based mining method. In the weak, highly stressed ground, a drawpoint spacing of 31 x 18m is planned, utilising El Teniente style, straight drawpoints. The minimum footprint width is 180 metres.

The mining zone is sub-blocked into Panel 0, Panel 1 and Panel 2 to reduce risk and increase productivity. Pillars, measuring 120m from undercut to undercut, have been placed in the ore body on either side of Panel 0, to locate and protect the materials handling infrastructure for cave initiation. It is anticipated that part of these pillars will be recovered in the future and the Ore Reserves have been written back to Mineral Resources. The

pillar tonnes added to Mineral Resources are larger than those excluded from Ore Reserves because they are reported in situ with no dilution or recovery factors applied.

Using a geological hazard risk rating across the mining footprint, drawpoints have been assumed to permanently fail prior to the full economic column being drawn. The early failure of drawpoints reduces the total production and copper tonnes by 11%.

The maximum draw column height assumed is 650m; the minimum draw column height is 100m with an average of 366m. Further detailed study on the fragmentation and flow modelling has driven an increase in the drawcone diameter. The larger diameter increases the overall recovery prior to the implementation of mining and recovery factors. The Hugo Dummett North Extension portion of the ore body is not impacted by the Panel 0 pillars, and thus sees an increase in recovery from the larger drawcones.

Inferred Mineral Resources are excluded from the Ore Reserve and constitute 5% of the mined material. (The grades of Inferred material are set to zero for production scheduling and the statement of Ore Reserves.)

Processing method
Once in production, the Hugo Dummett North ore will be processed through the existing crushing, milling and flotation circuit to produce a copper concentrate with gold and silver as byproduct. The metallurgical process is well understood, test work has demonstrated that the ore is well suited to this processing method and the plant has been operating since 2013 to process the open pit ore.

Cut-off grades
Ore Reserves use Net Smelter Return (NSR) shut off parameters based on 2019 cost estimates. A break-even shut off policy is used to define the draw column heights that includes both mining and processing costs. Footprint extents are determined by a combination of cut-off grade and geotechnical assessment of caveability and maintaining stability. The Mineral Resource estimates use a copper equivalent cut-off grade with the same cost, recovery and price basis as the NSR shut-off grade used for Ore Reserves.

Modifying factors
Oyu Tolgoi manages five mining licences that cover the project area. Three licences are held 100% by OT LLC (Manakht (Mining Licence 6708A, covering 4,533 ha), Oyu Tolgoi (Mining Licence 6709A, covering 8,490 ha), and Khukh Khad (Mining Licence 6710A, covering 1,763 ha)). Two licences are held by Entrée Gold (Javkhlant (Mining Licence 15225A, covering 20,327 ha) and Shivee Tolgoi (Mining Licence 15226A, covering 42,593 ha)). The Entrée Gold licences are held pursuant to joint venture arrangements between Entrée Gold and Oyu Tolgoi LLC.

A Power Source Framework Agreement amendment has been agreed. The amendment prioritises a Government of Mongolia funded State Owned Power Plant, with Oyu Tolgoi having rights to develop its own solution if required and to extend the current IMPC supply contract before 1 March 2021 to ensure no power gap.

Concentrate is shipped to China via a road upgraded as part of the original project scope to build the concentrator and bring the Open Pit into production, and which has been in use since 2013.

Rio Tinto are not presently aware of any regulatory or approvals impediments that would prevent development of the Hugo Dummett North mine.

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Competent Persons Statement

The information in this release that relates to Ore Reserves is based on information compiled by Ferrin Prince and Mark Bixley, Competent Persons, who are a Member and Fellow respectively of The Australasian Institute of Mining and Metallurgy. Ferrin Prince and Mark Bixley are full-time employees of Rio Tinto. Ferrin Prince and Mark Bixley have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Each of Ferrin Prince and Mark Bixley consents to the inclusion in the release of the matters based on the information that each of them has prepared in the form and context in which it appears.

The information in this release that relates to Mineral Resources is based on information compiled by Oyunjargal Dendev, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy. Oyunjargal Dendev is a full-time employee of Oyu Tolgoi LLC. Oyunjargal Dendev has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Oyunjargal Dendev consents to the inclusion in the release of the matters based on the information that he has prepared in the form and context in which it appears.

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This announcement is authorised for release to the market by Rio Tinto's Group Company Secretary.

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Appendix: Hugo Dummett North JORC Table 1

The following table provides a summary of important assessment and reporting criteria used at the Hugo Dummett North deposit for the reporting of Mineral Resources and Ore Reserves in accordance with the Table 1 checklist in *The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2012 Edition)*. Criteria in each section apply to all preceding and succeeding sections.

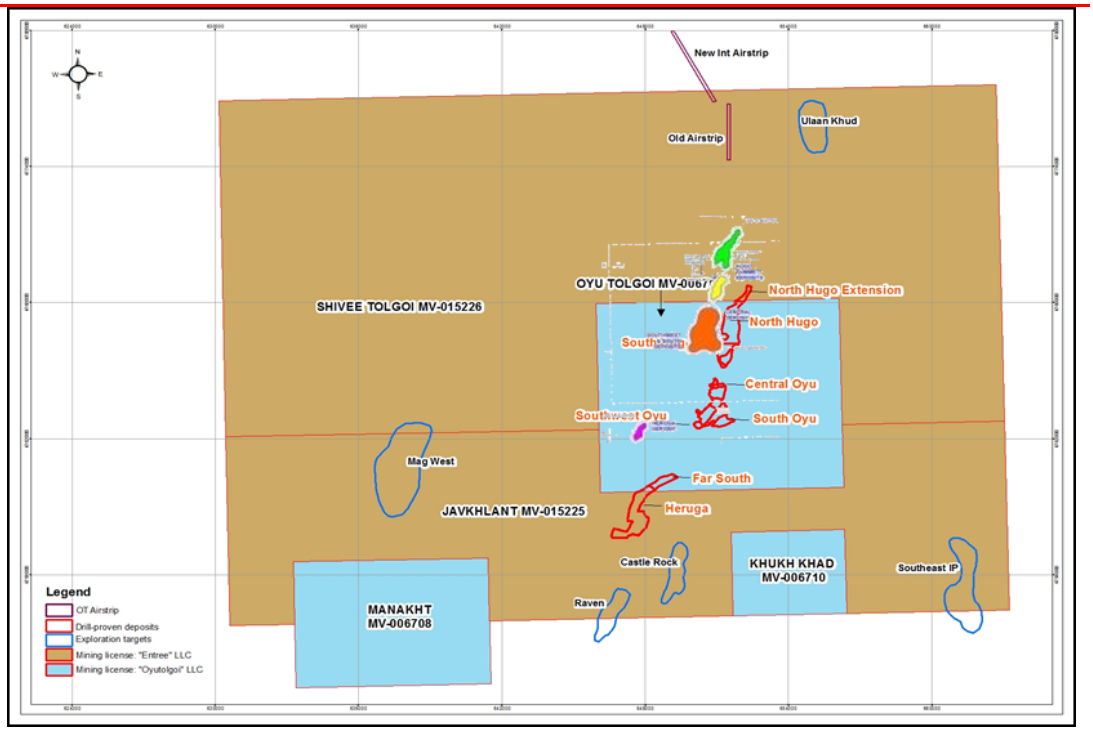
SECTION 1 SAMPLING TECHNIQUES AND DATA

Criteria	Commentary
Sampling techniques	• Half-core (HQ, NQ) or quarter core (PQ) samples taken on continuous 2 m intervals down each drill hole, excluding dykes that extend more than 10 m along the core length. Hanging wall sequence is generally not sampled. • Sample preparation protocols for all drill programmes are appropriate for porphyry-style and high-sulphidation deposits, consisting of drying, crushing, splitting, and pulverisation. • Half core duplicates samples are used to ensure sample representivity.
Drilling techniques	• Diamond drilling is the primary resource drilling technique used at Hugo Dummett North. Holes are generally collared in PQ and size down through HQ and NQ with rare use of BQ. Holes are generally drilled triple tube to maximise recovery and core quality and to enable pumping of the core direct from the tube to a V-rail for geotechnical logging. • As far as possible all diamond core is oriented. Historically different types of core orientation techniques have been used and currently the ACT II Rapid Descent tool is being used to orient core.
Drill sample recovery	• Recoveries are measured on the core and compared to driller's blocks. Recoveries generally average above 96%. • Core is routinely triple tubed to maximise sample recovery and ensure representative nature of the samples as well as providing the best possible geotechnical data. • No recovery based bias has been detected with grade.
Logging	• All core is geotechnically and geologically logged into standardised templates. The logging is entered directly into laptops at the core shed and is wirelessly synchronised with the geological database. The template includes header information, lithology, alteration, structure, texture, mineralisation, alteration minerals and intensity, and veins. Structural and detailed geotechnical logs are also made. • Magnetic susceptibility readings are taken using Terra Plus at one metre intervals. • Open-hole geophysical borehole logging (incl. acoustic televiewer, full wave sonic, resistivity, natural gamma etc.) is completed in specific drillholes based on their availability. • All core is photographed.
Sub-sampling techniques and sample preparation	• Core is sawn using an Almonte core saw and half core is sampled with half being returned to the core tray for storage. • Samples are weighted, dried, jaw crushed in two stages to -3.5mm, rotary split to 1kg, pulverised to 90% <75 microns, and split to 180g pulps. • A 30g sample is analysed by SGS-UB for gold using aqua regia followed by fire assay. • ALS-Vancouver had run a multi-element ICP suite and analyses for carbon and sulphur by LECO but since 2016 the same analytical suite has been carried out in ALS-Perth.
Quality of assay data and laboratory tests	• Quality control procedures are used to ensure quality at all stages of sample preparation and analysis and include certified reference materials, blank samples, sizing tests, duplicate samples (core/field, crush and pulp), replicate samples and check lab reassays. • All QC checks are completed on receipt of assays and individual batches must pass QC tests before they can be imported into the database. • QA/QC processes are also externally audited on an ad hoc basis. • Analysis of the performance of certified standards, duplicates, blanks and check assaying has indicated an acceptable level of precision and accuracy without any significant bias.

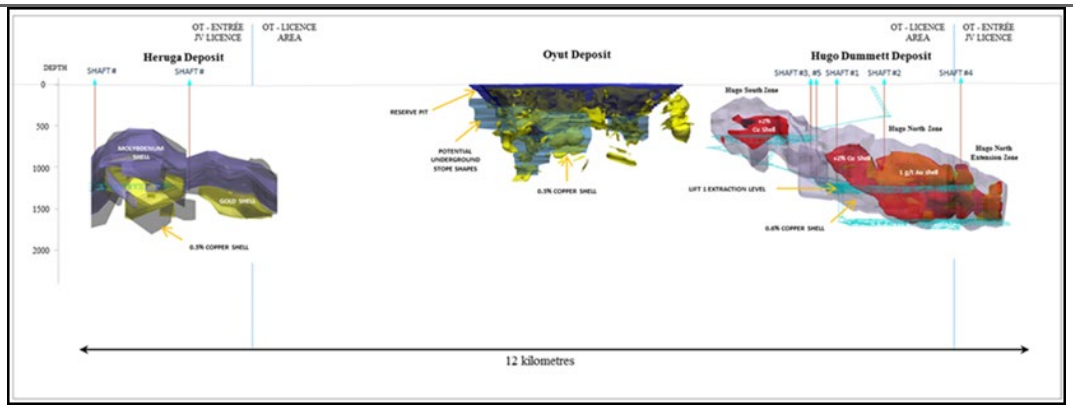
Verification of sampling and assaying	• Significant intersections are compiled for internal reporting purposes and use a minimum length of 50m, a copper equivalent cut-off and maximum internal dilution of ten metres. • All hardcopy records are kept on site in drill hole folders for use in future data verification. Data is generally imported from digital files directly into acQuire database where there are several types of checks to verify the accuracy of the data. • Electronic data is stored on servers on site which are backed up monthly to servers in Ulaanbaatar.
Location of data points	• Collars are picked up using theodolite or DGPS and several resurveys have been completed to verify the collar locations. • OTGrid is the grid system used although UTM WGS84 co-ordinates are also collected and stored for each drill hole collar. • Holes are guided using a 30m interval single shot Reflex down hole survey instrument. Final down hole surveys are completed using a north seeking gyro tool. Underground intersections have demonstrated the quality of the survey methods. • The most recent topographic survey was completed in 2010 using a total station instrument with 5cm accuracy with results being contoured at 1m.
Data spacing and distribution	• The drill hole spacing over much of the Hugo Dummett North area is approximately 125 m x 75 m. The data spacing varies with depth but the spacing and distribution is considered sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource estimation procedures and classifications applied. • Samples are composited to 5 metres.
Orientation of data in relation to geological structure	• The primary drilling orientations are perpendicular to strike of the mineralising system and host lithologies as far as possible. • This orientation makes identification of some fault sets (eg east-west faults at Hugo North) and the geometry of some late dyke sets more difficult. Additional drill holes from surface and underground at varying dips and strikes have been drilled to mitigate this risk.
Sample security	• Samples are shipped and tracked in a manner that ensures that tampering could not be done without detection.
Audits or reviews	• The most recent reviews of sampling techniques and data by Sketchley (2016), Baker (2010) and Bloom (2013) have led to some minor refinements of the sampling, preparation and analysis of samples. The most significant change was a move to a multi-element ICP suite to provide better quality assays on some minor elements.

SECTION 2 REPORTING OF EXPLORATION RESULTS

Criteria	Commentary
Mineral tenement and land tenure status	• Oyu Tolgoi manages five mining licences that cover the project area. • Three licences held 100% by OT LLC are Manakht (Mining Licence 6708A, covering 4,533 ha), Oyu Tolgoi (Mining Licence 6709A, covering 8,490 ha), and Khukh Khad (Mining Licence 6710A, covering 1,763 ha). • Two licences held by Entrée Gold are Javkhlant (Mining Licence 15225A, covering 20,327 ha) and Shivee Tolgoi (Mining Licence 15226A, covering 42,593 ha). These are held pursuant to joint venture arrangements between Entrée Gold and Oyu Tolgoi LLC. • Mining license boundaries, along with the surface projection of main deposits and some of the exploration targets, are shown in a plan view below.



Exploration done by other parties	• Magma Copper first took licence out over the Oyu Tolgoi area and subsequent exploration was completed by Magma Copper, BHP Billiton and Oyu Tolgoi LLC (formerly Ivanhoe Mines Mongolia Inc). Exploration work over a 16 year period took the project from a greenfields site through delineation drilling to published Mineral Resources and Ore Reserves before Rio Tinto's involvement in the project.
Geology	• The Oyu Tolgoi deposits display typical copper–gold porphyry and related high-sulphidation copper–gold deposit styles. • The deposits are divided into three zones: the Hugo Dummett zone to the north, the more deeply eroded Oyut deposits (South Oyu, Southwest Oyu and Central Oyu), and to the far south, the buried Heruga deposit. The surface traces and surface projection of the distinct porphyry centres define a north-northeast-trending mineralised corridor hosted by east-dipping panels of Upper Devonian or older layered sequences intruded by quartz monzodiorite and granodiorite stocks and dykes. • Variations apparent in the mineralisation styles, alteration characteristics, and deposit morphologies reflect differences in structural controls, host rock lithology, and depth of formation. • Structural influences account for the most part for the differences in shape, distribution, and potentially the grade of mineralisation within the deposits. • The more typical copper–gold porphyry-style alteration and mineralisation tend to occur in less structurally complex areas, predominantly within basalt and quartz monzodiorite. • High-sulphidation mineralisation and associated advanced argillic alteration are most common within the basaltic tuff, in the upper part of the quartz monzodiorite where it intrudes to levels high in the stratigraphic succession, and in narrow structurally-controlled zones. • A schematic long section along the Oyu Tolgoi deposits (divided into three zones: Hugo Dummett, Oyut and Heruga) from SW to NE is shown below.

	
Drill hole Information	• Cut-off date for the drill hole database for Hugo Dummett North for resource estimation and Mineral Resource reporting is the 14th February 2014. Following is a summary for Hugo Dummett North drilling metres by type as of 2019 December 31st. ○ Surface diamond drilling – 426,100 metres ○ Underground diamond drilling – 47,772 metres ○ RC drilling – 5,187 metres ○ Combined RC and diamond drilling – 3,154 metres ○ PCD drilling – 3,754 ○ Total drilling metres – 485,967 metres
Data aggregation methods	• Not applicable – no exploration results are reported.
Relationship between mineralisation widths and intercept lengths	• Depending on the dip of the drill hole, and the dip of the mineralisation, drill intercept widths are typically greater than true widths. Where the geometry of the mineralisation with respect to the drill hole angle is not known it is clearly stated.
Diagrams	• Not applicable – no exploration results are reported.
Balanced reporting	• Not applicable – no exploration results are reported.
Other substantive exploration data	• Not applicable – no exploration results are reported.
Further work	• Since completion of the resource estimate in 2014 the bulk of geological activities on site have been underground mapping of lateral development drives and geotechnical drilling in support of mine construction activities. This work is ongoing and is being used to inform mine designs.

SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES

Criteria	Commentary
Database integrity	• Extensive data quality assurance procedures are in place to ensure the data is as accurate as possible. • Detailed quality control and validation of all new data is undertaken before it is used in a Mineral Resource estimate.

	• Much of the data collection is now digital with remote uploading of data directly into acQuire. There are validation settings on most fields in acQuire. • Assay data is QA/QC assessed in acQuire before final release in the database. Basic and detailed checks are completed on all fundamental data and range from extent checks to checking individual assays against the hardcopy records. Detailed reports of all validation and QA/QC checks are available.
Site visits	• The Competent Person – Mineral Resources, Oyunjargal Dendev, is a full time employee of Oyu Tolgoi LLC. The Competent Person visits the mine site regularly.
Geological interpretation	• Drill core logging is of fundamental importance to geological interpretation and many layers of quality assurance are in place to ensure high quality logging information ranging from acQuire data entry checks and daily senior geologist checks of logging to peer reviews of drill hole logging on completion of drilling. • Infill drilling from surface, underground mapping and drilling, relogging of drill holes and new structural interpretations have all been used to improve the confidence in the structural and geological models at Hugo North over the last 10 years. • The structural and geology model form the basis of geotechnical assessments and the domaining used in resource estimation. • The greatest risk factors to the geology models are the structural interpretation and the geometry and extents of late barren dykes.
Dimensions	• The dimensions of the Hugo Dummett North deposit are a vertical extent of about 900 metres from +500 metres above sea level to depths greater than 400 metres below sea level. Along the strike, it extends in excess of 1,800 metres with width of 500 metres.
Estimation and modelling techniques	• The deposit has been domained using a combination of structure, geology and copper and gold grade shells. Analysis of contact grade profile plots was used to determine if domain boundaries were treated as soft, firm or hard. • Data was composited to 5m. • Exploratory data analysis looked at histograms, cumulative frequency plots, descriptive statistics and box plots. • Variography was undertaken on composite files using correlograms. • Interpolation into 15x15x15m blocks used ordinary kriging and limited to estimating blocks flagged with a mineralised lithological unit. Outlier restriction and thresholds were used to prevent excessive smearing of high grades. Search ellipsoids were oriented preferentially to the orientation of the grade shells. • Validation of the model was done using visual inspection of the results, a nearest neighbour estimate to determine potential bias and through histograms, probability plots and swath plots.
Moisture	• All tonnages are calculated on the basis of dry bulk density measurements taken on drill core at intervals of 10m.
Cut-off parameters	• A cut-off grade of 0.41% copper equivalence has been used in stating underground Mineral Resources at Hugo Dummett North. Following is a summary of copper equivalence assumptions used for defining the copper equivalence formula. • The formula is calculated on individual block grades for copper, gold and silver. • Oyu Tolgoi applies consensus pricing in the determination of reserves and resources. This involves generation of long-term price points based on industry capacity analysis, global commodity consumption and economic growth trends. A single long term price point is used in the definition of ore and waste and in the financial evaluations underpinning the reserves and resources statement. The detail of this process and of the price points selected are commercially sensitive and are not disclosed. • Average recoveries are 93% for copper, 80% for gold and 81% for silver. • It is Rio Tinto's opinion that all the elements included in the metal equivalents calculation have a reasonable potential to be recovered and sold. • Based on above the assumptions the copper equivalence formula is: CuEq = Cu+((Au*AuPrice*0.03215*AuRec/CuRec)+(Ag*AgPrice*0.03215*

	AgRec/CuRec))/(CuPrice*22.0462)
Mining factors or assumptions	• The first stage of the Hugo Dummett North underground development is the Lift 1 cave mine. • It is assumed that subsequent resource development will also utilise the caving underground mining method and this is the basis of reporting for Hugo Dummett North.
Metallurgical factors or assumptions	• Metallurgical assumptions have been made on the basis of comminution (throughput) and flotation (recovery) metallurgical test work at Hugo Dummett North.
Environmental factors or assumptions	• Tailings from the operation will be potentially acid forming and will be stored in the appropriately tailings storage facility to ensure no long term acid rock drainage issues.
Bulk density	• Dry bulk density is determined by calliper and immersion techniques for 20 cm lengths of core, sampled every ten metres down drill holes. Porous samples are measured with a paraffin wax coating. There is an extensive database of density measurements for the Hugo Dummett North deposit and its variations in lithology, alteration and mineralisation. • The dry bulk density measurements are used to estimate density (tonnes) in the block models and use simple kriging estimation methods.
Classification	• The majority of Mineral Resources are in the Inferred category with a proportion of Indicated category. Minor Measured category resources occur at Hugo Dummett North with the bulk having been converted to Ore Reserves. • Classification is based on a combination of drill spacing, visual inspection of geologic and grade continuity, spatial statistics and determination of confidence limits in predicting planned annual production. • Block confidence classification is based on three operations: preliminary block classification using a script based on distance to a drill hole and number of drill holes used to estimate a block, generation of probability model for the three confidence categories, and manual cleaning using polygons generated in sectional view. • A three-pass inverse distance squared (ID2) estimation of copper composites was used to capture the distance from a block centroid to the nearest composites; the closest anisotropic distance was captured from Pass 1 and Pass 2, and the closest Cartesian distance was captured from Pass 3. • A series of probability models were generated using the preliminary classification code of 1 for Measured, 2 for Indicated, and 3 for Inferred. Using a threshold value of 50%, the probability shells were compared to the preliminary classification block code. Boundary polygons reflecting the three categories were then manually digitized to eliminate the inclusion of isolated blocks and incorporate geologic and grade continuity. The probability shells were used as a guide for confidence. The polygons were then connected to create a three-dimensional solid. Blocks were then recoded as Measured, Indicated, or Inferred based on these solids. • For Measured Resources a three-hole rule was used for OK-estimated copper blocks with three or more composites from three different holes, from three different search octants, all within 50 m and at least one composite within 35 m of the block centroid. The distance used is the closest anisotropic distance captured from ID2 Pass 1. Blocks were constrained by the Measured classification solid generated using sectional interpretation and block probabilities. • For Indicated Resources the following criteria need to be met. A three-hole rule was used for OK-estimated copper blocks not classified as Measured and with three or more composites from three different holes, all within 50 m. The distance used is the closest anisotropic distance captured from ID2 Pass 1. A three-hole rule was used for OK-estimated copper blocks with three or more composites from three different holes, all within 150 m and at least one composite within 105 m of the block centroid, all distances from ID2 Pass 2. A two-hole rule was used for OK-estimated copper blocks with two or more composites from two different holes, all within 150 m with at least one hole within 75 m of the block centroid, all distances from ID2 Pass 2. Blocks were constrained by the Indicated classification solid generated using sectional interpretation and block probabilities. • All blocks in the Hugo North model with an OK-estimated copper grade that did not meet the

	classification criteria for Measured or Indicated Mineral Resources were assigned to Inferred Mineral Resources if the block centroid was within 150 m of a composite. The distance used is the closest Cartesian distance captured from Pass 3 of the ID2 estimation described above. Blocks were constrained by the inferred classification solid generated using sectional interpretation and block probabilities. • The Competent Person is satisfied that the stated Mineral Resource classification reflects the relevant factors of the deposit.
Audits or reviews	• Mineral Resource estimates have been audited by SRK acting for Rio Tinto Risk Assurance in 2012 and 2013 and received a Satisfactory rating in 2013. • Mineral Resource estimates were also considered in an internal audit on Production Reporting and Reconciliation in 2013 and received a Satisfactory rating. • No high rated findings were made in any of the above audits and the majority of findings had a low rating. • All stages of resource estimation have undergone an external review process and endorsement.
Discussion of relative accuracy/ confidence	• Oyu Tolgoi operates the nearby Oyut open pit mine. The data collection and estimation techniques used for the Hugo Dummett deposit are consistent with those used at Oyut. Reconciliation of actual production with the Mineral Resource estimates for the Oyut deposit is generally accurate to within ten per cent for tonnes and grade on an annual basis. This result is indicative of a robust process. • The accuracy and confidence of the Mineral Resource estimate is consistent with the current level of study (Feasibility Study).

SECTION 4 ESTIMATION AND REPORTING OF UNDERGROUND ORE RESERVES

Criteria	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• 2014 Mineral Resource is the basis for Hugo Dummett North Ore Reserves. • Ore Reserves are reported exclusive of Mineral Resources.
Site visits	• In 2019, the Competent Person visited site 3 times and works full time on the life of mine planning team for the Oyu Tolgoi Mine. The Competent Person has access to senior leaders to raise and discuss pertinent issues.
Study status	• Feasibility Study completed in 2015 (to be updated during 2020) and detailed design ongoing for project execution. Further detailed studies were completed on the design of the cave initiation area (Panel 0) in 2020.
Cut-off parameters	• Shut off parameters are based on 2019 cost estimate outputs. A break-even shut off policy is used to define the draw column heights. Footprint extents are determined by a combination of cut-off grade and geotechnical assessment of caveability and maintaining stability.
Mining factors or assumptions	• The Ore Reserve is based on a caving mining method for Hugo Dummett North, a large, highly faulted ore body considered ideal for a caving-based mining method. In the weak, highly stressed ground, a drawpoint spacing of 31 x 18m is planned, utilising El Teniente style, straight drawpoints. The minimum footprint width is 180 metres. • The mining zone is sub-blocked into Panel 0, Panel 1 and Panel 2 to reduce risk and increase productivity. Pillars, measuring 120m from undercut to undercut, have been placed in the ore body on either side of Panel 0, to locate and protect the materials handling infrastructure for cave initiation. Using a geological hazard risk rating across the mining footprint, drawpoints have been assumed to permanently fail prior to the full economic column being drawn. The early failure of drawpoints reduces the total production and copper tonnes by 11%. • The maximum draw column height assumed is 650m; the minimum draw column height is 100m with an average of 366m. Further detailed study on the fragmentation and flow modelling has driven an increase in the drawcone diameter. The larger diameter increases the overall recovery

	prior to the implementation of mining and recovery factors. The Hugo Dummett North Extension portion of the ore body is not impacted by the Panel 0 pillars, and thus sees an increase in recovery from the larger drawcones. • Inferred mineral resources are excluded from the Ore Reserve and constitute 5% of the mined material (The grades of Inferred material are set to zero for production scheduling and the statement of Ore Reserves).
Metallurgical factors or assumptions	• Sulphide copper flotation with gold and silver in copper concentrate is proposed for treatment of the Hugo Dummett North orebody. • The metallurgical process is well understood, test work has demonstrated that the ore is well suited to this processing method and the plant has been constructed with first concentrate in 2013 from the open pit feed. • Diamond drill core comminution and flotation test results were utilised to develop metallurgical models representing different metallurgical domains that were considered representative of the orebody. The metallurgical models predict product tonnage and grade parameters including deleterious elements.
Environmental	• A small underground development waste stockpile is planned and any potentially acid forming material will be placed in an environmentally appropriate way within the open pit approved dumping sites and plans. • Tailings from the operation will be potentially acid forming and will be stored in the appropriately tailings storage facility to ensure no long term acid rock drainage issues.
Infrastructure	• Leases in place with development approval. • Camp and roads in place • A power line from China is in place. A Power Source Framework Agreement amendment has been agreed. The amendment prioritises a Governement Of Mongolia funded State Owned Power Plant, with Oyu Tolgoi having rights to develop its own solution if required and to extend current IMPC supply contract before 01 March 2021 to ensure no power gap. • Water sources secured for the existing 100 ktpd plant • Road to China upgraded for freight and concentrate shipping • Nominal 100 ktpd concentrator commissioned and operating with open pit feed since 2013
Costs	• Capital costs are based on actuals and detailed projections through the project period. • Operating costs have been built up from material take offs based on the detailed mine design and operating plan • Deleterious element penalties for arsenic and fluorine are applied in the business model. The blend of open pit and underground material is designed to keep mill feed below rejection limits during periods of higher arsenic production from the open pit. • Transportation and refining charges are based on contracts in place • Royalties based on a formal government agreement.
Revenue factors	• Net Smelter Return is based on the recovery formulas developed by qualified metallurgists from test work on the Hugo Dummett North ore and excludes penalties for deleterious elements. It includes TC/RCs, Government royalty, and limits on payable Gold/Silver along with conventional payable copper logic • Oyu Tolgoi applies consensus pricing in the determination of reserves and resources. This involves generation of long-term price points based on industry capacity analysis, global commodity consumption and economic growth trends. A single long term price point is used in the definition of ore and waste and in the financial evaluations underpinning the reserves and resources statement. The detail of this process and of the price points selected are commercially sensitive and are not disclosed.
Market assessment	• The long term outlook for copper is positive. • A marketing plan has been completed and is part of the Feasibility Study documentation • Concentrate is currently shipped to China via the nearby border crossing.
Economic	• Rio Tinto makes an assessment of an appropriate country-specific discount rate to use and this rate is applied in the business' financial model.

	• The Hugo Dummett North cave is a robust project which shows positive NPV under a number of sensitivity cases on prices, costs and production outcomes.
Social	• There is a formal agreement with the Mongolian government.
Other	• A full project risk assessment has been completed. • An agreement with the government is in place. • The underground operation is currently being developed.
Classification	• Only material classified as having a Measured or Indicated level of resource confidence is considered as mineralised in the evaluation of mining plans that underpin the stated Ore Reserves. • 100% of Ore Reserves are reported as Probable Ore Reserves due to the nature of caving and uncertainty in the geotechnical modifying factors.
Audits or reviews	• A Rio Tinto Reserve audit was conducted in July 2013 using external reviewers. There were no high risk outcomes from the audit. CAMs reviewers associated with project finance reviewed the project in 2020 and have an ongoing monitoring role comprising quarterly site visits.
Discussion of relative accuracy/ confidence	• The mine is under development therefore no reconciliation data is available for calibration. • Industry-accepted parameters for dilution are applied, however Hugo Dummett North is a highly fractured orebody and dilution could be higher than expected. Work is ongoing in this area. • High abutment stresses may impact drawpoint availability and cost. In the event where a damaged drawpoint cannot be recovered, some reserve loss could be experienced. These Ore Reserves contain an allowance for permanent drawpoint loss. • The Hugo Dummett North cave is a financially robust project, consequently higher than expected dilution or drawpoint loss is not expected to make the project unattractive for investment. Sensitivity cases have confirmed this expectation.