

# QUARTERLY ACTIVITIES REPORT


ACTIVITIES FOR THE FOURTH QUARTER ENDING 30 JUNE 2014



Kharmagtai Camp, Omnogovi Province, Mongolia


## HIGHLIGHTS

- Initial drilling at Kharmagtai discovers extensions to high-grade porphyry mineralisation.
- KHDDH343 extends mineralised envelope 100m to the east of Altan Tolgoi:
  - 550m @ 0.39% Cu & 0.39g/t Au (0.64% CuEq) from 58m; including
  - 242.70m @ 0.55% Cu & 0.75g/t Au (1.02% CuEq) from 358.30m; including
  - 132m @ 0.65% Cu & 0.89g/t Au (1.21% CuEq) from 468m.
- KHDDH338 at the western end of Altan Tolgoi intersects:
  - 160m @ 0.47% Cu & 0.85 g/t Au (1.00% CuEq) from 110m.
- KHDDH340 intersects higher grade mineralisation at Tsagaan Sudal including:
  - 42m @ 0.56% Cu & 0.72g/t Au (1.01% CuEq) from 202m.
- These results significantly extend and confirm the continuity of shallow high-grade porphyry copper-gold mineralisation at Kharmagtai.
- Tourmaline breccia hosted mineralisation in KHDDH343 and KHDDH344 remains open at depth and along strike indicating potential bulk-tonnage copper-gold mineralisation at economic grades.
- \$4.429 million of cash on hand at 30 June following successful fund raising.

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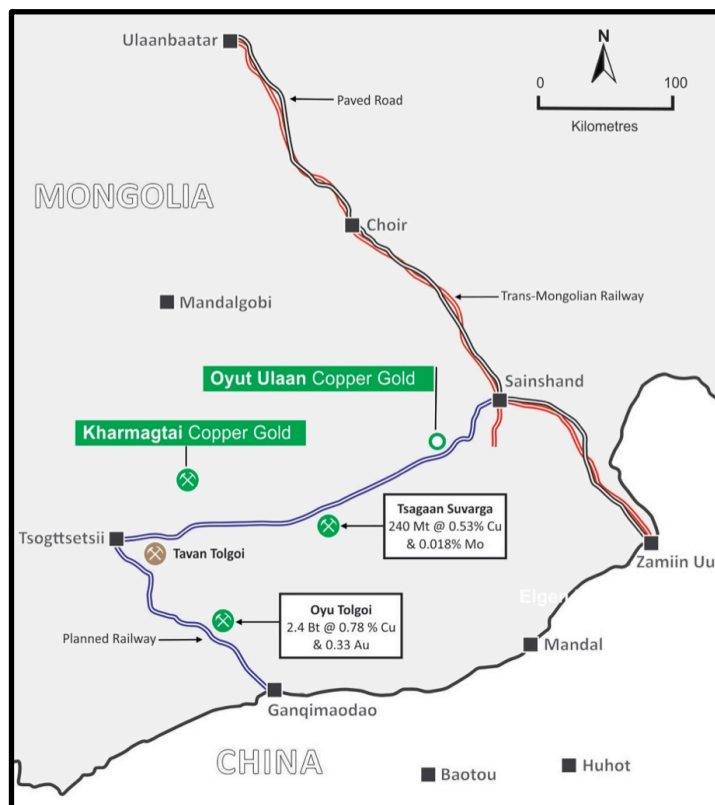
 **ASX**  
XAM

Xanadu Mines Ltd (ASX: XAM) is an exploration company that has assembled a significant exploration portfolio across Mongolia's porphyry belts. These belts are part of the larger Central Asian Orogenic Belt – one of the last great exploration frontiers known to host large copper porphyry deposits – and Mongolia is emerging as a globally significant copper province.

Xanadu Mines Ltd (ASX: XAM – “Xanadu”) is pleased to provide shareholders with an update of exploration activities for the three months to 30 June 2014. A number of significant milestones were achieved this quarter with the completion of the Kharmagtai acquisition and divestment of non-core coal assets. Initial diamond drilling at our flagship Kharmagtai project has significantly extended and confirmed the continuity of shallow, high-grade porphyry copper-gold mineralisation. The discovery of a new zone of tourmaline breccia hosted copper-gold mineralisation at Kharmagtai is encouraging and is believed to represent part of a much larger east trending tourmaline breccia system and the total extent of tourmaline breccia may exceed 3.5 kilometres.

### **KHARMAGTAI COMPLETION**

Xanadu shareholders approved the Kharmagtai transaction on 16 May 2014 and shortly thereafter Xanadu and its joint venture company, Mongol Metals LLC (“Mongol Metals”), completed the acquisition of a 90% interest in the Kharmagtai project from Turquoise Hill Resources Ltd. Xanadu has the right to earn an 85% interest in the Kharmagtai project, equivalent to a 76.5% effective interest, by funding acquisition and exploration costs. As at 30 June 2014, Xanadu had funded approximately 25% of the capital employed in Mongol Metals by equity and shareholder advances.

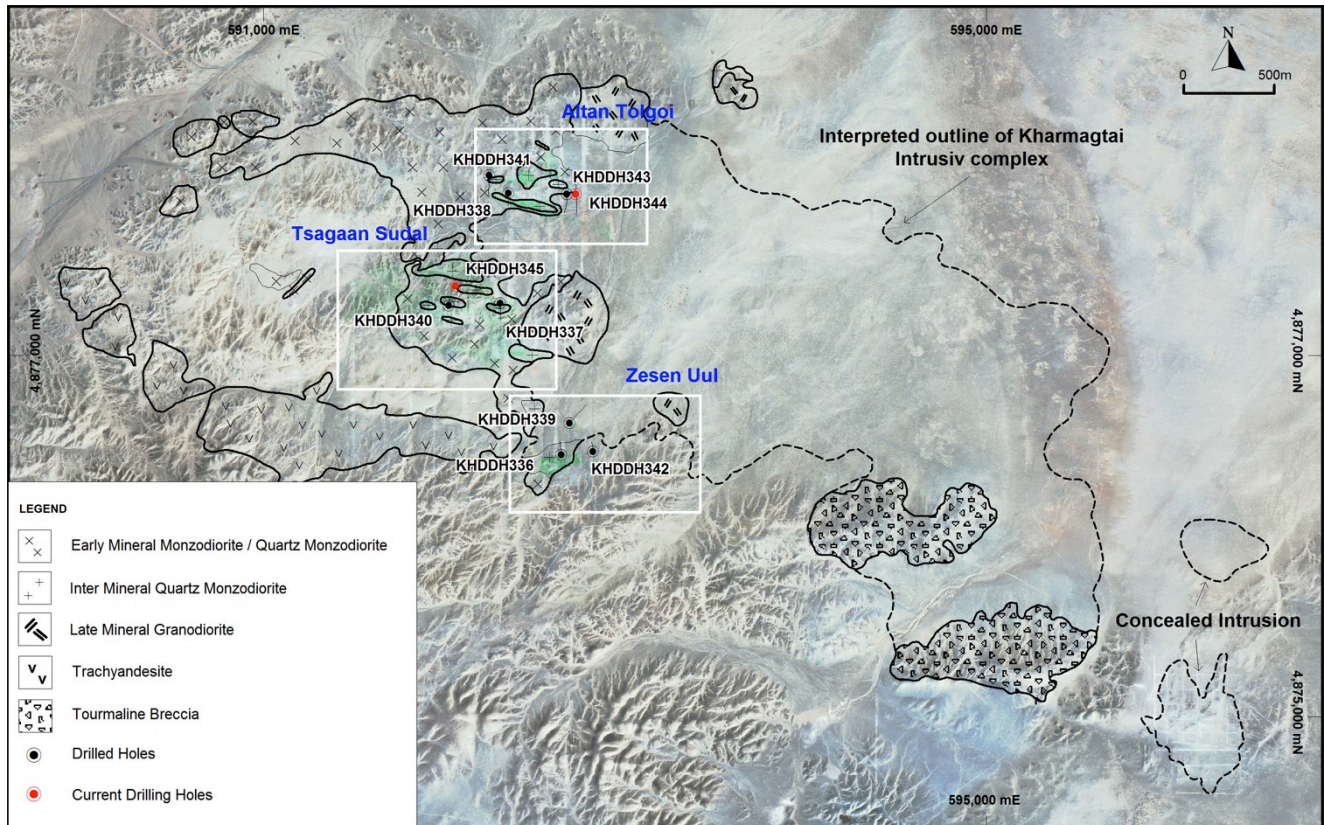


**Figure 1: Kharmagtai Location Map**

The Kharmagtai copper-gold porphyry district is located within the Omnogovi Province of southern Mongolia, approximately 420km south-southwest of Ulaanbaatar (Figure 1). The project is strategically located 120km north of the giant Oyu Tolgoi porphyry copper-gold project and 60km north of the Tavan Tolgoi coal deposit. The Kharmagtai copper-gold porphyry district consists of a cluster of Carboniferous gold-rich porphyry copper deposits which occur within the central part of the mining licence (17387A) which covers 66.52km<sup>2</sup>.

## KHARMAGTAI EXPLORATION ACTIVITIES

Diamond drilling has commenced at the Kharmagtai project utilising two diamond drill rigs. A total of ten drill holes have been completed for approximately 3,730.30m. Tables 2 and 3 list the drill hole details and significant results to date.



**Figure 2: Kharmagtai intrusive Complex & Recent Diamond Drill Collars**

The current diamond drill program is designed primarily to test potential extensions to high-grade mineralisation and identify new areas of mineralisation. Mineralisation remains open at Altan Tolgoi and Tsagaan Sudal while Zesen Uul may represent an off-faulted block from a larger system. Therefore the most effective exploration method to add tonnage and increase the grade is to drill in the shadows of the current mineralised zones, this reflects that the ore-forming processes tend to occur as multiple events and produce multiple deposits in favourable geologic settings.

## ZESEN UUL

Diamond drill hole KHDDH336 was drilled to test the inferred northeast extension of Zesen Uul (Figure 2). The hole was drilled to a depth of 158.60m and reached its target depth. The hole intersected a shallow zone 55.10m wide of high-density stockwork mineralisation which graded 0.46% copper and 0.23g/t gold (0.60% CuEq) from a depth of 2.90m. Mineralisation in KHDDH336 was centered on series of early-mineral monzodiorite and inter-mineral quartz monzodiorite porphyry dykes. KHDDH336 was a 50m step-out from previous drilling and has expanded the mineralisation envelope.



Diamond drill hole KHDDH342 was a 170m step east of KHDDH336, and intersected 32m grading 0.47% copper and 0.22g/t gold from 28m depth, which indicates the Zesen Uul mineralisation remains open to the east. This is a significant extension to the current shallow mineralisation envelope. Weakly malachite stained outcrops and rare quartz veins indicate that Zesen Uul may continue for 300m along strike to the east of current drilling. Recently discovered partially exposed malachite stained stockwork outcrops located approximately 800m southeast of Zesen Uul indicate lateral extensions to high-grade mineralisation at Zesen Uul may also occur. This 2km by 600m zone of weak, patchy, anomalous gold is associated with silicified structures, tourmaline breccias, quartz veins and quartz monzodiorite dykes. Rock-chip assays are typically 0.1 to 0.3 g/t, locally from 0.6 to 11.80 g/t gold. The mineralisation is centered over a concealed chargeability anomaly.

Diamond drill hole KHDDH339 was drilled to test a buried magnetic anomaly northeast of Zesen Uul. The hole was drilled to a depth of 250.80m and reached its target depth. The hole intersected porphyritic monzodiorite. Mineralisation was patchy with finely disseminated chalcopyrite that is associated with fine magnetite-pyrite-molybdenite stringers. Although the results were not significant, the hole intersected 162m grading 119ppm Mo from 76m. This requires follow-up drilling.

## TSAGAAN SUDAL

Tsagaan Sudal is currently defined as a large, low-grade porphyry system with stockwork mineralisation defined over at least an 850m by 550m area. Unlike at the Altan Tolgoi and Zesen Uul prospects, previous exploration drilling at Tsagaan Sudal has been relatively sparse despite the substantial size of the system. A total of two high priority diamond drill holes have been completed at Tsagaan Sudal.

Diamond drill hole KHDDH337 which was drilled at the eastern end of Tsagaan Sudal, intersected 324m graded at 0.39% CuEq including 56m graded at 0.5% CuEq (from 10m) and 18m graded at 0.5% CuEq (from 100m). Diamond drill hole KHDDH340 targeted the high-grade core approximately 280m to the west of KHDDH337 and intersected 186 metres grading 0.37% Cu and 0.53g/t Au from 164 metres. The geology, strength of alteration and style of mineralisation suggest that mineralisation will extend to the west and at depth.

## ALTAN TOLGOI

Diamond drill hole KHDDH338 tested the extent of mineralisation at depth along the western half of the Altan Tolgoi prospect. The hole was drilled to a depth of 329.30m and reached its target depth. The hole intersected several intervals of high-density stockwork veining (Table 3). This is thought to represent the upper part of the faulted-off southern margin of the high-grade (bornite core) Southern Stockwork which has been truncated by an east-west trending dextral shear zone. The southern flank of this shear zone has only been tested at shallow levels (200m) on the western half of the prospect where the off-faulted high-grade porphyry mineralisation is interpreted to lie at depth.

Diamond drill hole KHDDH341 was drilled to test the inferred western extension of Altan Tolgoi. The hole intersected a shallow zone of mineralisation to a depth of 74m. Between 74m and 112m the hole passed through the main fault zone (post mineral trachyandesite) which included blocks of mineralised quartz monzodiorite. The geology at the western end of Altan Tolgoi is structurally complex and it appears the mineralisation narrows.

Diamond drill hole KHDDH343 intersected a 550m zone of porphyry and tourmaline breccia hosted copper-gold mineralisation and remains open to the east and at depth. The mineralisation is predominantly hosted in tourmaline breccia and minor zones of relic quartz-chalcopyrite stockwork mineralisation. KHDDH343 is a 100m step out from historical drilling and tested a buried IP anomaly along strike from Altan Tolgoi.

Diamond drill hole KHDDH344, a further 50m to the east of KHDDH343, has intersected visible copper sulphides from 28.1m to 114.0m and from 223.0m to the end of hole at 659.70m. Results from KHDDH344 are expected over the coming weeks.

### **OYUT ULAAN PROJECT**

A multi-disciplinary exploration program, comprising trenching and detailed geophysics (pole-dipole IP) has been designed primarily to test potential extensions to high-grade porphyry mineralisation and identify new areas of mineralisation under shallow cover at Oyut Ulaan. Exploration is planned to commence in late August.

### **NON-CORE ASSETS**

Xanadu has materially completed its operations review and related restructuring activities during the quarter. This includes the completion of the exit from a number of non-core assets, including:

- the sale of its 50% interest in the Ekhgoviin Chuluu LLC joint venture to ASX listed Aspire Mining Ltd (ASX:AKM). The joint venture has a 60% interest in the Nuurstei Coking Coal Project in northern Mongolia; and
- the sale and lease back of its 64% interest in its Ulaanbaatar office building valuing Xanadu's interest in the property at approximately A\$700,000.

Xanadu has reduced its fixed operating costs through this rationalisation process and has secured a valuable and strategic position in Mongolia's copper belts.

### **EQUITY RESEARCH COVERAGE**

Bell Potter Securities Limited has resumed equity research on Xanadu. A copy of the report is available on the Xanadu website ([www.xanadumines.com](http://www.xanadumines.com)) under "Research".

### **FINANCIAL POSITION**

Xanadu had \$4.429 million of cash on hand as at 30 June 2014. This includes an increase in cash from over the quarter of \$8.564 million (on a fully consolidated basis) as the result of the UB property sale, the capitalisation of Mongol Metals, an initial drawdown on the Noble loan facility and the private placement subscribed for by clients of Bell Potter and directors. These funds will primarily be directed towards the drilling program at the Kharmagtai project following the positive initial exploration results released to the market earlier this month.

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**KHARMAGTAI PROJECT & THE MONGOL METALS JV**

Xanadu and its joint venture partner, Mongol Metals LLC, announced the acquisition of a 90% interest in the Kharmagtai porphyry copper-gold project from Turquoise Hill Resources in February 2014. Under the Mongol Metals LLC joint venture terms, Xanadu has the right to earn an 85% interest in the Kharmagtai project, equivalent to a 76.5% effective interest, by funding acquisition and exploration costs.

The Kharmagtai project is located in the under-explored South Gobi porphyry copper province which hosts the world-class Oyu Tolgoi copper-gold operation, the Tsagaan Survaga porphyry copper-molybdenum development and Xanadu's Oyut Ulaan copper-gold exploration project. The Kharmagtai project is located within the Omnogovi Province, approximately 420km southeast of Ulaanbaatar and 60km north of the Tavan Tolgoi coal deposit.

The Kharmagtai project is an advanced exploration project consisting of multiple co-genetic gold-rich porphyry copper centres and tourmaline breccia pipes occurring within the Lower Carboniferous Kharmagtai Igneous Complex. Exploration has identified significant shallow high-grade porphyry copper-gold mineralisation. A majority of the mineralised porphyry complex lies under un-explored shallow sediments. The large licence area has only been partially explored and the potential for further discoveries remains high.

**COMPETENT PERSONS STATEMENT**

The information in this report relating to Exploration Results is based on information compiled or reviewed by Dr. Andrew Stewart, who is an employee of Xanadu and is a Member of the Australasian Institute of Geoscientists. Dr. Andrew Stewart 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". Dr. Andrew Stewart consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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 0.6284); Price assumptions: Cu (US\$3.20/lb) and Au (US\$1,375/oz).

**TABLE 1: TENEMENTS HELD AS AT 30 JUNE 2014**

Set out below is the relevant information in relation to Xanadu's mining tenements as required under ASX Listing Rule 5.3.3.

Tenement No.	Tenement Name	Location	Change in % Interest	% Interest as at 30 June
MV17387A <sup>1</sup>	Kharmagtai	Omnogovi Province	13%	13%
MV017129	Oyut Ulaan	Dornogovi Province	-	90%
13670x	Sharchuluut	Bulgan Province	-	100%
13703x	Elgen Uul	Dornogovi Province	-	80%
13711x	Zos Uul	Dornogovi Province	-	80%
14451x	Suuji	Dornogovi Province	-	80%
15004x	Wild Horse	Dornogovi Province	-	80%
14160x	Khurem	Dornogovi Province	(100%)	-
13958x	Nuurstei	Northern Mongolia	(30%)	-
13580x	Nuurstei	Northern Mongolia	(30%)	-
15352x	Khus	Dornogovi Province	(50%)	-

<sup>1</sup> The Kharmagtai project has been funded through Xanadu's interest in Mongol Metals LLC buy a combination of equity shareholder advances to be converted to equity periodically. Xanadu's interest in Mongol Metals LLC is equivalent to approximately 25% on a fully converted basis as at 30 June 2014.





**TABLE 3: RECENT KHARMAGTAI DRILL RESULTS**

Set out below is summary of the Kharmagtai drill results as at 30 July 2014.

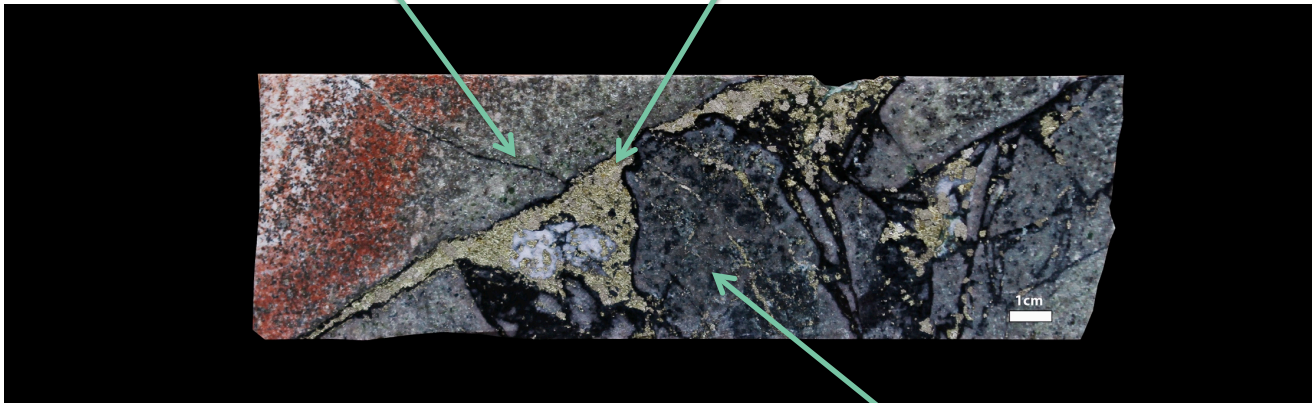
Hole	Prospect	From (m)	To (m)	Interval (m)	Cu (%)	Au (g/t)	CuEq (%)
<b>KHDDH336</b>	Zesen Uul	6	58.0	52	0.47	0.23	0.61
<b>KHDDH337</b>	Tsagaan Sudal	0.0	328.0	328.0	0.28	0.16	0.38
	<i>including:</i>	12.0	48.0	36.0	0.39	0.23	0.53
<b>KHDDH338</b>	Altan Tolgoi	28.0	76.0	48.0	0.33	0.45	0.61
	<i>and:</i>	86.0	102.0	16.0	0.50	0.68	0.93
	<i>and:</i>	110.0	268.0	160.0	0.47	0.85	1.00
	<i>and:</i>	316.0	357.8	41.8	0.30	0.31	0.50
<b>KHDDH340</b>	Tsagaan Sudal	0.0	468.9	468.9	0.29	0.32	0.49
	<i>including:</i>	164.0	350.0	186.0	0.37	0.53	0.70
	<i>including:</i>	202.0	244.0	42.0	0.56	0.72	1.01
	<i>And:</i>	452	458	6	0.43	0.38	0.66
<b>KHDDH341</b>	Altan Tolgoi	0	74	74	0.26	0.41	0.52
	<i>including:</i>	48	74	26	0.32	0.52	0.64
	<i>and:</i>	118	134	16	0.18	0.40	0.43
	<i>and:</i>	204	210	6	0.44	0.94	1.03
<b>KHDDH342</b>	Tsagaan Sudal	28	60	32	0.47	0.22	0.60
	<i>including:</i>	28	36	8	0.68	0.35	0.90
<b>KHDDH343</b>	East Altan Tolgoi	2	22	20	0.35	0.25	0.50
	<i>including:</i>	18	22	4	0.47	0.22	0.61
	<i>and:</i>	58	608	550	0.39	0.39	0.64
	<i>including:</i>	358.3	600	241.7	0.55	0.75	1.02
	<i>including:</i>	358.3	386	27.7	0.72	0.55	1.07
	<i>including:</i>	400	432	32	0.4	1.06	1.07
	<i>including:</i>	440	454	14	0.38	0.77	0.81
	<i>including:</i>	468	600	132	0.65	0.89	1.21

FIGURES 1 & 2: CORE SAMPLES

 KHDDH343

Relic potassic alteration overprinted by late muscovite alteration

Coarse chalcopyrite matrix infill



Clasts comprise clasts of stockwork mineralisation

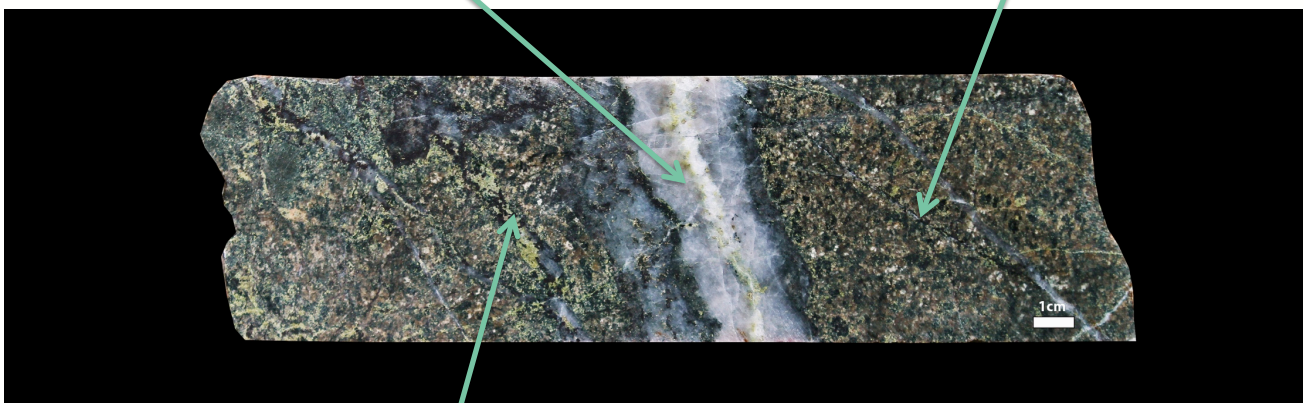
**KHDDH343: 348.10m. From a 2m interval (348m to 350m) that assayed 0.96% Cu & 0.10 g/t Au**

XANADU MINES (ASX:XAM)

 KHDDH343

Quartz-chalcopyrite vein

Early magnetite-chalcopyrite vein



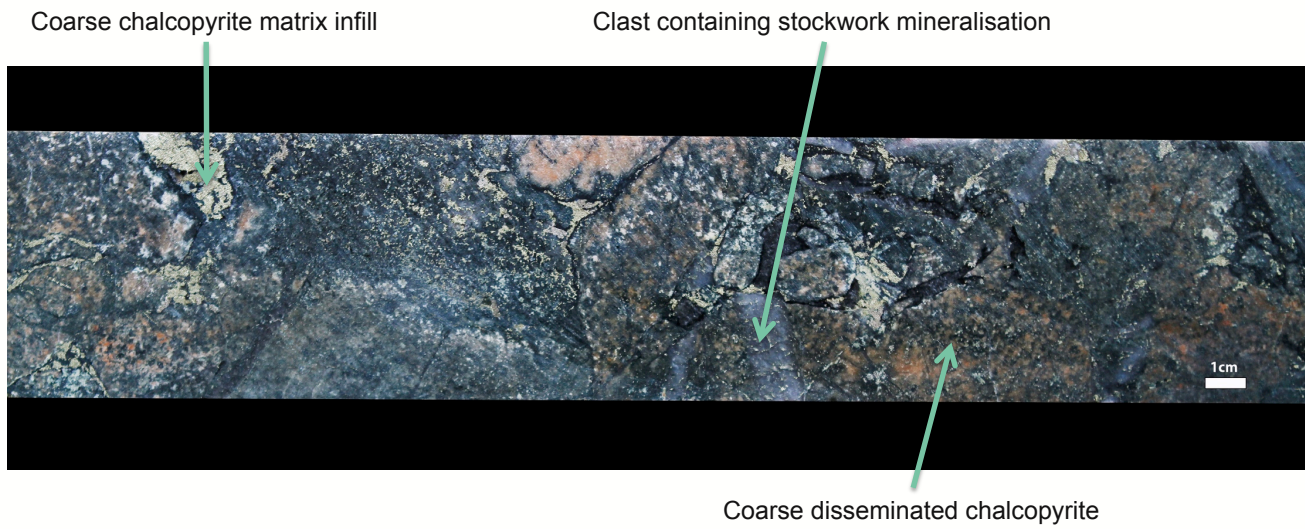
Coarse disseminated chalcopyrite

**KHDDH343: 444.30m. From a 2m interval (444m to 446m) that assayed 0.23% Cu & 2.27 g/t Au**

XANADU MINES (ASX:XAM)

FIGURES 3 & 4: CORE SAMPLES

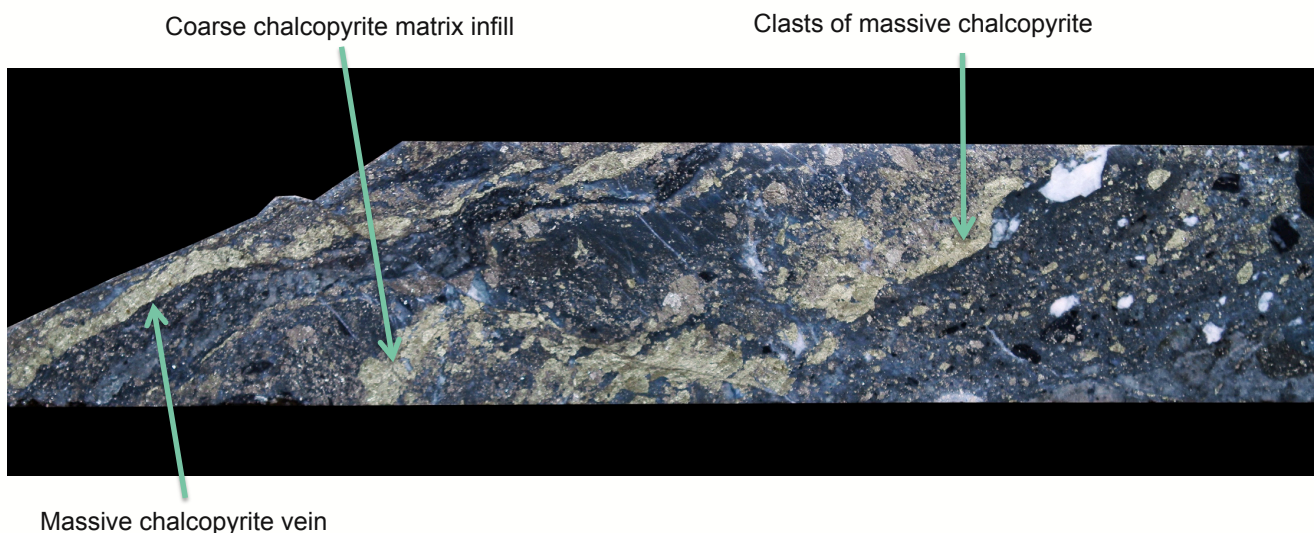
 KHDDH343



**KHDDH343: 477.10m. From a 2m interval (476m to 478m) that assayed 0.89% Cu & 0.25 g/t Au**

XANADU MINES (ASX:XAM)

 KHDDH343



**KHDDH343: 497m. From a 2m interval (496m to 498m) that assayed 2.06% Cu & 1.56 g/t Au**

XANADU MINES (ASX:XAM)

## 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 Turquoise Hill and Xanadu. This Table 1 updates the JORC Table 1 disclosure dated 28 July 2014.

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

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

Criteria	JORC Code Explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling and assaying.</li> <li>Measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> </ul>	<ul style="list-style-type: none"> <li>The resource estimate is based on drill samples only.</li> <li>Representative 2 metre samples were taken from ½ NQ or HQ) or diamond.</li> <li>Only assay result results from recognised, independent assay laboratories were used in Resource calculation after QAQC was verified.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type and details.</li> </ul>	<ul style="list-style-type: none"> <li>DDH drilling has been the primary drilling method.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>DDH core recoveries have been very good, averaging between 97% and 99% for all of the deposits. In localized areas of faulting and/or fracturing the recoveries decrease; however this is a very small percentage of the overall mineralised zones.</li> <li>Recovery measurements were collected during all DDH programs. The methodology used for measuring recovery is standard industry practice.</li> <li>Analysis of recovery results vs. grade indicates no significant trends. Indicating bias of grades due to diminished recovery and / or wetness of samples.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Drill 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.</li> <li>Drill core was photographed after being logged by a geologist.</li> <li>The entire interval drilled has been logged by a geologist.</li> </ul>
<b>Sub-sampling techniques and sample</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled,</li> </ul>	<ul style="list-style-type: none"> <li>DDH Core is cut in half with a diamond saw, following the line marked by the geologist. The rock saw is regularly</li> </ul>



Criteria	JORC Code Explanation	Commentary
<b>preparation</b>	<p>rotary split, etc and whether sampled wet or dry.</p> <ul style="list-style-type: none"> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<p>flushed with fresh water.</p> <ul style="list-style-type: none"> <li>Sample intervals are a constant 2m interval down-hole in length.</li> <li>Routine sample preparation and analyses of DDH samples were carried out by SGS Mongolia LLC (SGS Mongolia), who operates an independent sample preparation and analytical laboratory in Ulaanbaatar.</li> <li>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.</li> <li>Certified reference materials (CRMs), blanks and pulp duplicate were randomly inserted to manage the quality of data</li> <li>Sample sizes are well in excess of standard industry requirements.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All samples were routinely assayed by SGS Mongolia for gold, copper, silver, lead, zinc, arsenic and molybdenum.</li> <li>Au is determined using a 30g 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.</li> <li>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). Samples are 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 is over-range (&gt;1% Cu), it is analysed by a second analytical technique (AAS22S), which has a higher upper detection limit (UDL) of 5% copper.</li> <li>Quality assurance was provided by introduction of known certified standards, blanks and duplicate samples on a routine basis.</li> <li>Assay results outside the optimal range for methods were re-analysed by appropriate methods.</li> <li>Ore Research Pty Ltd certified copper</li> </ul>



Criteria	JORC Code Explanation	Commentary
		<p>and gold standards have been implemented as a part of QAQC procedures, as well as coarse and pulp blanks, and certified matrix matched copper--gold standards.</p> <ul style="list-style-type: none"> <li>• QAQC monitoring is an active and ongoing process on batch by batch basis by which an acceptable results are re-assayed as soon as practicable.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• The verification of significant intersections by either independent or alternative company personnel.</li> <li>• The use of twinned holes.</li> <li>• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>• Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>• All assay data QAQC is checked prior to loading into the ACCESS data base.</li> <li>• The data is managed XAM geologists.</li> <li>• The data base and geological interpretation is collectively managed by XAM.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>• All DDH's have been surveyed with a differential global positioning system (DGPS) to within 10cm accuracy.</li> <li>• All DDH's 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.</li> <li>• UTM WGS84 48N grid.</li> <li>• The DTM is based on 1 m contours with an accuracy of <math>\pm 0.01</math> m.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• Data spacing for reporting of Exploration Results.</li> <li>• 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.</li> <li>• Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>• Drilling has been completed on nominal north-south sections, commencing at 100m spacing and then closing to 50m for resource estimation.</li> <li>• Vertical spacing of intercepts on the mineralised zones similarly commences at 100m spacing and then closing to 50m for resource estimation.</li> <li>• Drilling has predominantly occurred with angled holes approximately <math>70^\circ</math> to <math>60^\circ</math> inclination below the horizontal and either drilling to north or south, depending on the dip of the target mineralised zone.</li> <li>• Holes have been drilled to 1000m vertical depth</li> <li>• The data spacing and distribution is sufficient to establish geological and grade continuity appropriate for the Mineral Resource estimation procedure and has been taken into account in 3D</li> </ul>

Criteria	JORC Code Explanation	Commentary
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<p>space when determining the classifications to be applied.</p> <ul style="list-style-type: none"> <li>Drilling has been predominantly completed on north-south section lines along the strike of the known mineralised zones and from either the north or the south depending on the dip.</li> <li>Vertical to South dipping ore bodies were predominantly drilled to the north.</li> <li>Scissor Drilling, (drilling from both north and south), as well as vertical drilling, has been used in key mineralised zones to achieve unbiased sampling of possible structures and mineralised zones.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Samples are dispatched from site through via company employees to the Laboratories.</li> <li>Samples are signed for at the Laboratory with confirmation of receipt emailed through.</li> <li>Samples are then stored at the lab and returned to a locked storage site.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data</li> </ul>	<ul style="list-style-type: none"> <li>Internal audits of sampling techniques and data management on a regular basis, to ensure industry best practice is employed at all times.</li> <li>External review and audit have been conducted by the following groups</li> <li>2012 – AMC Consultants Pty Ltd. was engaged to conduct an Independent Technical Report which reviewed drilling and sampling procedures. It was concluded that sampling and data record was appropriate for use in resource estimation including that required by the NI 43-101 standards.</li> <li>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.</li> </ul>

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

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

Criteria	JORC Code Explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The Project comprises 1 Mining Licences (MV 17387A).</li> <li>100% owned by Oyut Ulaan LLC. THR Oyu Tolgoi Ltd (a wholly owned subsidiary of Turquoise Hill Resources Ltd owns 90% of Oyut Ulaan LLC. 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.</li> <li>The Mongolian Minerals Law (2006 and Mongolian Land Law (2002) govern exploration, mining and land use rights for the project.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Previous exploration was conducted by Quincunx Ltd, Ivanhoe Mines Ltd and Turquoise Hill Resources Ltd including extensive drilling, surface geochemistry, geophysics, mapping and mineral resource estimation to NI 43-101 standards.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The mineralisation is characterised as porphyry copper-gold type.</li> <li>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 throughout 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.</li> </ul>
<b>Drill hole information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</li> </ul>	<ul style="list-style-type: none"> <li>Diamond drill holes are the principal source of geological and grade data for the Project.</li> <li>See Table 1 in main report.</li> </ul>

Criteria	JORC Code Explanation	Commentary
	<ul style="list-style-type: none"> <li>- easting and northing of the drill hole collar.</li> <li>- elevation or RL Reduced Level – elevation above sea level in metres) of the drill hole collar .</li> <li>- dip and azimuth of the hole</li> <li>- down hole length and interception depth</li> <li>- hole length.</li> <li>• 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.</li> </ul>	
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>• A nominal cutoff of 0.1% Cu is used for identification of potentially significant intercepts for reporting purposes.</li> <li>• 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.</li> <li>• 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).</li> <li>• 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 0.6284); Price assumptions: Cu (US\$3.20lb) and Au (US\$1,375oz).</li> </ul>
<b>Relationship between mineralization on widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Exploration results have been reported as</li> </ul>

Criteria	JORC Code Explanation	Commentary
	<ul style="list-style-type: none"> <li>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').</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Resource estimation, as reported later, was done in 3D space.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>See figures in main report.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Results have been reported at a range of cut-off grades, above a minimum suitable for open pit mining.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Extensive work in this area has been done, and is reported separately.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive</li> </ul>	<ul style="list-style-type: none"> <li>The mineralisation is open at depth and along strike.</li> <li>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.</li> <li>Exploration on going.</li> </ul>



## Appendix 5B

### Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/2013

Name of entity

XANADU MINES LTD

ABN

92 114 249 026

Quarter ended ("current quarter")

30 June 2014

#### Consolidated statement of cash flows

Cash flows related to operating activities	Current quarter \$A'000	Year to date (12 months) \$A'000
1.1 Receipts from product sales and related debtors	-	-
1.2 Payments for (a) exploration & evaluation (b) development (c) production (d) administration	(663) - - (725)	(2,118) - - (2,585)
1.3 Dividends received	-	-
1.4 Interest and other items of a similar nature received	9	124
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Other (provide details if material)	-	9
<b>Net Operating Cash Flows</b>	<b>(1,379)</b>	<b>(4,570)</b>
<b>Cash flows related to investing activities</b>		
1.8 Payment for purchases of: (a) prospects (b) equity investments (c) other fixed assets	(4,204) - (51)	(4,920) - (58)
1.9 Proceeds from sale of: (a) prospects (b) equity investments (c) other fixed assets	- - 503	- - 503
1.10 Loans to other entities	-	-
1.11 Loans repaid by other entities	-	-
1.12 Other (provide details if material)	-	-
<b>Net investing cash flows</b>	<b>(3,752)</b>	<b>(4,475)</b>
1.13 Total operating and investing cash flows (carried forward)	<b>(5,131)</b>	<b>(9,045)</b>

+ See chapter 19 for defined terms.

**Appendix 5B**  
**Mining exploration entity and oil and gas exploration entity quarterly report**

1.13	Total operating and investing cash flows (brought forward)	(5,131)	(9,045)
	<b>Cash flows related to financing activities</b>		
1.14	Proceeds from issues of shares, options, etc.	1,653	1,653
1.15	Proceeds from sale of forfeited shares	-	-
1.16	Proceeds from borrowings	2,101	2,101
1.17	Repayment of borrowings	-	-
1.18	Dividends paid	-	-
1.19	Other (Proceeds from JV partner)	4,307	4,307
	<b>Net financing cash flows</b>	<b>8,061</b>	<b>8,061</b>
	<b>Net increase (decrease) in cash held</b>	<b>2,930</b>	<b>(984)</b>
1.20	Cash at beginning of quarter/year to date	1,524	5,642
1.21	Exchange rate adjustments to item 1.20	(25)	(229)
1.22	<b>Cash at end of quarter</b>	<b>4,429</b>	<b>4,429</b>

**Payments to directors of the entity, associates of the directors, related entities of the entity and associates of the related entities**

		Current quarter \$A'000
1.23	Aggregate amount of payments to the parties included in item 1.2	212
1.24	Aggregate amount of loans to the parties included in item 1.10	-

1.25 Explanation necessary for an understanding of the transactions

Payment of Director's fees and salaries

**Non-cash financing and investing activities**

2.1 Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows

The Financing of the Kharmagtai acquisition is set out in the company's announcement of 3 February 2014

+ See chapter 19 for defined terms.

**Appendix 5B**

**Mining exploration entity and oil and gas exploration entity quarterly report**

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- 2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest

Mongol Metals LLC Joint Venture received \$4.3m from its joint venture partner
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### Financing facilities available

*Add notes as necessary for an understanding of the position.*

	Amount available \$A'000	Amount used \$A'000
3.1 Loan facilities	4,238	2,135
3.2 Credit standby arrangements	Nil	Nil

### Estimated cash outflows for next quarter

	\$A'000
4.1 Exploration and evaluation	2,265
4.2 Development	191
4.3 Production	-
4.4 Administration	815
<b>Total</b>	<b>3,271</b>

### Reconciliation of cash

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.

	Current quarter \$A'000	Previous quarter \$A'000
5.1 Cash on hand and at bank	4,429	624
5.2 Deposits at call	-	900
5.3 Bank overdraft	-	-
5.4 Other (provide details)	-	-
<b>Total: cash at end of quarter</b> (item 1.22)	<b>4,429</b>	<b>1,524</b>

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+ See chapter 19 for defined terms.

## Appendix 5B

### Mining exploration entity and oil and gas exploration entity quarterly report

#### Changes in interests in mining tenements and petroleum tenements

	Tenement reference and location	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter	
6.1	Interests in mining tenements and petroleum tenements relinquished, reduced or lapsed	14160X	Direct interest relinquished	100%	Nil
		13958X	Joint Venture Interest sold	30%	Nil
		13580X	Joint Venture Interest Sold	30%	Nil
		15352X	Joint Venture Interest Sold	50%	Nil
6.2	Interests in mining tenements and petroleum tenements acquired or increased	MV17387A	Direct	Nil	13%

#### Issued and quoted securities at end of current quarter

Description includes rate of interest and any redemption or conversion rights together with prices and dates.

	Total number	Number quoted	Issue price per security (see note 3) (cents)	Amount paid up per security (see note 3) (cents)
7.1	<b>Preference securities</b>			
	(description)			
7.2	Changes during quarter			
	(a) Increases through issues			
	(b) Decreases through returns of capital, buy-backs, redemptions			
7.3	<b>+Ordinary securities</b>	241,536,839	241,536,839	
7.4	Changes during quarter	27,568,990	27,568,990	\$0.048
	(a) Increases through issues	500,000	500,000	Nil
	(b) Decreases through returns of capital, buy-backs			Nil Issued pursuant to the Xanadu Mines Equity Incentive Plan which was approved at the 2013 AGM
7.5	<b>+Convertible debt securities</b>			
	(description)			

+ See chapter 19 for defined terms.

**Appendix 5B**

**Mining exploration entity and oil and gas exploration entity quarterly report**

7.6	Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted				
7.7	<b>Options</b> (description and conversion factor)			<i>Exercise price</i>	<i>Expiry date</i>
	14,000,000			\$0.50	31/12/2014
	5,240,000			\$0.50	19/12/2014
	1,000,000			\$0.60	30/06/2016
	1,000,000			\$1.20	30/06/2016
	1,000,000			\$1.80	30/06/2016
	1,000,000			\$0.70	31/12/2014
	1,000,000			\$1.00	31/12/2014
	3,300,000			)Nil subject to	21/5/2016
	1,800,000			)share price	21/5/2016
	4,000,000			)hurdle	26/2/2016
	15,000,000			)Nil subject to	14/1/2019
	20,000,000			)JORC resource	14/1/2019
				)hurdle	
7.8	Issued during quarter	1,250,000		)Nil subject to	28/2/2016
		1,250,000		)share price	28/2/2016
				)hurdle	
7.9	Exercised during quarter				
7.10	Expired during quarter				
7.11	<b>Debentures</b> (totals only)				
7.12	<b>Unsecured notes</b> (totals only)				

## Compliance statement

- 1 This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act or other standards acceptable to ASX (see note 5).
- 2 This statement does /does not\* (*delete one*) give a true and fair view of the matters disclosed.



Sign here:

Company secretary

Date: 31 July 2014

Print name: Janine Rolfe

+ See chapter 19 for defined terms.



## Notes

- 1 The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.
- 2 The "Nature of interest" (items 6.1 and 6.2) includes options in respect of interests in mining tenements and petroleum tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement or petroleum tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.
- 3 **Issued and quoted securities** The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.
- 4 The definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report.
- 5 **Accounting Standards** ASX will accept, for example, the use of International Financial Reporting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.

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