XANADU MINES

Compelling Coarse Ore Flotation Results Indicate Throughput Upside for Kharmagtai

23 April 2024

Xanadu Mines Ltd (ASX: XAM, TSX: XAM) (**Xanadu, XAM** or the **Company**) is pleased to provide an update on metallurgical testwork for the Kharmagtai Copper-Gold Project (**Kharmagtai**) in Mongolia, being developed with the Company's joint venture partner, **Zijin Mining Group Co., Ltd. (Zijin**).

The Eriez HydroFloat test work for evaluating coarse ore flotation has demonstrated excellent results for one of the key uplift scenarios defined in the Kharmagtai Scoping Study[1]. It has effectively improved upfront processing efficiencies, producing a coarse reject of up to ~44% by mass for the main mineralised sulphide orebody.

Highlights

- Testwork for assessing coarser grind options (P80 grind sizes ranging between 150 to 450 microns (**µm**) for Kharmagtai sulphide mineralisation, using HydroFloat achieved compelling results:
    - Up to **94% copper and 92% gold recovered** in the HydroFloat stage;
    - Enabling a **peak coarse reject of 43.8% by mass**, at 450µm; and
    - Rougher recoveries of **91% for copper and 83% for gold**, at 250 µm.
- Coarse ore flotation may offer numerous benefits for Kharmagtai, including:
    - Reduced power and water intensity per tonne of ore processed;
    - Increased mill capacity and overall plant capacity for an increased production rate;
    - Reduction in consumables, such as grinding media and reagents; and
    - Significant improvement in tailings stability with the production of coarser tails, as well as water recycling at the back end of the plant.

[1] ASX/TSX Announcement 8 April 2022 – Scoping Study Kharmagtai Copper-Gold Project

- HydroFloat provides the opportunity for Kharmagtai to recover valuable minerals in the 150 to 200µm range that processing through conventional flotation alone is unable to perform.
- More than 70 HydroFloat units are commercially used in global operations, including Australia. The pilot program to date has demonstrated significant potential for HydroFloat, with further mineralogy and pilot tests to be conducted as new samples become available.

Xanadu's Executive Chairman and Managing Director, Colin Moorhead said:

"These results provide strong support for our Scoping Study uplift scenario using coarse ore flotation to improve overall project economics. This uplift is achieved through increasing throughput and accelerating mining and processing rates which ultimately accelerate revenue generation at Kharmagtai.

It also promises to enhance the environmental sustainability aspects of Kharmagtai through the early separation of barren material and a coarser grind size, allowing for significant reduction in power and water requirements, and better tailings management. Given this separation method has been used successfully by bulk miners for over 20 years, we intend to leverage those learnings at Kharmagtai. We are now working with DRA, our process design engineers, to determine the optimal timing to include HydroFloat in the processing flowsheet, and maximise its beneficial impact for Kharmagtai."

Coarse Ore Flotation Metallurgical Testwork Program

Summary

The existing conventional flowsheet involves crushing and grinding ore to a P80 size of 150µm for Stage 1 (15Mtpa in Scoping Study) and 212µm for Stage 2 (30Mtpa in Scoping Study)[2].

Testwork to investigate coarser grind options was completed at ALS' laboratory in Perth and was supervised by Eriez Australia using Eriez HydroFloat pilot equipment, returning HydroFloat rougher recoveries of:

- **91% Cu** recovery and **83.2% Au** recovery at 250µm; and
- **88.4% Cu** recovery and **77.7% Au** recovery at 350µm.

Description

Composite samples were prepared from core drilled at each of the Stockwork Hill, White Hill and Copper Hill deposits Kharmagtai. Sample preparation consisted of combining samples "as received" into a single 200kg composite, crushing to 3.35mm, followed by rotary blending and splitting and then grinding individual samples to 150 (finer), 250, 350 and 450 (coarser) µm.

[2] ASX/TSX Announcement 4 March 2024 – Metallurgical Tests at Kharmagtai Show Strong Sulphide Rougher Flotation Recovery

Eriez supplied the CrossFlow classifier (XF), rotary drum and HydroFloat (HF) units used for laboratory testing at the ALS facility. The Eriez Laboratory CrossFlow is a hydraulic classifier that separates particles according to size, shape, and specific gravity. Samples were classified in the CrossFlow to remove the fines and slimes with a target split size of 90µm and the CrossFlow underflow was used as the feed for the coarse particle flotation into the HydroFloat unit. Prior to that, the HydroFloat feed was polished and conditioned with collector reagent in a rotating drum before being pumped into the HydroFloat. The entire HydroFloat overflow and HydroFloat underflow streams were collected, split, and sub-sampled before assay analysis for primarily copper and gold. Combined CrossFlow overflow and HydroFloat overflow from the 250 and 350µm tests were tested by flotation to produce a rougher concentrate, after grinding to 75µm.

HydroFloat Results

The coarse ore flotation evaluation included head grade analysis and rougher flotation recovery testwork on a composite sample taken from varying deposits, depths, sulphide and alteration types to test coarser grind options. Results for the Cross Flow (XF) stage at the tested P80 grind sizes are shown in **Table 1.**

Table 1: Mass Split in Cross Flow

Stream	P80 450 µm	P80 350 µm	P80 250 µm	P80 150 µm
XF Overflow %Wt	36.6	37.6	44.5	52.9
XF Underflow %Wt	63.4	62.4	55.5	47.1

As the grind size gets coarser, less fines are produced and hence the XF overflow mass reduces from 52.9% by weight at 150 µm, to 36.6% at 450 µm. In a full-scale flowsheet, the XF overflow would join the HF overflow for downstream conventional rougher and cleaner flotation.

The results from the HydroFloat (HF) stage are shown in Table 2. Both Cu and Au recoveries increase as the grind size becomes finer, and at the same time the HydroFloat overflow Cu and Au grades **increase from 0.88% Cu to 1.24% Cu and from 0.97g/t Au to 1.70g/t Au**, demonstrating improved liberation at the finer sizes. The HydroFloat underflow grade (final tailings) reduce from 0.08% Cu to 0.03% Cu and 0.08g/t Au to 0.06g/t Au as the sizing gets finer.

Table 2: HydroFloat Recovery and Mass Pull Results

Stream	Parameter	P80 Grind Size			
		450µm	350µm	250µm	150µm
HF Feed	% Cu	0.33	0.32	0.35	0.38
	g/t Au	0.35	0.25	0.40	0.54
HF Overflow	%Wt	30.6	32.1	33.6	28.9
	% Cu	0.88	0.88	0.98	1.24
	g/t Au	0.86	0.65	0.98	1.70
Recovery	% Cu	82.9	87.3	92.5	94.4
	% Au	84.2	77.5	90.8	92.1
HF Underflow	% Cu	0.08	0.06	0.04	0.03
	g/t Au	0.08	0.09	0.05	0.06

The combined XF overflow (minus 90 µm) and the HydroFloat overflow represent the downstream feed in the process flowsheet. For each of the 250 µm and 350 µm laboratory tests, the XF and HF overflows were combined and ground to 75 µm for rougher flotation. The results of this step, plus the HydroFloat (HF) results are combined in Table 3 and compared with results from the conventional flowsheet.

Table 3: Combined Results of HydroFloat Test Products for Rougher Flotation Compared to Standard Rougher Test

Product	350µm HF Feed and 75 µm Rougher				250µm HF Feed and 75 µm Rougher				Typical conventional Results			
	Cu %	Cu Rec %	Au g/t	Au Rec %	Cu %	Cu Rec %	Au g/t	Au Rec %	Cu %	Cu Rec %	Au g/t	Au Rec %
Rougher	6.11	88.4	4.51	77.7	5.95	91.0	4.07	83.2	4.64	90.1	4.50	86.4
Rougher	0.04	5.5	0.08	11.4	0.04	5.4	0.06	10.8	0.04	9.9	0.06	13.6
XF	0.06	6.1	0.09	10.9	0.04	3.6	0.05	6.0	-	-	-	-

These results demonstrate that the 250 µm HydroFloat test, followed by a 75 µm grind for rougher flotation, produced similar results to a conventional flotation test at 150 µm. Furthermore, improved rougher concentrate grade and recovery were achieved:

- 5.95% Cu grade and 91.0% recovery for HydroFloat, versus
- 4.64% Cu grade and 90.1% recovery for conventional flotation.

However, Au grade and recovery are both less favourable for HydroFloat versus conventional flotation.

Results indicate that use of Eriez HydroFloat for Kharmagtai ore achieved a high recovery while rejecting coarse, barren ore.

Significance to Kharmagtai

The results achieved in these preliminary tests provide sufficient encouragement to conduct further studies. Since the comminution circuit is the major source of energy consumption, investigating ways to reduce this through a coarser grind warrants further work. This will take the form of mineralogical studies to determine the liberation of sulphides at coarse grinds, followed by further pilot testing on new samples, as they become available.

Figure 1: Eriez 6" Laboratory HydroFloat Setup

Sample Selection and Preparation

Metallurgical sample locations, zones and assayed head grades are detailed in **Table 3**. Drill hole collar locations for drill holes sampled are outlined in **Figure 2** and detailed in **Appendix 1, Table 1**.

Table 3: Drill hole sample details incorporated in composite for HydroFloat testwork

Sample ID	Drill Hole Number	From (m)	To (m)	Cu Head Grade (%)	Au Head Grade (g/t)
CHCOM_001	KHDDH336	50	60	0.39	0.14
CHCOM_002	KHDDH416	150	160	0.85	2.03
CHCOM_003	KHDDH434	62	74	0.24	0.06
SHCOM_001	KHDDH457	64	74	0.27	0.07
SHCOM_001	KHDDH250	220	230	0.80	1.38
SHCOM_002	KHDDH394	112	122	0.65	1.61
SHCOM_003	KHDDH371	269	279	0.47	0.13
SHCOM_004	KHDDH527	66	76	0.05	0.04
SHCOM_005	KHDDH263	288	298	0.18	0.06
SHCOM_006	KHDDH565	195	205	0.14	0.24
SHCOM_007	KHDDH372	140	150	0.04	0.02
SHCOM_008	KHDDH277	204	214	0.09	0.11
SHCOM_009	KHDDH276	70	80	0.01	0.02
SHCOM_10	KHDDH359	200	210	0.22	0.14
SHCOM_11	KHDDH347	502	512	0.80	1.05
SHCOM_12	KHDDH343	180	190	0.48	0.09
SHCOM_13	KHDDH279	336	346	0.29	0.11
SHCOM_14	KHDDH346	364	374	1.46	0.76
SHCOM_15	KHDDH347	170	180	0.18	0.16
WHCOM_001	KHDDH473	63	74	0.31	0.15
WHCOM_002	KHDDH430	458	468	0.21	0.10
WHCOM_003	KHDDH477	263.2	274	0.33	0.44
WHCOM_004	KHDDH474	50	60	0.16	0.05
WHCOM_005	KHDDH444	64	74	0.36	0.14
WHCOM_006	KHDDH345	222	232	0.28	0.17
WHCOM_007	KHDDH366	352	362	0.17	0.08

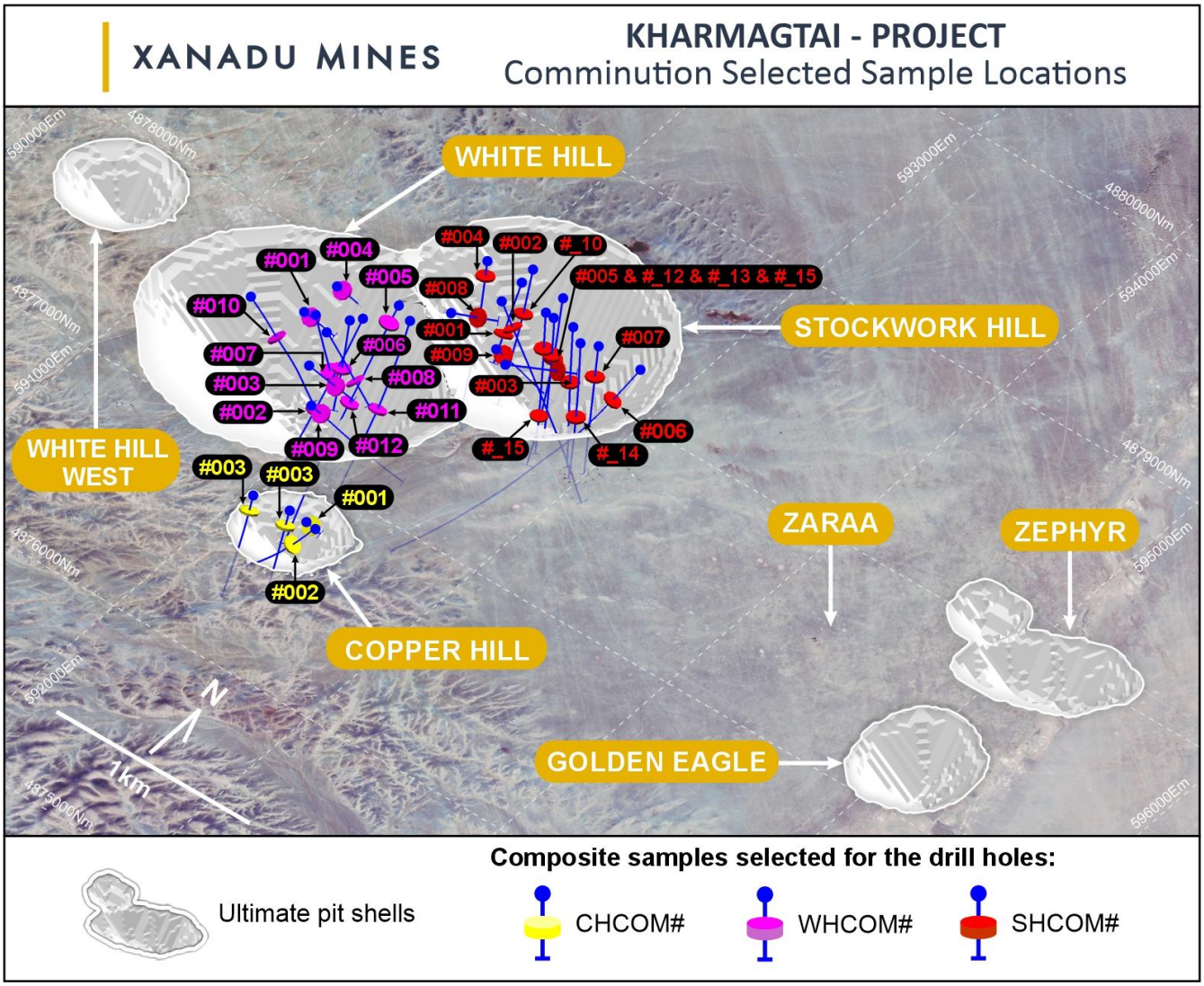

Figure 2: Collar locations for drill holes sampled in metallurgical testwork

Next Steps

The next step for coarse ore flotation is PFS process flow sheet modelling and engineering design by DRA, the engineering firm leading process design and engineering for the study.

Coarse ore flotation is a subset of the broader Kharmagtai metallurgical testwork program. The comprehensive metallurgy program during the Pre-Feasibility Study includes comminution properties of the mineralisation and alteration styles at Kharmagtai to determine the optimum flowsheet and generate inputs for engineering design. This will also generate data to inform the copper and gold recovery models, and allow operating costs estimates to be calculated. Concentrate samples will also be generated for marketing studies as part of the broader metallurgy program.

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 jointly control a globally significant copper-gold deposit in our flagship Kharmagtai project. Xanadu is the Operator of a 50-50 JV with Zijin Mining Group in Khuiten Metals Pte Ltd, which controls 76.5% of the Kharmagtai project.

For further information on Xanadu, please visit: **www.xanadumines.com** or contact:

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This Announcement was authorised for release by Xanadu's Executive Chair and Managing Director.

Appendix 1: Metallurgical Sample Composition and Location

Table 1: Drill hole sample details for rougher flotation testwork

Hole ID	Sample ID	Prospect	East	North	RL	Azimuth (°)	Inc (°)
KHDDH336	CHCOM_001	Copper Hill	592647	4876448	1304	0	-60
KHDDH416	CHCOM_002	Copper Hill	592698	4876440	1305	246	-50
KHDDH434	CHCOM_003	Copper Hill	592554	4876456	1302	180	-62
KHDDH457	CHCOM_003	Copper Hill	592388	4876430	1305	180	-65
KHDDH250	SHCOM_001	Stockwork Hill	592456	4877956	1290	180	-55
KHDDH394	SHCOM_002	Stockwork Hill	592460	4877833	1288	100	-59
KHDDH371	SHCOM_003	Stockwork Hill	592768	4877899	1283	180	-80
KHDDH527	SHCOM_004	Stockwork Hill	592274	4877961	1293	178	-72
KHDDH263	SHCOM_005	Stockwork Hill	592636	4877991	1287	180	-75
KHDDH565	SHCOM_006	Stockwork Hill	593128	4877885	1280	233	-55
KHDDH372	SHCOM_007	Stockwork Hill	592915	4877882	1281	180	-75
KHDDH277	SHCOM_008	Stockwork Hill	592344	4877662	1291	0	-45
KHDDH276	SHCOM_009	Stockwork Hill	592612	4877623	1288	0	-60
KHDDH359	SHCOM_10	Stockwork Hill	592443	4878038	1291	180	-68
KHDDH347	SHCOM_11	Stockwork Hill	592636	4877890	1285	175	-80
KHDDH343	SHCOM_12	Stockwork Hill	592680	4877890	1285	180	-80
KHDDH279	SHCOM_13	Stockwork Hill	592693	4877582	1288	0	-45
KHDDH346	SHCOM_14	Stockwork Hill	592849	4877851	1283	175	-80
KHDDH347	SHCOM_15	Stockwork Hill	592636	4877890	1285	175	-80
KHDDH473	WHCOM_001	White Hill	591894	4877307	1305	0	-60
KHDDH430	WHCOM_002	White Hill	592097	4877422	1301	200	-60
KHDDH477	WHCOM_003	White Hill	592100	4877097	1305	0	-60
KHDDH474	WHCOM_004	White Hill	591900	4877496	1299	0	-60
KHDDH444	WHCOM_005	White Hill	592159	4877565	1296	205	-60
KHDDH345	WHCOM_006	White Hill	592065	4877380	1305	176	-73
KHDDH366	WHCOM_007	White Hill	591943	4877319	1309	5	-82
KHDDH226	WHCOM_008	White Hill	592041	4877274	1310	90	-50
KHDDH322	WHCOM_009	White Hill	592248	4876940	1302	0	-60
KHDDH308	WHCOM_010	White Hill	591674	4877243	1305	90	-53

Appendix 2: Statements and Disclaimers

Competent Person Statements

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.

The information in this Announcement that relates to metallurgy and metallurgical testwork has been reviewed by Graham Brock, BSc (Eng), ARSM. Mr Brock is not an employee of the Company but is employed as a contract consultant. Mr Brock is a Fellow of the Australasian Institute of Mining and Metallurgy; he has sufficient experience with the style of processing response and type of deposit under consideration, and to the activities undertaken, to qualify as a competent 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*. Mr Brock consents to the inclusion in this report of the contained technical information in the form and context as it appears.

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.

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: 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 8 December 2023.

JORC TABLE 1 - SECTION 1 - SAMPLING TECHNIQUES AND DATA

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

Criteria	Commentary
Sampling techniques	• Representative ½ core samples were split from PQ, HQ and NQ diameter diamond drill core on site using rock saws, on a routine 2m sample interval that also honours lithological/intrusive contacts. • 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. • Sample intervals are defined and subsequently checked by geologists, and sample tags are attached (stapled) to the plastic core trays for every sample interval. • Reverse Circulation (**RC**) chip samples are ¼ splits from one-meter (**1m**) intervals using a 75%:25% riffle splitter to obtain a 3kg sample • RC samples are uniform 2m samples formed from the combination of two ¼ split 1m samples.
Drilling techniques	• The Mineral Resource Estimation has been 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. • All drill core drilled by Xanadu has been oriented using the “Reflex Ace” tool.
Drill sample recovery	• Diamond drill core recoveries were assessed using the standard industry (best) practice which involves removing the core from core trays; reassembling multiple core runs in a v-rail; measuring core lengths with a tape measure, assessing recovery against core block depth measurements and recording any measured core loss for each core run. • Diamond core recoveries average 97% through mineralisation. • Overall, core quality is good, with minimal core loss. Where there is localised faulting and or fracturing core recoveries decrease, however, this is a very small percentage of the mineralised 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	• All drill core is geologically logged by well-trained geologists using a modified “Anaconda-style” logging system methodology. The Anaconda method of logging and mapping is specifically designed for porphyry Cu-Au mineral systems and is entirely appropriate to support Mineral Resource Estimation, mining and metallurgical studies. • Logging of lithology, alteration and mineralogy is intrinsically qualitative in nature. However, the logging is subsequently supported by 4 Acid ICP-MS (48 element) geochemistry and SWIR spectral mineralogy (facilitating semi-quantitative/calculated mineralogical, lithological and alteration classification) which is integrated with the logging to improve cross section interpretation and 3D geological model development. • Drill core is also systematically logged for both geotechnical features and geological structures. Where drill core has been successfully oriented, the orientation of

Criteria	Commentary
	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 the drill core has been cut.
Sub-sampling techniques and sample preparation	• All drill core samples are ½ core splits from either PQ, HQ or NQ diameter cores. A routine 2m sample interval is used, but this is varied locally to honour lithological/intrusive contacts. The minimum allowed sample length is 30cm. • Core is appropriately split (onsite) using diamond core saws with the cut line routinely located relative to the core orientation line (where present) to provide consistency of sample split selection. • The diamond saws are regularly flushed with water to minimize potential contamination. • A field duplicate ¼ core sample is collected every 30th sample to ensure the "representivity of the in-situ material collected". The performance of these field duplicates is routinely analysed as part of Xanadu's sample QC process. • Routine sample preparation and analyses of DDH samples were carried out by ALS Mongolia LLC (**ALS Mongolia**), who operates an independent sample preparation and analytical laboratory in Ulaanbaatar. • All samples were prepared to meet standard quality control procedures as follows: Crushed to 75% passing 2mm, split to 1kg, pulverised to 85% passing 200 mesh (75 microns) and split to 150g sample pulp. • ALS Mongolia Geochemistry labs quality management system is certified to ISO 9001:2008. • The sample support (sub-sample mass and comminution) is appropriate for the grainsize and Cu-Au distribution of the porphyry Cu-Au mineralization and associated host rocks. • Sample preparation at ALS Perth Labs consisted of homogenising and splitting samples "as received" into a single 150kg composite. The composite was crushed to 3.35mm, followed by rotary blending and splitting, and then 1kg grind samples were separated for head assay, size fractions and testwork.
Quality of assay data and laboratory tests	• All samples were routinely assayed by ALS Mongolia for gold. • Au is determined using a 25g fire assay fusion, cupelled to obtain a bead, and digested with Aqua Regia, followed by an atomic absorption spectroscopy (**AAS**) finish, with a lower detection (LDL) of 0.01 ppm. • All samples were also submitted to ALS Mongolia for the 48-element package ME-ICP61 using a four-acid digest (considered to be an effective total digest for the elements relevant to the Mineral Resource Estimate (**MRE**)). 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 has been managed by insertion of appropriate Standards (1:30 samples – suitable Ore Research Pty Ltd certified standards), Blanks (1:30 samples), Duplicates (1:30 samples – ¼ core duplicate) by XAM. • Assay results outside the optimal range for methods were re-analysed by appropriate methods. • Ore Research Pty Ltd certified copper and gold standards have been implemented as a part of QC procedures, as well as coarse and pulp blanks, and certified matrix matched copper-gold standards. • QC monitoring is an active and ongoing processes on batch-by-batch basis by which unacceptable results are re-assayed as soon as practicable. • Prior to 2014: Cu, Ag, Pb, Zn, As and Mo were routinely determined using a three-acid-digestion of a 0.3g sub-sample followed by an AAS finish (AAS21R) at SGS Mongolia. Samples were digested with nitric, hydrochloric and perchloric acids to

Criteria	Commentary
	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. • Assays were carried out at ALS' laboratory in, Perth. Gold and copper solid assays were determined using Fire Assay followed by AAS. Solution assays were determined using AAS.
Verification of sampling and assaying	• 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. • There have been no adjustments to any of the assay data.
Location of data points	• Diamond drill holes have been surveyed with a differential global positioning system (**DGPS**) to within 10cm accuracy. • The grid system used for the project is UTM WGS-84 Zone 48N • Historically, Eastman Kodak and Flexit electronic multi-shot downhole survey tools have been used at Kharmagtai to collect down hole azimuth and inclination information for the majority of the diamond drill holes. 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 Kharmagtai mineral system. The extent of this interference cannot be quantified on a reading-by-reading basis. • More recently (since September 2017), a north-seeking gyro has been employed by the drilling crews on site (rented and operated by the drilling contractor), providing accurate downhole orientation measurements unaffected by magnetic effects. Xanadu have a permanent calibration station setup for the gyro tool, which is routinely calibrated every 2 weeks (calibration records are maintained and were sighted) • The project Digital Terrain Model (**DTM**) is based on 1m contours from satellite imagery with an accuracy of ±0.1 m.
Data spacing and distribution	• 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 porphyry Cu-Au, tourmaline breccia and epithermal target types. • Holes have been drilled to a maximum of 1,304m vertical depth. • The data spacing and distribution is sufficient to establish geological and grade continuity, and to support the Mineral Resource classification.
Orientation of data in relation to geological structure	• Drilling is conducted in a predominantly regular grid to allow unbiased interpretation and targeting. • 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 to assist in constraining the geometry of the mineralised

Criteria	Commentary
	hydrothermal tourmaline-sulphide breccia domains.
Sample security	• Samples are delivered from the drill rig to the core shed twice daily and are never left unattended at the rig. • Samples are dispatched from site in locked boxes transported on XAM company vehicles to ALS lab in Ulaanbaatar. • Sample shipments from Ulaanbaatar to ALS' laboratory in Perth are dispatched in locked barrels and transported via air freight. • Sample shipment receipt is signed off at the Laboratory with additional email confirmation of receipt. • Samples are then stored at the lab and returned to a locked storage site.
Audits or reviews	• Internal audits of sampling techniques and data management are undertaken on a regular basis, to ensure industry best practice is employed at all times. • External reviews and audits have been conducted by the following groups: • 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. • 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. • 2018: CSA Global reviewed the entire drilling, logging, sampling, sample shipping and laboratory processes during the competent persons site visit for the 2018 MRE and found the systems and adherence to protocols to be to an appropriate standard.

JORC TABLE 1 - SECTION 2 - REPORTING OF EXPLORATION RESULTS

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

Criteria	Commentary

Mineral tenement and land tenure status	• The Project comprises two Mining Licences (MV-17129A Oyut Ulaan and (MV-17387A Kharmagtai):
	  ○ Xanadu now owns 90% of Vantage LLC, the 100% owner of the Oyut Ulaan mining licence.
	  ○ The Kharmagtai mining license MV-17387A is 100% owned by Oyut Ulaan LLC. Xanadu has an 85% interest in Mongol Metals LLC, which has a 90% interest in Oyut Ulaan LLC. The remaining 10% in Oyut Ulaan LLC is owned by Quincunx (BVI) Ltd.
	• 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	• Previous exploration at Kharmagtai was conducted by Quincunx Ltd, Ivanhoe Mines Ltd and Turquoise Hill Resources Ltd including extensive drilling, surface geochemistry, geophysics, mapping. • Previous exploration at Red Mountain (Oyut Ulaan) was conducted by Ivanhoe Mines.
Geology	• 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

Criteria	Commentary
	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 Information	• Diamond drill holes are the principal source of geological and grade data for the Project. • See figures in this ASX/TSX Announcement.
Data Aggregation methods	• The CSAMT data was converted into 2D line data using the Zonge CSAMT processing software and then converted into 3D space using a UBC inversion process. Inversion fit was acceptable, and error was generally low. • A nominal cut-off of 0.1% CuEq 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% CuEq. • A nominal cut-off of 0.1g/t AuEq is used in gold dominant systems like Golden Eagle for identification of potentially significant intercepts for reporting purposes. Higher grade cut-offs are 0.3g/t, 0.6g/t and 1g/t AuEq. • Maximum contiguous dilution within each intercept is 9m for 0.1%, 0.3%, 0.6% and 1% CuEq. • 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). 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 with a metallurgical recovery factor applied. The copper equivalent calculation used is based off the CuEq calculation defined by CSA Global in the 2018 Mineral Resource Upgrade. Copper equivalent (**CuEq**) grade values were calculated using the following formula: CuEq = Cu + Au * 0.62097 * 0.8235, Gold Equivalent (**AuEq**) grade values were calculated using the following formula: AuEq = Au + Cu / 0.62097 * 0.8235. Where: Cu - copper grade (%) 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 - $3.10/lb (or $6,834/t) ○ Gold price $1,320/oz ○ Copper recovery - 85% ○ Gold recovery - 70%

Criteria	Commentary
	○ Relative recovery of gold to copper = 70% / 85% = 82.35%.
Relationship between mineralisation on widths and intercept lengths	• 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	• See figures in the body of this ASX/TSX Announcement.
Balanced reporting	• 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	• Extensive work in this area has been done and is reported separately.
Further Work	• 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 ongoing.

JORC TABLE 1 - SECTION 3 - ESTIMATION AND REPORTING OF MINERAL RESOURCES

Mineral Resources are not reported so this is not applicable to this Announcement. Please refer to the Company's ASX Announcement dated 8 December 2023 for Xanadu's most recent reported Mineral Resource Estimate and applicable Table 1, Section 3.

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

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