

# XANADU MINES

## New Higher Grade Zones Found in Kharmagtai Infill Drilling

07 June 2023

Xanadu Mines Ltd (ASX: XAM, TSX: XAM) (Xanadu, XAM or the Company) and its joint venture partner Zijin Mining Group Co., Ltd. (Zijin) are pleased to provide an update for the Kharmagtai Prefeasibility Study (PFS) infill drilling program underway.

### Highlights

- Approximately 15,000m of Phase One diamond drilling has been completed (out of 30,000m total) at the Kharmagtai Stockwork Hill and White Hill deposits.
- Assay results returned for thirty-one drill holes. Exceptional highlights include:
  - Several holes delivered grades materially better than current resource grades for each deposit, and
  - Newly identified higher-grade zones demonstrate potential to enhance the 2021 Mineral Resource Estimate (MRE), currently 3Mt copper and 8Moz gold (1.98Mt CuEq Indicated, 2.33Mt CuEq Inferred).<sup>1</sup>
- Updated MRE expected Q4 CY2023, expected to deliver improved grade relative to 2021 MRE and to add newly identified higher-grade zones.
- Upgrades to Kharmagtai PFS production and economics expected after incorporating the updated MRE.
- Parallel, high impact Kharmagtai discovery exploration drilling program (two rigs) progressing well. Assay results soon to be reported for shallow holes targeting new resource at five unexplored porphyry clusters.
- Kharmagtai JV is funding US\$35M PFS completion and discovery exploration, aiming towards a decision to mine in Q4 CY2024

<sup>1</sup> ASX/TSX Announcement 08 December 2021 - Kharmagtai resource grows to 1.1 billion tonnes, containing 3Mt Cu and 8Moz Au

Xanadu’s Executive Chairman and Managing Director, Mr Colin Moorhead, said “Our extensional and infill drilling program has progressed efficiently and is demonstrating results in line with or materially better than the 2021 Mineral Resource Estimate. Pleasingly we’ve intersected new high-grade zones at Stockwork Hill within the existing Resource boundary, which will undoubtedly have a positive impact on the PFS. Given we are only halfway through Phase 1, we are very excited on the drilling results to come and look forward to providing regular updates as we progress both infill and exploration drilling programs at Kharmagtai”.

## Infill Drilling Results to Date

Approximately 15,000m diamond drilling completed, as part of the 30,000m Phase One infill drilling program (Figures 1 and 2; Appendix 1). Assay results have been returned for thirty-one drill holes, with results better than, or in line with, 2021 MRE grades.

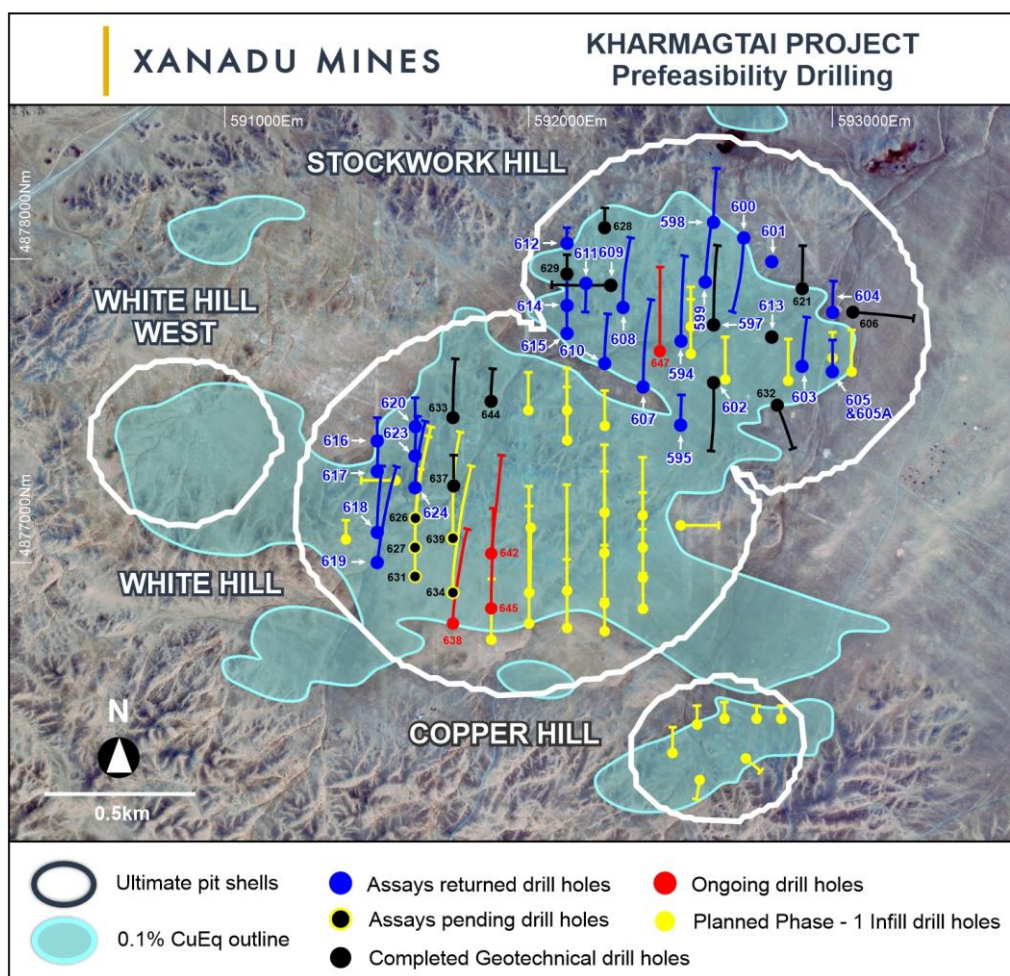


Figure 1: Kharmagtai copper-gold district showing currently defined mineral deposits and planned Phase One Resource infill drill holes.

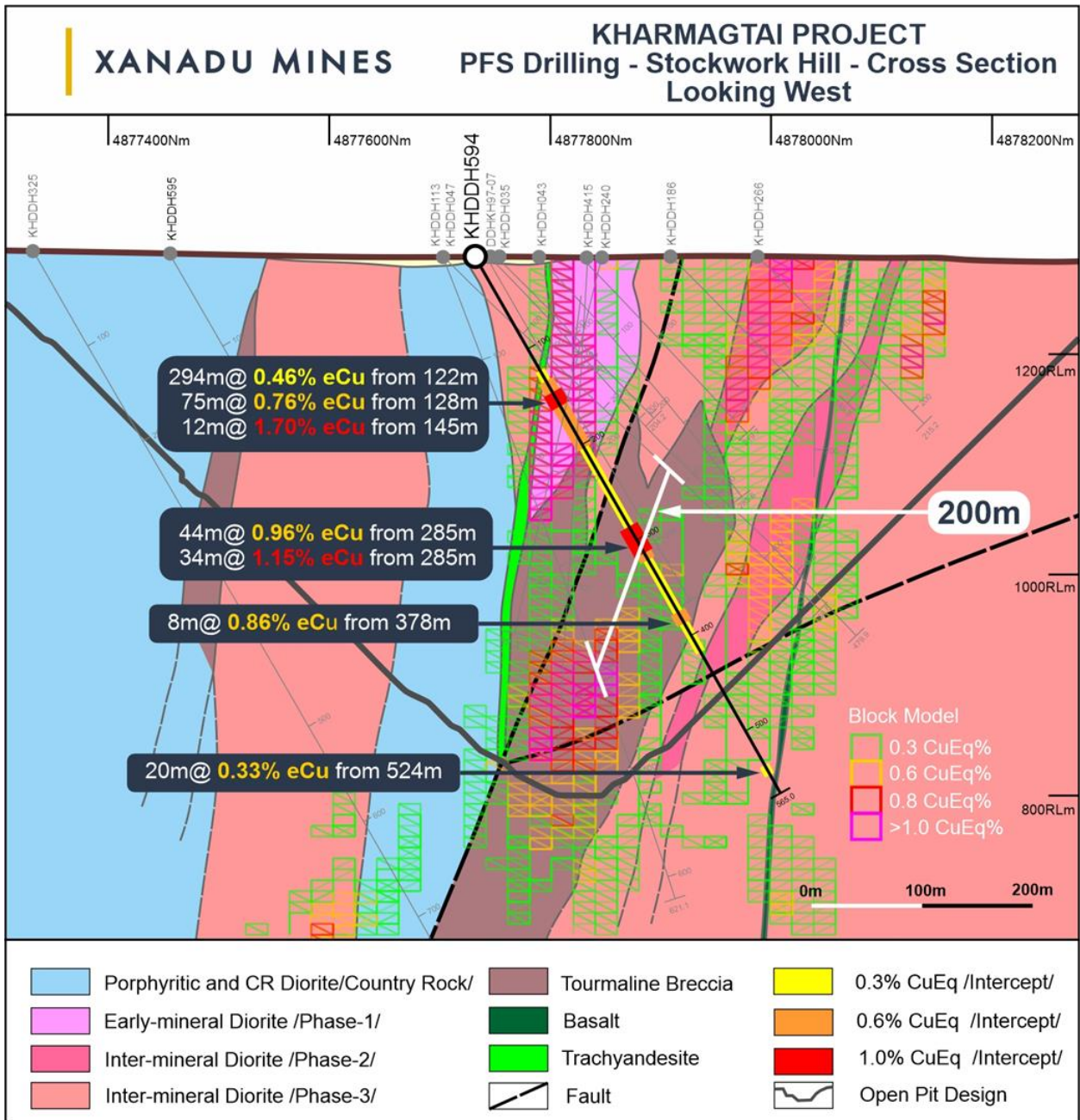


Figure 2: Cross section through the Stockwork Hill deposit showing drill hole KHDDH594.



Several holes encountered materially better grade relative to resource grade. Significant drill intersections from Stockwork Hill, include:

Hole ID	Interval (m)	Cu (%)	Au (g/t)	CuEq (%)	From (m)
KHDDH594	294	0.32	0.26	0.46	122
including	75	0.35	0.80	0.76	128
including	48	0.43	1.05	0.96	133
including	12	0.77	1.82	1.70	145
including	34	1.10	0.10	1.15	285
KDDH601	9.5	0.35	2.07	1.40	79.9
KDDH603	71	0.47	0.14	0.55	306
including	20	0.82	0.26	0.95	331
KDDH607	22	0.95	0.12	1.01	411
including	4.1	3.82	0.24	3.94	427
KDDH608	53.5	0.31	0.49	0.56	59
including	11.2	0.56	1.26	1.21	99
KDDH613	272	0.31	0.30	0.46	199
including	48	0.45	0.47	0.69	237
including	42	0.41	0.47	0.66	506
including	34	0.45	0.53	0.72	510

Significant drill intersections from White Hill, include:

Hole ID	Interval (m)	Cu (%)	Au (g/t)	CuEq (%)	From (m)
KHDDH623	44	0.27	0.16	0.35	72
KHDDH624	30	0.31	0.22	0.42	183

## Extension of Higher Grade Zones at Stockwork Hill

Significantly, drill hole KHDDH594, drilled into the central portion of Stockwork Hill, has encountered higher-grade zones of tourmaline breccia mineralisation (**Figure 2**) adding vertical extension to known higher grade zones. Principally, drilling intercepted a highly encouraging zone grading **34m @ 1.10% Cu and 0.10g/t Au (1.15% CuEq) from 285m**, significantly exceeding the 2021 MRE block model prediction for 0.3% CuEq mineralisation. This intercept is approximately 120m above the closest high-grade tourmaline breccia drilled in this area, highlighting potential for significant grade boosts relative to the existing MRE. Additional drilling is now planned to test for further extensions of these higher-grade zones and aimed for inclusion in the upcoming MRE update.



**Figure 3:** Four diamond drill rigs drilling at White Hill.

## PFS Data Acquisition

Xanadu are using cutting edge technology to acquire accurate and consistent data for the PFS. All drill core is being run through two Boxscan devices that scan the drill core to acquire ultra high-resolution imagery, laser scan topology, short-wave infrared data and magnetic susceptibility. With this dataset, advanced machine learning algorithms are logging the core for rock type, alteration, sulphide distribution (size and shape), rock quality data (RQD), vein types and densities, mineralogical composition as well as taking structural measurements. These data are being used to build the geological, geometallurgical and geotechnical domain models for input into the PFS and aimed at positioning the future Kharmagtai mine for operational readiness.

## About the Infill Drilling Program

Four diamond drill rigs are currently focussed on Kharmagtai infill drilling, with overarching objective to target areas with potential for future Mineral Resource to Ore Reserve conversion. Totalling ~30,000 metres, the infill drilling program is planned to specifically increase the Resource confidence category from Inferred to Indicated. As such, the planned drill holes aim to remove any mineralisation knowledge gaps around the edges of existing deposits.

Kharmagtai currently has an Inferred and Indicated Resource of 1.1Bt containing 3Mt Cu and 8Moz Au<sup>2</sup>. As part of the Kharmagtai PFS, the Resource will be upgraded to Indicated classification, enabling a maiden, JORC compliant Ore Reserve to be reported. To achieve this, the infill drilling program is designed to upgrade and extend strike length of the shallow open pit Resource areas and selected deeper high-grade zones (**Figure 1**), including investigation of near-mine, higher-grade extensions.

## 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](http://www.xanadumines.com) or contact:

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

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<sup>2</sup> ASX/TSX Announcement 08 December 2021 - Kharmagtai resource grows to 1.1 billion tonnes, containing 3Mt Cu and 8Moz Au

## Appendix 1: Drilling Results

Note that true widths will generally be narrower than those reported. See disclosure in JORC explanatory statement attached.

**Table 1: Drill hole collar**

Hole ID	Prospect	East	North	RL	Azimuth (°)	Inc (°)	Depth (m)
KHDDH594	Stockwork Hill	592501	4877730	1292	0	-60	565.0
KHDDH595	White Hill	592500	4877453	1294	0	-60	200.0
KHDDH597	Stockwork Hill	592609	4877783	1284	0	-60	525.0
KHDDH598	Stockwork Hill	592609	4878114	1284	0	-60	350.0
KHDDH599	Stockwork Hill	592581	4877924	1287	0	-60	411.2
KHDDH600	Stockwork Hill	592708	4878069	1283	180	-75	821.4
KHDDH601	Stockwork Hill	592800	4877990	1283	0	-90	375.0
KHDDH602	White Hill	592609	4877592	1289	180	-60	450.0
KHDDH603	Stockwork Hill	592900	4877646	1280	0	-70	475.9
KHDDH604	Stockwork Hill	593000	4877824	1282	0	-70	275.0
KHDDH605	Stockwork Hill	593000	4877629	1285	0	-60	60.0
KHDDH605A	Stockwork Hill	593000	4877629	1285	0	-70	325.0
KHDDH606	Stockwork Hill	593069	4877824	1281	90	-60	400.2
KHDDH607	Stockwork Hill	592376	4877578	1292	0	-60	600.1
KHDDH608	Stockwork Hill	592310	4877840	1291	0	-55	400.0
KHDDH609	Stockwork Hill	592270	4877913	1293	270	-60	410.0
KHDDH610	Stockwork Hill	592250	4877654	1292	0	-60	325.0
KHDDH611	Stockwork Hill	592189	4877919	1291	180	-70	275.0
KHDDH612	Stockwork Hill	592126	4878051	1291	0	-60	100.0
KHDDH613	Stockwork Hill	592800	4877742	1283	0	-90	573.6
KHDDH614	Stockwork Hill	592126	4877846	1295	0	-60	175.0
KHDDH615	Stockwork Hill	592126	4877755	1295	0	-60	200.0
KHDDH616	White Hill	591501	4877401	1304	0	-60	150.0
KHDDH617	White Hill	591501	4877300	1307	0	-60	231.0
KHDDH618	White Hill	591501	4877101	1307	0	-60	444.3
KHDDH619	White Hill	591501	4877000	1309	0	-60	634.1
KHDDH620	White Hill	591626	4877452	1303	0	-60	175.0
KHDDH621	Stockwork Hill	592900	4877901	1282	0	-70	420.7
KHDDH623	White Hill	591626	4877353	1304	0	-60	250.0
KHDDH624	White Hill	591626	4877247	1306	0	-60	423.6
KHDDH626	White Hill	591626	4877149	1306	0	-60	596.0
KHDDH627	White Hill	591626	4877051	1308	0	-60	672.8
KHDDH628	Stockwork Hill	592250	4878102	1289	0	-60	125.0
KHDDH629	Stockwork Hill	592126	4877950	1291	0	-60	125.0
KHDDH631	White Hill	591626	4876953	1310	0	-60	705.6
KHDDH632	White Hill	592819	4877517	1274	160	-60	350.0

KHDDH633	White Hill	591751	4877477	1302	0	-60	375.6
KHDDH634	White Hill	591751	4876901	1310	0	-60	826.5
KHDDH637	White Hill	591751	4877255	1303	0	-60	360.1
KHDDH644	White Hill	591876	4877532	1301	0	-60	200.0

**Table 2: Significant drill results**

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (%)	CuEq (%)	AuEq (g/t)
KHDDH594	Stockwork Hill	11	15	4	0.10	0.06	0.12	0.23
<i>and</i>		122	416	294	0.26	0.32	0.46	0.89
<i>including</i>		128	203	75	0.80	0.35	0.76	1.49
<i>including</i>		133	181	48	1.05	0.43	0.96	1.88
<i>including</i>		145	157	12	1.82	0.77	1.70	3.33
<i>including</i>		249	257	8	0.14	0.23	0.30	0.58
<i>including</i>		285	329	44	0.14	0.89	0.96	1.88
<i>including</i>		285	319	34	0.10	1.10	1.15	2.25
<i>including</i>		285	317	32	0.10	1.11	1.16	2.28
<i>including</i>		356	386	30	0.06	0.43	0.46	0.90
<i>including</i>		378	386	8	0.11	0.80	0.86	1.68
<i>including</i>		378	384	6	0.13	0.80	0.86	1.68
<i>and</i>		426	442	16	0.06	0.11	0.14	0.28
<i>and</i>		464	476	12	0.06	0.05	0.08	0.15
<i>and</i>		496	555	59	0.23	0.10	0.22	0.43
<i>including</i>		524	544	20	0.35	0.15	0.33	0.64
KHDDH595	White Hill	3	89	86	0.04	0.11	0.13	0.25
<i>and</i>		131	141	10	0.09	0.07	0.11	0.22
KHDDH597	Stockwork Hill	5	134	129	0.08	0.16	0.20	0.40
<i>including</i>		61	81	20	0.15	0.25	0.33	0.64
<i>and</i>		144	164	20	0.06	0.11	0.14	0.28
<i>and</i>		195	448	253	0.08	0.17	0.21	0.41
<i>including</i>		222	226	4	0.07	0.30	0.34	0.66
<i>including</i>		240	244	4	0.14	0.30	0.36	0.71
<i>including</i>		324	356	32	0.20	0.24	0.34	0.67
<i>including</i>		366	402	36	0.12	0.26	0.32	0.63
<i>and</i>		488	509	21	0.10	0.08	0.13	0.26
KHDDH598	Stockwork Hill	1.2	75	73.8	0.06	0.13	0.16	0.31
<i>including</i>		9	17	8	0.23	0.23	0.35	0.68
KHDDH599	Stockwork Hill	3.2	75	71.8	0.12	0.17	0.23	0.45
<i>including</i>		20	34	14	0.11	0.23	0.28	0.55
<i>including</i>		44.5	54	9.5	0.38	0.36	0.55	1.07
<i>and</i>		85	294	209	0.13	0.20	0.26	0.52
<i>including</i>		99	160	61	0.21	0.29	0.40	0.78
<i>including</i>		142	154	12	0.39	0.47	0.66	1.30
<i>including</i>		180	220	40	0.18	0.26	0.35	0.69



Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (%)	CuEq (%)	AuEq (g/t)
<i>and</i>		321	325	4	0.03	0.13	0.15	0.29
KHDDH600	Stockwork Hill	12	38	26	0.15	0.12	0.19	0.37
<i>and</i>		83	99	16	0.07	0.06	0.10	0.19
<i>and</i>		165	199	34	0.25	0.11	0.23	0.46
<i>including</i>		167	177	10	0.72	0.05	0.41	0.81
<i>including</i>		167	177	10	0.72	0.05	0.41	0.81
<i>and</i>		211	220.7	9.7	0.02	0.10	0.11	0.21
<i>and</i>		263	273	10	0.06	0.05	0.08	0.16
<i>and</i>		369	382	13	0.10	0.08	0.13	0.25
<i>and</i>		392.3	470	77.7	0.12	0.18	0.24	0.47
<i>including</i>		435.3	448	12.7	0.29	0.56	0.71	1.39
<i>including</i>		442	448	6	0.46	0.79	1.02	2.00
<i>and</i>		480	494	14	0.05	0.07	0.10	0.20
<i>and</i>		566	590	24	0.10	0.06	0.11	0.21
<i>and</i>		600	754	154	0.19	0.16	0.25	0.49
<i>including</i>		608	652	44	0.38	0.22	0.41	0.81
<i>including</i>		620	626	6	1.34	0.34	1.02	1.99
<i>including</i>		622	626	4	1.60	0.36	1.17	2.29
<i>including</i>		662	668	6	0.48	0.24	0.48	0.94
<i>including</i>		724	728	4	0.23	0.28	0.40	0.78
<i>and</i>		772	778	6	0.09	0.08	0.13	0.26
<i>and</i>		788	821.4	33.4	0.07	0.19	0.22	0.43
<i>including</i>		792	802	10	0.10	0.25	0.30	0.60
KHDDH601	Stockwork Hill	32	52	20	0.02	0.10	0.11	0.21
<i>and</i>		79.9	89.4	9.5	2.07	0.35	1.40	2.74
<i>including</i>		79.9	86	6.1	3.09	0.53	2.11	4.13
KHDDH602	White Hill	216.21	324.6	108.39	0.06	0.12	0.15	0.29
KHDDH603	Stockwork Hill	28	32	4	0.06	0.10	0.13	0.26
<i>and</i>		105	109	4	0.11	0.09	0.15	0.29
<i>and</i>		121	145	24	0.03	0.08	0.09	0.18
<i>and</i>		176.3	186	9.7	0.05	0.07	0.09	0.18
<i>and</i>		206	475.9	269.9	0.10	0.26	0.32	0.62
<i>including</i>		214	222	8	0.09	0.22	0.27	0.52
<i>including</i>		240	296	56	0.12	0.26	0.32	0.63
<i>including</i>		262	268	6	0.28	0.67	0.81	1.58
<i>including</i>		306	377	71	0.14	0.47	0.55	1.07
<i>including</i>		308	317	9	0.18	0.45	0.54	1.05
<i>including</i>		331	351	20	0.26	0.82	0.95	1.86
<i>including</i>		337	351	14	0.33	0.90	1.07	2.10
<i>including</i>		440.1	454.1	14	0.13	0.23	0.29	0.58
<i>including</i>		468	474.2	6.2	0.45	0.34	0.57	1.12
KHDDH604	Stockwork Hill	35	49	14	0.10	0.05	0.10	0.20

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (%)	CuEq (%)	AuEq (g/t)
<i>and</i>		246	250	4	0.22	0.01	0.12	0.23
KHDDH605A	Stockwork Hill	41	45	4	0.26	0.06	0.19	0.37
<i>and</i>		139.4	155	15.6	0.03	0.07	0.09	0.17
<i>and</i>		195	199	4	0.28	0.08	0.22	0.43
<i>and</i>		209	283.92	74.92	0.19	0.23	0.32	0.63
<i>including</i>		226	243.43	17.43	0.23	0.35	0.46	0.91
<i>including</i>		228	232	4	0.52	0.78	1.04	2.03
<i>including</i>		254	268	14	0.43	0.44	0.66	1.29
<i>including</i>		258	266	8	0.55	0.49	0.77	1.50
<i>including</i>		278	283.92	5.92	0.34	0.13	0.31	0.61
KHDDH607	Stockwork Hill	9	19	10	0.03	0.13	0.15	0.30
<i>and</i>		106	112	6	0.06	0.10	0.13	0.26
<i>and</i>		121.7	149	27.3	0.07	0.10	0.14	0.27
<i>and</i>		159	193	34	0.04	0.09	0.11	0.22
<i>and</i>		214.2	222	7.8	0.10	0.06	0.12	0.23
<i>and</i>		234	238	4	0.09	0.07	0.11	0.22
<i>and</i>		252	284	32	0.07	0.07	0.10	0.20
<i>and</i>		296	307	11	0.06	0.09	0.12	0.23
<i>and</i>		330.85	434.9	104.05	0.08	0.27	0.31	0.61
<i>including</i>		411	433	22	0.12	0.95	1.01	1.98
<i>including</i>		426.9	431	4.1	0.24	3.82	3.94	7.71
<i>and</i>		445	449	4	0.14	0.08	0.14	0.28
<i>and</i>		492.9	501.3	8.4	0.35	0.18	0.35	0.69
<i>including</i>		492.9	497	4.1	0.53	0.26	0.53	1.04
<i>and</i>		512	568	56	0.11	0.18	0.23	0.46
<i>including</i>		524	542	18	0.11	0.25	0.30	0.59
<i>and</i>		578	586.2	8.2	0.04	0.14	0.16	0.32
KHDDH608	Stockwork Hill	0.35	112.5	112.15	0.27	0.21	0.35	0.68
<i>including</i>		59	112.5	53.5	0.49	0.31	0.56	1.09
<i>including</i>		99	110.2	11.2	1.26	0.56	1.21	2.36
<i>and</i>		129.7	148	18.3	0.13	0.17	0.23	0.46
<i>including</i>		129.7	135.87	6.17	0.29	0.31	0.46	0.89
<i>and</i>		166	270	104	0.12	0.13	0.19	0.38
<i>including</i>		224	230	6	0.28	0.30	0.44	0.86
<i>and</i>		282	400	118	0.07	0.13	0.16	0.32
<i>including</i>		318	322	4	0.11	0.27	0.32	0.62
KHDDH609	Stockwork Hill	10	18	8	0.07	0.07	0.11	0.21
<i>and</i>		28	322	294	0.08	0.10	0.14	0.27
<i>including</i>		81	89	8	0.06	0.21	0.24	0.46
<i>including</i>		207	237	30	0.18	0.15	0.24	0.46
<i>and</i>		334	350	16	0.32	0.08	0.24	0.48
<i>including</i>		336	348	12	0.39	0.08	0.28	0.54

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (%)	CuEq (%)	AuEq (g/t)
<i>and</i>		378	394	16	0.05	0.05	0.08	0.16
KHDDH610	Stockwork Hill	3.5	46	42.5	0.06	0.10	0.13	0.25
<i>and</i>		55	88	33	0.08	0.11	0.15	0.29
<i>and</i>		204	212	8	0.07	0.07	0.10	0.20
<i>and</i>		294	325	31	0.08	0.10	0.13	0.26
KHDDH611	Stockwork Hill	3	115	112	0.10	0.09	0.14	0.28
<i>and</i>		125	137	12	0.13	0.06	0.12	0.24
<i>and</i>		171.85	214	42.15	0.07	0.09	0.12	0.23
<i>and</i>		255	275	20	0.04	0.11	0.13	0.26
KHDDH612	Stockwork Hill	8	98	90	0.10	0.13	0.18	0.36
<i>including</i>		58	68	10	0.14	0.30	0.37	0.73
KHDDH613	Stockwork Hill	17	25	8	0.19	0.12	0.22	0.43
<i>and</i>		39	111.35	72.35	0.08	0.13	0.17	0.34
<i>including</i>		70.9	87.8	16.9	0.18	0.20	0.29	0.57
<i>including</i>		97.6	106	8.4	0.14	0.26	0.33	0.64
<i>and</i>		121	495.6	374.6	0.25	0.26	0.40	0.77
<i>including</i>		141	149	8	0.14	0.18	0.25	0.49
<i>including</i>		159	180.6	21.6	0.25	0.31	0.44	0.86
<i>including</i>		199	471	272	0.30	0.31	0.46	0.90
<i>including</i>		237	285	48	0.47	0.45	0.69	1.36
<i>including</i>		409	419	10	0.57	0.56	0.85	1.66
<i>including</i>		409	413	4	0.80	0.80	1.21	2.37
<i>including</i>		441	451	10	1.14	0.37	0.96	1.87
<i>including</i>		443	451	8	1.25	0.38	1.02	1.99
<i>and</i>		506	548	42	0.47	0.41	0.66	1.28
<i>including</i>		507.6	548	40.4	0.48	0.42	0.67	1.31
<i>including</i>		510	544	34	0.53	0.45	0.72	1.41
<i>including</i>		540	544	4	1.42	1.29	2.01	3.94
KHDDH614	Stockwork Hill	2.85	39	36.15	0.09	0.09	0.14	0.27
<i>and</i>		138	174	36	0.08	0.10	0.14	0.28
KHDDH615	Stockwork Hill	2.4	16	13.6	0.08	0.06	0.10	0.20
<i>and</i>		28	173.8	145.8	0.15	0.13	0.21	0.40
<i>including</i>		46	68	22	0.30	0.18	0.33	0.65
<i>including</i>		84.1	102	17.9	0.22	0.21	0.32	0.63
KHDDH616	White Hill	25	150	125	0.08	0.13	0.17	0.33
<i>including</i>		25	38	13	0.20	0.17	0.28	0.54
KHDDH617	White Hill	0	231	231	0.08	0.15	0.19	0.37
<i>including</i>		94	112	18	0.12	0.24	0.30	0.59
<i>including</i>		144	154	10	0.13	0.20	0.26	0.52
<i>including</i>		168	172	4	0.31	0.23	0.38	0.75
KHDDH618	White Hill	67	354	287	0.07	0.17	0.20	0.39
<i>including</i>		232	275.2	43.2	0.08	0.25	0.29	0.57

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (%)	CuEq (%)	AuEq (g/t)
<i>including</i>		304	328	24	0.10	0.22	0.27	0.52
<i>including</i>		342	350	8	0.15	0.26	0.34	0.66
<i>assays pending</i>								
KHDDH619	White Hill	135	634.1	499.1	0.07	0.18	0.22	0.43
<i>including</i>		313.9	349	35.1	0.10	0.28	0.33	0.65
<i>including</i>		387	405.3	18.3	0.18	0.36	0.45	0.89
<i>including</i>		417.2	435.9	18.7	0.12	0.25	0.32	0.62
<i>including</i>		495	503	8	0.10	0.28	0.32	0.63
<i>including</i>		523.2	531	7.8	0.13	0.28	0.34	0.67
<i>including</i>		621	625	4	0.07	0.33	0.36	0.71
KHDDH620	White Hill	0.5	175	174.5	0.05	0.14	0.16	0.32
KHDDH621	White Hill	<i>assays pending</i>						
KHDDH623	White Hill	0	250	250	0.11	0.18	0.24	0.46
<i>including</i>		28	34	6	0.37	0.22	0.41	0.80
<i>including</i>		72	116	44	0.16	0.27	0.35	0.69
<i>including</i>		230	246	16	0.17	0.24	0.33	0.64
KHDDH624	White Hill	0	397	397	0.10	0.18	0.24	0.46
<i>including</i>		85	139.2	54.2	0.15	0.26	0.33	0.65
<i>including</i>		149	166.7	17.7	0.17	0.24	0.32	0.63
<i>including</i>		183	212.6	29.6	0.22	0.31	0.42	0.82
<i>including</i>		229	238.1	9.1	0.14	0.27	0.35	0.68
<i>including</i>		321.6	330	8.4	0.18	0.32	0.41	0.81
<i>including</i>		340	362.7	22.7	0.20	0.30	0.40	0.79
<i>and</i>		411	423.6	12.6	0.08	0.14	0.18	0.35
KHDDH626	White Hill	<i>assays pending</i>						
KHDDH627	White Hill	<i>assays pending</i>						
KHDDH628	Stockwork Hill	<i>assays pending</i>						
KHDDH629	Stockwork Hill	<i>assays pending</i>						
KHDDH631	White Hill	<i>assays pending</i>						
KHDDH632	White Hill	<i>assays pending</i>						
KHDDH633	White Hill	<i>assays pending</i>						
KHDDH634	White Hill	<i>assays pending</i>						
KHDDH637	White Hill	<i>assays pending</i>						
KHDDH644	White Hill	<i>assays pending</i>						

## Appendix 2: Statements and Disclaimers

### Competent Person Statement

The information in this announcement that relates to Mineral Resources is based on information compiled by Mr Robert Spiers, who is responsible for the Mineral Resource estimate. Mr Spiers is a full time Principal Geologist employed by Spiers Geological Consultants (SGC) and is a Member of the Australian Institute of Geoscientists. He 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 Qualified Person as defined in the CIM Guidelines and National Instrument 43-101 and as a Competent Person under JORC Code 2012. Mr Spiers 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 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.

### 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.

The information in this Announcement relates to the exploration results previously reported in ASX Announcements which are available on the Xanadu website at:

<https://www.xanadumines.com/site/investor-centre/asx-announcements>

The Company is not aware of any new, material information or data that is not included in those market announcements.



## Copper Equivalent Calculations

The copper equivalent (CuEq) calculation represents the total metal value for each metal, multiplied by the conversion factor, summed and expressed in equivalent copper percentage with a metallurgical recovery factor applied.

Copper equivalent (CuEq) grade values were calculated using the formula:  $CuEq = Cu + Au * 0.60049 * 0.86667$ .

Where Cu - copper grade (%); Au - gold grade (g/t); 0.60049 - conversion factor (gold to copper); 0.86667 - relative recovery of gold to copper (86.67%).

The copper equivalent formula was based on the following parameters (prices are in USD): Copper price 3.4 \$/lb; Gold price 1400 \$/oz; Copper recovery 90%; Gold recovery 78%; Relative recovery of gold to copper =  $78\% / 90\% = 86.67\%$ .

## 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](http://www.xanadumines.com).

## Appendix 2: 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 2021.

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

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

Criteria	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Representative ½ core samples were split from PQ, HQ &amp; NQ diameter diamond drill core on site using rock saws, on a routine 2m sample interval that also honours 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>Reverse Circulation (<b>RC</b>) chip samples are ¼ splits from one meter (<b>1m</b>) 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> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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.</li> <li>All drill core drilled by Xanadu has been oriented using the “Reflex Ace” tool.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Diamond core recoveries average 97% through mineralisation.</li> <li>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.</li> <li>RC recoveries are measured using whole weight of each 1m intercept measured before splitting</li> <li>Analysis of recovery results vs grade shows no significant trends that might indicate sampling bias introduced by variable recovery in fault/fracture zones.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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</li> </ul>

Criteria	Commentary
	<p>is integrated with the logging to improve cross section interpretation and 3D geological model development.</p> <ul style="list-style-type: none"> <li>• Drill core is also systematically logged for both geotechnical features and geological structures. Where drill core has been successfully oriented, the orientation of structures and geotechnical features are also routinely measured.</li> <li>• Both wet and dry core photos are taken after core has been logged and marked-up but before drill core has been cut.</li> </ul>
<p><b>Sub-sampling techniques and sample preparation</b></p>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• The diamond saws are regularly flushed with water to minimize potential contamination.</li> <li>• A field duplicate ¼ core sample is collected every 30<sup>th</sup> 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.</li> <li>• Routine sample preparation and analyses of DDH samples were carried out by ALS Mongolia LLC (<b>ALS Mongolia</b>), who operates an independent sample preparation and analytical laboratory in Ulaanbaatar.</li> <li>• All samples were prepared to meet standard quality control procedures as follows: Crushed to 75% passing 2mm, split to 1kg, pulverised to 85% passing 200 mesh (75 microns) and split to 150g sample pulp.</li> <li>• ALS Mongolia Geochemistry labs quality management system is certified to ISO 9001:2008.</li> <li>• 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.</li> </ul>
<p><b>Quality of assay data and laboratory tests</b></p>	<ul style="list-style-type: none"> <li>• All samples were routinely assayed by ALS Mongolia for gold</li> <li>• 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 (<b>AAS</b>) finish, with a lower detection (LDL) of 0.01 ppm.</li> <li>• 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 (<b>MRE</b>)). Where copper is over-range (&gt;1% Cu), it is analysed by a second analytical technique (Cu-OG62), which has a higher upper detection limit (<b>UDL</b>) of 5% copper.</li> <li>• 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.</li> <li>• Assay results outside the optimal range for methods were re-analysed by appropriate methods.</li> <li>• 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.</li> <li>• QC monitoring is an active and ongoing processes on batch by batch basis by which</li> </ul>

Criteria	Commentary
	<p>unacceptable results are re-assayed as soon as practicable.</p> <ul style="list-style-type: none"> <li>• 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 over-range (&gt;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.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• All assay data QA/QC is checked prior to loading into XAM's Geobank data base.</li> <li>• The data is managed by XAM geologists.</li> <li>• The data base and geological interpretation is managed by XAM.</li> <li>• Check assays are submitted to an umpire lab (SGS Mongolia) for duplicate analysis.</li> <li>• No twinned drill holes exist.</li> <li>• There have been no adjustments to any of the assay data.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• Diamond drill holes have been surveyed with a differential global positioning system (<b>DGPS</b>) to within 10cm accuracy.</li> <li>• The grid system used for the project is UTM WGS-84 Zone 48N</li> <li>• 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.</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 Digital Terrain Model (<b>DTM</b>) is based on 1m contours from satellite imagery with an accuracy of <math>\pm 0.1</math> m.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <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 epithermal target types.</li> <li>• Holes have been drilled to a maximum of 1,304m vertical depth.</li> <li>• The data spacing and distribution is sufficient to establish geological and grade continuity, and to support the Mineral Resource classification.</li> </ul>

Criteria	Commentary
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <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>
<b>Sample security</b>	<ul style="list-style-type: none"> <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>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <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> <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> <li>• 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.</li> </ul>

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

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

Criteria	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>• The Project comprises 2 Mining Licences (MV-17129A Oyut Ulaan and (MV-17387A Kharmagtai): <ul style="list-style-type: none"> <li>○ Xanadu now owns 90% of Vantage LLC, the 100% owner of the Oyut Ulaan mining licence.</li> <li>○ 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”).</li> </ul> </li> <li>• The <i>Mongolian Minerals Law (2006)</i> and <i>Mongolian Land Law (2002)</i> govern exploration, mining and land use rights for the project.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>• Previous exploration at Kharmagtai was conducted by Quincunx Ltd, Ivanhoe Mines Ltd and Turquoise Hill Resources Ltd including extensive drilling, surface geochemistry, geophysics, mapping.</li> <li>• Previous exploration at Red Mountain (Oyut Ulaan) was conducted by Ivanhoe Mines.</li> </ul>



Criteria	Commentary
<b>Geology</b>	<ul style="list-style-type: none"> <li>The mineralisation is characterised as porphyry copper-gold type.</li> <li>Porphyry copper-gold deposits are formed from magmatic hydrothermal fluids typically associated with felsic intrusive stocks that have deposited metals as sulphides both within the intrusive and the intruded host rocks. Quartz stockwork veining is typically associated with sulphides occurring both within the quartz veinlets and disseminated throughout the wall rock. Porphyry deposits are typically large tonnage deposits ranging from low to high grade and are generally mined by large scale open pit or underground bulk mining methods. The deposits at Kharmagtai are atypical in that they are associated with intermediate intrusions of diorite to quartz diorite composition; however, the deposits are in terms of contained gold significant, and similar gold-rich porphyry deposits.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>Diamond drill holes are the principal source of geological and grade data for the Project.</li> <li>See figures in this ASX/TSX Announcement.</li> </ul>
<b>Data Aggregation methods</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> <li>Maximum contiguous dilution within each intercept is 9m for 0.1%, 0.3%, 0.6% and 1% CuEq.</li> <li>Most of the reported intercepts are shown in sufficient detail, including maxima and subintervals, to allow the reader to make an assessment of the balance of high and low grades in the intercept.</li> <li>Informing samples have been composited to two metre lengths honouring the geological domains and adjusted where necessary to ensure that no residual sample lengths have been excluded (best fit).</li> </ul> <p>The copper equivalent (<b>CuEq</b>) 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.</p> <p>Copper equivalent (<b>CuEq</b>) grade values were calculated using the following formula:</p> $\text{CuEq} = \text{Cu} + \text{Au} * 0.62097 * 0.8235,$ <p>Gold Equivalent (<b>eAu</b>) grade values were calculated using the following formula:</p> $\text{eAu} = \text{Au} + \text{Cu} / 0.62097 * 0.8235.$ <p>Where:</p>

Criteria	Commentary
	<p>Cu - copper grade (%)</p> <p>Au - gold grade (g/t)</p> <p>0.62097 - conversion factor (gold to copper)</p> <p>0.8235 - relative recovery of gold to copper (82.35%)</p> <p>The copper equivalent formula was based on the following parameters (prices are in USD):</p> <ul style="list-style-type: none"> <li>○ Copper price - 3.1 \$/lb (or 6834 \$/t)</li> <li>○ Gold price - 1320 \$/oz</li> <li>○ Copper recovery - 85%</li> <li>○ Gold recovery - 70%</li> <li>○ Relative recovery of gold to copper = 70% / 85% = 82.35%.</li> </ul>
<b>Relationship between mineralisation on widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• Mineralised structures are variable in orientation, and therefore drill orientations have been adjusted from place to place in order to allow intersection angles as close as possible to true widths.</li> <li>• Exploration results have been reported as an interval with 'from' and 'to' stated in tables of significant economic intercepts. Tables clearly indicate that true widths will generally be narrower than those reported.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• See figures in the body of this ASX/TSX Announcement.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>• Extensive work in this area has been done and is reported separately.</li> </ul>
<b>Further Work</b>	<ul style="list-style-type: none"> <li>• The mineralisation is open at depth and along strike.</li> <li>• Current estimates are restricted to those expected to be reasonable for open pit mining. Limited drilling below this depth (-300m RLI) shows widths and grades potentially suitable for underground extraction.</li> <li>• Exploration on going.</li> </ul>

**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 1 December 2021 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.