XANADU MINES

Copper-Gold Mineralisation Expands at Kharmagtai

7 December 2020

Xanadu Mines Ltd (**ASX: XAM | TSX: XAM**) (**Xanadu** or the **Company**) is pleased to announce a significant expansion to mineralisation at the Company's Kharmagtai copper and gold Project, located within the South Gobi, Mongolia. Kharmagtai is an emerging copper and gold project, within the highly prospective South Gobi Desert, which the Company believes has the potential to be a globally significant, gold rich copper project.

Highlights

- Phase 1 program has completed 17,000 metres out of a 23,000 metre plan, resulting in significant expansion to the mineralised system at Kharmagtai, with ~9,800 metres of assays still pending.
- Includes drilling at the Zaraa Prospect which intersected extensive zones of anomalous copper and gold mineralisation, more than **doubling the size** of the immediate target zone.
- Also includes drilling at Stockwork Hill which has identified a potential structural repeat of mineralisation below the currently defined Mineral Resource.
- Discovery drilling nearby at the Pechko target area has also identified a large scale, potentially mineralised tourmaline breccia system.
- The Kharmagtai Mineral Resource is currently estimated to contain 1.9 million tonnes of copper and 4.3 million ounces of gold (as announced to ASX on 31 October 2018). An updated Mineral Resource Estimate is planned in H1 CY2021. An updated "Mining Options Study" is also planned.
- Increased news flow from Phase 1 drilling results expected through Q1 CY21 to support a planned Resource Update.

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Xanadu's Chief Executive Officer, Dr Andrew Stewart, said *"Kharmagtai is an emerging, globally significant, gold rich porphyry copper system. It contains large zones of relatively higher-grade mineralisation that may represent opportunities to unlock real value. Our exploration strategy remains focused on defining these higher grade zones whilst growing the Mineral Resource through extensions to known deposits such as Stockwork Hill and discovery of new deposits such as Zaraa and potentially Pechko."*

Execution – Phase 1 Underway

The Kharmagtai exploration strategy is constructed in two components, with Phase 1 designed to understand the scale of the mineralised system through extensional drilling with several large step-outs from known zones, following broad geological and geochemical trends. Phase 2 will use the outcomes from Phase 1 to design and execute a more surgical drill program to better define higher-grade zones.

Phase 1 commenced in August 2020 as a program of approximately 23,000 metre diamond core drilling. New geophysical data (see ASX/TSX announcement dated April 15, 2020) revealed that the mineral system is disrupted by a series post-mineral faults that displace higher-grade zones. The resulting structural interpretation was successfully incorporated into the Phase 1 targeting (**Figures 1 to 3**). Specific objectives were to do the following.

- Test extensions to the known mineralised envelope;
- Find new, internal high-grade zones within that envelope; and
- Test other known copper-gold mineralisation and co-incident geophysical and geochemical anomalies within the Kharmagtai Mining License.

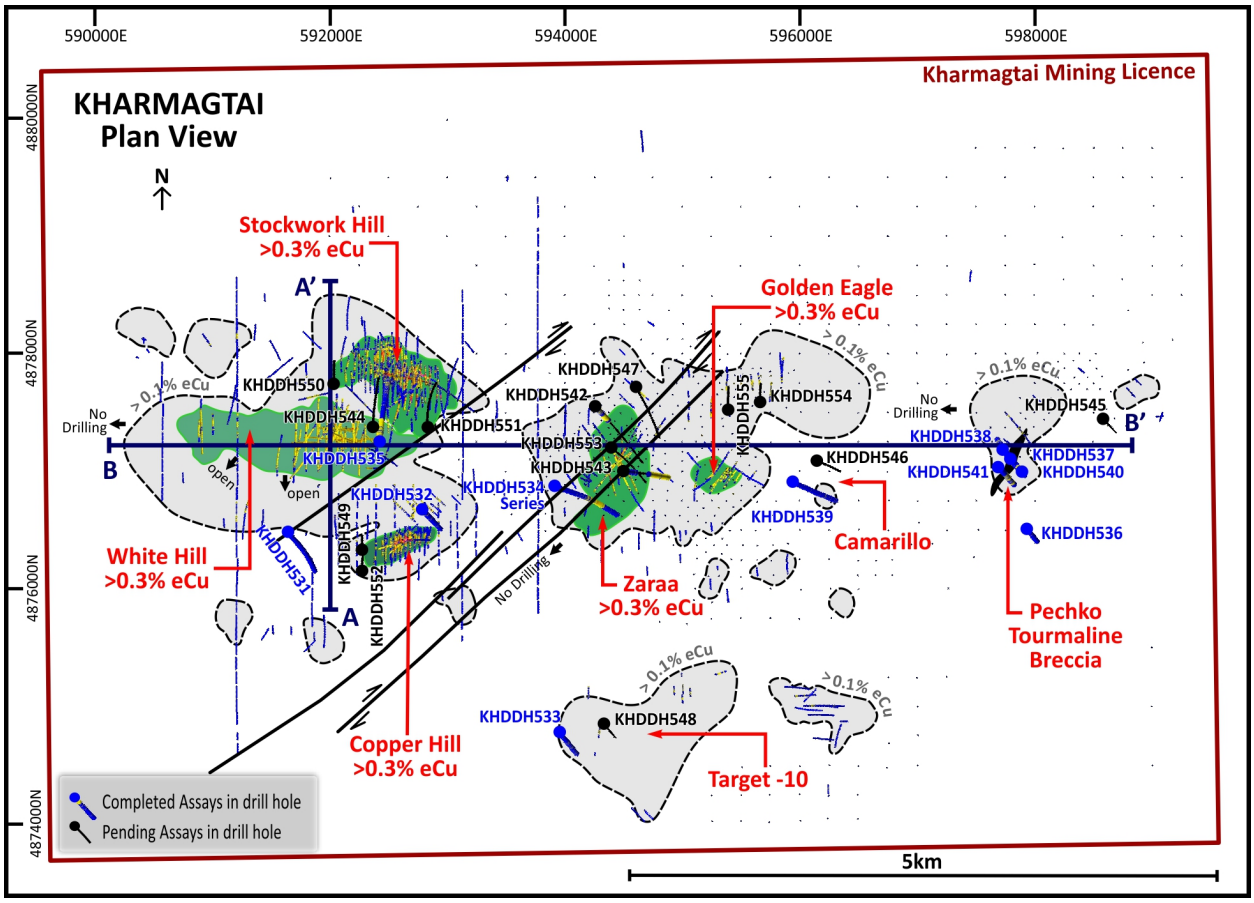

Figure 1. Kharmagtai Mining Lease Plan View with existing, current, and target drilling areas

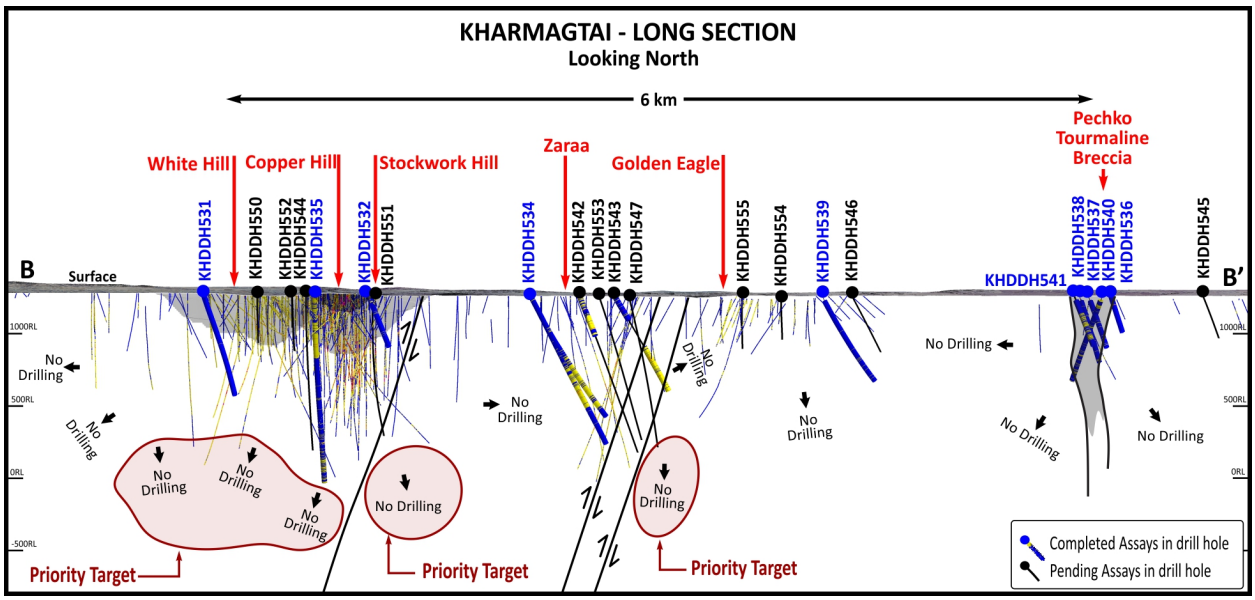

Figure 2 Kharmagtai Mining Lease Long Section with existing, current, and target drilling areas

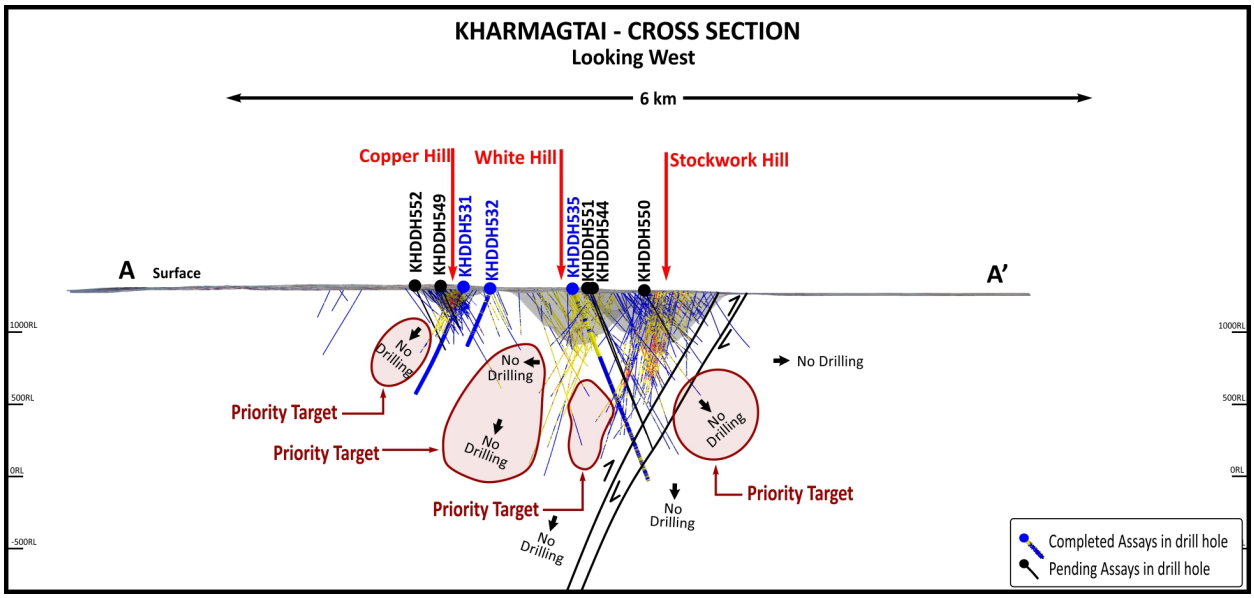

Figure 3 Long Section through Copper Hill, White Hill & Stockwork Hill showing target zones

Since August 2020, approximately 17,000 metres of the 23,000 metre Phase 1 program have been drilled (**Table 1**).

Table 1. Phase 1 Exploration Program Status

Prospect	Objective	Phase 1 Metres Planned	Metres Drilled to Date (at 3 Dec 2020)	Assays Returned	Assays Pending
Stockwork Hill, Copper Hill and White Hill	Step Out Extensions	8,000m	4,876m	1,651m	3,225m
Zaraa Prospect	Step Out Extensions, Find New High Grade Zones, Test at Depth	8,000m	6,468m	2,918m	4,475m
Pechko and Camarillo Targets	Identify New High Grade Zones	3,118m	3,118m	2,234m	794m
Other Kharmagtai Targets	Identify New High Grade Zones	3,989m	2.542m	1,211m	1,330m
Total Phase 1		23,000m	17,004m	8,014m	9,824m

Stockwork Hill

Four diamond drill holes have been drilled at Stockwork Hill totalling 4,100m. Three drill holes have targeted along strike of the higher grade bornite zone. These holes have encountered several low angle structures that have offset mineralisation and have identified the potential offset to the northern Stockwork Zone at depth. This suggests the higher-grade zone has been shifted to beneath White Hill. Geological models are being updated to incorporate these results. Assays for two holes have been returned (**Tables 2 and 3**) and assays for the remaining holes are awaited. Once these results are returned final models will be developed and additional drill planned.

Zaraa Prospect

Recent drilling at the Zaraa prospect has been designed to test the dimensions and extensions to the large, mineralised envelope as well as any internal high-grade zones. This mineralised zone is not currently included in the Kharmagtai Mineral Resource Estimate and has the potential to add significant value to the project.

The current drill program has made significant progress in these objectives, with five holes completed. Zaraa mineralisation has been expanded 200m to the south, 200m to the north and 150m to the west. New modelling of these results show that Zaraa is now 700m long, 300m wide and 650m deep and remains open along strike and at depth (**Figure 4**). This has approximately doubled the size of the Zaraa system. Assay results have been returned for KHDDH534, 534a (previously reported) and partial results for KHDDH542 and KHDDH543 (**Table 2**). Assays are pending for the remaining holes.

Detailed structural observations made during this program have provided a structural framework which indicates additional extensions may be found (**Figure 4**). When this structural framework is layered with the existing 3D IP data, a clear offset target is identified. The current drilling identified two large structures. The offset on these structures can be clearly seen in the geology and geochemistry and when the 3D Induced Polarization data is shown a significant target to expand Zaraa is observed.

Additional drilling is currently being planned for Zaraa and will target the offset IP chargeability anomaly in Figure 4 to confirm the location of the large offset zone of interpreted mineralisation.

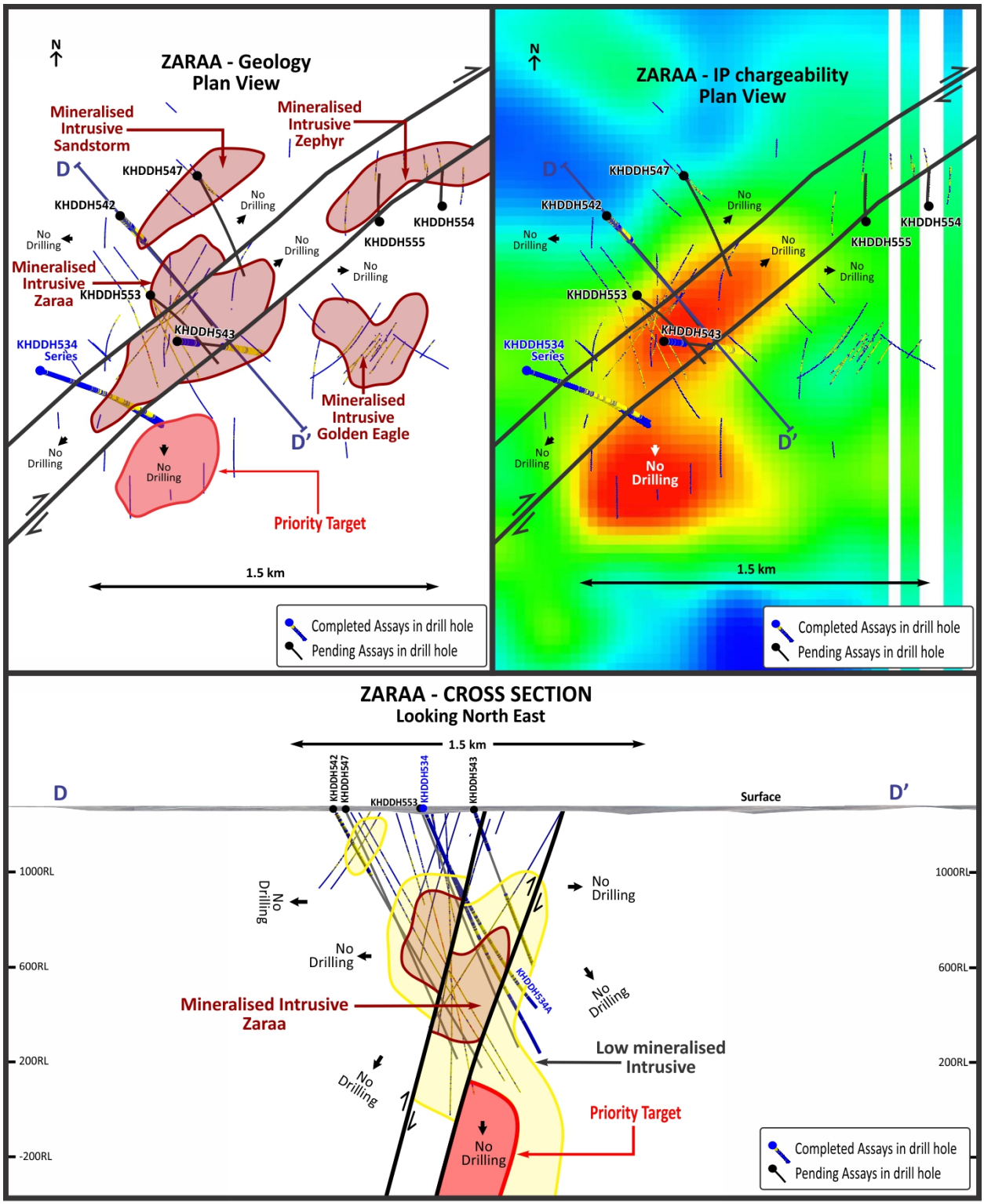

Figure 4 The Zaraa region showing Zaraa, Sandstorm, Zephyr and Golden Eagle.

Discovery Drilling

Pechko

Four diamond drill holes have been drilled at Pechko for a total of 1,900m of drilling. Drill hole KHDDH537 was collared targeting a surface geochemical and sub-surface geophysical target and encountered over 225m of sulphide bearing tourmaline breccia. A 150m step back hole KHDDH538 was drilled to test for higher grade copper beneath KHDDH537 and showed a zonation of increasing copper down plunge. A scissor hole was drilled (KHDDH540) to test the depth continuity of mineralisation. Partial assays have been returned for KHDDH537 and KHDDH538 (**Tables 2 and 3**), remaining assays are awaited. These results will be combined, and collated and geological models created to vector towards a possible higher-grade core of the tourmaline breccia system.

Camarillo

Two diamond drill holes totalling 1,700m have been collared at Camarillo targeting a new porphyry centre. Drill hole KHDDH539 encountered over 200m of porphyry style veining towards the end of the hole and represents a near miss to a porphyry system. Assay results have been returned for KHDDH539 (**Tables 2 and 3**) and assays are pending for the second drill hole KHDDH546.

Copper Hill

Two diamond drill holes totalling 770m have been collared at Copper Hill targeting offset extensions. Both holes encountered porphyry veining but only weak mineralisation. Assays are pending for both holes.

Target 10

Two diamond drill holes totalling 800m have been collared at Target 10 targeting a Copper Hill style magnetic feature associated with surface copper and gold anomalism. Both holes encountered porphyry veining but only weak mineralisation. Assays have been returned for KHDDH533 and are pending for KHDDH548 (**Tables 2 and 3**).

Geological Modelling

The drilling results are continually used to update the >0.2g/t eCu cut-off model. This indicates a there are two large clusters of mineralisation, one (western) surrounding Stockwork Hill, White Hill and Copper Hill and one (eastern) surrounding Zaraa, Sandstorm, Zephyr and Golden Eagle (**Figure 1**). The Western Cluster displays copper-gold mineralisation of over 2,000m north-south strike length, 2,000m wide and more than 800m vertically. The Eastern Cluster displays copper-gold mineralisation

of over 1,000m north-south strike length, 1,000m wide and more than 800m vertically Drilling continues to expand the footprint of Kharmagtai and remains open to the northwest, south and at depth and confirms Kharmagtai is shaping up to be a large, tier one gold-copper porphyry project.

Red Mountain

Two diamond drill holes have been started at Red Mountain in the past month totalling 193m. The program has been temporarily suspended due a small cluster of COVID-19 cases in a nearby town. Drilling is anticipated to recommence in early January 2021.

Upcoming News Flow

The Company plans to provide several drilling and operational updates over the coming weeks following strong advancement across multiple work streams at Kharmagtai, including the following:

- Drilling Program Phase 1 Results (Q1 CY21)
- Exploration Target Review and Mining Concepts Study (Q1 CY21)
- Resource Update (H1 CY21)
- Drilling Program Phase 2 Results (Q1 to Q3 CY21)
- Updated Concept Study and Gating Decision (Q4 CY21 to Q1 CY22)

COVID in Mongolia

On 11 November 2020, the Government of Mongolia announced measures to halt community transmission of COVID-19, following positive tests outside of quarantine in Ulaanbaatar. This includes an initial lockdown across the country, currently scheduled to finish on 11 December 2020.

The Government of Mongolia has taken a conservative approach to managing COVID-19, closing its borders early in the year, and to date the Mongolian economy has remained largely open. The action announced by the Government is consistent with this conservative approach.

Mining and exploration facilities have been able to continue operation through this period, however a temporary reduction in assay lab capacity in Ulaanbaatar will likely delay drilling results and news flow. The Kharmagtai operation continues its exploration activities, currently operating two diamond drill rigs. The Red Mountain exploration program is anticipated to commence in the January quarter.

Extraordinary General Meeting

Xanadu has scheduled an Extraordinary General Meeting (**EGM**) on 23 December 2020 to request shareholder approval to add a share price vesting condition to option grants for Executive Directors. Please refer to the Notice of Meeting available on the Xanadu website. These share price vesting conditions will also apply to Executives under the Employee Share Option Plan. Xanadu recognises the timing of this EGM just prior to the holiday break and encourages all shareholders to vote their proxies prior to the meeting.

About Xanadu Mines

Xanadu is an ASX and TSX listed Exploration company that discovers and defines globally significant porphyry copper-gold assets in Mongolia. We give investors exposure to large scale copper-gold discoveries and low-cost inventory growth, and we create liquidity events for shareholders at peak value points in the mining life cycle. Xanadu maintains a portfolio of exploration projects and remains one of the few junior explorers on the ASX or TSX who control an emerging Tier 1 copper-gold deposit in our flagship Kharmagtai project. For information on Xanadu visit: www.xanadumines.com.

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

Appendix 1: Drilling Results

Table 2: Recent Drill hole details (KH prefix = Kharmagtai, OU prefix = Red Mountain)

Hole ID	Prospect	East	North	RL	Azimuth (°)	Inc (°)	Depth (m)
KHDDH541	Pechko	597689	4877039	1267	140	-60	402.7
KHDDH542	Zaraa	594259	4877549	1273	135	-60	1264.2
KHDDH543	Zaraa	594500	4877000	1273	95	-60	771.2
KHDDH544	Stockwork Hill	592368	4877377	1295	0	-70	1182.7
KHDDH545	Pechko	598581	4877446	1265	140	-60	339.7
KHDDH546	Camarillo	596148	4877090	1268	115	-60	454.7
KHDDH547	Zaraa	594604	4877715	1267	150	-65	1156.2
KHDDH548	Target 10	594332	4874850	1290	140	-60	303.2
KHDDH549	Zesen Uul	592271	4876331	1311	0	-65	297.1
KHDDH550	Stockwork Hill	592032	4877741	1295	0	-60	414.7
KHDDH551	Stockwork Hill	592830	4877363	1290	0	-70	1078.5
KHDDH552	Zesen Uul	592272	4876153	1311	0	-65	477.1
KHDDH553	Zaraa	594395	4877199	1273	130	-67	1093.2
KHDDH554	Zephyr	595660	4877587	1260	0	-60	343.0
KHDDH555	Zephyr	595389	4877519	1261	0	-60	420.1
KHDDH556	Zephyr	595503	4877598	1260	0	-65	513.0
KHDDH557	Zaraa	594174	4877088	1277	130	-67	1000.0
KHDDH558	Zephyr	595846	4877566	1260	0	-65	600.0
OUDDH098	Bavuu	376100	4938900	1088	0	-75	374.7
OUDDH099	Vein 10	377250	4940400	1088	0	-75	18.0

Table 3: Kharmagtai significant drill results

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (%)	CuEq (%)	AuEq (g/t)
KHDDH541	Pechko	155	256	101	0.11	0.06	0.12	0.23
and		272	277.7	5.7	0.08	0.06	0.11	0.21
and		288	296	8	0.11	0.06	0.12	0.23
and		318	362	44	0.07	0.11	0.14	0.28
KHDDH542	Zaraa	30	54	24	0.26	0.03	0.16	0.32
including		34	38	4	0.65	0.04	0.37	0.72
and		64	75	11	0.11	0.09	0.14	0.28
and		85	107	22	0.07	0.09	0.12	0.24
and		119	131.2	12.2	0.19	0.09	0.19	0.37
and		161	285.1	124.1	0.09	0.12	0.17	0.33
including		277	285.1	8.1	0.18	0.26	0.35	0.69
and		314.6	327	12.4	0.10	0.11	0.16	0.32
			Assays pending					
KHDDH543	Zaraa	46	50	4	0.24	0.04	0.16	0.32

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (%)	CuEq (%)	AuEq (g/t)
and		166	170	4	0.09	0.11	0.15	0.30
			Assays pending					
and		427	771.2	344.2	0.09	0.15	0.19	0.37
including		502	539.2	37.2	0.17	0.23	0.32	0.62
including		551	557	6	0.13	0.22	0.29	0.56
including		646	654	8	0.16	0.25	0.33	0.64
KHDDH544	Stockwork Hill	3.7	225	221.3	0.11	0.20	0.26	0.50
including		6	10	4	0.18	0.30	0.39	0.76
including		68	80	12	0.11	0.22	0.27	0.53
including		96	102	6	0.16	0.27	0.35	0.69
including		112	146	34	0.31	0.41	0.57	1.11
including		112	136	24	0.38	0.48	0.67	1.32
including		126	134	8	0.62	0.70	1.02	1.99
			Assays pending					
KHDDH545	Pechko	67	109	42	0.07	0.08	0.12	0.23
			Assays pending					
KHDDH546	Camarillo			Assays pending				
KHDDH547	Zaraa			Assays pending				
KHDDH548	Target 10			Assays pending				
KHDDH549	Zesen Uul			Assays pending				
KHDDH550	Stockwork Hill			Assays pending				
KHDDH551	Stockwork Hill			Assays pending				
KHDDH552	Zesen Uul			Assays pending				
KHDDH553	Zaraa			Assays pending				
KHDDH554	Zephyr			Assays pending				
KHDDH555	Zephyr			Assays pending				
KHDDH556	Zephyr			Assays pending				
KHDDH557	Zaraa			Assays pending				
KHDDH558	Zephyr			Assays pending				
OUDDH098	Bavuu			Assays pending				
OUDDH099	Vein 10			Assays pending				

Appendix 2: Statements and Disclaimers

Mineral Resources and Ore Reserves Reporting Requirements

The 2012 Edition of the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* (the **JORC Code 2012**) sets out minimum standards, recommendations and guidelines for Public Reporting in Australasia of Exploration Results, Mineral Resources and Ore Reserves. The Information contained in this Announcement has been presented in accordance with the JORC Code 2012.

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.

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 (**$/t**)); Gold price = 1,320 $ per ounce (**$/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.

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 11 April 2019.

JORC TABLE 1 - SECTION 1 - SAMPLING TECHNIQUES AND DATA

Criteria	Commentary
Sampling techniques	• The CSAMT Survey at Kharmagtai was conducted by OGC LLC, an external Geophysical Contractor. • The transmitter system used was a Zonge GGT-30 transmitter and GDP-32 receiver. • Transmitter was set up +10km for the survey grid and receiver stations were spaced at 200m along oblique lines roughly perpendicular to the geological trend. Line locations and lengths can be seen in the text of the document. • The relevant QAQC was conducted to ensure measurements give a representative sample for this type of survey. • Representative 2 metre samples were taken from ½ HQ diamond core for assay. • Only assay result results from recognised, independent assay laboratories were used after QAQC was verified. • The IP Survey at Red Mountain was conducted by OGC LLC, an external Geophysical Contractor. • The IP transmitter system used was a Zonge GGT-30 transmitter and GDP-32 receiver. • Transmitter and receiver stations were spaced at 200m along north south lines. Line locations and lengths can be seen in the text of the document. • The relevant QAQC was conducted to ensure measurements give a representative sample for this type of survey.
Drilling techniques	• Diamond Drill Hole (**DDH**) drilling has been the primary drilling method. Some RC (reverse circulation) is conducted. RC holes are denoted by the KHRC prefix. Diamond Drill Holes are denoted by the KHDDH prefix.
Drill sample recovery	• DDH core recoveries have been very good, averaging between 95% and 99% for all of the deposits. In localised areas of faulting and/or fracturing the recoveries decrease; however, this is a very small percentage of the overall mineralised zones. • Recovery measurements were collected during all DDH and RC programs. The methodology used for measuring recovery is standard industry practice. • Analysis of recovery results vs. grade indicates no significant trends. Indicating bias of grades due to diminished recovery and / or wetness of samples.
Logging	• Drill and trench samples are logged for lithology, mineralisation and alteration and geotechnical aspects using a standardised logging system, including the recording of visually estimated volume percentages of major minerals. • Drill core was photographed after being logged by a geologist. • The entire interval drilled and trenched has been logged by a geologist.
Sub-sampling techniques and sample preparation	• DDH Core is cut in half with a diamond saw, following the line marked by the geologist. The rock saw is regularly flushed with fresh water. • Sample intervals are generally a constant 2m interval down-hole in length unless subdivided at geological contacts.

Criteria	Commentary
	• Routine sample preparation and analyses of DDH samples were carried out by ALS Mongolia LLC (**ALS Mongolia**), who operates an independent sample preparation and analytical laboratory in Ulaanbaatar. • All samples were prepared to meet standard quality control procedures as follows: crushed to 90% passing 3.54 mm, split to 1kg, pulverised to 90% - 95% passing 200 mesh (75 microns) and split to 150g. • Certified reference materials (**CRMs**), blanks and pulp duplicate were randomly inserted to manage the quality of data. • Sample sizes are well in excess of standard industry requirements.
Quality of assay data and laboratory tests	• 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 limit (**LDL**) of 0.01 ppm. • All samples were submitted to ALS Mongolia for the package ME-ICP61 using a four acid digest. Where copper is over-range (>1% Cu), it is analysed by a second analytical technique (Cu-OG62), which has a higher upper detection limit (**UDL**) of 5% copper. • Quality assurance was provided by introduction of known certified standards, blanks and duplicate samples on a routine basis. • Assay results outside the optimal range for methods were re-analysed by appropriate methods. • Ore Research Pty Ltd certified copper and gold standards have been implemented as a part of QA/QC procedures, as well as coarse and pulp blanks, and certified matrix matched copper-gold standards. • QAQC monitoring is an active and ongoing processes on batch by batch basis by which unacceptable results are re-assayed as soon as practicable.
Verification of sampling and assaying	• All assay data QA/QC is checked prior to loading into the Geobank data base. • The data is managed by Xanadu geologists. • The database and geological interpretation is collectively managed by Xanadu.
Location of data points	• CSAMT transmitter and receivers were located using a handheld GPS • Diamond drill holes have been surveyed with a differential global positioning system (**DGPS**) to within 10cm accuracy. • All diamond drill holes have been down hole surveyed to collect the azimuth and inclination at specific depths. Two principal types of survey method have been used over the duration of the drilling programs including Eastman Kodak and Flexit. • UTM WGS84 48N grid. • The digital terrain model (**DTM)** is based on 1m contours with an accuracy of ±0.01m.
Data spacing and distribution	• CSAMT receiver nodes were place at 200m spacings to allow a potential maximum depth penetration of 1000m. • 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.

Criteria	Commentary
	• The data spacing and distribution is sufficient to establish anomalism and targeting for both porphyry, tourmaline breccia and epithermal target types.
Orientation of data in relation to geological structure	• Drilling is conducted in a predominantly regular grid to allow unbiased interpretation and targeting. • Sample lines for the CSAMT survey were conducted roughly perpendicular to the gross geological trend
Sample security	• Samples are dispatched from site through via company employees and secure company vehicles to the Laboratories. • Samples are signed for at the Laboratory with confirmation of receipt emailed through. • Samples are then stored at the lab and returned to a locked storage site.
Audits or reviews	• CSAMT data from the survey was reviewed and audited by Barry de Wet, an external consultant. • Internal audits of sampling techniques and data management on a regular basis, to ensure industry best practice is employed at all times.

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 2 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 90% interest in Oyut Ulaan LLC. The remaining 10% in Oyut Ulaan LLC is owned by Quincunx (BVI) Ltd ("Quincunx").
	• The Mongolian Minerals Law (2006) and Mongolian Land Law (2002) govern exploration, mining and land use rights for the project.

Exploration done by other parties	• 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 scale open pit or underground bulk mining methods. The deposits at Kharmagtai are atypical in that they are associated with intermediate intrusions

Criteria	Commentary
	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% eCu is used in copper dominant systems for identification of potentially significant intercepts for reporting purposes. Higher grade cut-offs are 0.3%, 0.6% and 1% eCu. • A nominal cut-off of 0.1g/t eAu is used in gold dominant systems like 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 eAu. • Maximum contiguous dilution within each intercept is 9m for 0.1%, 0.3%, 0.6% and 1% eCu. • Most of the reported intercepts are shown in sufficient detail, including maxima and subintervals, to allow the reader to make an assessment of the balance of high and low grades in the intercept. • Informing samples have been composited to two metre lengths honouring the geological domains and adjusted where necessary to ensure that no residual sample lengths have been excluded (best fit). 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. Copper equivalent (**CuEq** or **eCu**) grade values were calculated using the following formula: eCu or CuEq = Cu + Au * 0.62097 * 0.8235, Gold Equivalent (**eAu**) grade values were calculated using the following formula: eAu = 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%)

Criteria	Commentary
	The copper equivalent formula was based on the following parameters (prices are in USD): o Copper price - 3.1 $/lb (or 6834 $/t) o Gold price - 1320 $/oz o Copper recovery - 85% o Gold recovery - 70% o 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 the report.
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 RLl) shows widths and grades potentially suitable for underground extraction. • Exploration on going.

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

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

Criteria	Commentary
Database integrity	• The database is a Geobank data base system. • Data is logged directly into an Excel spread sheet logging system with drop down field lists. • Validation checks are written into the importing program ensures all data is of high quality. • Digital assay data is obtained from the Laboratory, QAQC checked and imported • Geobank exported to Access and connected directly to the GemcomSurpac Software. • Data was validated prior to resource estimation by the reporting of basic statistics for each of the grade fields, including examination of maximum values, and visual checks of drill traces and grades on sections and plans.
Site visits	• Andrew Vigar of Mining Associates Pty Ltd visited the site from 24 and 25 October 2014.

Criteria	Commentary
	• The site visit included a field review of the exploration area, an inspection of core, sample cutting and logging procedures and discussions of geology and mineralisation with exploration geologists.
Geological interpretation	• Mineralisation resulted in the formation of comprises quartz-chalcopyrite-pyrite-magnetite stockwork veins and minor breccias. • The principle ore minerals of economic interest are chalcopyrite, bornite and gold, which occur primarily as infill within these veins. Gold is intergrown with chalcopyrite and bornite. • The ore mineralised zones at Stockwork Hill, White HIll and Copper Hill are associated with a core of quartz veins that were intensely developed in and the quartz diorite intrusive stocks and/or dykes rocks. These vein arrays can be described as stockwork, but the veins have strong developed preferred orientations. • Sulphide mineralisation is zoned from a bornite-rich core that zone outwards to chalcopyrite-rich and then outer pyritic haloes, with gold closely associated with bornite. • Drilling indicates that the supergene profile has been oxidised to depths up to 60 metres below the surface. The oxide zone comprises fracture controlled copper and iron oxides; however there is no obvious depletion or enrichment of gold in the oxide zone.
Dimensions	• Stockwork Hill comprises two main mineralised zones, northern and southern stockwork zones (SH-N and SH-S) which are approximately 100 metres apart and hosted in diorite and quartz diorite porphyries. • The SH-S is at least 550 metres long, 600 metres deep and contains strong quartz-chalcopyrite-pyrite stockwork veining and associated high grade copper-gold mineralisation. The stockwork zone widens eastward from a 20 to 70 metres wide high-grade zone in the western and central sections to a 200 metres wide medium-grade zone in the eastern most sections. Mineralisation remains open at depth and along strike to the east. • The SH-N consists of a broad halo of quartz that is 250 metres long, 150 metres wide long and at least 350 metres deep. • WH consists of a broad halo of quartz veins that is 850 metres long, 550 metres wide long and at least 500 metres deep, and forms a pipe like geometry. • CH forms a sub vertical body of stockwork approximately 350 × 100 metres by at least 200 metres and plunges to the southeast.
Estimation and modelling techniques	• The estimate Estimation Performed using Ordinary Kriging. • Variograms are reasonable along strike. • Minimum & Maximum Informing samples is 5 and 20 (1st pass), Second pass is 3 and 20. • Copper and Gold Interpreted separately on NS sections and estimated as separate domains. • Halo mineralisation defined as 0.12% Cu and 0.12g/t Au Grade. • The mineralised domains were manually digitised on cross sections defining mineralisation. Three-dimensional grade shells (wireframes) for each of the metals to be estimated were created from the sectional interpretation. Construction of the grade shells took into account prominent lithological and structural features. For copper, grade shells were constructed for each deposit at a cut-off of 0.12% and 0.3% Cu. For gold, wireframes were constructed at a

Criteria	Commentary
	threshold of 0.12g/t and 0.3 g/t. These grade shells took into account known gross geological controls in addition to broadly adhering to the above mentioned thresholds. • Cut off grades applied are copper-equivalent (CuEq) cut off values of 0.3% for appropriate for a large bulk mining open pit and 0.5% for bulk block caving underground. • A set of plans and cross-sections that displayed colour coded drill holes were plotted and inspected to ensure the proper assignment of domains to drill holes. • The faulting interpreted to have had considerable movement, for this reason, the fault surface was used to define two separate structural domains for grade estimation. • Six metre down-hole composites were chosen for statistical analysis and grade estimation of Cu and Au. Compositing was carried out downhole within the defined mineralisation halos. Composite files for individual domains were created by selecting those samples within domain wireframes, using a fix length and 50% minimum composite length. • A total of 4,428 measurements for specific gravity are recorded in the database, all of which were determined by the water immersion method. The average density of all samples is 2.74 t/m3. In detail there are some differences in density between different rock types, but since the model does not include geological domains a single pass Inverse Distance (**ID2**) interpolation was applied. • Primary grade interpolation for the two metals was by ordinary kriging of capped 6m composites. A two-pass search approach was used, whereby a cell failing to receive a grade estimate in a previous pass would be resubmitted in a subsequent and larger search pass. • The Mineral Resource Estimate meets the requirements of JORC 2012 and has been reported considering geological characteristics, grade and quantity, prospects for eventual economic extraction and location and extents. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories using relevant copper-equivalent cut-off values. • 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. • Copper equivalent (**CuEq** or **eCu**) grade values were calculated using the following formula: eCu or CuEq = Cu + Au * 0.62097 * 0.8235, Gold Equivalent (**eAu**) grade values were calculated using the following formula: eAu = 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):

Criteria	Commentary
	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%.
Moisture	• All tonnages are reported on a dry basis.
Cut-off parameters	• Cut off grades applied are copper-equivalent (**CuEq**) cut off values of 0.3% for possible open pit and 0.5% for underground.
Mining factors or assumptions	• No mining factors have been applied to the in-situ grade estimates for mining dilution or loss due to the grade control or mining process. • The deposit is amenable to large scale bulk mining. • The Mineral Resource is reported above an optimised pit shell. (Lerch Grossman algorithm), mineralisation below the pit shell is reported at a higher cut-off to reflect the increased costs associated with block cave underground mining
Metallurgical factors or assumptions	• No metallurgical factors have been applied to the in-situ grade estimates.
Environmental factors or assumptions	• An environmental baseline study was completed in 2003 by Eco Trade Co. Ltd. of Mongolia in cooperation with Sustainability Pty Ltd of Australia. The baseline study report was produced to meet the requirements for screening under the Mongolian Environmental Impact Assessment (**EIA**) Procedures administered by the Mongolian Ministry for Nature and Environment (**MNE**).
Bulk density	• A total of 4,428 measurements for specific gravity are recorded in the database, all of which were determined by the water immersion method. • The average density of all samples is approximately 2.74 t/m3. In detail there are some differences in density between different rock types, but since the model does not include geological domain, an ID2 was applied to a density attribute. • There is no material impact on global tonnages, but it should be noted that density is a function of both lithology and alteration (where intense magnetite/sulphide is present).
Classification	• The Mineral Resource classification protocols, for drilling and sampling, sample preparation and analysis, geological logging, database construction, interpolation, and estimation parameters are described in the ASX/TSX Announcement above have been used to classify the 2015 resource. • The Mineral Resource statement relates to global estimates of in situ tonnes and grade • The Mineral Resource Estimate has been classified in accordance with the JORC Code, 2012 Edition using a qualitative approach. The classifications reflect the competent person's view of the Kharmagtai Copper Gold Project.
Audits or reviews	• Xanadu's internal review and audit of the Mineral Resource Estimate consisted of data analysis and geological interpretation of individual cross-sections, comparing drill-hole data with the resource estimate block model. • Good correlation of geological and grade boundaries was observed • 2013 - Mining Associates Ltd. was engaged to conduct an Independent Technical Report to review drilling, sampling techniques, QA/QC and previous Resource estimates. Methods were found to conform to international best practice.

Criteria	Commentary
Discussion of relative accuracy/ confidence	• An approach to the resource classification was used which combined both confidence in geological continuity (domain wireframes) and statistical analysis. The level of accuracy and risk is therefore reflected in the allocation of the measured, indicated, and inferred resource categories. • Resource categories were constrained by geological understanding, data density and quality, and estimation parameters. It is expected that further work will extend this considerably. • Resources estimates have been made on a global basis and relates to in situ grades. • Confidence in the Indicated Mineral Resources is sufficient to allow application of Modifying Factors within a technical and economic study. The confidence in Inferred Mineral Resources is not sufficient to allow the results of the application of technical and economic parameters. • The deposits are not currently being mined. • There is surface evidence of historic artisanal workings. • No production data is available.

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

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