ASX/TSX ANNOUNCEMENT

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XANADU MINES

SIGNIFICANT TRENCHING RESULTS AND COMMENCEMENT OF DRILLING AT RED MOUNTAIN

05 August 2021

Xanadu Mines Ltd (ASX: XAM, TSX: XAM) (Xanadu or the Company) is pleased to provide an exploration update for the Red Mountain copper-gold district (Figure 3), a joint venture with the Japan Oil, Gas and Metals National Corporation (JOGMEC JV).

**Highlights** 

Drilling commenced at Red Mountain on a targeted approx. 2,450 metre program

 Assay results returned for the 1,000 metres trenching program, confirming additional, shallow high-grade copper mineralisation at Stairy and extending zones of mineralisation seen in historic trenches

Significant results include:

OUTR100 returns 8m @ 2.03% eCu from 136m<sup>1</sup>

OUTR104 returns 8m @ 1.94% eCu from 4m<sup>1</sup>

Varying thicknesses of copper mineralisation intersected in all trench assays

· Exploration drilling will focus on shallow high-grade targets identified via trenching and previous drilling

• Red Mountain district is being progressed as a standalone high-grade copper project, complementing the

advanced large-scale Kharmagtai copper-gold district

Xanadu's Chief Executive Officer, Dr Andrew Stewart, said "We are very excited by shallow copper mineralisation in our surface trenching at Red Mountain. This confirms the mineralised structures are sub-vertical and up to twenty-four meters wide, potentially extending well over a kilometre. Importantly, our latest geological interpretation suggests these may be linked to a large-scale porphyry system at depth. The quality of Stairy and of the Red Mountain district continues to improve, laying a strong foundation for our new drilling program."

<sup>1</sup> Refers to horizontal distance along the trench

#### **Stairy Trenching Results**

Approximately 1,000 metres of trenching was completed at Stairy (**Figure 1**), designed to obtain geological (structural) data relating to the zones of mineralisation associated with previous company trenches. Multiple intercepts of strong copper mineralisation have been encountered (**Appendix 1: Tables 1 and 2**), including Trenches OUTR100 and OUTR104 shown below. These results indicate extensions of the mineralisation zones seen in historic trenches and provide important information for targeting future drilling programs.

Hole ID	From <sup>2</sup>	Interval	Au	Ag	Cu	eCu
OUTR100	22m	6m	0.01g/t	6.17g/t	0.77%	0.78%
and	132m	19m	0.06g/t	8.14g/t	0.88%	0.91%
including	136m	8m	0.13g/t	18.33g/t	1.96%	2.03%
including	136m	6m	0.17g/t	23.60g/t	2.36%	2.45%

Hole ID	From <sup>2</sup>	Interval	Au	Ag	Cu	eCu
OUTR104	0m	14m	0.03g/t	9.43g/t	1.32%	1.34%
including	4m	8m	0.04g/t	13.78g/t	1.92%	1.94%
and	38m	14m	0.02g/t	6.56g/t	0.95%	0.96%
including	40m	12m	0.02g/t	7.62g/t	1.08%	1.09%

 $<sup>^{2}</sup>$  Refers to horizontal distance long the trench

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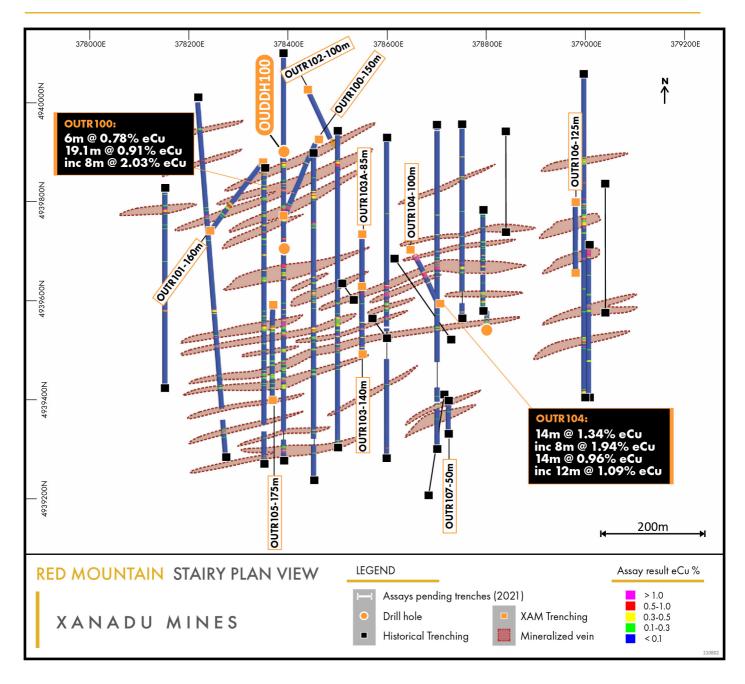


FIGURE 1: Trenching Results at Stairy, showing surface high-grade mineralisation.<sup>3</sup>

 $<sup>^{3}</sup>$  ASX/TSX Announcement 16 June 2021 - Multiple strong MLEM conductors detected at Stairy

#### **Stairy Drilling Program Commencing**

An approximately 2,450-metre drilling program has commenced at the Red Mountain district, with the objective to delineate a near surface, low tonnage, high-grade copper deposit.

Targets are developed based on results of the recent 1,000 metre trenching program and drilling intercepts from the first quarter of 2021, which included drill hole OUDDH100 with **4m @ 15.85% Cu** from 55m within **16m @ 4.09% Cu** from 54m.<sup>4</sup>

#### **About Stairy**

The Stairy prospect consists of a 1.5km by 1km zone of sheeted mineralised structures hosted within the Stairy Intrusive in the central east of the Red Mountain Mining Lease (**Figure 2**). These structures are interpreted to be sub-vertical, up to twenty-four meters wide and can extend for over a kilometre.

Copper mineralisation at Stairy consists of bornite and chalcopyrite sulphide with quartz carbonate fill. The current geological interpretations suggest these sheeted structures may be linked to a large-scale porphyry system at depth.

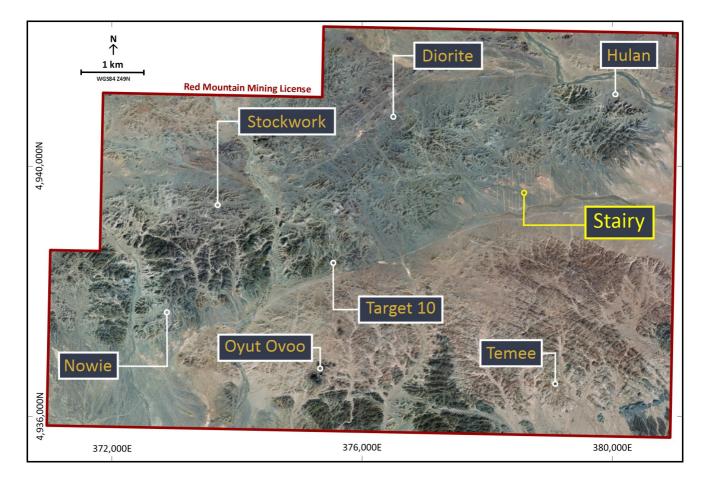


FIGURE 2: Red Mountain Mining Licence, showing ground Landsat data and priority target locations.

<sup>&</sup>lt;sup>4</sup> ASX/TSX Announcement 23 March 2021 - Shallow Bornite Mineralisation at Red Mountain

#### **About Red Mountain**

The Red Mountain district is located within the Dornogovi Province of southern Mongolia, approximately 420 kilometres southeast of Ulaanbaatar (**Figure 3**) and is a joint venture between Xanadu and JOGMEC, in which JOGMEC may earn up to 51% beneficial interest in the project by sole funding up to \$US7.2 million in exploration expenditure over 4 years, commencing April 2020.

Red Mountain covers approximately 57 square kilometres in a frontier terrane with significant mineral endowment, and it has a granted 30-year mining licence. Red Mountain comprises a cluster of outcropping mineralising porphyry intrusions which display features typically found in the shallower parts of porphyry systems where narrow dykes and patchy mineralisation branch out above a mineralised stock. This includes multiple porphyry copper-gold centres, mineralised tourmaline breccia pipes copper-gold/base metal skarns and high-grade epithermal gold veins.

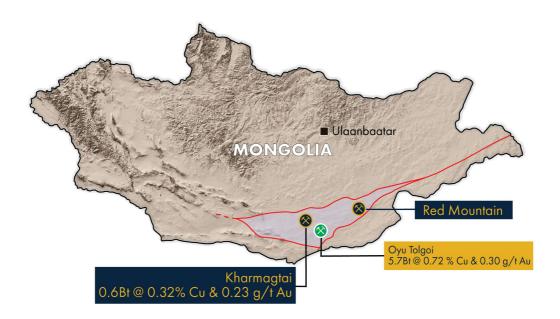


FIGURE 3: Location of the Red Mountain district in the South Gobi porphyry copper belt.

#### **About Xanadu Mines**

Xanadu is an ASX and TSX listed Exploration company operating in Mongolia. We give investors exposure to globally significant, large scale copper-gold discoveries and low-cost inventory growth. Xanadu maintains a portfolio of exploration projects and remains one of the few junior explorers on the ASX or TSX who control a globally significant copper-gold deposit in our flagship Kharmagtai project. For information on Xanadu visit: <a href="https://www.xanadumines.com">www.xanadumines.com</a>.

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This Announcement was authorised for release by Xanadu's Board of Directors.

## **Appendix 1: Trenching Results**

**Table 1: Trench locations** 

Hole ID	Prospect	East	North	RL	Azimuth (°)	Depth (m)
OUTR100	Stairy	378456	4939918	1056	203	151.1
OUTR101	Stairy	378346	4939874	1056	217	160.0
OUTR102	Stairy	378444	4940018	1058	155	100.0
OUTR103	Stairy	378550	4939640	1050	180	140.0
OUTR103A	Stairy	378550	4939725	1053	180	85.0
OUTR104	Stairy	378656	4939694	1051	152	100.0
OUTR105	Stairy	378370	4939583	1052	180	175.0
OUTR106	Stairy	378980	4939790	1047	180	125.0
OUTR107	Stairy	378725	4939390	1045	180	50.0

**Table 2: Significant trench results** 

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)	Ag (g/t)	Cu (%)	CuEq (%)	AuEq (g/t)
OUTR100	Stairy	22	28	6	0.01	6.17	0.77	0.78	1.53
and		132	151.1	19.1	0.06	8.14	0.88	0.91	1.77
including		136	144	8	0.13	18.33	1.96	2.03	3.97
including		136	142	6	0.17	23.60	2.36	2.45	4.79
OUTR101	Stairy	96	113	17	0.01	2.32	0.32	0.33	0.64
and		123	131	8	0.01	0.42	0.09	0.09	0.18
OUTR103	Stairy	94	97.5	3.5	0.02	2.86	0.69	0.70	1.37
OUTR104	Stairy	0	14	14	0.03	9.43	1.32	1.34	2.62
including		4	12	8	0.04	13.78	1.92	1.94	3.80
and		38	52	14	0.02	6.56	0.95	0.96	1.88
including		40	52	12	0.02	7.62	1.08	1.09	2.12
OUTR105	Stairy	32	46	14	0.01	0.77	0.24	0.24	0.48
including		34	38	4	0.01	1.10	0.44	0.44	0.86
and		102	114	12	0.01	0.71	0.10	0.10	0.20
and		130	160	30	0.01	0.37	0.12	0.12	0.24
including		130	136	6	0.01	0.70	0.27	0.28	0.54

#### **Appendix 2: Statements and Disclaimers**

#### **Competent 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 (**eCu**) calculation represents the total metal value for each metal, multiplied by the conversion factor, summed and expressed in equivalent copper percentage with a metallurgical recovery factor applied. The copper equivalent calculation used is based off the eCu calculation defined by CSA in the 2018 Mineral Resource Upgrade for Xanadu's Kharmagtai project.<sup>5</sup>

Copper equivalent (eCu) grade values were calculated using the following formula:

eCu = Cu + Au \* 0.62097 \* 0.8235,

Where Cu = copper grade (%); Au = gold grade (gold per tonne (g/t)); 0.62097 = conversion factor (gold to copper); and 0.8235 = relative recovery of gold to copper (82.35%).

The copper equivalent formula was based on the following parameters (prices are in USD): Copper price = 3.1 /lb (or 6,834 per tonne ( $\text{$/\text{t}}$ )); Gold price = 1,320 per ounce ( $\text{$/\text{oz}}$ ); Copper recovery = 85%; Gold recovery = 70%; and Relative recovery of gold to copper = 70% / 85% = 82.35%.

#### **Forward-Looking Statements**

Certain statements contained in this Announcement, including information as to the future financial or operating performance of Xanadu and its projects may also include statements which are 'forward-looking statements' that may include, amongst other things, statements regarding targets, estimates and assumptions in respect of mineral reserves and mineral resources and anticipated grades and recovery rates, production and prices, recovery costs and results, capital expenditures and are or may be based on assumptions and estimates related to future technical, economic, market, political, social and other conditions. These 'forward-looking statements' are necessarily based upon a number of estimates and assumptions that, while considered reasonable by Xanadu, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies and involve known and unknown risks and uncertainties that could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward-looking statements.

 $<sup>^{5}</sup>$  ASX Announcement 31 October 2018 - Major increase in Kharmagtai Open-Cut Resource to 1.9Mt Cu & 4.3Moz AU

Xanadu disclaims any intent or obligation to update publicly or release any revisions to any forward-looking statements, whether as a result of new information, future events, circumstances or results or otherwise after the date of this Announcement or to reflect the occurrence of unanticipated events, other than required by the *Corporations Act 2001 (Cth)* and the Listing Rules of the Australian Securities Exchange (**ASX**) and Toronto Stock Exchange (**TSX**). The words 'believe', 'expect', 'anticipate', 'indicate', 'contemplate', 'target', 'plan', 'intends', 'continue', 'budget', 'estimate', 'may', 'will', 'schedule' and similar expressions identify forward-looking statements.

All 'forward-looking statements' made in this Announcement are qualified by the foregoing cautionary statements. Investors are cautioned that 'forward-looking statements' are not guarantee of future performance and accordingly investors are cautioned not to put undue reliance on 'forward-looking statements' due to the inherent uncertainty therein.

For further information please visit the Xanadu Mines' Website at www.xanadumines.com.

### **Appendix 3: Red Mountain Table 1 (JORC 2012)**

Set out below is Section 1 and Section 2 of Table 1 under the JORC Code, 2012 Edition for the Red Mountain project. Data provided by Xanadu. This Table 1 updates the JORC Table 1 disclosure dated 22 July 2021.<sup>6</sup>

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to 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> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>The exploration results are based on diamond drill core samples, reverse circulation (RC) chip samples and channel samples from surface trenches.</li> <li>Representative ½ core samples were split from PQ, HQ &amp; NQ diameter diamond drill core on site using rock saws, on a routine two metres sample interval that also honors lithological/intrusive contacts.</li> <li>The orientation of the cut line is controlled using the core orientation line ensuring uniformity of core splitting wherever the core has been successfully oriented.</li> <li>Sample intervals are defined and subsequently checked by geologists, and sample tags are attached (stapled) to the plastic core trays for every sample interval.</li> <li>RC chip samples are ¼ splits from 1m intervals using a 75%:25% riffle splitter to obtain a 3kg sample.</li> <li>RC samples are uniform 2m samples formed from the combination of two ¼ split 1m samples.</li> <li>Trench samples are collected as 2m composite from 30m above the trench toe.</li> <li>Sampling generally honors lithological contacts.</li> <li>Trench samples are continuous along the length of the trench</li> </ul>
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	<ul> <li>The exploration results are based upon diamond drilling of PQ, HQ and NQ diameters with both standard and triple tube core recovery configurations, RC drilling and surface trenching with channel sampling.</li> <li>All drill core drilled by Xanadu has been oriented using the "Reflex Ace" tool.</li> </ul>
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results	Diamond drill core recoveries were assessed using the standard industry (best) practice

<sup>&</sup>lt;sup>6</sup> ASX Announcement 22 July 2021 – Target Program Completed at Red Mountain

Core is appropriately split (onsite) using

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

• For all sample types, the nature, quality •

#### Commentary Criteria **JORC Code explanation** and appropriateness of the sample diamond core saws with the cut line routinely preparation technique. located relative to the core orientation line Quality control procedures adopted for (where present) to provide consistency of sample split selection. all sub-sampling stages to maximise representivity of samples. The diamond saws are regularly flushed with • Measures taken to ensure that the water to minimize potential contamination. A field duplicate 1/4 core sample is collected sampling is representative of the in-situ every 30<sup>th</sup> sample to ensure the "representivity material collected, including for instance results for field duplicate/second-half of the in-situ material collected". The sampling. performance of these field duplicates is routinely analysed as part of Xanadu's sample Whether sample sizes are appropriate QC process. to the grain size of the material being sampled. Routine sample preparation and analyses of DDH samples were carried out by ALS Mongolia LLC (ALS Mongolia), who operates an independent sample preparation and analytical laboratory in Ulaanbaatar. • All samples were prepared to meet standard quality control procedures as follows: Crushed to 75% passing 2mm, split to 1kg, pulverised to 85% passing 200 mesh (75 microns) and split to 150g sample pulp. • ALS Mongolia Geochemistry labs quality management system is certified to ISO 9001:2008. • The sample support (sub-sample mass and comminution) is appropriate for the grainsize and Cu-Au distribution of the porphyry Cu-Au mineralization and associated host rocks. Trench samples by previous explorers between 2001 to 2007 were prepared and assayed by SGS Mongolia. Quality of The nature, quality and appropriateness assay data of the assaying and laboratory ALS Mongolia for gold. and procedures used and whether the laboratory technique is considered partial or total.

# tests

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

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

Criteria	JORC Code explanation	Commentary
Criteria	JORC Code explanation	Duplicates (1:30 samples - ¼ core duplicate) by XAM.  Assay results outside the optimal range for methods were re-analysed by appropriate methods.  Ore Research Pty Ltd certified copper and gold standards have been implemented as a part of QC procedures, as well as coarse and pulp blanks, and certified matrix matched coppergold standards.  QC monitoring is an active and ongoing processes on batch-by-batch basis by which unacceptable results are re-assayed as soon as practicable.  Prior to 2014: Cu, Ag, Pb, Zn, As and Mo were routinely determined using a three-acid-digestion of a 0.3g sub-sample followed by an AAS finish (AAS21R) at SGS Mongolia. Samples were digested with nitric, hydrochloric and perchloric acids to dryness before leaching with hydrochloric acid to dissolve soluble salts and made to 15ml volume with distilled water. The LDL for copper using this technique was 2ppm. Where copper was overrange (>1% Cu), it was analysed by a second analytical technique (AAS22S), which has a higher upper detection limit (UDL) of 5% copper. Gold analysis method was essentially unchanged.  Trenching samples from 2001 to 2007 were analysed for 6 elements (Cu, Ag, Pb, Zn, As and Mo) by SGS Mongolia using a three-acid-digestion of a 0.3g sub-sample followed by an AAS finish (AAS21R). Samples were digested with nitric, hydrochloric and perchloric acids to dryness before leaching with hydrochloric acid to dissolve soluble salts and made to 15ml volume with distilled water. The LDL for copper using this technique was 2ppm. Where copper was over-range (>1% Cu), it was analysed by a second analytical technique (AAS22S), which has a higher upper detection limit (UDL) of 5% copper. Gold analysis method was essentially unchanged.
Verification of sampling	The verification of significant intersections by either independent or	· 1

# 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.
- All assay data QA/QC is checked prior to loading into XAM's Geobank data base.
- The data is managed by XAM geologists.
- The data base and geological interpretation is managed by XAM.
  - Check assays are submitted to an umpire lab (SGS Mongolia) for duplicate analysis.
  - No twinned drill holes exist.

Criteria	JORC Code explanation	Commentary
	Discuss any adjustment to assay data.	There have been no adjustments to any of the assay data.
Location of data points	<ul> <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> <li>Diamond drill holes have been surveyed with a differential global positioning system (DGPS) to within 10cm accuracy.</li> <li>The grid system used for the project is UTM WGS-84 Zone 49N</li> <li>Historically, Eastman Kodak and Flexit electronic multi-shot downhole survey tools have been used at Red Mountain to collect down hole azimuth and inclination information for the majority of the diamond drill holes. Single shots were typically taken every 30m to 50m during the drilling process, and a multi-shot survey with readings every 3-5m are conducted at the completion of the drill hole. As these tools rely on the earth's magnetic field to measure azimuth, there is some localised interference/inaccuracy introduced by the presence of magnetite in some parts of the Red Mountain mineral system. The extent of this interference cannot be quantified on a reading-by-reading basis.</li> <li>More recently (since September 2017), a north-seeking gyro has been employed by the drilling crews on site (rented and operated by the drilling contractor), providing accurate downhole orientation measurements unaffected by magnetic effects. Xanadu have a permanent calibration station setup for the gyro tool, which is routinely calibrated every 2 weeks (calibration records are maintained and were sighted).</li> <li>The project DTM is based on 1 m contours from satellite imagery with an accuracy of ±0.1 m.</li> <li>Trenching locations for trenches between 2001 and 2007 were located using a handheld GPS.</li> </ul>
Data spacing and distribution	<ul> <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> <li>Holes spacings range from &lt;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.</li> <li>Holes range from vertical to an inclination of -60 degrees depending on the attitude of the target and the drilling method.</li> <li>The data spacing and distribution is sufficient to establish anomalism and targeting for porphyry Cu-Au, tourmaline breccia and</li> </ul>

epithermal target types.

Criteria	JORC Code explanation	Commentary
		<ul> <li>Holes have been drilled to a maximum of 1,300m vertical depth.</li> <li>The data spacing and distribution is sufficient to establish geological and grade continuity.</li> </ul>
Orientation of data in relation to geological structure	<ul> <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>	<ul> <li>Drilling is conducted in a predominantly regular grid to allow unbiased interpretation and targeting.</li> <li>Scissor drilling, as well as some vertical and oblique drilling, has been used in key mineralised zones to achieve unbiased sampling of interpreted structures and mineralised zones, and in particular to assist in constraining the geometry of the mineralised hydrothermal tourmaline-sulphide breccia domains.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>Samples are delivered from the drill rig to the core shed twice daily and are never left unattended at the rig.</li> <li>Samples are dispatched from site in locked boxes transported on XAM company vehicles to ALS lab in Ulaanbaatar.</li> <li>Sample shipment receipt is signed off at the Laboratory with additional email confirmation of receipt.</li> <li>Samples are then stored at the lab and returned to a locked storage site.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>Internal audits of sampling techniques and data management are undertaken on a regular basis, to ensure industry best practice is employed at all times.</li> </ul>
		<ul> <li>External reviews and audits 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 to an appropriate standard.</li> <li>2013: Mining Associates Ltd. was engaged to conduct an Independent Technical Report to review drilling, sampling techniques and QAQC. 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 (Section 2) Explanation	Con	nmentary
Mineral tenement and land tenure status	<ul> <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 license to operate in the area.</li> </ul>	<ul><li>(MV</li><li>Xan the licer</li><li>The Mor expl</li></ul>	Project comprises 1 Mining Licence 7-17129A). Hadu now owns 90% of Vantage LLC, 100% owner of the Oyut Ulaan mining Ince. He Mongolian Minerals Law (2006) and Ingolian Land Law (2002) govern loration, mining and land use rights for project.
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	Quii Turc exte	vious exploration was conducted by ncunx Ltd, Ivanhoe Mines Ltd and quoise Hill Resources Ltd including ensive drilling, surface geochemistry, physics, mapping.
Geology	Deposit type, geological setting and style of mineralisation.	porp Porp from typic stoc sulp intru vein sulp vein wall larg high larg mini Mou asso dior how cont	cally associated with felsic intrusive cks that have deposited metals as phides both within the intrusive and the uded host rocks. Quartz stockwork
Drill hole Information	<ul> <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> <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</li> </ul>	of g Proj • See	

Criteria	JORC Code (Section 2) Explanation	Commentary
	Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</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> <li>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.</li> <li>A nominal cut-off of 0.1g/t eAu is used in gold dominant systems like for identification of potentially significant intercepts for reporting purposes. Higher grade cut-offs are 0.3g/t, 0.6g/t and 1g/eAu.</li> <li>Maximum contiguous dilution within each intercept is 9m for 0.1%, 0.3%, 0.6% and 1% eCu.</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 (bestift).</li> <li>The copper equivalent (eCu) calculation represents the total metal value for each metal, multiplied by the conversion factor summed and expressed in equivalent copper percentage with a metallurgical recovery factor applied.</li> <li>Copper equivalent (CuEq or eCu) grade values were calculated using the following formula: <ul> <li>eCu or CuEq = Cu + Au * 0.62097 * 0.8235,</li> </ul> </li> <li>Gold Equivalent (eAu) grade values were calculated using the following formula: <ul> <li>eAu = Au + Cu / 0.62097 * 0.8235.</li> </ul> </li> <li>Where:</li> <li>Cu - copper grade (%)</li> </ul>

Criteria	JORC Code (Section 2) Explanation		Commentary
		•	Au - gold grade (g/t)
		•	0.62097 - conversion factor (gold to copper)
		•	0.8235 - relative recovery of gold to copper (82.35%)
		•	The copper equivalent formula was based on the following parameters (prices are in USD):
		•	Copper price - 3.1 \$/lb (or 6834 \$/t)
		•	Gold price - 1320 \$/oz
		•	Copper recovery - 85%
		•	Gold recovery - 70%
		•	Relative recovery of gold to copper = 70% / 85% = 82.35%.
Relationship between mineralisation on widths and intercept lengths	<ul> <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> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	•	Mineralised structures are variable in orientation, and therefore drill orientations have been adjusted from place to place in order to allow intersection angles as close as possible to true widths.  Exploration results have been reported as an interval with 'from' and 'to' stated in tables of significant economic intercepts. Tables clearly indicate that true widths will generally be narrower than those reported.
Diagrams	<ul> <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>	•	See figures in this ASX/TSX Announcement.
Balanced Reporting	<ul> <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>	•	Exploration results 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	<ul> <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</li> </ul>	•	Extensive work in this area has been done and is reported separately.

Criteria	JORC Code (Section 2) Explanation		Commentary
	substances.		
Further • Work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).  Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially 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 RLI) 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

Mineral Resources are not reported so this is not applicable to this report.

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

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