NEW HIGH-GRADE COPPER-GOLD ZONE EMERGING AT WHITE HILL

19 July 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 on recent infill drilling at the Kharmagtai Project in Mongolia. Infill drilling has defined a new zone (core) of high-grade copper and gold mineralisation at the White Hill deposit and results continue to validate the total mineral resource model.

Highlights

- Approximately 27,000m of Phase One diamond drilling has been completed (out of 30,000m total) at both the Stockwork Hill and White Hill deposits, at Kharmagtai.
- Exceptional highlights from an additional fourteen drill holes demonstrate a new high-grade zone (core) is emerging at White Hill and extending below the currently optimised pit.
- Best drilling results include:
    - KHDDH638 – **544m @ 0.4% eCu (0.34% Cu & 0.12g/t Au) from 273.4m**

      Including **63m @ 1.03% eCu (0.92% Cu & 0.23g/t Au) from 634m**

      Including **28m @ 1.45% eCu (1.45% Cu & 0.32g/t Au) from 645m**
    - KHDDH634 – **654m @ 0.34% eCu (0.28% Cu & 0.11g/t Au) from 172m**

      Including **32m @ 0.61% eCu (0.48% Cu & 0.25g/t Au) from 512m**

      And **58m @ 0.71% eCu (0.59% Cu & 0.23g/t Au) from 617m**

      Including **8m @ 1.45% eCu (1.17% Cu & 0.50g/t Au) from 651m**
- Newly identified high-grade (>1% eCu) core at White Hill demonstrates potential to enhance the 2021 Mineral Resource Estimate MRE (3Mt copper and 8Moz gold [1.98Mt CuEq Indicated, 2.33Mt eCu Inferred]).

- Kharmagtai JV is funding US$35M PFS completion and discovery exploration, aiming towards decision to mine in Q4 CY2024

Xanadu's Executive Chairman and Managing Director, Mr Colin Moorhead, said *"I'm particularly proud of our hardworking geology team making steady progress at Kharmagtai, better defining the White Hill deposit. Both drill holes KHDDH638 and KHDDH634 have effectively intercepted the top of a previously undefined high-grade core at White Hill. Both Stockwork Hill and Copper Hill deposits feature these higher-grade zones (core), and previous drilling at White Hill has suggested such a zone may be present there also. However, this is the first time we have observed significant intervals spanning greater than 50m of mineralisation at grades greater than 1% eCu at White Hill. We see this as a very positive result, with strong potential to impact PFS pit optimisation and very encouraging for higher grade mineralisation to be uncovered at depth."*

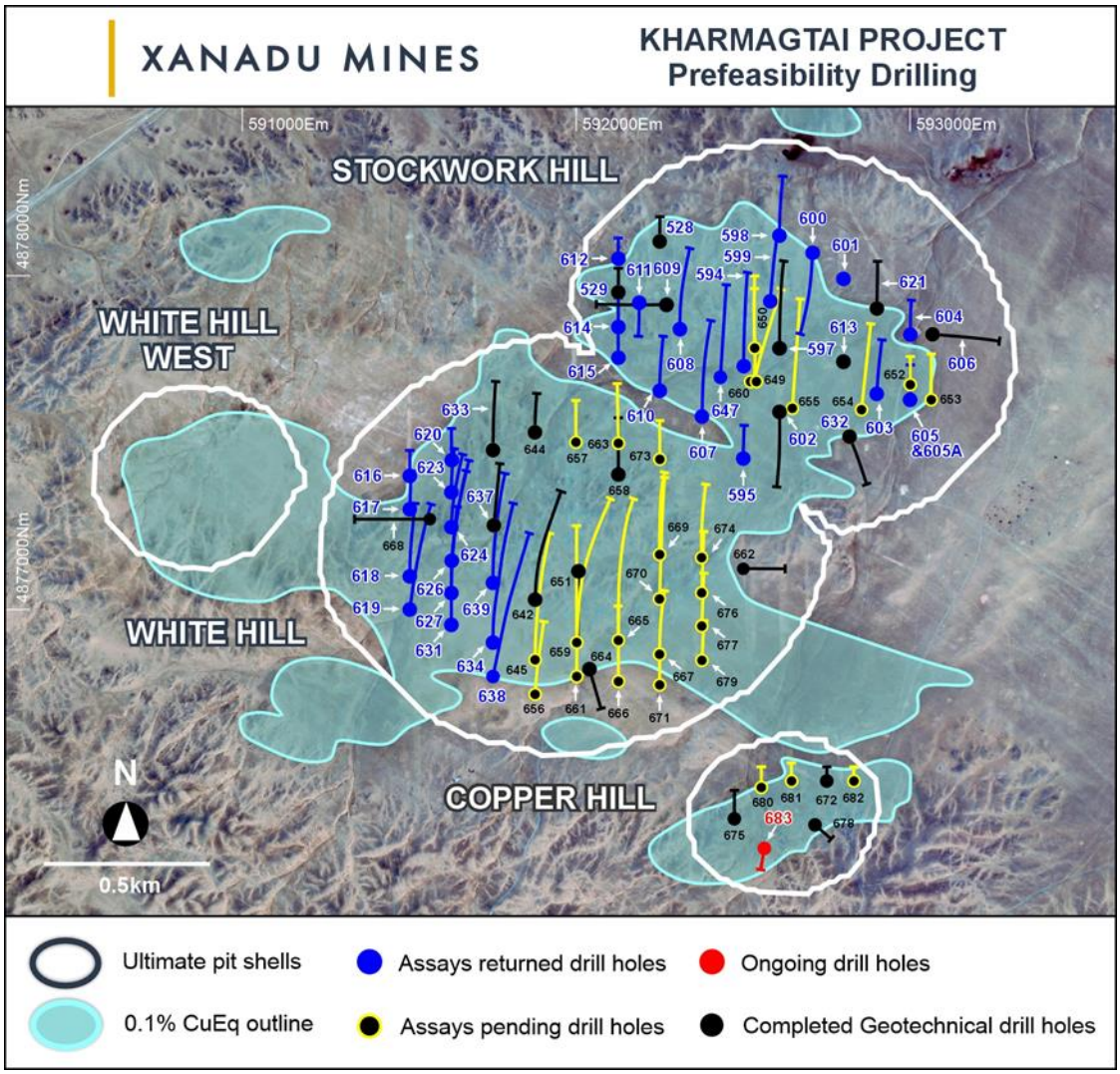

Figure 1: Kharmagtai copper-gold district showing currently defined mineral deposits and planned Phase One Resource infill drill holes.

Infill Drilling Intercepts High-Grade Core at White Hill

Approximately 27,000m of infill drilling has been completed, as part of the 30,000m Phase One infill drilling program. Assay results have been returned for fourteen additional drill holes, with results generally better than, or in line with, 2021 MRE grades (**Figures 1 and 2; Appendix 1)**.

Several drill holes have encountered materially better grade relative to the White Hill MRE resource grade. **Drill hole KHDDH638**, located on the southern margin of the White Hill deposit, targeted a mineralised and resource controlling fault, intersecting a significantly higher-grade zone of copper and gold mineralisation that is located below the current optimised pit design (**Figures 2, 3 and 4**).

Hole ID	Deposit	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (%)	eCu (%)	eAu (g/t)
KHDDH638	White Hill	203.8	208	4.2	0.02	0.11	0.12	0.24
and		273.4	817.4	544	0.12	0.34	0.40	0.79
including		360	364	4	0.12	0.28	0.34	0.67
including		422	525	103	0.16	0.32	0.40	0.78
including		541.1	588	46.9	0.12	0.27	0.33	0.65
including		**600**	**815**	**215**	**0.15**	**0.52**	**0.60**	**1.17**
including		**634**	**697**	**63**	**0.23**	**0.92**	**1.03**	**2.02**
including		**645**	**673**	**28**	**0.32**	**1.45**	**1.61**	**3.15**
including		**711**	**723**	**12**	**0.19**	**0.44**	**0.54**	**1.05**
including		**736.5**	**747.8**	**11.3**	**0.16**	**0.66**	**0.74**	**1.45**

Drill hole **KHDDH634** targeted definition and expansion of mineralisation at White Hill within the current Mineral Resource Estimate. It intersected the top of a new high-grade zone and returned the following interval along the edge and outside of the current open pit optimisation (**Figure 2**):

Hole ID	Deposit	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (%)	eCu (%)	eAu (g/t)
KHDDH634	White Hill	126	160	34	0.03	0.11	0.12	0.24
and		172	826.5	654.5	0.11	0.28	0.34	0.67
including		352	360.09	8.09	0.14	0.25	0.32	0.63
including		392	410.32	18.32	0.14	0.27	0.34	0.67
including		426	567.5	141.5	0.18	0.39	0.48	0.94
including		**494**	**502**	**8**	**0.29**	**0.63**	**0.78**	**1.53**
including		**512**	**544**	**32**	**0.25**	**0.48**	**0.61**	**1.19**
including		**556**	**567.5**	**11.5**	**0.19**	**0.54**	**0.63**	**1.24**
including		**617**	**675**	**58**	**0.23**	**0.59**	**0.71**	**1.38**
including		**651**	**659**	**8**	**0.50**	**1.17**	**1.43**	**2.79**

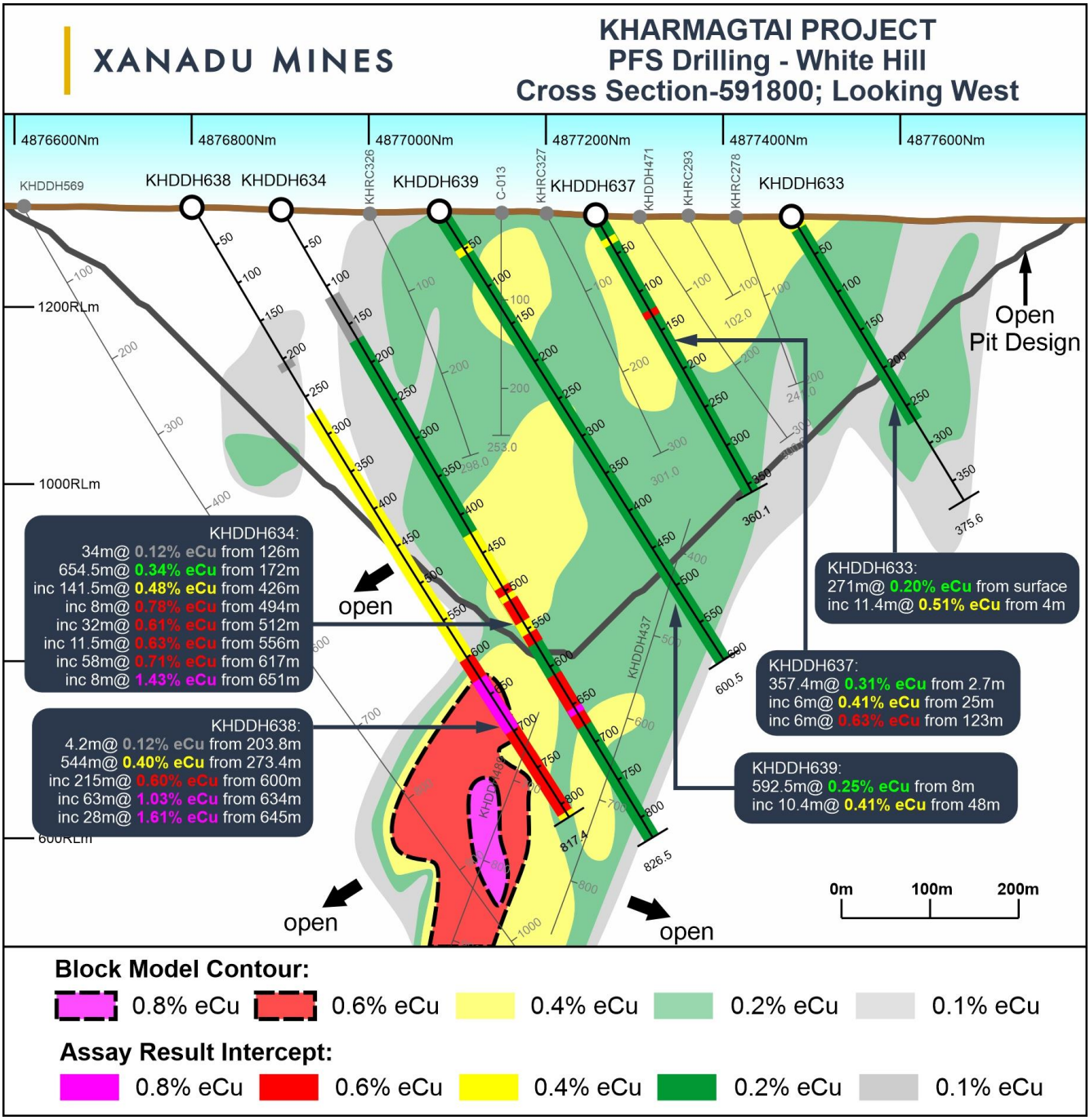

Figure 2: Cross section 591800mE through the White Hill deposit.

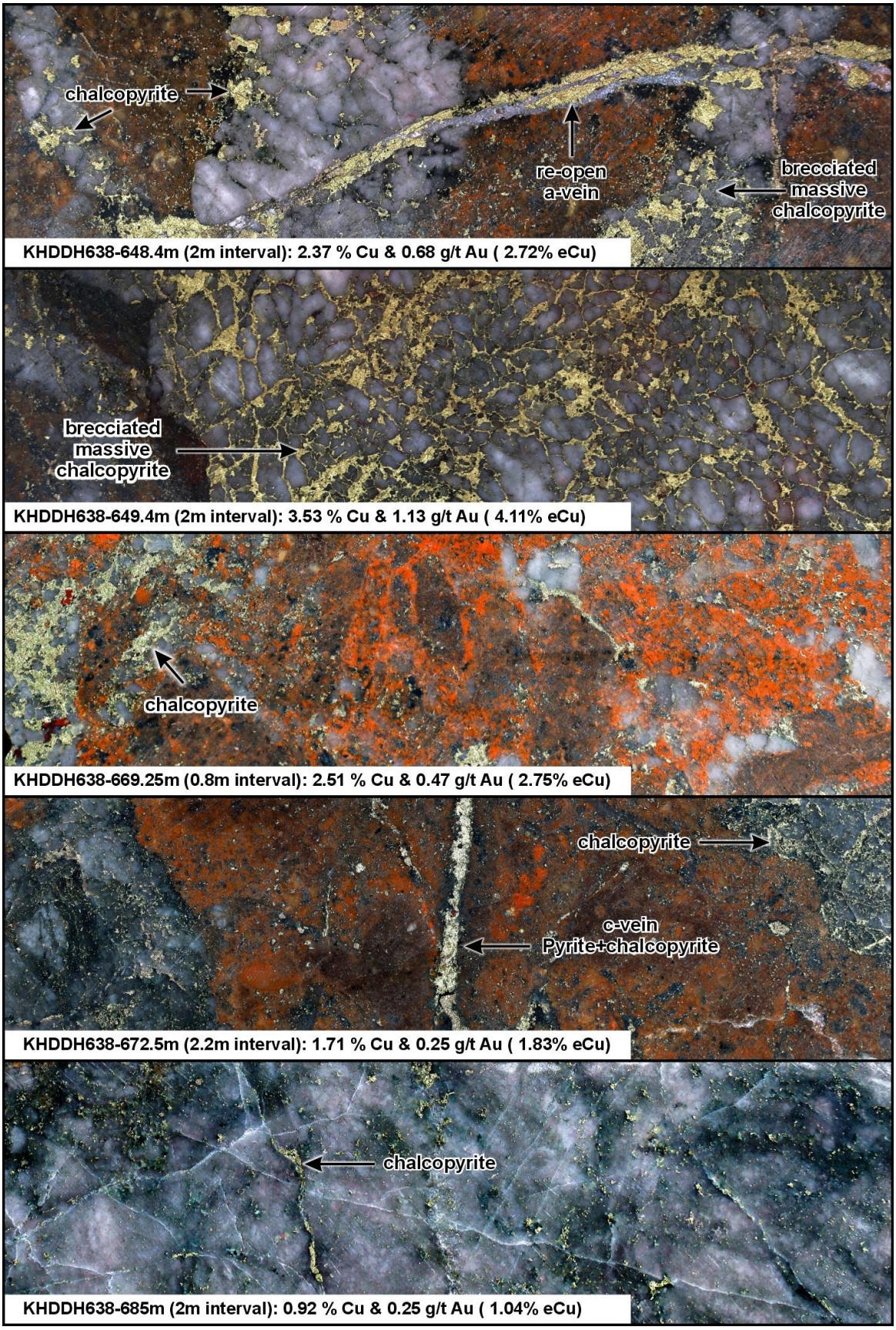

Figure 3: Core photos from KHDDH638.

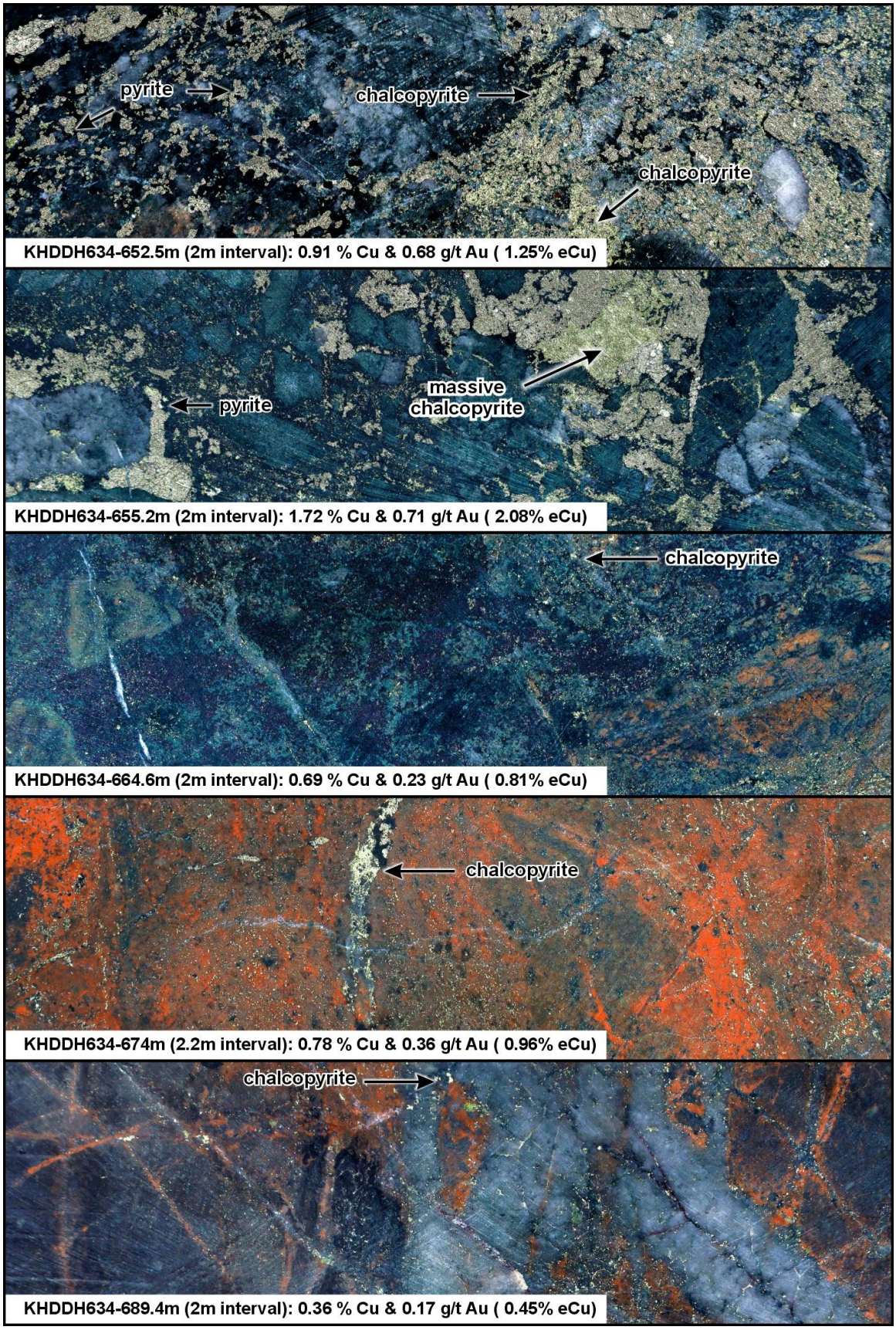

Figure 4: Core photos from KHDDH634.

About the Infill Drilling Program

Four diamond drill rigs are currently focussed on Kharmagtai infill drilling, with the 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[1]. 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** or contact:

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

[1] 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)
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
KHDDH638	White Hill	591751	4876800	1313	0	-60	817.4
KHDDH639	White Hill	591751	4877080	1307	0	-60	600.5
KHDDH642	White Hill	591877	4877030	1307	0	-60	625.0
KHDDH644	White Hill	591876	4877532	1301	0	-60	200.0
KHDDH645	White Hill	591876	4876849	1310	0	-60	715.6
KHDDH647	Stockwork Hill	592432	4877696	1289	0	-60	564.5
KHDDH649	Stockwork Hill	592535	4877686	1287	0	-60	560.0
KHDDH650	Stockwork Hill	592533	4877777	1287	0	-60	460.1
KHDDH651	White Hill	592006	4877113	1304	180	-60	415.0
KHDDH652	Stockwork Hill	593000	4877670	1284	0	-60	350.0
KHDDH653	Stockwork Hill	593063	4877630	1284	0	-60	275.0
KHDDH654	Stockwork Hill	592854	4877599	1285	0	-60	522.5
KHDDH655	Stockwork Hill	592647	4877603	1288	0	-60	735.0
KHDDH656	White Hill	591876	4876747	1311	0	-60	420.6
KHDDH657	White Hill	592000	4877501	1301	0	-60	250.4
KHDDH658	White Hill	592126	4877404	1303	0	-60	550.0
KHDDH659	White Hill	592001	4876900	1305	0	-60	721.6
KHDDH660	Stockwork Hill	592535	4877686	1287	357	-60	576.6
KHDDH661	White Hill	592001	4876800	1310	0	-60	775.0
KHDDH662	White Hill	592500	4877122	1300	90	-60	250.0
KHDDH663	White Hill	592126	4877501	1299	0	-60	305.5
KHDDH664	White Hill	592039	4876821	1307	170	-70	350.0
KHDDH665	White Hill	592126	4876908	1303	0	-60	700.0
KHDDH666	White Hill	592126	4876785	1307	0	-60	473.6
KHDDH667	White Hill	592250	4876867	1304	0	-65	450.0

KHDDH668	White Hill	591561	4877271	1309	270	-60	225.0
KHDDH669	White Hill	592250	4877166	1301	0	-65	525.0
KHDDH670	White Hill	592250	4877036	1301	0	-65	625.0

Table 2: Significant drill results

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (%)	CuEq (%)	AuEq (g/t)
KHDDH624	White Hill	0	397	397	0.10	0.18	0.24	0.46
including		85	139.2	54.2	0.15	0.26	0.33	0.65
including		149	166.7	17.7	0.17	0.24	0.32	0.63
including		183	212.6	29.6	0.22	0.31	0.42	0.82
including		229	238.1	9.1	0.14	0.27	0.35	0.68
including		321.6	330	8.4	0.18	0.32	0.41	0.81
including		340	362.7	22.7	0.20	0.30	0.40	0.79
and		411	423.6	12.6	0.08	0.14	0.18	0.35
KHDDH626	White Hill	3	596	593	0.14	0.25	0.32	0.63
including		119	241	122	0.16	0.30	0.38	0.75
including		256.9	400	143.1	0.17	0.28	0.37	0.72
including		364	370	6	0.23	0.43	0.55	1.07
including		412	501.98	89.98	0.16	0.25	0.33	0.64
including		512	596	84	0.18	0.32	0.41	0.80
KHDDH627	White Hill	13	672.8	659.8	0.11	0.21	0.26	0.52
including		37	42.7	5.7	0.12	0.38	0.45	0.87
including		65	71	6	0.06	0.25	0.28	0.54
including		201	222	21	0.12	0.25	0.31	0.60
including		232	294.6	62.6	0.23	0.43	0.55	1.07
including		246	272	26	0.29	0.57	0.71	1.40
including		331	337	6	0.16	0.26	0.34	0.67
including		347	376	29	0.17	0.27	0.36	0.70
including		426	464	38	0.15	0.26	0.34	0.66
including		523	546	23	0.13	0.21	0.27	0.53
including		577	599	22	0.12	0.23	0.29	0.58
including		629	645.4	16.4	0.13	0.27	0.33	0.65
including		663	667	4	0.16	0.30	0.38	0.73
KHDDH628	Stockwork Hill	10	22	12	0.67	0.06	0.40	0.79
including		10	18	8	0.93	0.07	0.55	1.07
and		32	50	18	0.15	0.03	0.10	0.20
KHDDH629	Stockwork Hill	3.3	125	121.7	0.07	0.14	0.17	0.34
including		3.3	13	9.7	0.18	0.14	0.24	0.47
including		49	53	4	0.16	0.44	0.51	1.01

including		111	121	10	0.09	0.29	0.34	0.66
KHDDH631	White Hill	97	705.6	608.6	0.09	0.20	0.24	0.48
including		270.9	281	10.1	0.15	0.38	0.46	0.90
including		339	407.5	68.5	0.13	0.28	0.35	0.68
including		357	361	4	0.22	0.66	0.77	1.51
including		432.4	516.4	84	0.14	0.26	0.33	0.64
including		527	544.6	17.6	0.12	0.28	0.34	0.66
including		554.8	575	20.2	0.12	0.24	0.30	0.59
including		609	613	4	0.19	0.36	0.45	0.88
including		639	655	16	0.13	0.30	0.36	0.71
including		669	673	4	0.11	0.26	0.32	0.62
including		685	705.6	20.6	0.12	0.31	0.37	0.72
KHDDH632	White Hill	255	259	4	0.06	0.27	0.30	0.58
KHDDH633	White Hill	0	271	271	0.08	0.16	0.20	0.39
including		4	15.4	11.4	0.26	0.38	0.51	1.00
including		4	13	9	0.25	0.37	0.50	0.98
including		35	68	33	0.11	0.24	0.29	0.57
including		88	98.5	10.5	0.07	0.24	0.27	0.54
and		283.3	321	37.7	0.03	0.09	0.11	0.21
and		333	375.6	42.6	0.04	0.09	0.11	0.21
KHDDH634	White Hill	126	160	34	0.03	0.11	0.12	0.24
and		172	826.5	654.5	0.11	0.28	0.34	0.67
including		352	360.09	8.09	0.14	0.25	0.32	0.63
including		392	410.32	18.32	0.14	0.27	0.34	0.67
including		426	567.5	141.5	0.18	0.39	0.48	0.94
including		494	502	8	0.29	0.63	0.78	1.53
including		512	544	32	0.25	0.48	0.61	1.19
including		556	567.5	11.5	0.19	0.54	0.63	1.24
including		617	675	58	0.23	0.59	0.71	1.38
including		651	659	8	0.50	1.17	1.43	2.79
KHDDH637	White Hill	2.7	360.1	357.4	0.13	0.24	0.31	0.61
including		25	31	6	0.20	0.31	0.41	0.80
including		42	186	144	0.15	0.30	0.38	0.74
including		123	129	6	0.33	0.46	0.63	1.23
including		222.6	359	136.4	0.14	0.25	0.32	0.62
KHDDH638	White Hill	203.8	208	4.2	0.02	0.11	0.12	0.24
and		273.4	817.4	544	0.12	0.34	0.40	0.79
including		360	364	4	0.12	0.28	0.34	0.67
including		422	525	103	0.16	0.32	0.40	0.78
including		541.1	588	46.9	0.12	0.27	0.33	0.65
including		600	815	215	0.15	0.52	0.60	1.17
including		634	697	63	0.23	0.92	1.03	2.02
including		645	673	28	0.32	1.45	1.61	3.15

including		711	723	12	0.19	0.44	0.54	1.05
including		736.5	747.8	11.3	0.16	0.66	0.74	1.45
KHDDH639	White Hill	8	600.5	592.5	0.09	0.20	0.25	0.49
including		30	36	6	0.12	0.33	0.39	0.77
including		48	58.4	10.4	0.16	0.33	0.41	0.81
including		72.4	94	21.6	0.15	0.21	0.29	0.56
including		168	177.4	9.4	0.11	0.24	0.30	0.58
including		195.7	304	108.3	0.13	0.29	0.36	0.71
including		314.4	354	39.6	0.10	0.23	0.29	0.56
including		480.7	487.2	6.5	0.13	0.25	0.32	0.62
including		497	511	14	0.14	0.25	0.33	0.64
including		558	599	41	0.12	0.26	0.32	0.62
KHDDH645	White Hill	75	79	4	0.09	0.06	0.11	0.21
and		153.8	171	17.2	0.04	0.09	0.11	0.21
and		180.6	279	98.4	0.05	0.16	0.19	0.37
and		313	715.6	402.6	0.14	0.32	0.40	0.77
including		337	580	243	0.15	0.32	0.40	0.78
including		512	536	24	0.21	0.57	0.68	1.33
including		592	658	66	0.19	0.45	0.55	1.07
including		609	615.1	6.1	0.26	0.53	0.67	1.31
including		625	658	33	0.23	0.54	0.66	1.28
including		668.3	706	37.7	0.14	0.37	0.44	0.86
including		668.3	682	13.7	0.24	0.54	0.66	1.29
				Assays pending				
KHDDH647	Stockwork Hill	5	21	16	0.18	0.05	0.15	0.28
and		94	104	10	0.11	0.07	0.13	0.25
and		142	164	22	0.08	0.07	0.11	0.22
and		174	211	37	0.18	0.15	0.24	0.46
including		184	211	27	0.20	0.16	0.26	0.52
and		258	367	109	0.12	0.25	0.31	0.61
including		258	278	20	0.23	0.43	0.55	1.07
including		258	274	16	0.24	0.47	0.59	1.16
including		290	304	14	0.12	0.21	0.28	0.54
including		317	332	15	0.12	0.33	0.39	0.76
including		349	363	14	0.15	0.25	0.33	0.65
and		381	389	8	0.04	0.20	0.22	0.44
and		403	409	6	0.07	0.16	0.20	0.38
and		423	435	12	0.09	0.12	0.17	0.33
and		467	560	93	0.23	0.12	0.23	0.46
including		471	485.7	14.7	0.19	0.18	0.28	0.55
including		534	546	12	1.04	0.17	0.70	1.38
KHDDH649	Stockwork Hill				*Assays pending*			
KHDDH650	Stockwork Hill				*Assays pending*			

KHDDH651	White Hill	*Assays pending*
KHDDH652	Stockwork Hill	*Assays pending*
KHDDH653	Stockwork Hill	*Assays pending*
KHDDH654	Stockwork Hill	*Assays pending*
KHDDH655	Stockwork Hill	*Assays pending*
KHDDH656	White Hill	*Assays pending*
KHDDH657	White Hill	*Assays pending*
KHDDH658	White Hill	*Assays pending*
KHDDH659	White Hill	*Assays pending*
KHDDH660	Stockwork Hill	*Assays pending*
KHDDH661	White Hill	*Assays pending*
KHDDH662	White Hill	*Assays pending*
KHDDH663	White Hill	*Assays pending*
KHDDH664	White Hill	*Assays pending*
KHDDH665	White Hill	*Assays pending*
KHDDH666	White Hill	*Assays pending*
KHDDH667	White Hill	*Assays pending*
KHDDH668	White Hill	*Assays pending*
KHDDH669	White Hill	*Assays pending*
KHDDH670	White Hill	*Assays pending*

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.**

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
Sampling techniques	• Representative ½ core samples were split from PQ, HQ & 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

Criteria	Commentary
	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 structures and geotechnical features are also routinely measured. • Both wet and dry core photos are taken after core has been logged and marked-up but before drill core has been cut.
Sub-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.
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

Criteria	Commentary
	unacceptable results are re-assayed as soon as practicable. • Prior to 2014: Cu, Ag, Pb, Zn, As and Mo were routinely determined using a three-acid-digestion of a 0.3g sub-sample followed by an AAS finish (AAS21R) at SGS Mongolia. Samples were digested with nitric, hydrochloric and perchloric acids to dryness before leaching with hydrochloric acid to dissolve soluble salts and made to 15ml volume with distilled water. The LDL for copper using this technique was 2ppm. Where copper was over-range (>1% Cu), it was analysed by a second analytical technique (AAS22S), which has a higher upper detection limit (UDL) of 5% copper. Gold analysis method was essentially unchanged.
Verification of sampling 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.

Criteria	Commentary
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 in particular to assist in constraining the geometry of the mineralised 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 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 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.

Criteria	Commentary
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 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 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% 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 (**eAu**) grade values were calculated using the following formula: eAu = Au + Cu / 0.62097 * 0.8235. Where:

Criteria	Commentary
	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 - 3.1 $/lb (or 6834 $/t) ○ Gold price - 1320 $/oz ○ Copper recovery - 85% ○ Gold recovery - 70% ○ Relative recovery of gold to copper = 70% / 85% = 82.35%.
Relationship between mineralisation on widths and intercept lengths	• 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 on going.

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.