11 July 2018

KHARMAGTAI - DRILLING AT ZARAA SUPPORTS SHALLOW HIGH-GRADE POTENTIAL

Xanadu Mines Ltd (**ASX: XAM** – "**Xanadu**" or "**Company**") is pleased to provide a drilling update for the new Zaraa Discovery at its flagship Kharmagtai copper and gold project located in the South Gobi region of Mongolia (Figures 1 and 2).

HIGHLIGHTS

- **KHDDH469 brings Zaraa mineralisation within 330m vertically of surface**
- **KHDDH469 returns a near continuous >920m intercept of copper and gold mineralisation**
- **Final assays returned for KHDDH469:**

	441.6m @ 0.35% Cu and 0.35g/t Au (0.57% eCu or 0.89g/t eAu) from 378.9m
including	**333.4m @ 0.42% Cu and 0.41g/t Au (0.68% eCu or 1.06g/t eAu) from 414m**
and	**480.3m @ 0.30% Cu and 0.25g/t Au (0.46% eCu or 0.72g/t eAu) from 832.3m**
including	**117.2m @ 0.49% Cu and 0.39g/t Au (0.74% eCu or 1.16g/t eAu) from 988m**

- **Drill hole KHDDH469 terminated in porphyry mineralisation at 1399.5m**

Xanadu's Managing Director & Chief Executive Officer, Dr Andrew Stewart, said: *"We are extremely pleased with progress at the new Zaraa discovery. After our initial drill holes showed Zaraa to be a very large-scale system with high-grade potential, our program has turned to bringing Zaraa to surface.*

KHDDH469 entered consistent and strong mineralisation at a depth of 330m vertically from surface. Drill hole KHDDH469 is one more step towards defining the size, shape and grade of Zaraa. With additional shallow drilling we believe we can bring this new discovery into open pit range. The objective at Zaraa is to first define a large-scale open pit resource, then step deeper towards the higher-grade underground potential.

This blind discovery is the result of a high-quality and systematic exploration program using good geology and a scientific exploration approach. We believe there remains excellent potential for more large-scale discoveries across the Kharmagtai district and we will continue to take a systematic approach throughout 2018 to assess the four deposits that we have identified so far (Copper Hill, Stockwork Hill, White Hill and Zaraa) as well as testing the other shallow exploration targets.

Following the discovery of our fourth porphyry centre at Zaraa we believe the Kharmagtai project is approaching a near-term development opportunity. Our objective at Kharmagtai now is to work on a new mineral resource estimate for a low strip ratio, high quality standalone open-pit project and quickly demonstrate economic viability. We look forward to updating shareholders as results come to hand."

BRINGING ZARAA DISCOVERY TO SURFACE

Drilling continues to bring the new Zaraa discovery closer to open pit range. Drill hole KHDDH469 was designed to test the shallower up dip projection of Zaraa mineralisation. Sporadic porphyry mineralisation was encountered from 100m in depth (~80m vertically) with 52m @ 0.26% eCu from 100m. The main body of mineralisation was entered at 378.9m down hole (330m vertically from surface) (Figures 3, 4, 5 & 6).

KHDDH469 returned a near continuous >920m intercept of copper and gold porphyry mineralisation, broken only by a narrow band (11.8m downhole) of low grade material.

KHDDH469 returned 441.6m @ 0.35% Cu and 0.35g/t Au (0.57% eCu or 0.89g/t eAu) from 378.9m
including **333.4m @ 0.42% Cu and 0.41g/t Au (0.68% eCu or 1.06g/t eAu) from 414m**
including **105.2m @ 0.53% Cu and 0.56g/t Au (0.89% eCu or 1.39g/t eAu) from 474m**
including **92.7m @ 0.52% Cu and 0.48g/t Au (0.82% eCu or 1.29g/t eAu) from 594m**

and **480.3m @ 0.30% Cu and 0.25g/t Au (0.46%eCu or 0.72g/t eAu) from 832.3m**
including **273.3m @ 0.40% Cu and 0.32g/t Au (0.60% eCu or 0.95g/t eAu) from 840m**
including **117.2m @ 0.49% Cu and 0.39g/t Au (0.74% eCu or 1.16g/t eAu) from 988m.**

KHDDH469 has expanded the Zaraa system 220m to the northeast, 170m to the southwest and brought Zaraa 200m closer to surface. These intercepts are open at depth and the drilling to date has yet to define the edges to the Zaraa system.

Top of basement drilling has defined a 300m by 300m zone of shallow gold and copper anomalism at the basement surface which is interpreted to be the surface expression of the Zaraa discovery (Figure 7). Approximately 5000m of diamond drilling is planned to bring the known mineralisation at Zaraa to the basement surface (20m from the current land surface) and drill this shallow zone to spacings sufficient for a maiden resource estimate, focusing on large-scale open-pit potential.

There are some close similarities between the surface expression of Zaraa and the surface expression of Golden Eagle, 800m to the east-southeast. Learnings from Zaraa are being used to re-interpret the Golden Eagle data to help define potential depth extensions and drilling is currently being planned to test this system.

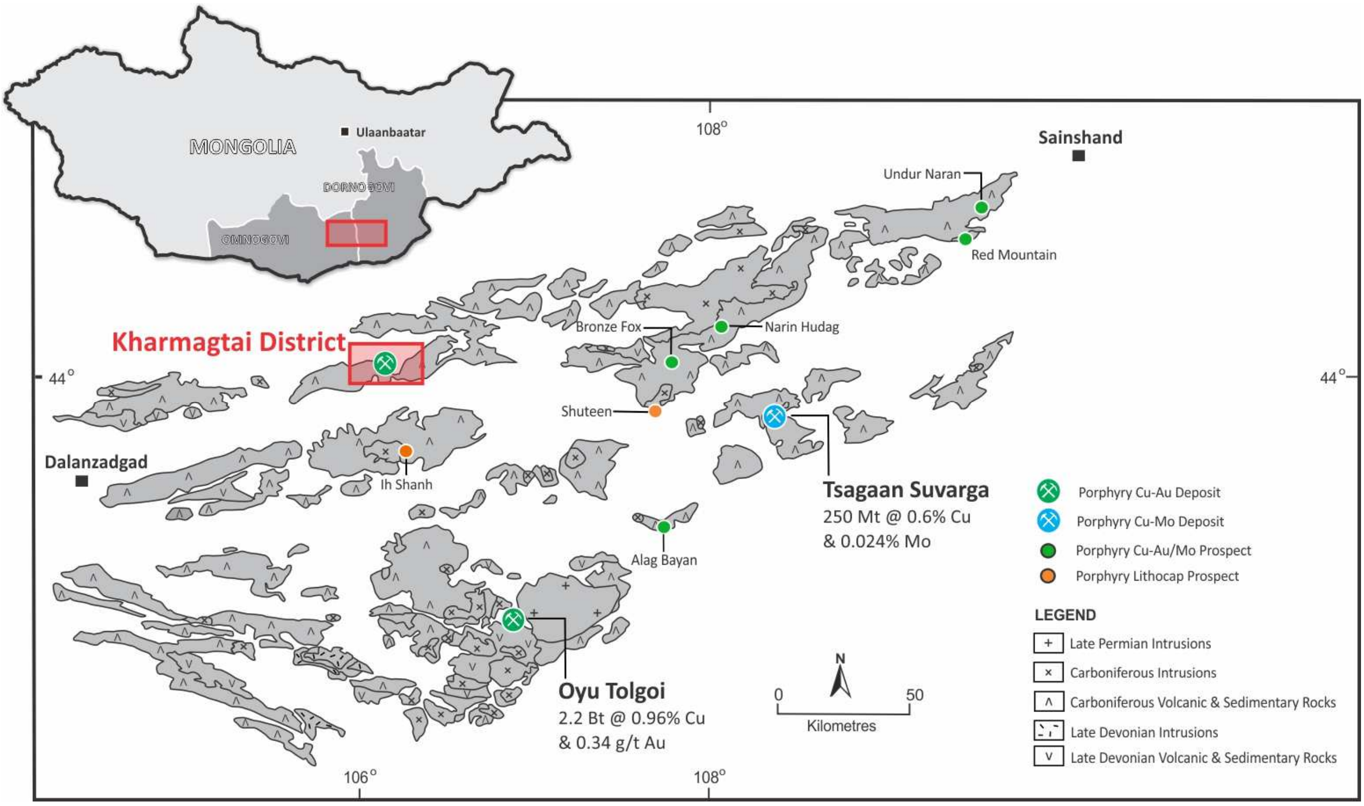

FIGURE 1: Location of the Kharmagtai Project in the South Gobi porphyry copper belt.

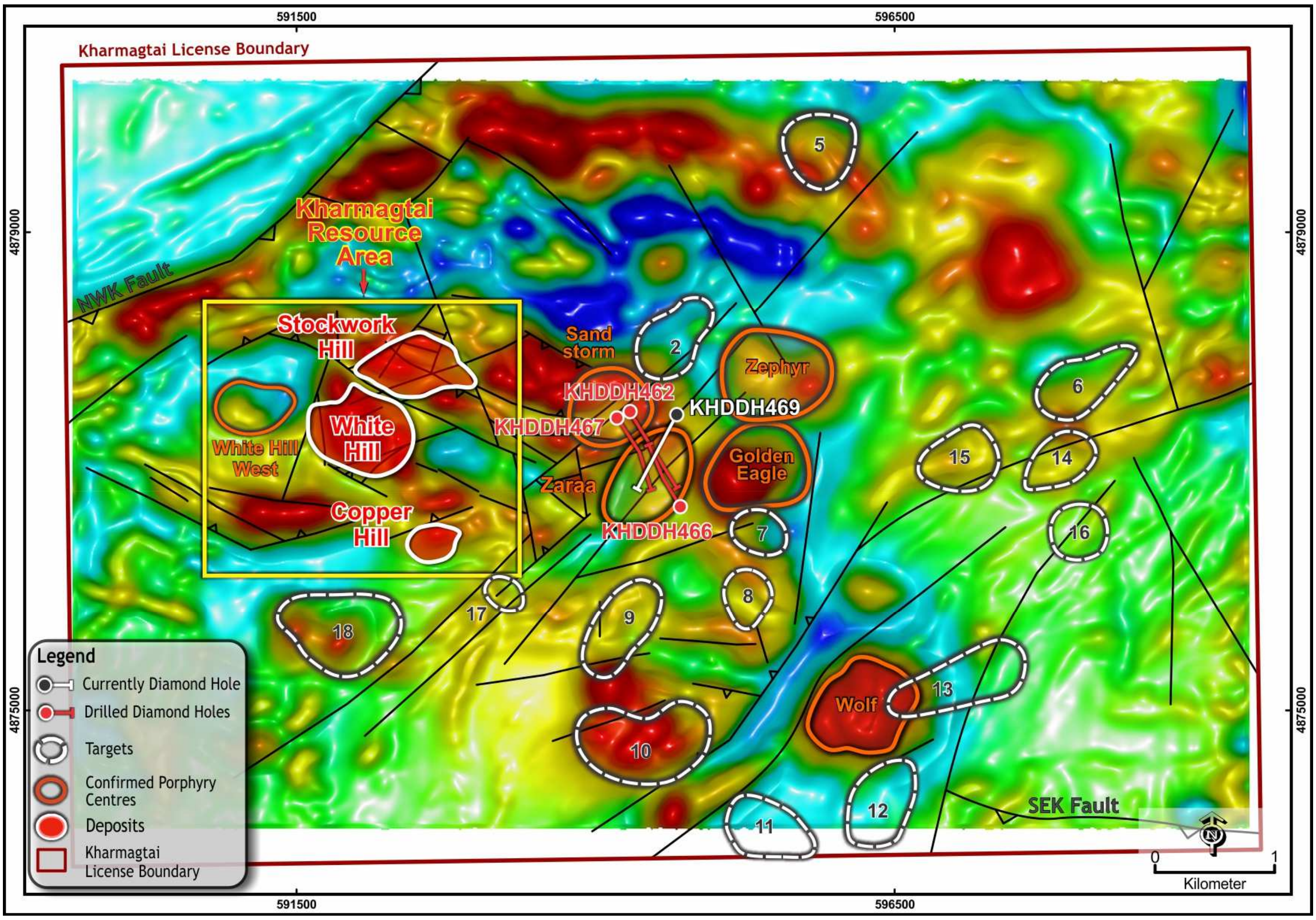

FIGURE 2: The Kharmagtai District showing ground magnetic data and location of the Kharmagtai Deposits (Stockwork Hill, White Hill, Copper Hill), porphyry centres, targets and location of Zaraa and current drilling.

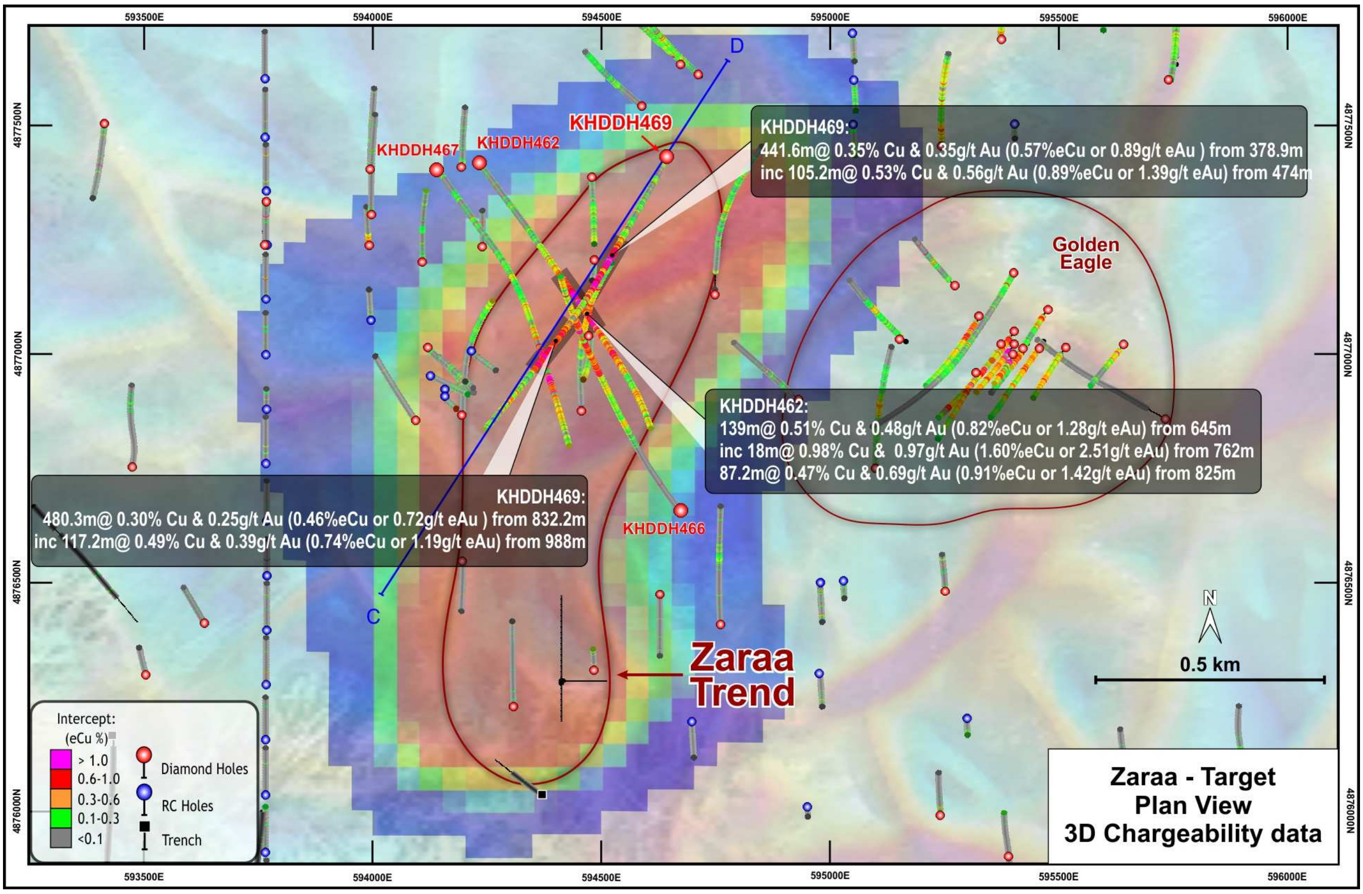

FIGURE 3: Plan view of the Zaraa discovery with 3D Induced polarisation.

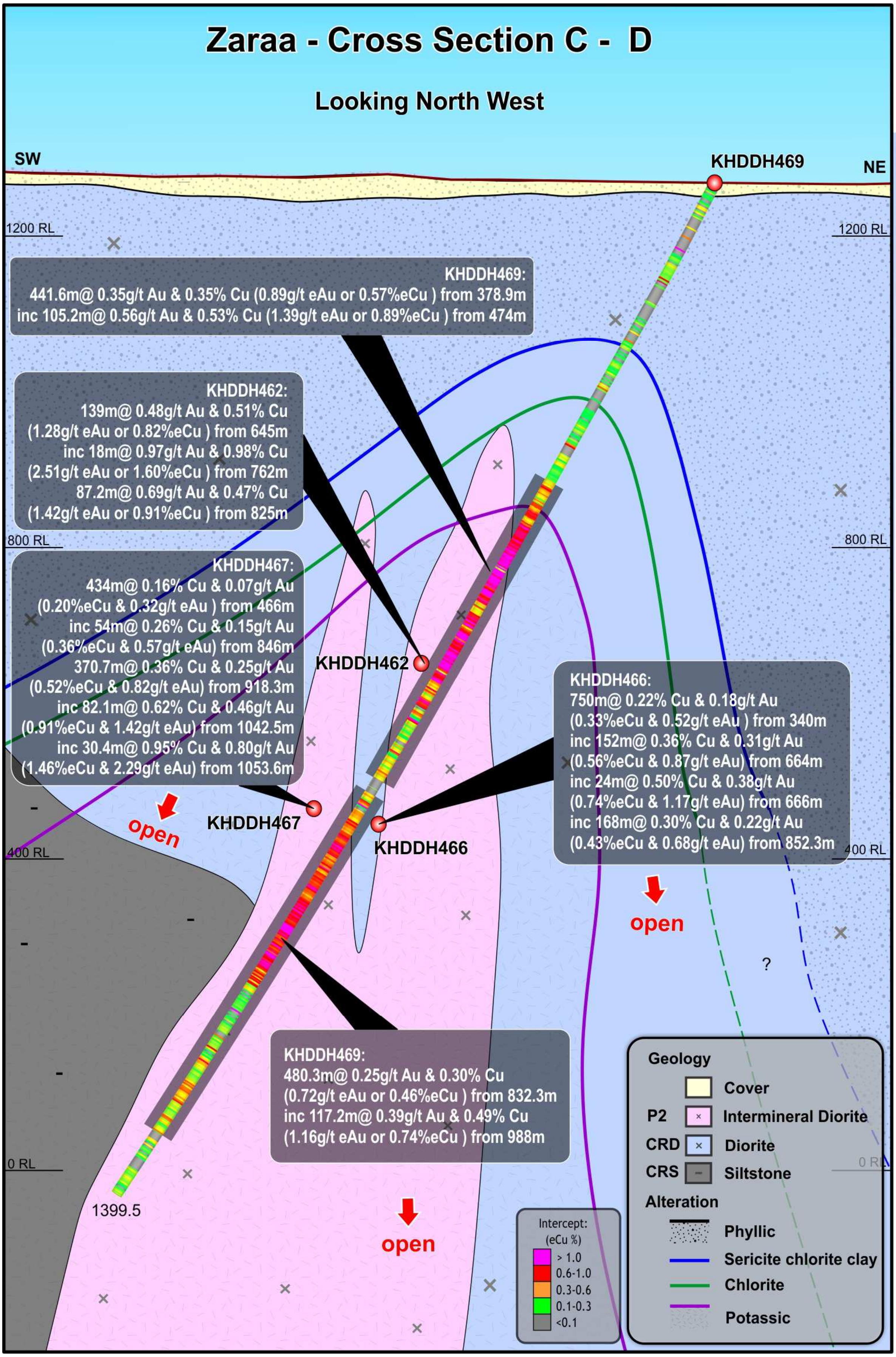

FIGURE 4: Cross section through the Zaraa Discovery showing KHDDH469 and pierce points for previous drilling.

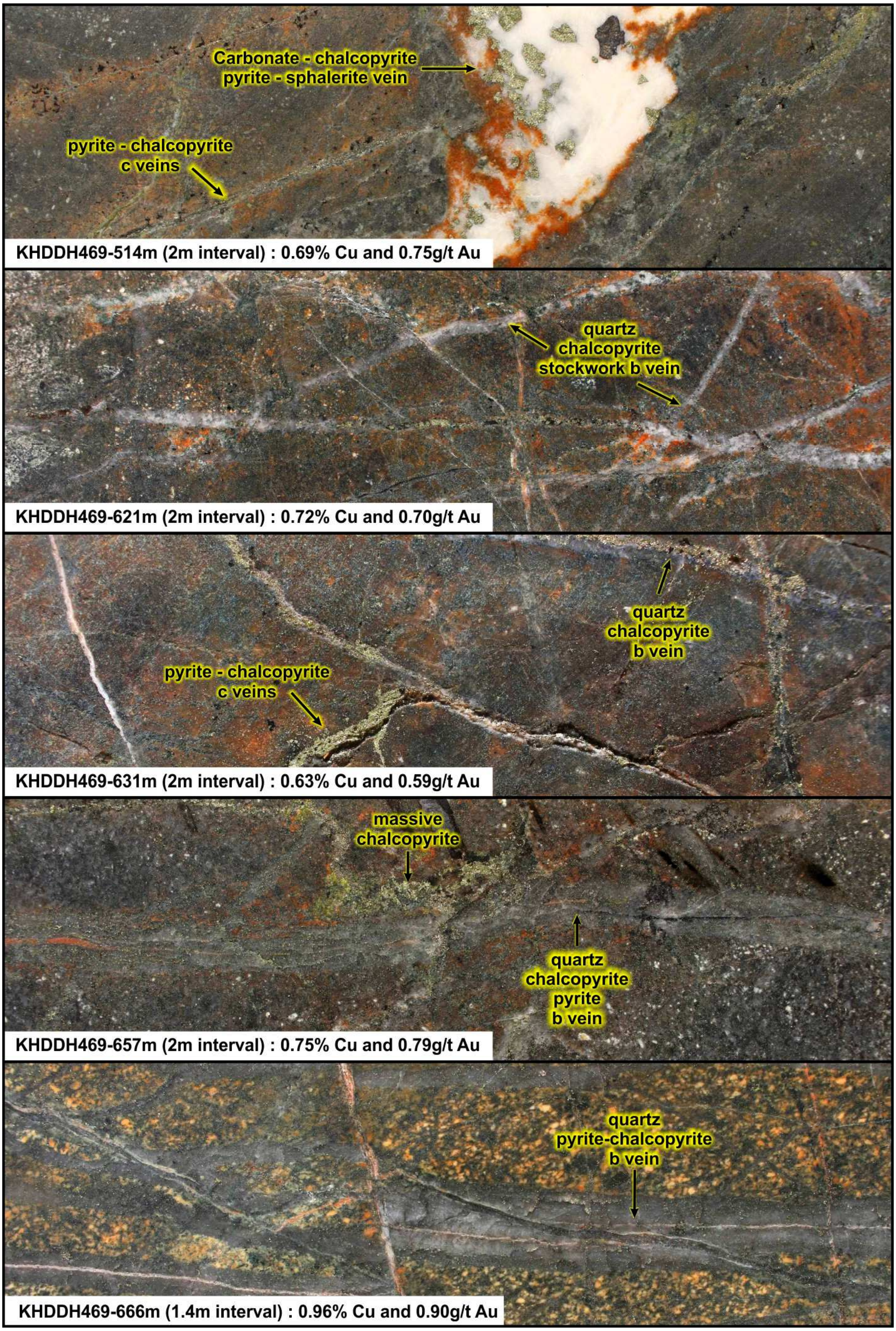

FIGURE 5: Mineralised slab images from KHDDH469. All images are halved HQ core and 6.35cm tall.

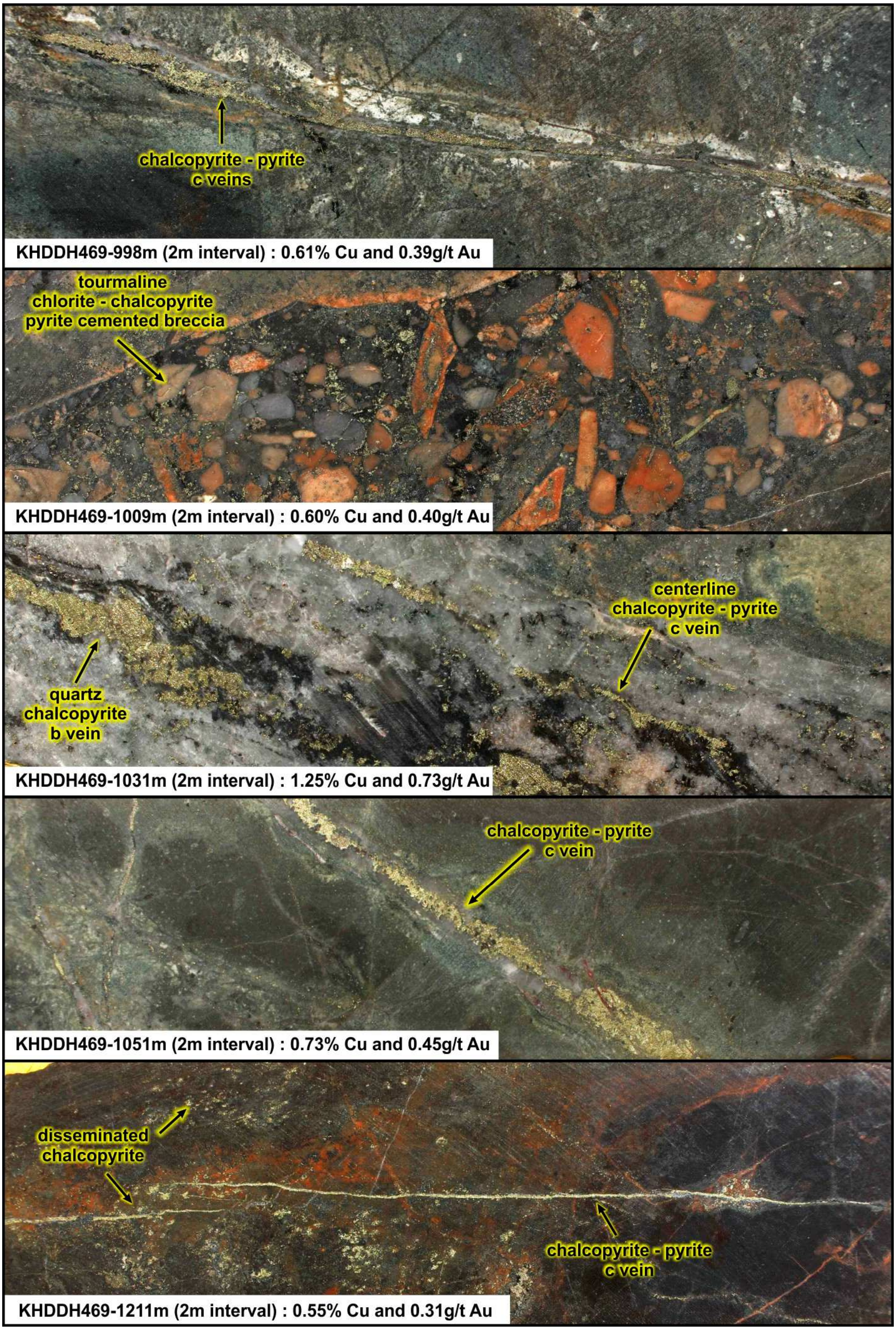

FIGURE 6: Mineralised slab images from KHDDH469. All images are halved HQ core and 6.35cm tall.

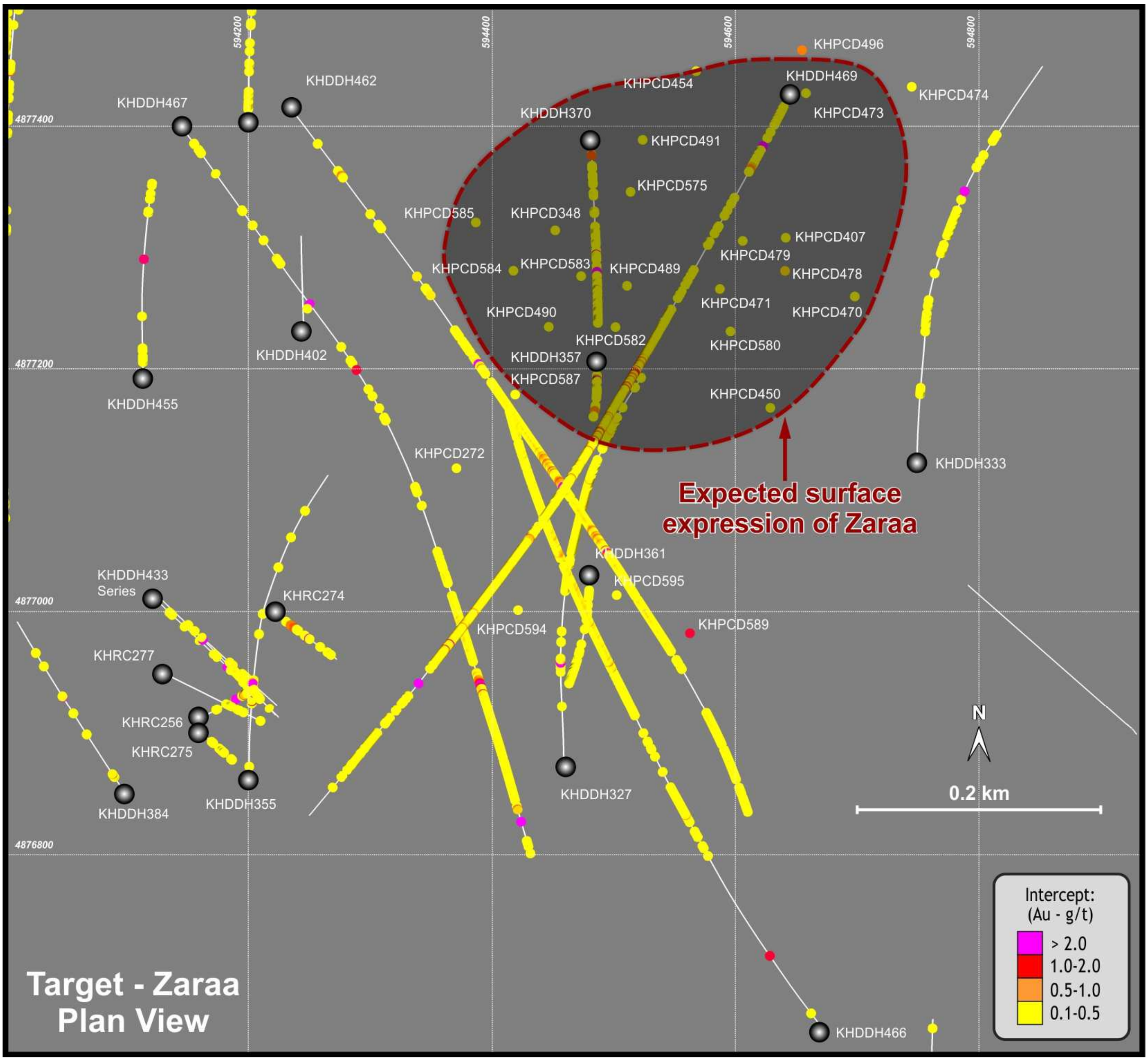

FIGURE 7: Plan view of Zaraa showing the expected surface expression. Zaraa is a blind discovery and is buried beneath ~20m of post mineral sediment.

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.

COPPER EQUIVALENT CALCULATIONS

The copper equivalent (CuEq) calculation represents the total metal value for each metal, multiplied by the conversion factor, summed and expressed in equivalent copper percentage. Grades have not been adjusted for metallurgical or refining recoveries and the copper equivalent grades are of an exploration nature only and intended for summarising grade. The copper equivalent calculation is intended as an indicative value only. The following copper equivalent conversion factors and long-term price assumptions have been adopted: Copper Equivalent Formula (CuEq) = Cu% + (Au (ppm) x 0.6378). Based on a copper price of $2.60/lb and a gold price of $1,300/oz.

Table 1: Drill hole collar location

Hole ID	Prospect	East	North	RL	Azimuth (°)	Inc (°)	Depth (m)
KHDDH469	Zaraa	594644	4877425	1268	208	-62	1399.5

Table 2: Significant intercepts

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (%)	CuEq (%)	AuEq (g/t)
KHDDH469	Zaraa	22	59.5	37.5	0.17	0.03	0.14	0.22
and		100	152	52	0.24	0.11	0.26	0.40
including		140	146	6	0.51	0.15	0.47	0.73
and		194	292	98	0.09	0.09	0.15	0.23
and		318	368	50	0.10	0.11	0.17	0.27
and		378.9	820.5	441.6	0.35	0.35	0.57	0.89
including		414	747.4	333.4	0.41	0.42	0.68	1.06
including		456	462	6	0.44	0.37	0.65	1.02
including		474	579.2	105.2	0.56	0.53	0.89	1.39
including		508	569	61	0.63	0.59	0.99	1.55
including		594	686.7	92.7	0.48	0.52	0.82	1.29
including		603.7	610.9	7.2	0.45	0.63	0.92	1.44
including		620	632	12	0.55	0.55	0.91	1.42
including		648	668	20	0.66	0.65	1.07	1.68
including		712	722	10	0.46	0.41	0.70	1.10
including		758	766	8	0.12	0.15	0.22	0.35
including		774	820.5	46.5	0.19	0.19	0.31	0.49
and		832.3	1312.6	480.3	0.25	0.30	0.46	0.72
including		840	1113.3	273.3	0.32	0.40	0.60	0.95
including		878	884	6	0.35	0.37	0.59	0.92
including		898	926.2	28.2	0.36	0.43	0.66	1.03

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (%)	CuEq (%)	AuEq (g/t)
including		938	945	7	0.30	0.45	0.64	1.00
including		968	974	6	0.36	0.55	0.78	1.22
including		988	1105.2	117.2	0.39	0.49	0.74	1.16
including		1022	1032	10	0.58	0.81	1.19	1.86
including		1209	1222.8	13.8	0.16	0.29	0.39	0.61
including		1239	1270	31	0.21	0.27	0.41	0.64
including		1290	1300	10	0.19	0.25	0.37	0.58
and		1321.8	1349.5	27.7	0.08	0.13	0.17	0.27
and		1363.3	1399.5	36.2	0.07	0.15	0.20	0.31

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APPENDIX 1: KHARMAGTAI TABLE 1 (JORC 2012)

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 18 September 2017.

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

Criteria	JORC Code (Section 1) Explanation	Commentary
Sampling techniques	• Nature and quality of sampling and assaying. • Measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report.	• Representative 2 metre samples were taken from ½ HQ diamond core. • Only assay result results from recognised, independent assay laboratories were used after QC was verified.
Drilling techniques	• Drill type and details.	• DDH drilling has been the primary drilling method. Some RC (reverse circulation) is conducted. RC holes are denoted by the KHRC prefix. Diamond Drill holes are denoted by the KHDDH prefix.
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• DDH core recoveries have been very good, averaging between 95% and 99% for all of the deposits. In localised areas of faulting and/or fracturing the recoveries decrease; however this is a very small percentage of the overall mineralised zones. • Recovery measurements were collected during all DDH and RC programs. The methodology used for measuring recovery is standard industry practice. • Analysis of recovery results vs. grade indicates no significant trends. Indicating bias of grades due to diminished recovery and / or wetness of samples.
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.	• Drill and trench samples are logged for lithology, mineralisation and alteration and geotechnical aspects using a standardised logging system, including the recording of visually estimated volume percentages of major minerals. • Drill core was photographed after being logged by a geologist. • The entire interval drilled and trenched has been logged by a geologist.
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.	• DDH Core is cut in half with a diamond saw, following the line marked by the geologist. The rock saw is regularly flushed with fresh water. • Sample intervals are generally a constant

Criteria	JORC Code (Section 1) Explanation	Commentary
	• For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximize 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.	2m interval down-hole in length unless subdivided at geological contacts. • 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 90% passing 3.54 mm, split to 1kg, pulverised to 90% - 95% passing 200 mesh (75 microns) and split to 150g. • Certified reference materials (CRMs), blanks and pulp duplicate were randomly inserted to manage the quality of data. • Sample sizes are well in excess of standard industry requirements.
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie 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 submitted to ALS Mongolia for the package ME-ICP61 using a four acid digest. Where copper is over-range (>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 was provided by introduction of known certified standards, blanks and duplicate samples on a routine basis. • 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.

Criteria	JORC Code (Section 1) Explanation	Commentary
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 QC is checked prior to loading into the Geobank data base. • The data is managed by XAM geologists. • The database and geological interpretation is collectively managed by XAM.
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. • All diamond drill holes have been down hole surveyed to collect the azimuth and inclination at specific depths. Two principal types of survey method have been used over the duration of the drilling programs including Eastman Kodak and Flexit. • UTM WGS84 48N grid. • The DTM is based on 1m contours with an accuracy of ±0.01m.
Data spacing and distribution	• Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied.	• Holes spacings range from 50m spacings within the core of mineralization to +500m spacings for exploration drilling. Hole spacings can be determined using the sections and drill plans provided • Holes range from vertical to an inclination of -60 degrees depending on the attitude of the target and the drilling method. • The data spacing and distribution is sufficient to establish anomalism and targeting for both porphyry, tourmaline breccia and epithermal target types.
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• Drilling is conducted in a predominantly regular grid to allow unbiased interpretation and targeting.
Sample security	• The measures taken to ensure sample security.	• Samples are dispatched from site through via company employees and secure company vehicles to the Laboratories. • Samples are signed for at the Laboratory with confirmation of receipt emailed through. • Samples are then stored at the lab and returned to a locked storage site.
Audits or	• The results of any audits or reviews of	• Internal audits of sampling techniques and

Criteria	JORC Code (Section 1) Explanation	Commentary
reviews	sampling techniques and data	data management on a regular basis, to ensure industry best practice is employed at all times.

1.2 JORC TABLE 1 - SECTION 2 - REPORTING OF EXPLORATION RESULTS

(Criteria in this section apply to all succeeding sections).

Criteria	JORC Code (Section 2) 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 license to operate in the area.	• The Project comprises 1 Mining Licence (MV 17387A). • 100% owned by Oyut Ulaan LLC. • Xanadu and its joint venture partner, Mongol Metals can earn a 90% interest in the Kharmagtai porphyry copper-gold project. The remaining 10% is owned by Quincunx Ltd, which in turn is owned by an incorporated joint venture between Kerry Holdings Ltd. and MCS Holding LLC. • 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.	• Previous exploration was conducted by Quincunx Ltd, Ivanhoe Mines Ltd and Turquoise Hill Resources Ltd including extensive drilling, surface geochemistry, geophysics, mapping.
Geology	• Deposit type, geological setting and style of mineralisation.	• The mineralisation is characterised as porphyry copper-gold type. • Porphyry copper-gold deposits are formed 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 deposits at Kharmagtai are atypical in that they are associated with intermediate intrusions of diorite to quartz diorite composition, however the deposits are in terms of contained gold significant, and similar gold-rich porphyry deposits.
Drill hole	• A summary of all information material to the	• Diamond drill holes are the principal source

Criteria	JORC Code (Section 2) Explanation	Commentary
Information	understanding of the exploration results including a tabulation of the following information for all Material drill holes: • easting and northing of the drill hole collar. • elevation or RL Reduced Level – elevation above sea level in metres) of the drill hole collar. • 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.	of geological and grade data for the Project. • See figures in main report.
Data Aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg 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 aggregation should be stated and 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.	• A nominal cut-off of 0.1% eCu is used in copper dominant systems for identification of potentially significant intercepts for reporting purposes. Higher grade cut-offs are 0.3%, 0.6% and 1% eCu. • A nominal cut-off of 0.1g/t eAu is used in gold dominant systems like Altan Burged for identification of potentially significant intercepts for reporting purposes. Higher grade cut-offs are 0.3g/t, 0.6g/t and 1g/t eAu. • Maximum contiguous dilution within each intercept is 9m for 0.1%, 0.3%, 0.6% and 1% eCu. • Most of the reported intercepts are shown in sufficient detail, including maxima and subintervals, to allow the reader to make an assessment of the balance of high and low grades in the intercept. • Informing samples have been composited to two metre lengths honouring the geological domains and adjusted where necessary to ensure that no residual sample lengths have been excluded (best fit). • Metal equivalents used the following formula: • CuEq = Cu% + (Au g/t x 0.6378) • AuEq = Au g/t + (Cu% / 0.6378) • Formula is based on a $2.60/lb copper price and a $1,300/oz gold price. A gold recovery factor of 78.72% was used.
Relationship between	• These relationships are particularly important in the reporting of Exploration	• Mineralised structures are variable in orientation, and therefore drill orientations

Criteria	JORC Code (Section 2) Explanation	Commentary
mineralisation on widths and intercept lengths	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 (eg 'down hole length, true width not known').	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.
Further work	• The nature and scale of planned further work (eg 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 sensitive.	• 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 on going.

1.3 JORC TABLE 1 – SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code (Section 3) Explanation	Commentary
Database integrity	• Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. • Data validation procedures used.	• The database is a Geobank data base system. • Data is logged directly into an Excel spread sheet logging system with drop down field lists. • Validation checks are written into the importing program ensures all data is of high quality. • Digital assay data is obtained from the Laboratory, QC checked and imported • Geobank exported to Access, and connected directly to the GemcomSurpac Software. • Data was validated prior to resource estimation by the reporting of basic statistics for each of the grade fields, including examination of maximum values, and visual checks of drill traces and grades on sections and plans.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• Andrew Vigar of Mining Associates visited site from 24 and 25 October 2014. • The site visit included a field review of the exploration area, an inspection of core, sample cutting and logging procedures and discussions of geology and mineralisation with exploration geologists.
Geological interpretation	• Confidence in (or conversely, the uncertainty of the geological interpretation of the mineral deposit. • Nature of the data used and of any assumptions made. • The effect, if any, of alternative interpretations on Mineral Resource estimation. • The use of geology in guiding and controlling Mineral Resource estimation. • The factors affecting continuity both of grade and geology.	• Mineralisation resulted in the formation of comprises quartz-chalcopyrite-pyrite-magnetite stockwork veins and minor breccias. • The principle ore minerals of economic interest are chalcopyrite, bornite and gold, which occur primarily as infill within these veins. Gold is intergrown with chalcopyrite and bornite. • The ore mineralised zones at Stockwork Hill, White HIll and Copper Hill are associated with a core of quartz veins that were intensely developed in and the quartz diorite intrusive stocks and/or dykes rocks. These vein arrays can be described as stockwork, but the veins have strong developed preferred orientations. • Sulphide mineralisation is zoned from a bornite-rich core that zone outwards to

Criteria	JORC Code (Section 3) Explanation	Commentary
		chalcopyrite-rich and then outer pyritic haloes, with gold closely associated with bornite. • Drilling indicates that the supergene profile has been oxidised to depths up to 60 metres below the surface. The oxide zone comprises fracture controlled copper and iron oxides; however there is no obvious depletion or enrichment of gold in the oxide zone.
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	• Stockwork Hill comprises two main mineralised zones, northern and southern stockwork zones (SH-N and SH-S) which are approximately 100 metres apart and hosted in diorite and quartz diorite porphyries. • The SH-S is at least 550 metres long, 600 metres deep and contains strong quartz-chalcopyrite-pyrite stockwork veining and associated high grade copper-gold mineralisation. The stockwork zone widens eastward from a 20 to 70 metres wide high-grade zone in the western and central sections to a 200 metres wide medium-grade zone in the eastern most sections. Mineralisation remains open at depth and along strike to the east. • The SH-N consists of a broad halo of quartz that is 250 metres long, 150 metres wide long and at least 350 metres deep. • WH consists of a broad halo of quartz veins that is 850 metres long, 550 metres wide long and at least 500 metres deep, and forms a pipe like geometry. • CH forms a sub vertical body of stockwork approximately 350 × 100 metres by at least 200 metres and plunges to the southeast.
Estimation and modelling techniques	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. • The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	• The estimate Estimation Performed using Ordinary Kriging. • Variograms are reasonable along strike. • Minimum & Maximum Informing samples is 5 and 20 (1st pass), Second pass is 3 and 20. • Copper and Gold Interpreted separately on NS sections and estimated as separate domains. • Halo mineralisation defined as 0.12% Cu and 0.12g/t Au Grade. • The mineralised domains were manually digitised on cross sections defining

Criteria	JORC Code (Section 3) Explanation	Commentary
	• The assumptions made regarding recovery of by-products. • Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). • In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. • Any assumptions behind modelling of selective mining units. • Any assumptions about correlation between variables. • Description of how the geological interpretation was used to control the resource estimates. • Discussion of basis for using or not using grade cutting or capping. • The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	mineralisation. Three dimensional grade shells (wireframes) for each of the metals to be estimated were created from the sectional interpretation. Construction of the grade shells took into account prominent lithological and structural features. For copper, grade shells were constructed for each deposit at a cut-off of 0.12% and 0.3% Cu. For gold, wireframes were constructed at a threshold of 0.12g/t and 0.3 g/t. These grade shells took into account known gross geological controls in addition to broadly adhering to the above mentioned thresholds. • Cut off grades applied are copper-equivalent (CuEq) cut off values of 0.3% for appropriate for a large bulk mining open pit and 0.5% for bulk block caving underground. • A set of plans and cross-sections that displayed colour-coded drill holes were plotted and inspected to ensure the proper assignment of domains to drill holes. • The faulting interpreted to have had considerable movement, for this reason, the fault surface were used to define two separate structural domains for grade estimation. • Six metre down-hole composites were chosen for statistical analysis and grade estimation of Cu and Au. Compositing was carried out downhole within the defined mineralisation halos. Composite files for individual domains were created by selecting those samples within domain wireframes, using a fix length and 50% minimum composite length. • A total of 4,428 measurements for specific gravity are recorded in the database, all of which were determined by the water immersion method. The average density of all samples is 2.74 t/m3. In detail there are some differences in density between different rock types, but since the model does not include geological domains a single pass ID2 interpolation was applied. • Primary grade interpolation for the two metals was by ordinary kriging of capped 6m composites. A two-pass search approach was used, whereby a cell failing

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		to receive a grade estimate in a previous pass would be resubmitted in a subsequent and larger search pass. • The Mineral Resource estimate meets the requirements of JORC 2012 and has been reported considering geological characteristics, grade and quantity, prospects for eventual economic extraction and location and extents. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories using relevant copper-equivalent cut-off values; • CuEq = Cu% x(Aug/t x 0.6378 • Formula is based on a $2.60/lb copper price and a $1,300/oz gold price. A gold recovery factor of 78.72% was used.
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• All tonnages are reported on a dry basis.
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• Cut off grades applied are copper-equivalent (CuEq) cut off values of 0.3% for possible open pit and 0.5% for underground.
Mining factors or assumptions	• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	• No mining factors have been applied to the in situ grade estimates for mining dilution or loss as a result of the grade control or mining process. • The deposit is amenable to large scale bulk mining. • The Mineral resource is reported above an optimised pit shell. (Lerch Grossman algorithm), mineralisation below the pit shell is reported at a higher cut-off to reflect the increased costs associated with block cave underground mining
Metallurgical factors or assumptions	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case,	• No metallurgical factors have been applied to the in situ grade estimates.

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	this should be reported with an explanation of the basis of the metallurgical assumptions made.	
Environmental factors or assumptions	• Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	• An environmental baseline study was completed in 2003 by Eco Trade Co. Ltd. of Mongolia in cooperation with Sustainability Pty Ltd of Australia. The baseline study report was produced to meet the requirements for screening under the Mongolian Environmental Impact Assessment (EIA) Procedures administered by the Mongolian Ministry for Nature and Environment (MNE).
Bulk density	• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. • The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. • Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	• A total of 4,428 measurements for specific gravity are recorded in the database, all of which were determined by the water immersion method. • The average density of all samples is approximately 2.74 t/m3. In detail there are some differences in density between different rock types, but since the model does not include geological domains a single estimation pass (ID2) was applied to a density attribute. • There is no material impact on global tonnages, but it should be noted that density is a function of both lithology and alteration (where intense magnetite/sulphide is present).
Classification	• The basis for the classification of the Mineral Resources into varying confidence categories. • Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). • Whether the result appropriately reflects the Competent Person's view of the deposit.	• The mineral resource classification protocols, for drilling and sampling, sample preparation and analysis, geological logging, database construction, interpolation, and estimation parameters are described in the Main Report have been used to classify the 2015 resource. • The Mineral Resource statement relates to global estimates of in situ tonnes and grade • The Mineral Resource estimate has been classified in accordance with the JORC Code, 2012 Edition using a qualitative approach. The classifications reflect the competent person's view of the Kharmagtai

Criteria	JORC Code (Section 3) Explanation	Commentary
		Copper Gold Project.
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	• XAM's internal review and audit of the Mineral Resource Estimate consisted of data analysis and geological interpretation of individual cross-sections, comparing drill-hole data with the resource estimate block model. • Good correlation of geological and grade boundaries were observed • 2013 - Mining Associates Ltd. was engaged to conduct an Independent Technical Report to review drilling, sampling techniques, QAQC and previous resource estimates. Methods were found to conform to international best practice.
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• An approach to the resource classification was used which combined both confidence in geological continuity (domain wireframes) and statistical analysis. The level of accuracy and risk is therefore reflected in the allocation of the measured, indicated and inferred resource categories. • Resource categories were constrained by geological understanding, data density and quality, and estimation parameters. It is expected that further work will extend this considerably. • Resources estimates have been made on a global basis and relates to in situ grades. • Confidence in the Indicated resource is sufficient to allow application of Modifying Factors within a technical and economic study. The confidence in Inferred Mineral Resources is not sufficient to allow the results of the application of technical and economic parameters. • The deposits are not currently being mined. • There is surface evidence of historic artisanal workings. • No production data is available.

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.