

26 August 2019

INTERSECTIONS FROM KHARMAGTAI

Xanadu Mines Ltd (**ASX: XAM, TSX: XAM**) ("**Xanadu**" or "the **Company**") is pleased to announce the second batch of assay results from its oxide gold drilling program at its flagship Kharmagtai Project in southern Mongolia (Figures 1 and 2). These results form part of the Company's current 2019 drilling program, with significant progress made towards defining a shallow oxide gold resource.

HIGHLIGHTS

Significant shallow oxide gold intersects include:

Drill hole KHDDH499 returns 40m at 2.91g/t Au from surface

including 37m @ 3.14g/t Au from surface

including 21m @ 5.20g/t Au from surface

Drill hole KHDDH498 returns 40m at 1.72g/t Au from surface

including 36m @ 1.85g/t Au from 4m

Drill hole KHDDH494 returns 40m at 1.50g/t Au from surface

including 34m @ 1.75g/t Au from 6m

- Latest drilling confirms continuity of mineralisation within a single high-grade gold zone
- . Results are very encouraging and demonstrate excellent potential for a shallow oxide resource
- Plans are being developed to test the Copper Hill and Golden Eagle Oxide Gold zones

The new results have significantly increased the Company's confidence in the emerging oxide gold opportunity at Kharmagtai. Stockwork Hill is the first prospect to be drilled outside and above the Kharmagtai copper-gold deposit, highlighting the under-explored nature of the broader project. The drill program is designed to extend both strike and depth to the significant shallow oxide gold mineralisation at Kharmagtai.

Xanadu's Chief Executive Officer, Dr Andrew Stewart, said "We are very pleased by these new drill results from the mineralised oxide zone above the Stockwork Hill copper-gold deposit, which have delivered some pleasant surprises — not least of which are the much higher-than-anticipated gold grades, which are significant given the wide-spaced reconnaissance nature of this initial phase of drilling. To have such high gold grades defined so early is promising and supports our interpretation of an east-west zone of mineralisation, which presents as an outstanding target for further step-out drilling.

Given the shallow nature of the mineralisation, these outstanding gold intercepts generated at Stockwork Hill show just how underexplored the broader Kharmagtai Project is for oxide gold mineralisation and validates the current plan of developing a low-cost, high-value gold starter project at Kharmagtai.

ASX/MEDIA RELEASE





Our long running objective is to develop Mongolia's next large-scale open-pit copper and gold deposit. We are encouraged by what we see at Stockwork Hill, particularly the grade and potential scale and strike extent of the oxide system. The new results demonstrate clear progress, and given Kharmagtai sits on a granted mining lease with a registered water resource and an established power supply nearby, we have the ability to move quickly on an oxide gold project, and our current strategy of seeking high-return options via an oxide gold project, is focused on providing the capital needed to advance that larger scale copper and gold project."

HIGH-GRADE OXIDE RESULTS FROM STOCKWORK HILL

The initial eight-hole drill program has been extended to a twenty-one-hole program to quickly and economically test one of the main oxide gold targets at Kharmagtai, to confirm the expected gold grades and characterise the gold deportment. Holes have been drilled PQ and designed to test five sections across the oxide cap, with other holes designed to test above the sulphide zones to the northwest.

Drill results from an additional eight drill holes have been received. Table 1 contains the calculated assay intervals, Table 2 contains the drill hole collar locations and Figures 3 shows a plan view of the drilling.

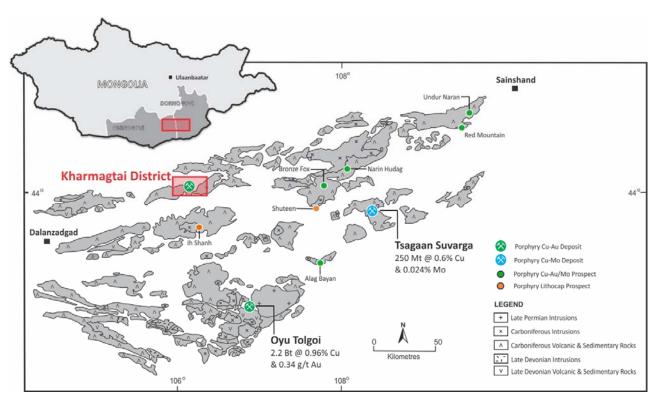


FIGURE 1: Location of the Kharmagtai Project in the South Gobi porphyry copper belt.

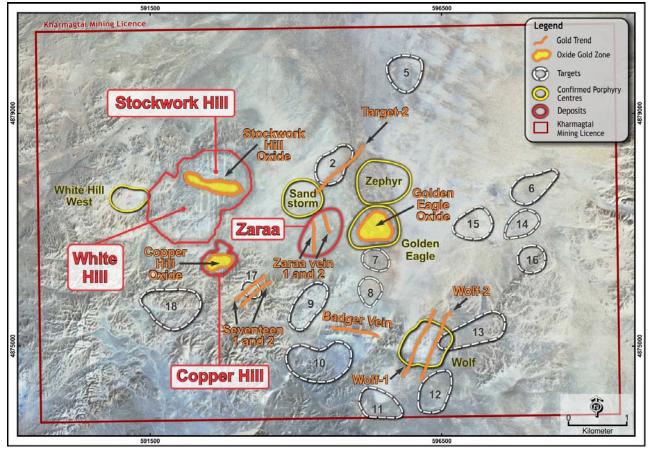


FIGURE 2: The Kharmagtai Mining Licence showing location of the Kharmagtai Deposits (Stockwork Hill, White Hill, Copper Hill) and areas being investigated for oxide gold at Kharmagtai.

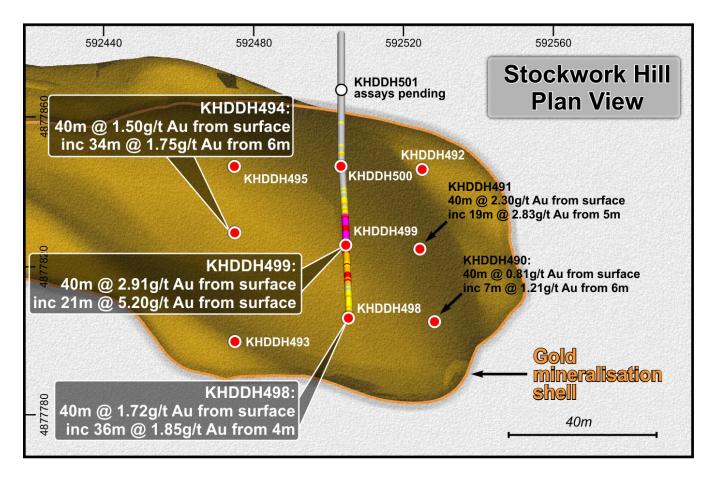


FIGURE 3: Plan view of the Stockwork Hill Oxide Zone showing current drill holes and modelled gold results from the recent resource upgrade.

COMPETENT-QUALIFIED PERSON STATEMENT

The information in this announcement that relates to exploration results is based on information compiled by Dr Andrew Stewart, who is responsible for the exploration data, comments on exploration target sizes, QA/QC and geological interpretation and information. Dr Stewart, who is an employee of Xanadu and is a Member of the Australasian Institute of Geoscientists, has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking, to qualify as the "Competent Person" as defined in the 2012 Edition of the "Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves" and the National Instrument 43-101. Dr Stewart consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

Table 1: Currently returned assay intercepts for Stockwork Hill

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)
KHDDH492	Stockwork Hill	0	48	48	0.07
including		0	17	17	0.11
KHDDH493	Stockwork Hill	1	40.5	39.5	0.10
including		7	11	4	0.16
KHDDH494	Stockwork Hill	0	40	40	1.50



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Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)
including		5	40	35	1.71
including		6	40	34	1.75
KHDDH495	Stockwork Hill	0	40	40	0.22
including		5	17	12	0.31
KHDDH496	Stockwork Hill	0	6	6	0.06
and		16.1	59	42.9	0.11
KHDDH497	Stockwork Hill	0	40	40	0.18
KHDDH498	Stockwork Hill	0	40	40	1.72
including		2	40	38	1.80
including		4	40	36	1.85
KHDDH499	Stockwork Hill	0	40	40	2.91
including		0	37	37	3.14
including		0	21	21	5.20
KHDDH500	Stockwork Hill	0	70.5	70.5	0.13
including		0	23	23	0.30
including		4	23	19	0.29

Table 2: Drill hole collar location

Hole ID	Prospect	East	North	RL	Azimuth (°)	Inc (°)	Depth (m)
KHDDH492	Stockwork Hill	592525	4877846	1288	0	-90	50.0
KHDDH493	Stockwork Hill	592475	4877800	1288	0	-90	40.5
KHDDH494	Stockwork Hill	592475	4877829	1288	0	-90	40.0
KHDDH495	Stockwork Hill	592475	4877847	1289	0	-90	40.0
KHDDH496	Stockwork Hill	592277	4877974	1292	0	-90	60.0
KHDDH497	Stockwork Hill	592240	4878001	1292	0	-90	40.0
KHDDH498	Stockwork Hill	592505	4877806	1287	0	-60	40.0
KHDDH499	Stockwork Hill	592505	4877826	1287	0	-60	40.0
KHDDH500	Stockwork Hill	592503	4877847	1288	0	-60	70.5

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Criteria

APPENDIX 1: KHARMAGTAI TABLE 1 (JORC 2012)

JORC Code explanation

Set out below is Section 1 and Section 2 of Table 1 under the JORC Code, 2012 Edition for the Kharmagtai project. Data provided by Xanadu. This Table 1 updates the JORC Table 1 disclosure dated 31 July 2018.

Commentary

1.1 JORC TABLE 1 - SECTION 1 - SAMPLING TECHNIQUES AND DATA

Sampling Nature and quality of sampling (e.g. cut The resource estimate is based on diamond techniques channels, random chips, or specific drill core samples, RC chip samples and specialised industry standard channel samples from surface trenches. measurement tools appropriate to the Representative ½ core samples were split minerals under investigation, such as from PQ, HQ & NQ diameter diamond drill down hole gamma sondes, or handheld core on site using rock saws, on a routine 2m XRF instruments, etc.). These sample interval that also honours examples should not be taken as lithological/intrusive contacts. limiting the broad meaning of sampling. The orientation of the cut line is controlled Include reference to measures taken to using the core orientation line ensuring ensure sample representivity and the uniformity of core splitting wherever the core appropriate calibration of any has been successfully oriented. measurement tools or systems used. Sample intervals defined and Aspects of the determination of subsequently checked by geologists, and mineralisation that are Material to the sample tags are attached (stapled) to the Public Report. plastic core trays for every sample interval. In cases where 'industry standard' work RC chip samples are 1/4 splits from one meter has been done this would be relatively intervals using a 75%:25% riffle splitter to simple (e.g. 'reverse circulation drilling obtain a 3kg sample was used to obtain 1 m samples from RC samples are uniform 2m samples formed which 3 kg was pulverised to produce a from the combination of two 1/4 split 1m 30 g charge for fire assay'). In other samples. cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information. Drilling Drill type (e.g. core, reverse circulation, The Mineral Resource estimation has been techniques open-hole hammer, rotary air blast, based upon diamond drilling of PQ, HQ and NQ diameters with both standard and triple auger, Bangka, sonic, etc.) and details tube core recovery configurations, RC drilling (e.g. core diameter, triple or standard tube, depth of diamond tails, faceand surface trenching with channel sampling. sampling bit or other type, whether core All drill core drilled by Xanadu has been is oriented and if so, by what method, oriented using the "Reflex Ace" tool. etc.). Method of recording and assessing Drill sample Diamond drill core recoveries were assessed recovery core and chip sample recoveries and using the standard industry (best) practice results assessed. which involves: removing the core from core trays; reassembling multiple core runs in a v-Measures taken to maximise sample rail; measuring core lengths with a tape recovery and ensure representative nature of the samples. measure, assessing recovery against core block depth measurements and recording any Whether a relationship exists between measured core loss for each core run. sample recovery and grade and





Criteria	JORC Code explanation	Commentary
	whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	 Diamond core recoveries average 97% through mineralization. Overall, core quality is good, with minimal core loss. Where there is localized faulting and or fracturing core recoveries decrease, however, this is a very small percentage of the mineralized intersections. RC recoveries are measured using whole weight of each 1m intercept measured before splitting Analysis of recovery results vs grade shows no significant trends that might indicate sampling bias introduced by variable recovery in fault/fracture zones.
Logging	 Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. The total length and percentage of the relevant intersections logged. 	 All drill core is geologically logged by well-trained geologists using a modified "Anaconda-style" logging system methodology. The Anaconda method of logging and mapping is specifically designed for porphyry Cu-Au mineral systems and is entirely appropriate to support Mineral Resource Estimation, mining and metallurgical studies. Logging of lithology, alteration and mineralogy is intrinsically qualitative in nature. However, the logging is subsequently supported by 4 Acid ICP-MS (48 element) geochemistry and SWIR spectral mineralogy (facilitating semi-quantitative/calculated mineralogical, lithological and alteration classification) which is integrated with the logging to improve cross section interpretation and 3D geological model development. Drill core is also systematically logged for both geotechnical features and geological structures. Where drill core has been successfully oriented, the orientation of structures and geotechnical features are also routinely measured. Both wet and dry core photos are taken after core has been logged and marked-up but before drill core has been cut.
Sub- sampling techniques and sample preparation	 If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample 	 All drill core samples are ½ core splits from either PQ, HQ or NQ diameter cores. A routine 2m sample interval is used, but this is varied locally to honour lithological/intrusive contacts. The minimum allowed sample length is 30cm. Core is appropriately split (onsite) using



Criteria JORC Code explanation Commentary

preparation technique.

- Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.
- Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.
- Whether sample sizes are appropriate to the grain size of the material being sampled.

diamond core saws with the cut line routinely located relative to the core orientation line (where present) to provide consistency of sample split selection.

- The diamond saws are regularly flushed with water to minimize potential contamination.
- A field duplicate ¼ core sample is collected every 30th sample to ensure the "representivity of the in situ material collected". The performance of these field duplicates are routinely analysed as part of Xanadu's sample QC process.
- Routine sample preparation and analyses of DDH samples were carried out by ALS Mongolia LLC (ALS Mongolia), who operates an independent sample preparation and analytical laboratory in Ulaanbaatar.
- All samples were prepared to meet standard quality control procedures as follows: Crushed to 75% passing 2mm, split to 1kg, pulverised to 85% passing 200 mesh (75 microns) and split to 150g sample pulp.
- ALS Mongolia Geochemistry labs quality management system is certified to ISO 9001:2008.
- The sample support (sub-sample mass and comminution) is appropriate for the grainsize and Cu-Au distribution of the porphyry Cu-Au mineralization and associated host rocks.

Quality of assay data and laboratory tests

- The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.
- For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.
- Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.

- All samples were routinely assayed by ALS Mongolia for gold
- Au is determined using a 25g fire assay fusion, cupelled to obtain a bead, and digested with Aqua Regia, followed by an atomic absorption spectroscopy (AAS) finish, with a lower detection (LDL) of 0.01 ppm.
- All samples were also submitted to ALS Mongolia for the 48 element package ME-ICP61 using a four acid digest (considered to be an effective total digest for the elements relevant to the MRE). Where copper is overrange (>1% Cu), it is analysed by a second analytical technique (Cu-OG62), which has a higher upper detection limit (UDL) of 5% copper.
- Quality assurance has been managed by insertion of appropriate Standards (1:30 samples – suitable Ore Research Pty Ltd certified standards), Blanks (1:30 samples), Duplicates (1:30 samples – ¼ core duplicate)



Criteria	JORC Code explanation	Commentary
		 by XAM. Assay results outside the optimal range for methods were re-analysed by appropriate methods. Ore Research Pty Ltd certified copper and gold standards have been implemented as a part of QC procedures, as well as coarse and pulp blanks, and certified matrix matched copper-gold standards. QC monitoring is an active and ongoing processes on batch by batch basis by which unacceptable results are re-assayed as soon as practicable. Prior to 2014: Cu, Ag, Pb, Zn, As and Mo were routinely determined using a three-acid-digestion of a 0.3g sub-sample followed by an AAS finish (AAS21R) at SGS Mongolia. Samples were digested with nitric, hydrochloric and perchloric acids to dryness before leaching with hydrochloric acid to dissolve soluble salts and made to 15ml volume with distilled water. The LDL for copper using this technique was 2ppm. Where copper was over-range (>1% Cu), it was analysed by a second analytical technique (AAS22S), which has a higher upper detection limit (UDL) of 5% copper. Gold analysis method was essentially unchanged.
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	 All assay data QAQC is checked prior to loading into XAM's Geobank data base. The data is managed by XAM geologists. The data base and geological interpretation is managed by XAM. Check assays are submitted to an umpire lab (SGS Mongolia) for duplicate analysis. No twinned drill holes exist. There have been no adjustments to any of the assay data.
Location of data points	 Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	 Diamond drill holes have been surveyed with a differential global positioning system (DGPS) to within 10cm accuracy. The grid system used for the project is UTM WGS-84 Zone 48N Historically, Eastman Kodak and Flexit electronic multi-shot downhole survey tools have been used at Kharmagtai to collect down hole azimuth and inclination information for the majority of the diamond drill holes.

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Criteria	JORC Code explanation	Commentary
		Single shots were typically taken every 30m to 50m during the drilling process, and a multishot survey with readings every 3-5m are conducted at the completion of the drill hole. As these tools rely on the earth's magnetic field to measure azimuth, there is some localised interference/inaccuracy introduced by the presence of magnetite in some parts of the Kharmagtai mineral system. The extent of this interference cannot be quantified on a reading-by-reading basis. • More recently (since September 2017), a north-seeking gyro has been employed by the drilling crews on site (rented and operated by the drilling contractor), providing accurate downhole orientation measurements unaffected by magnetic effects. Xanadu have a permanent calibration station setup for the gyro tool, which is routinely calibrated every 2 weeks (calibration records are maintained and were sighted) • The project DTM is based on 1 m contours from satellite imagery with an accuracy of ±0.1 m.

1.2 JORC TABLE - SECTION 2 - REPORTING OF EXPLORATION RESULTS

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	 Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	 The Project comprises 1 Mining Licence (MV-17387A). The Kharmagtai mining license MV-17387A is 100% owned by Oyut Ulaan LLC. Xanadu has an 85% interest in Mongol Metals LLC, which has 90% interest in Oyut Ulaan LLC. The remaining 10% in Oyut Ulaan LLC is owned by Quincunx (BVI) Ltd ("Quincunx"). The Mongolian Minerals Law (2006) and Mongolian Land Law (2002) govern exploration, mining and land use rights for the project.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Detailed exploration was conducted by Quincunx Ltd, Ivanhoe Mines Ltd and Turquoise Hill Resources Ltd including extensive surface mapping, trenching, diamond drilling, surface geochemistry and geophysics.
Geology	Deposit type, geological setting and style of mineralisation.	 The mineralisation is characterised as porphyry copper-gold type. Porphyry copper-gold deposits are formed



Criteria	JORC Code explanation	Commentary				
		from magmatic hydrothermal fluids typically associated with felsic intrusive stocks that have deposited metals as sulphides both within the intrusive and the intruded host rocks. Quartz stockwork veining is typically associated with sulphides occurring both within the quartz veinlets and disseminated thought out the wall rock. Porphyry deposits are typically large tonnage deposits ranging from low to high grade and are generally mined by large scale open pit or underground bulk mining methods. The prospects at Kharmagtai are atypical in that they are associated with intermediate intrusions of diorite to quartz diorite composition; however the deposits are significant in terms of gold:copper ratio, and similar to other gold-rich porphyry deposits.				
Drill hole Information	· · · · · · · · · · · · · · · · · · ·	 Diamond holes, RC holes and trenches are the principal source of geological and grade data for the Project. 				
		Timing RC Holes Metre DDH Holes Metre DDH Metre DDH Metre DH Metre Trench Metre				
	collar	Drilling <2015 155 24553 252 88511 0 0 106 39774				
	 elevation or RL (Reduced Level – elevation above sea level in metres) 	Drilling 68 13107 116 57876 22 5323 17 5618				
	of the drill hole collar	Total 223 37660 368 146387 22 5323 123 45392				
	 dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	See figures in main report.				
Data	In reporting Exploration Results,	Weighted averages have not been used in this				
aggregation methods	 weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such 	 Some compositing has been used in this resource but with statistically relevant techniques that do not include internal dilution 				

aggregation should be stated and



Criteria	JORC Code explanation	Commentary
	some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	
Relationship between mineralisation widths and intercept lengths	 These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known'). 	 Mineralised structures are variable in orientation, and therefore drill orientations have been adjusted from place to place in order to allow intersection angles as close as possible to true widths. Exploration results have been reported as an interval with 'from' and 'to' stated in tables of significant economic intercepts. Tables clearly indicate that true widths will generally be narrower than those reported.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	See figures in main report.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	 Resources have been reported at a range of cut-off grades, above a minimum suitable for open pit mining, and above a minimum suitable for underground mining.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Extensive work in this area has been done and is reported separately. See the company website for significant announcements and milestones. Work that has been done includes; relogging of core, structural studies, alteration studies, geotechnical studies and preliminary metallurgical test works. The project has been subject to various geophysical studies including aeromagnetic, radiometric surveys and electromagnetic surveys over discrete targets.
Further work	 The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially 	 The mineralisation is open at depth and along strike. Current estimates are restricted to those expected to be reasonable for open pit mining. Limited drilling below this depth (- 300m rl) shows widths and grades potentially suitable for underground extraction. Exploration is on-going.



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Criteria	JORC Code explanation	Commentary	
	sensitive.		

1.3 JORC TABLE 1 – SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES Mineral resources are not being reported so this is not applicable to this report

1.4 JORC TABLE 1 – SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES

Ore Reserves are not reported so this is not applicable to this report.