MULTIPLE NEW BREAKTHROUGH ACHIEVEMENTS FOR KHARMAGTAI DISCOVERY DRILLING

16 November 2023

Xanadu Mines Ltd (ASX: XAM, TSX: XAM) (Xanadu, XAM or the Company) is pleased to provide an update on deep and shallow exploration drilling currently underway at the Kharmagtai Project in Mongolia, being undertaken with the Company's joint venture partner Zijin Mining Group Co., Ltd. (Zijin). Xanadu's experienced exploration team is currently operating three (3) diamond drill rigs which are focused on delivering new discoveries outside the current Mineral Resource Estimate (**MRE**) at the Kharmagtai copper and gold project.

Highlights

- New discovery drilling intersects mineralisation across multiple largely unexplored porphyry clusters, including high-density stockwork, breccia and gold only mineralisation.
- The first of four planned deep diamond drillholes targeting mineralisation below White Hill, the largest deposit delineated to date at Kharmagtai, expands the mineralised system by over 600m;
  - **KHDDH648 – 1080m at 0.21% eCu from 491m.**
- Shallow drilling at **Cluster 2** extends mineralisation 800m along strike from the current MRE limit. Given proximity to the high-grade Stockwork Hill deposit it could represent a mineralised porphyry stockwork offset.
  - **KHDDH786 - 144m at 0.34% eCu from 117m;**
    - **Including 12m @ 0.63% eCu from 144m, and**
    - **Including 12.3m @ 0.54% eCu from 168m.**
- Multiple new broad zones of gold-rich tourmaline breccia mineralisation delivered over a 2km strike, at **Cluster 5**.
- Extensive discovery drilling continues with regular news flow to continue throughout 2023, focussed on extensions to known deposits and new porphyry copper gold systems.

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Xanadu's Executive Vice President Exploration, Dr Andrew Stewart, said *"Following the completion of more than 52,000 metres of infill and extensional drilling at Kharmagtai, our focus has shifted to the very exciting deep and shallow discovery drilling; aimed at making new economic discoveries outside the current MRE. Following successful delivery of higher-grade mineralisation from the infill and extensional drilling program, this purposeful program represents our most significant exploration pursuit in recent years.*

The first of four currently planned deep drill holes, KHDDH648 intercepted an impressive (>1km) porphyry zone, expanding the White Hill mineralised system more than 600m down dip. Importantly this hole has provided important vectors required to target higher-grade mineralisation at depth; 3D geological modelling is underway to refine these vectors, in anticipation for high priority drilling.

These deep drill holes could prove to be a major Kharmagtai value driver; as they are designed to test for high-grade, large-scale systems at depth as seen at the nearby Olu Tolgoi Mine.

Discovery of shallow, broad intercepts of mineralisation along strike from the Stockwork Hill deposit is also very encouraging with drill hole KHDDH786 intersecting a strong and wide (144m) mineralised zone approximately 800m west of Stockwork Hill. Importantly this intercept includes a coherent zone of greater than 0.6% eCu, providing optimism towards discovering another high-grade deposit similar to Copper Hill and Stockwork Hill.

The good strike rate of significant intercepts in these holes provides us confidence that more shallow, high-grade deposits will be discovered at Kharmagtai. As drilling progresses, we look forward to providing additional updates advancing our important exploration activities at our flagship Kharmagtai Project.

About the Shallow Exploration Drilling

Shallow exploration drilling at Kharmagtai is targeting additional porphyry copper-gold deposits outside the currently defined MRE. This programme also serves to inform future infrastructure location decisions associated with the potential development of the Kharmagtai Project into a large-scale mining operation.

An additional 9,000m of diamond drilling has been conducted in forty-one shallow (200m) diamond drill holes since the last update (*ASX/TSX Press Release "Shallow Drilling Confirms Kharmagtai Discovery Potential, 5th July 2023)* **(Figure 1, Tables 1 and 2)**. Twenty-four of the forty-one new drill holes have returned significant intercepts, with two holes assays pending.

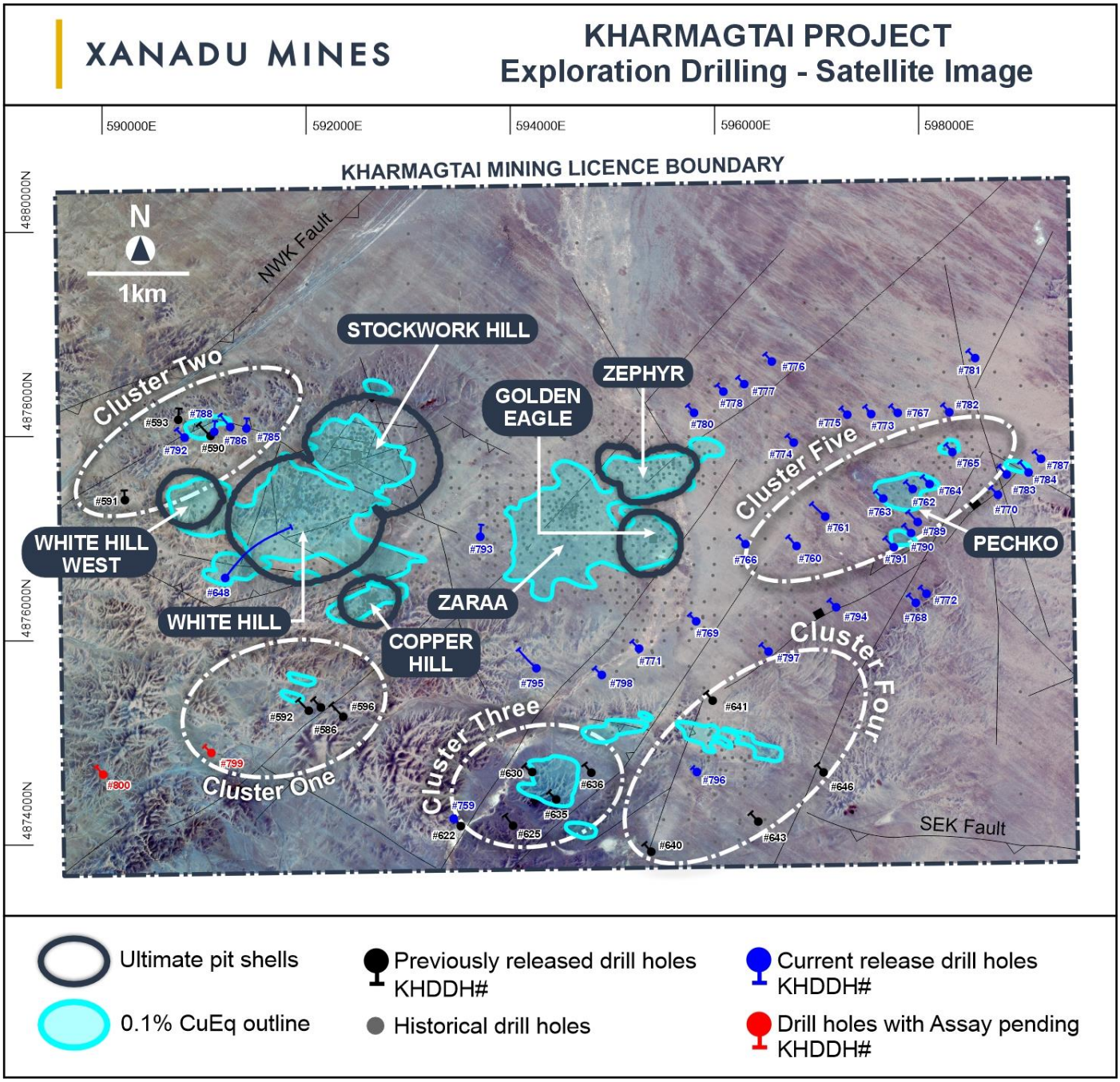

Figure 1: Kharmagtai copper-gold district showing currently defined mineral deposits and planned and completed shallow exploration drill holes. Grey outlines are 2021 scoping study open pit designs and white dashed outlines define porphyry cluster target areas.

Table 1: Geological characteristics of the five copper-gold and gold clusters.

Cluster	Style	Size	Depth	Host	Max Copper from drilling	Max Gold from drilling	Comments
Cluster One	Porphyry Stockwork	1.5km by 1km	Outcrop	Diorite intrusive in siltstone	**2m @ 0.35% Cu**	**2m @ 0.74g/t Au**	Outcropping high-density sheeted porphyry veining with malachite staining.
Cluster Two	Porphyry Stockwork and Epithermal Gold	2km by 1km	Outcrop	Diorite intrusive in sandstone	**2m @ 0.85% Cu**	**2m @ 4.17g/t Au**	Outcropping high-density sheeted porphyry veining with malachite staining.
Cluster Three	Porphyry Stockwork and Tourmaline Breccia	1.5km by 1.5km	Outcrop	Diorite intrusive in siltstone	**1.95m @ 5.38% Cu and 1.15m @ 5.59% Cu**	**2m @ 1.06g/t Au**	Outcropping porphyry veining and tourmaline breccia with malachite staining.
Cluster Four	Porphyry Stockwork and Tourmaline Breccia	3km by 2km	10m of cover	Diorite intrusive in siltstone	**2m @ 0.69% Cu**	**2m @ 1.06g/t Au**	Previous broad intercepts of porphyry mineralisation
Cluster Five	Porphyry Stockwork and Tourmaline Breccia	3km by 2km	Between 5 and 20m of cover	Diorite Intrusive	**2m @0.72% Cu**	**2m @ 1.1g/t Au**	Porphyry veining and tourmaline breccia related mineralisation

New Shallow Drilling Results

Drilling at **Cluster Two** (**Figure 1, 2 and 3**) targeted previous shallow porphyry stockwork mineralisation and was prioritised given the area is adjacent to existing planned open pits and planned infrastructure. Drill hole **KHDDH786** targeted a previous porphyry intercept **(Figure 3)** and encountered a broad zone of porphyry mineralisation above the Resource cut-off grade, including a cohesive zone greater than 0.6% eCu mineralisation. Result is significant as it may represent the faulted offset of Stockwork Hill. More drilling is planned to expand this exciting new target.

Significant Intercepts KHDDH786

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (%)	eCu (%)	eAu (g/t)
KHDDH786	Exploration	41	45	4	0.64	0.01	0.34	0.66
and		79	87	8	0.24	0.00	0.13	0.25
and		**117**	**261**	**144**	**0.18**	**0.25**	**0.34**	**0.67**
including		127	225	98	0.22	0.30	0.41	0.81
including		**144**	**156**	**12**	**0.31**	**0.47**	**0.63**	**1.23**
including		168	180.3	12.3	0.28	0.40	0.54	1.05

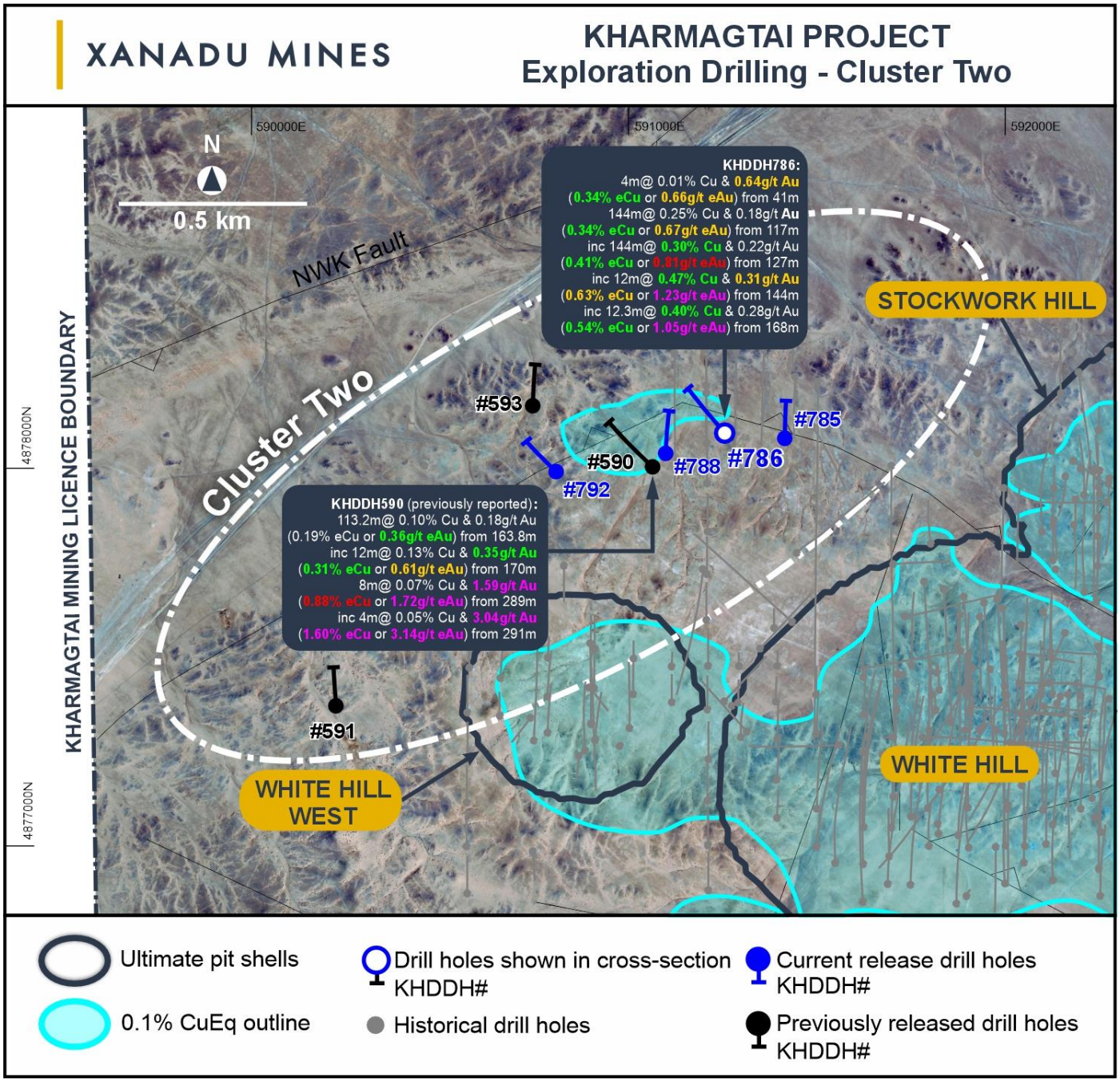

Figure 2: Plan view of Cluster 2

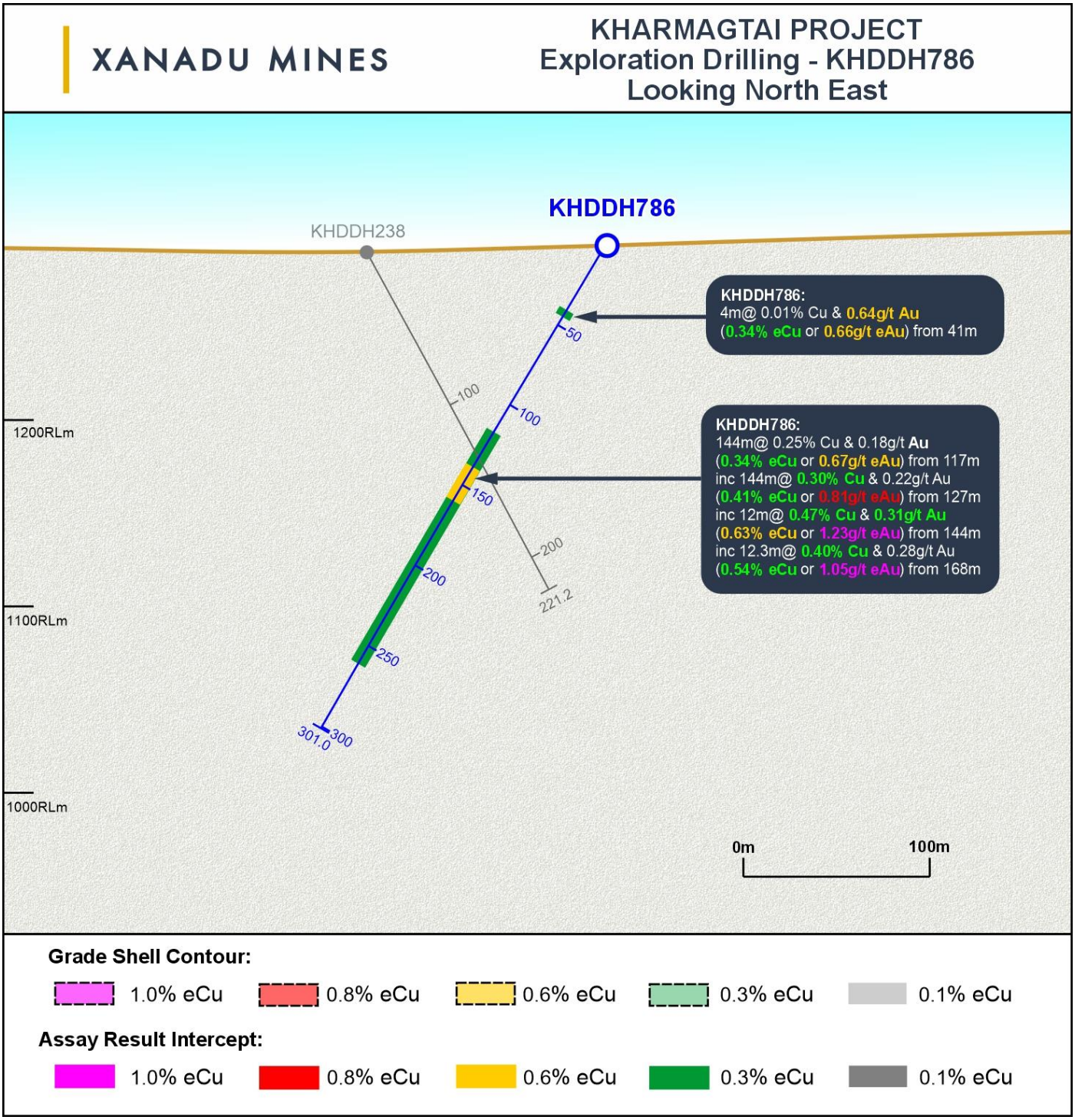

Figure 3: Cross Section Drill Hole KHDDH786.

At **Cluster Three (Figures 1 and 4)**, a scissor hole was drilled to investigate the previously reported high-grade result from KHDDH622 (15m @ 1.26% Cu, including 5.95m @ 2.97% Cu). Objective of drill hole KHDDH759 was to determine both dip and strike of the structure hosting high-grade copper in KHDDH622. KHDDH759 encountered the mineralised structure in two sections; between 16 to 22m and a secondary narrow mineralised structure between 106.2 and 108.5m, containing 2.3m @ 1.3% Cu.

The mineralised structure near surface was well within the weathering zone and copper is depleted relative to the deeper sulphide zone. Additional drilling is planned along strike, targeting the extensions of the higher-grade sulphide zone.

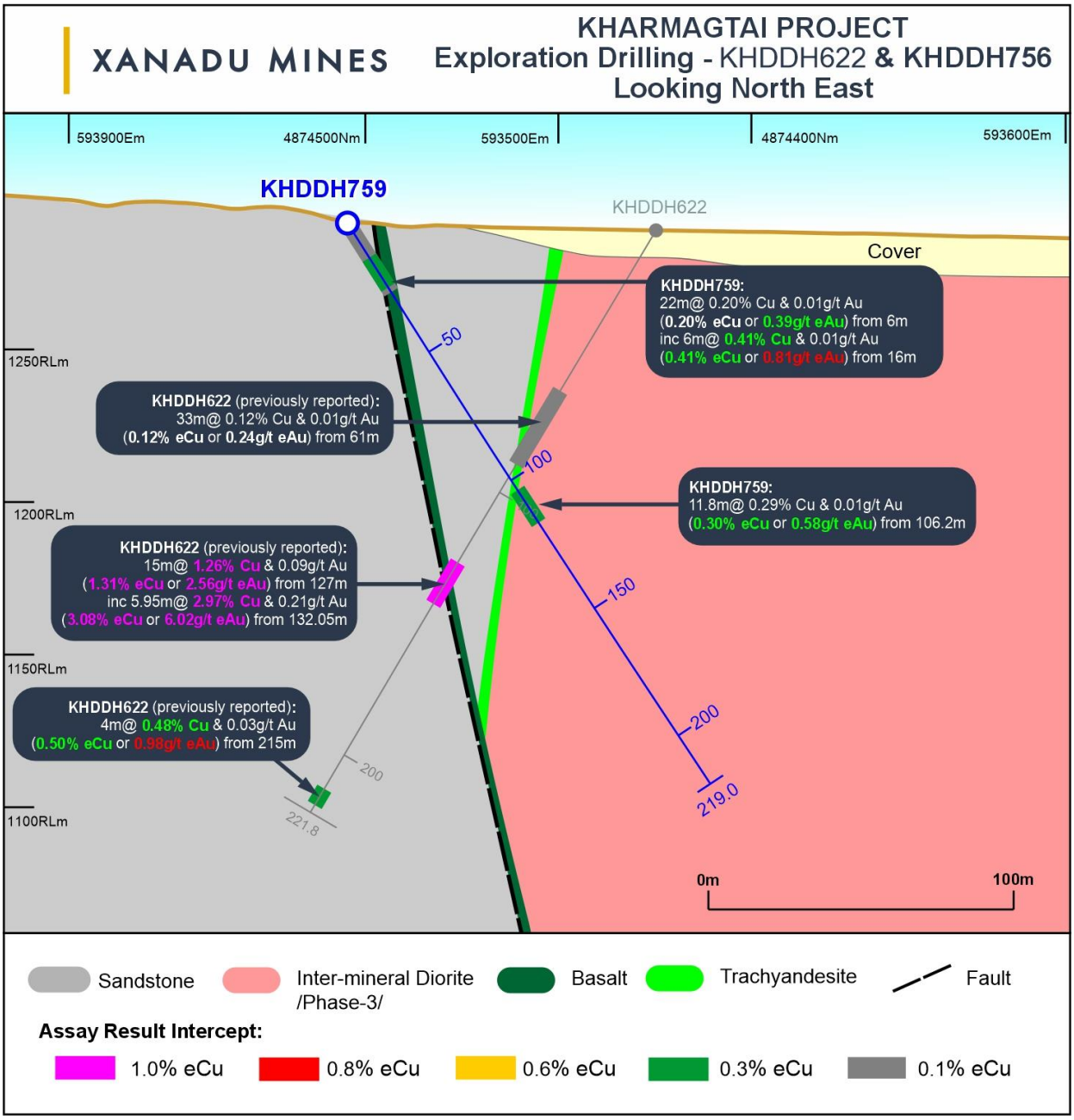

Figure 4: Cross Section Drill Hole KHDDH759 and KHDDH622.

Drilling at **Cluster Five** (**Figures 1 and 6**) targeted strong copper anomalism at the top of basement approximately 30m below surface and has successfully defined 2km long zone of gold-rich tourmaline breccia (**Figure 6**). Follow-up drilling is planned to test this large-scale target.

Drill Holes **KHDDH761, KHDDH762, KHDDH764 and KHDDH783 (Figure 6) at Cluster Five** encountered broad zones of gold dominated tourmaline breccia and porphyry mineralisation, providing evidence of a very large-scale tourmaline breccia. Follow-up drilling is planned to test this exciting large-scale target.

Significant Intercepts KHDDH761, 762, 764 and 783

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (%)	eCu (%)	eAu (g/t)
KHDDH761	Target Five	**39.5**	**141**	**101.5**	**0.19**	**0.06**	**0.16**	**0.30**
including		80	88	8	0.32	0.08	0.24	0.47
including		98	106	8	0.61	0.07	0.38	0.74
and		151	161	10	0.12	0.06	0.12	0.24
and		175	225	50	0.11	0.09	0.14	0.28
and		235	239	4	0.17	0.20	0.29	0.56
and		261	267.5	6.5	0.37	0.16	0.35	0.69
and		277	293.85	16.85	0.23	0.10	0.22	0.43
and		316	337.5	21.5	0.22	0.07	0.18	0.35
including		324	334	10	0.28	0.09	0.24	0.46
Hole ID	**Prospect**	**From (m)**	**To (m)**	**Interval (m)**	**Au (g/t)**	**Cu (%)**	**eCu (%)**	**eAu (g/t)**
KHDDH762	Target Five	43	96.3	53.3	0.21	0.07	0.17	0.34
and		113.1	178.2	65.1	0.28	0.06	0.20	0.39
including		129	145	16	0.44	0.07	0.30	0.58
Hole ID	**Prospect**	**From (m)**	**To (m)**	**Interval (m)**	**Au (g/t)**	**Cu (%)**	**eCu (%)**	**eAu (g/t)**
KHDDH764	Target Five	56.9	67	10.1	0.27	0.11	0.25	0.48
including		56.9	63	6.1	0.35	0.14	0.32	0.63
and		129	139	10	0.50	0.06	0.31	0.61
including		135	139	4	0.80	0.07	0.48	0.93
and		149.25	194	44.75	0.21	0.09	0.20	0.39
including		169	177	8	0.53	0.21	0.48	0.94
Hole ID	**Prospect**	**From (m)**	**To (m)**	**Interval (m)**	**Au (g/t)**	**Cu (%)**	**eCu (%)**	**eAu (g/t)**
KHDDH783	Target Five	29	68	39	0.06	0.08	0.11	0.22
and		88	144	56	0.08	0.15	0.19	0.37
including		106	110	4	0.20	0.44	0.54	1.05
and		194	211	17	0.06	0.08	0.11	0.22

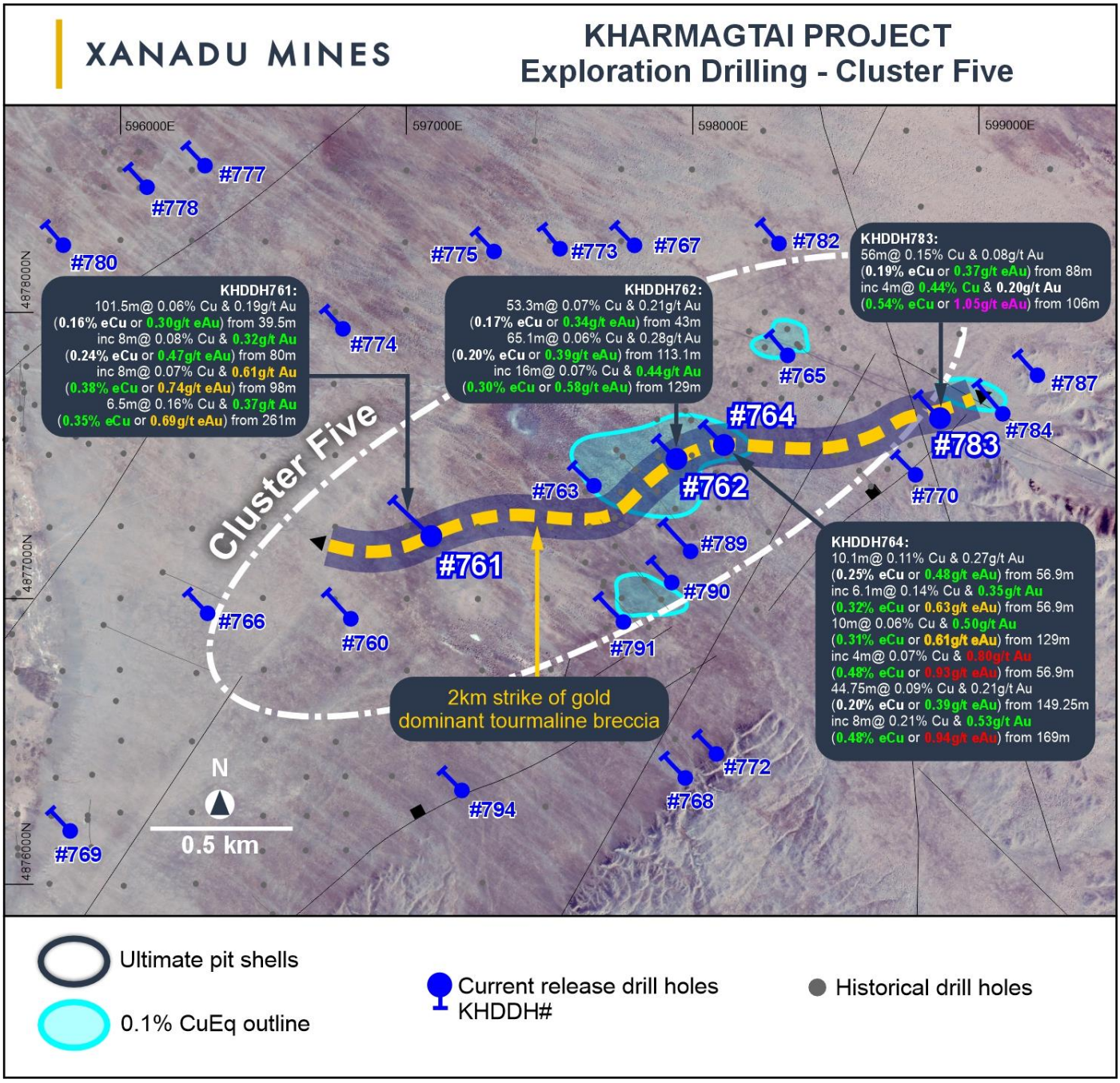

Figure 6: Plan view of Cluster Five.

Several isolated drill holes, distal to defined clusters have encountered broad zones of peripheral porphyry and tourmaline breccia mineralisation; two new high priority targets identified **(Figure 7)**.

Drill holes **KHDDH793** and **KHDDH795** were drilled targeting shallow top of basement copper geochemical anomalies.

KHDDH793 intercepted a zone of tourmaline breccia **(Figure 8)** approximately 1km along strike from the Stockwork Hill Tourmaline Breccia. Follow up drilling is planned to expand this shallow intercept and target high-grade tourmaline breccia between KHDDH973 and Stockwork Hill.

Significant Intercepts KHDDH793

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (%)	eCu (%)	eAu (g/t)
KHDDH793	Exploration	51	63	12	0.05	0.07	0.10	0.19
and		106	126	20	0.15	0.25	0.33	0.64
including		110	124	14	0.13	0.32	0.39	0.76
and		138	158	20	0.10	0.08	0.13	0.26

KHDDH795 intercepted a broad zone of low-grade porphyry mineralisation **(Figure 9)** approximately 1.5km southwest of Golden Eagle Deposit. There is very little drilling in this area and such a broad intercept of mineralisation suggests the presence of a large-scale porphyry in this area. Follow up drilling is planned to expand this shallow intercept.

Significant Intercepts KHDDH795

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (%)	eCu (%)	eAu (g/t)
KHDDH795	Exploration	68	94	26	0.03	0.07	0.09	0.17
And		141	151	10	0.11	0.11	0.17	0.33
And		194.1	294	99.9	0.22	0.08	0.19	0.37
Including		262	279.5	17.5	0.32	0.11	0.27	0.54
And		308	330	22	0.13	0.06	0.13	0.25
And		340	435	95	0.17	0.07	0.16	0.31
Including		382	388	6	0.35	0.17	0.35	0.68
Including		404.5	410.8	6.3	0.14	0.10	0.18	0.34
And		491	495	4	0.17	0.06	0.15	0.30

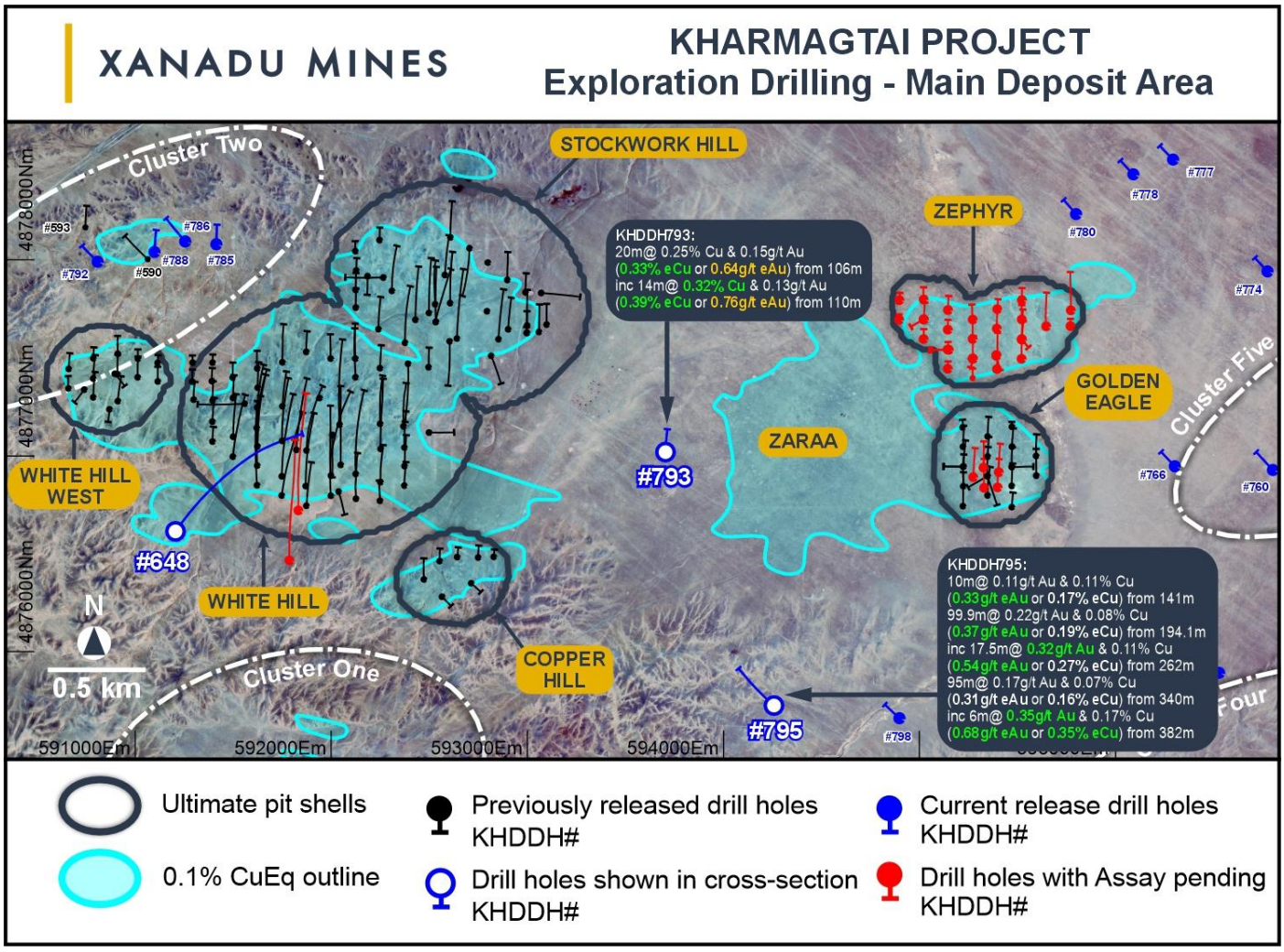

Figure 7: Plan view showing the location of new targets identified by drill holes KHDDH793 and KHDDH795.

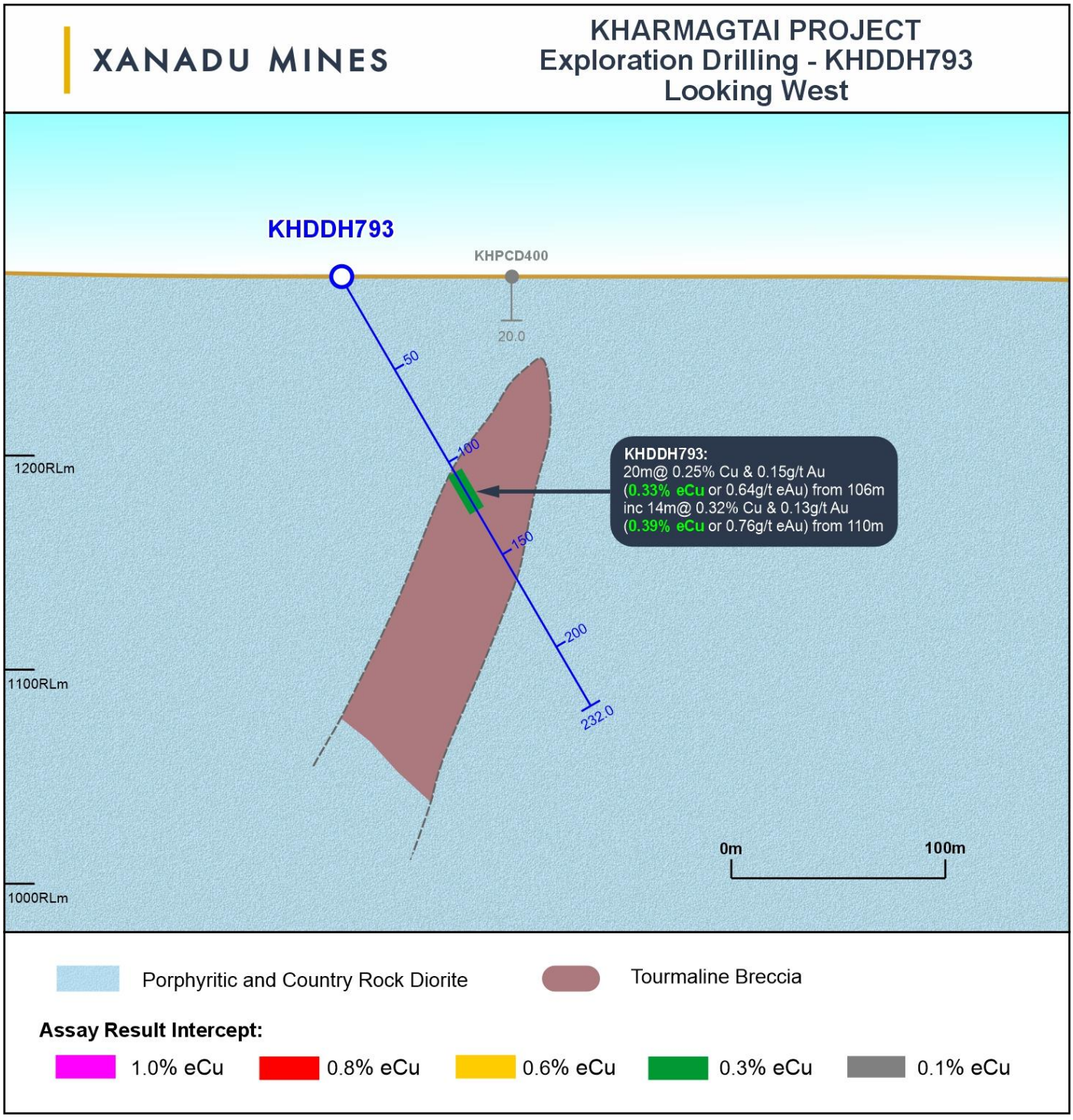

Figure 8: Cross Section Drill Hole KHDDH793.

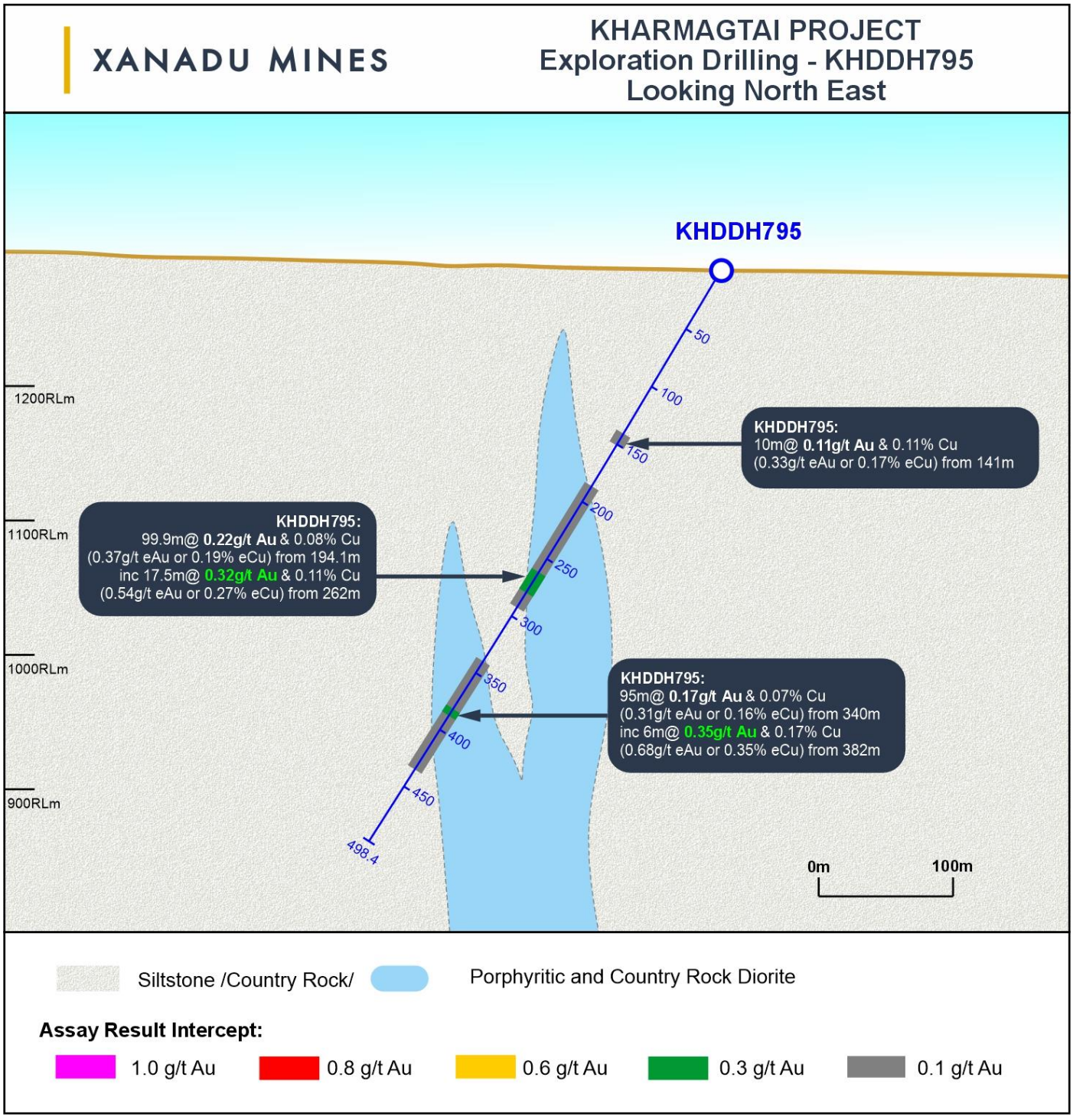

Figure 9: Cross Section Drill Hole KHDDH795.

Large-scale, high-grade exploration programme

Existing geochemical, geological, and geophysical datasets point to known mineralisation at Kharmagtai represents a shallow surface expression of a much larger porphyry system at depth (**Figure 10**).

Deep drill holes have been designed to ensure that a potential high-grade, large-scale and deeper "Oyu Tolgoi" style deposit is discovered early in the PFS process, allowing optimal infrastructure decisions to be made, without sterilising what could be the major value driver at Kharmagtai (**Figure 11**).

Drill hole **KHDDH648** was designed to test for a large-scale high-grade extension beneath White Hill. KHDDH648intercepted a very large (+1km) zone of porphyry mineralisation, expanding the White Hill mineralised system more than 600m down dip **(Figure 12)**. This hole has provided the vectors required to target higher-grade mineralisation at depth. 3D geological modelling is underway to refine these vectors for further high priority drilling.

Significant Intercepts KHDDH648

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (%)	eCu (%)	eAu (g/t)
KHDDH648		29	123	94	0.08	0.14	0.18	0.35
including		99	111	12	0.10	0.18	0.23	0.45
and		139	221	82	0.04	0.12	0.14	0.28
and		241	269	28	0.02	0.07	0.08	0.16
and		287	311	24	0.03	0.09	0.10	0.19
and		325	345	20	0.03	0.13	0.14	0.28
and		423.2	479	55.8	0.05	0.16	0.18	0.36
including		423.2	439	15.8	0.07	0.23	0.27	0.53
including		451	457	6	0.08	0.26	0.31	0.60
including		**491**	**1571**	**1080**	**0.06**	**0.17**	**0.21**	**0.41**
including		509	527	18	0.07	0.27	0.31	0.60
including		619	707	88	0.08	0.28	0.32	0.63
including		627	635	8	0.17	0.64	0.73	1.43
including		717	798	81	0.09	0.29	0.34	0.66
including		759	763.4	4.4	0.19	0.63	0.73	1.43
including		824	836	12	0.07	0.20	0.24	0.47
including		848	872	24	0.10	0.30	0.35	0.69
including		964	976	12	0.09	0.22	0.27	0.52
including		1004	1020	16	0.18	0.22	0.32	0.62
including		1114.8	1124	9.2	0.06	0.20	0.24	0.46
including		1160	1196	36	0.07	0.24	0.28	0.55
including		1269	1278	9	0.13	0.29	0.35	0.69
and		1440	1444	4	0.12	0.24	0.30	0.59
and		1589	1613	24	0.06	0.08	0.11	0.21
and		1623	1635	12	0.06	0.07	0.10	0.20

and	1689	1693	4	0.07	0.10	0.13	0.25
and	1703	1737	34	0.11	0.03	0.09	0.18
and	1761	1769.3	8.3	0.22	0.19	0.30	0.59
and	1828	1840	12	0.07	0.08	0.12	0.23
and	1876	1912	36	0.27	0.12	0.25	0.50
and	1902	1912	10	0.13	0.24	0.31	0.60
and	1928	1964	36	0.05	0.06	0.09	0.17
and	2029	2048.3	19.3	0.08	0.02	0.07	0.13
and	2115.8	2124	8.2	0.35	0.05	0.23	0.44

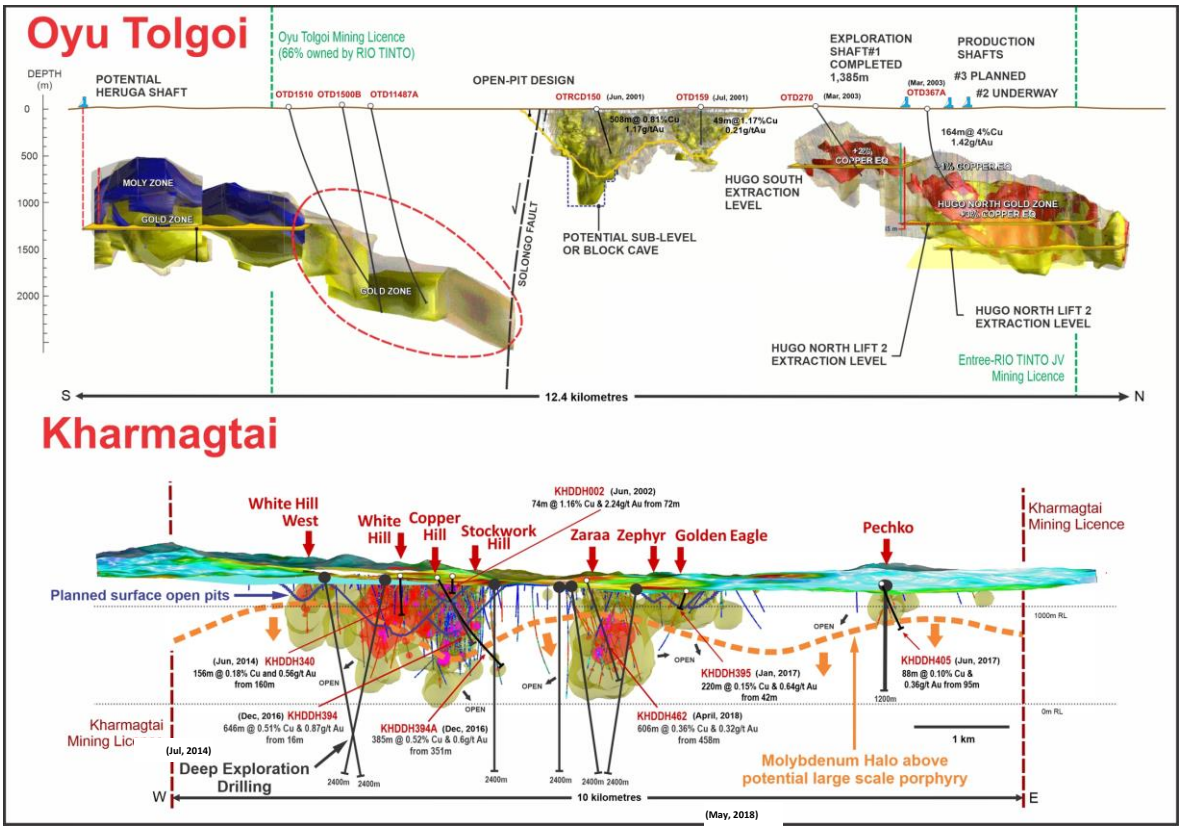

Figure 10: Long Sections through the Oyu Tolgoi Porphyry System and The Kharmagtai Porphyry System. Deep high-grade exploration drill program geochemical zonation points to much larger system beneath Kharmagtai.

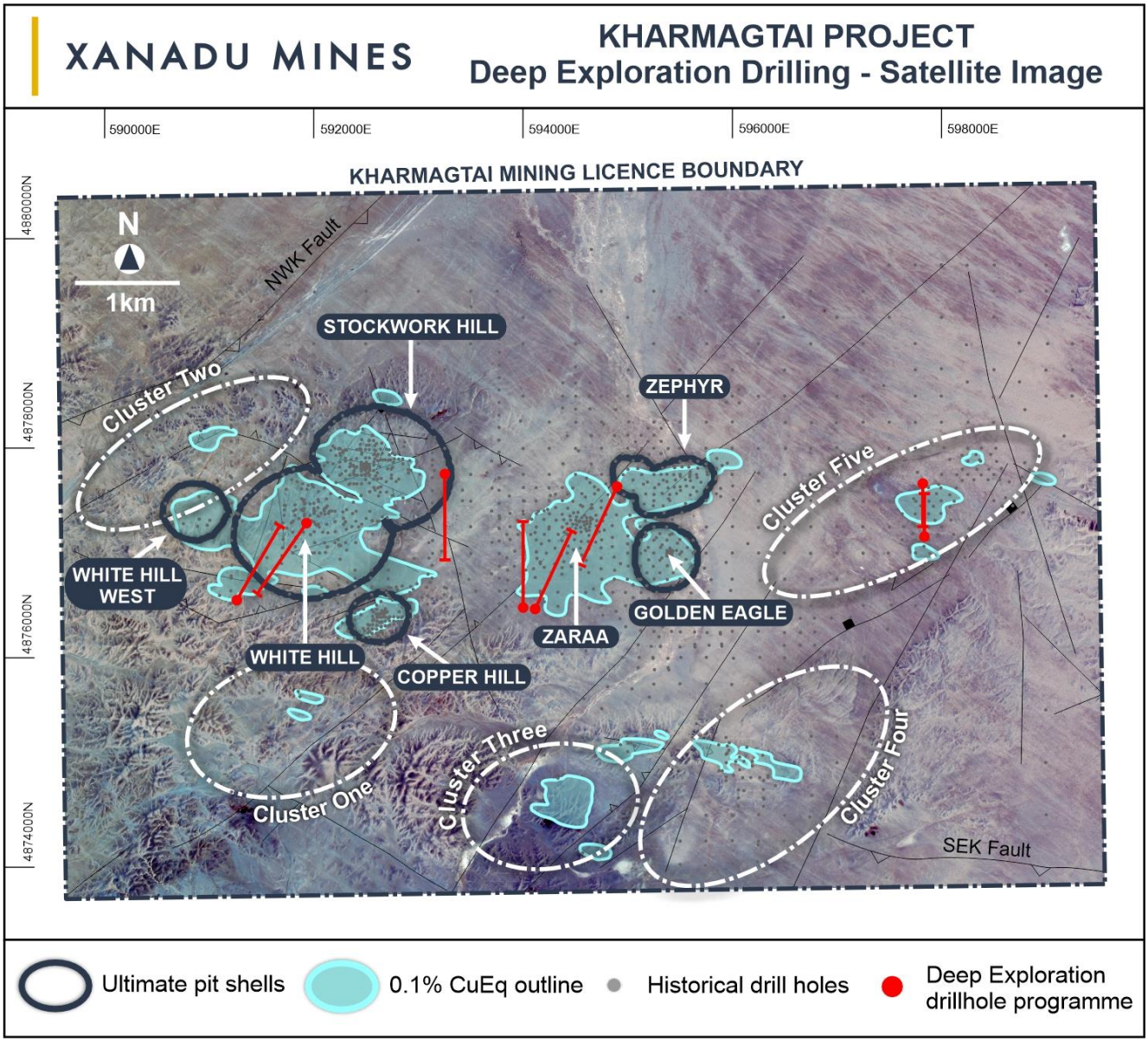

Figure 11: Kharmagtai copper-gold district showing currently defined mineral deposits and planned deep exploration holes.

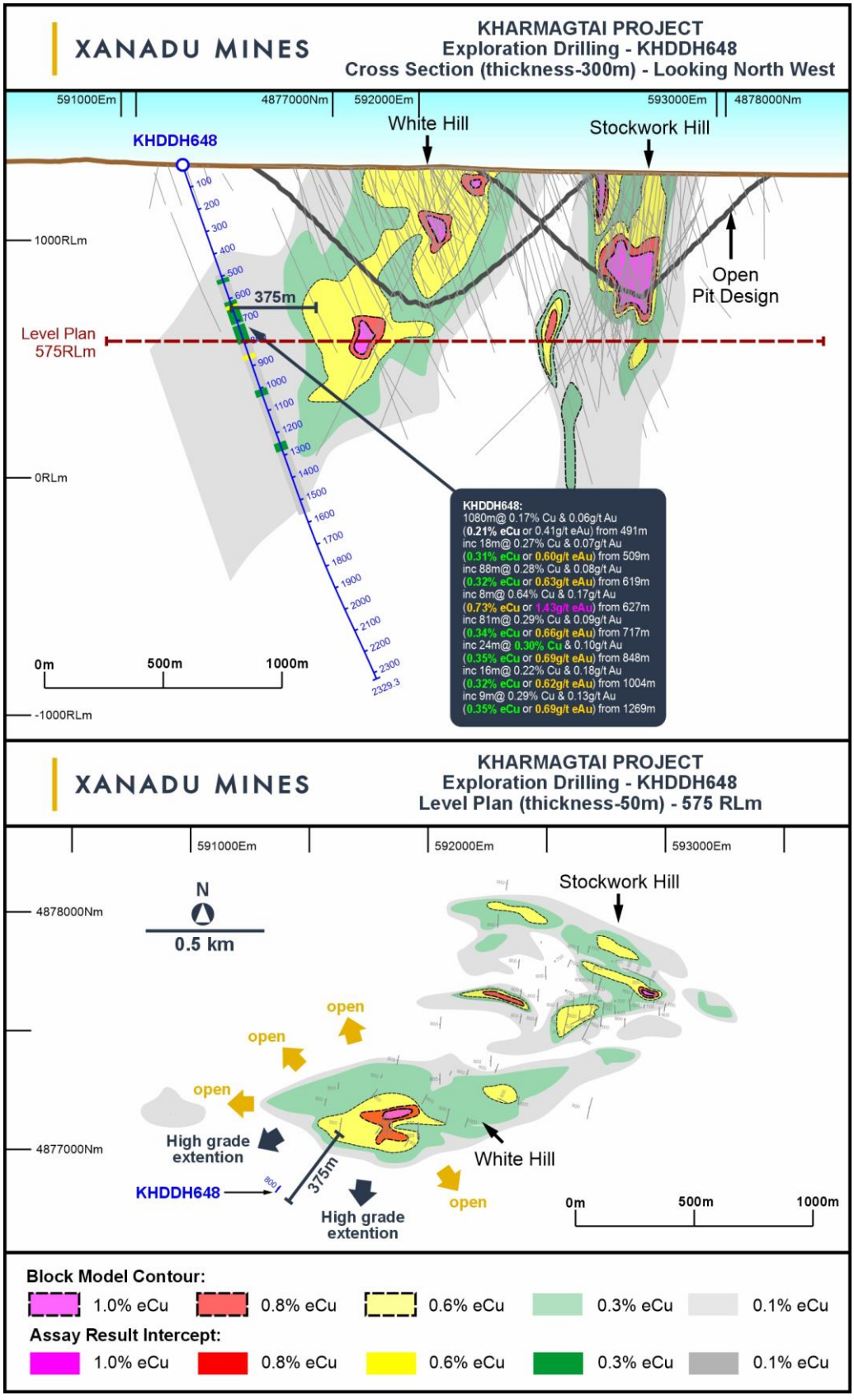

Figure 12: Cross Section and level plan showing KHDDH648 beneath White Hill

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.

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)
KHDDH648	Exploration	591207	4876617	1318	30	-70	2329.3
KHDDH759	Exploration	593445	4874259	1292	135	-58	219.0
KHDDH760	Exploration	596805	4876930	1272	315	-60	250.0
KHDDH761	Exploration	597087	4877219	1266	315	-60	369.5
KHDDH762	Exploration	597943	4877488	1265	315	-60	205.7
KHDDH763	Exploration	597655	4877395	1262	315	-60	200.0
KHDDH764	Exploration	598109	4877537	1266	315	-60	210.5
KHDDH765	Exploration	598332	4877850	1265	315	-60	200.0
KHDDH766	Exploration	596305	4876949	1272	315	-60	200.0
KHDDH767	Exploration	597797	4878235	1262	315	-60	200.0
KHDDH768	Exploration	597974	4876374	1284	315	-60	210.0
KHDDH769	Exploration	595825	4876189	1276	315	-60	200.0
KHDDH770	Exploration	598779	4877433	1274	315	-60	200.0
KHDDH771	Exploration	595262	4875925	1274	315	-60	200.0
KHDDH772	Exploration	598083	4876458	1286	315	-60	200.0
KHDDH773	Exploration	597536	4878223	1262	315	-60	200.0
KHDDH774	Exploration	596778	4877943	1266	315	-60	200.0
KHDDH775	Exploration	597306	4878213	1263	315	-60	200.0
KHDDH776	Exploration	596562	4878738	1264	315	-60	200.0
KHDDH777	Exploration	596296	4878513	1265	315	-60	200.0
KHDDH778	Exploration	596093	4878438	1266	315	-60	200.0
KHDDH780	Exploration	595801	4878235	1265	315	-60	200.0
KHDDH781	Exploration	598555	4878772	1264	315	-60	200.0
KHDDH782	Exploration	598301	4878241	1264	315	-60	200.0
KHDDH783	Exploration	598864	4877631	1271	315	-60	215.6
KHDDH784	Exploration	599083	4877646	1275	315	-60	279.5
KHDDH785	Exploration	591415	4878081	1294	0	-60	200.0
KHDDH786	Exploration	591256	4878095	1294	315	-60	300.0
KHDDH787	Exploration	599204	4877781	1284	315	-60	200.0
KHDDH788	Exploration	591099	4878042	1294	0	-60	222.5
KHDDH789	Exploration	597993	4877166	1268	315	-60	276.9
KHDDH790	Exploration	597927	4877057	1267	315	-60	214.5
KHDDH791	Exploration	597758	4876919	1265	315	-60	247.0
KHDDH792	Exploration	590809	4877992	1299	315	-60	221.5

KHDDH793	Exploration	593706	4877021	1283	315	-60	232.0
KHDDH794	Exploration	597193	4876330	1275	0	-60	200.0
KHDDH795	Exploration	594260	4875729	1285	315	-60	498.4
KHDDH796	Exploration	595818	4874725	1292	315	-60	93.0
KHDDH797	Exploration	596531	4875896	1282	315	-60	200.0
KHDDH798	Exploration	594900	4875664	1278	315	-60	200.0
KHDDH799	Exploration	591077	4874898	1326	315	-60	200.0
KHDDH800	Exploration	590011	4874691	1347	315	-60	201.0

Table 2: Significant drill results

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (%)	CuEq (%)	AuEq (g/t)
KHDDH648		29	123	94	0.08	0.14	0.18	0.35
including		99	111	12	0.10	0.18	0.23	0.45
and		139	221	82	0.04	0.12	0.14	0.28
and		241	269	28	0.02	0.07	0.08	0.16
and		287	311	24	0.03	0.09	0.10	0.19
and		325	345	20	0.03	0.13	0.14	0.28
and		423.2	479	55.8	0.05	0.16	0.18	0.36
including		423.2	439	15.8	0.07	0.23	0.27	0.53
including		451	457	6	0.08	0.26	0.31	0.60
including		491	1571	1080	0.06	0.17	0.21	0.41
including		509	527	18	0.07	0.27	0.31	0.60
including		619	707	88	0.08	0.28	0.32	0.63
including		627	635	8	0.17	0.64	0.73	1.43
including		717	798	81	0.09	0.29	0.34	0.66
including		759	763.4	4.4	0.19	0.63	0.73	1.43
including		824	836	12	0.07	0.20	0.24	0.47
including		848	872	24	0.10	0.30	0.35	0.69
including		964	976	12	0.09	0.22	0.27	0.52
including		1004	1020	16	0.18	0.22	0.32	0.62
including		1114.8	1124	9.2	0.06	0.20	0.24	0.46
including		1160	1196	36	0.07	0.24	0.28	0.55
including		1269	1278	9	0.13	0.29	0.35	0.69
and		1440	1444	4	0.12	0.24	0.30	0.59
and		1589	1613	24	0.06	0.08	0.11	0.21
and		1623	1635	12	0.06	0.07	0.10	0.20
and		1689	1693	4	0.07	0.10	0.13	0.25
and		1703	1737	34	0.11	0.03	0.09	0.18

and		1761	1769.3	8.3	0.22	0.19	0.30	0.59
and		1828	1840	12	0.07	0.08	0.12	0.23
and		1876	1912	36	0.27	0.12	0.25	0.50
and		1902	1912	10	0.13	0.24	0.31	0.60
and		1928	1964	36	0.05	0.06	0.09	0.17
and		2029	2048.3	19.3	0.08	0.02	0.07	0.13
and		2115.8	2124	8.2	0.35	0.05	0.23	0.44
KHDDH759	Target 10	6	28	22	0.01	0.20	0.20	0.39
including		16	22	6	0.01	0.41	0.41	0.81
and		38	52	14	0.01	0.13	0.13	0.26
and		92	97	5	0.03	0.13	0.15	0.28
and		106.2	118	11.8	0.01	0.29	0.30	0.58
KHDDH760	Exploration	189	198.9	9.9	0.03	0.13	0.15	0.28
KHDDH761	Exploration	39.5	141	101.5	0.19	0.06	0.16	0.30
including		80	88	8	0.32	0.08	0.24	0.47
including		98	106	8	0.61	0.07	0.38	0.74
and		151	161	10	0.12	0.06	0.12	0.24
and		175	225	50	0.11	0.09	0.14	0.28
and		235	239	4	0.17	0.20	0.29	0.56
and		261	267.5	6.5	0.37	0.16	0.35	0.69
and		277	293.85	16.85	0.23	0.10	0.22	0.43
and		316	337.5	21.5	0.22	0.07	0.18	0.35
including		324	334	10	0.28	0.09	0.24	0.46
KHDDH762	Exploration	43	96.3	53.3	0.21	0.07	0.17	0.34
and		113.1	178.2	65.1	0.28	0.06	0.20	0.39
including		129	145	16	0.44	0.07	0.30	0.58
KHDDH763	Exploration	173	179	6	0.21	0.01	0.12	0.23
KHDDH764	Exploration	56.9	67	10.1	0.27	0.11	0.25	0.48
including		56.9	63	6.1	0.35	0.14	0.32	0.63
and		129	139	10	0.50	0.06	0.31	0.61
including		135	139	4	0.80	0.07	0.48	0.93
and		149.25	194	44.75	0.21	0.09	0.20	0.39
including		169	177	8	0.53	0.21	0.48	0.94
KHDDH765	Exploration	144	150.5	6.5	0.29	0.12	0.27	0.52
KHDDH766	Exploration	*No significant intercepts*						
KHDDH767	Exploration	*No significant intercepts*						
KHDDH768	Exploration	*No significant intercepts*						
KHDDH769	Exploration	*No significant intercepts*						
KHDDH770	Exploration	42	48	6	0.31	0.03	0.19	0.38
and		70	84	14	0.03	0.12	0.14	0.27
and		94	148	54	0.06	0.10	0.13	0.25
and		181	194	13	0.07	0.05	0.08	0.16

KHDDH771	Exploration	39	65.5	26.5	0.30	0.04	0.19	0.38
and		76	86.9	10.9	0.18	0.06	0.15	0.29
and		108	123.4	15.4	0.13	0.12	0.18	0.35
KHDDH772	Exploration	41.3	51	9.7	0.19	0.05	0.15	0.29
KHDDH773	Exploration	*No significant intercepts*						
KHDDH774	Exploration	92.2	107	14.8	0.44	0.01	0.23	0.46
KHDDH775	Exploration	*No significant intercepts*						
KHDDH776	Exploration	*No significant intercepts*						
KHDDH777	Exploration	*No significant intercepts*						
KHDDH778	Exploration	*No significant intercepts*						
KHDDH780	Exploration	*No significant intercepts*						
KHDDH781	Exploration	*No significant intercepts*						
KHDDH782	Exploration	*No significant intercepts*						
KHDDH783	Exploration	29	68	39	0.06	0.08	0.11	0.22
and		88	144	56	0.08	0.15	0.19	0.37
including		106	110	4	0.20	0.44	0.54	1.05
and		194	211	17	0.06	0.08	0.11	0.22
KHDDH784	Exploration	224	228	4	0.19	0.09	0.18	0.36
and		274	279.6	5.6	0.12	0.08	0.14	0.27
KHDDH785	Exploration	*No significant intercepts*						
KHDDH786	Exploration	41	45	4	0.64	0.01	0.34	0.66
and		79	87	8	0.24	0.00	0.13	0.25
and		117	261	144	0.18	0.25	0.34	0.67
including		127	225	98	0.22	0.30	0.41	0.81
including		144	156	12	0.31	0.47	0.63	1.23
including		168	180.3	12.3	0.28	0.40	0.54	1.05
KHDDH787	Exploration	22	38	16	0.14	0.12	0.19	0.37
including		32	38	6	0.27	0.26	0.40	0.78
and		56	70	14	0.10	0.13	0.18	0.35
and		86	95	9	0.05	0.12	0.14	0.28
and		128	138	10	0.12	0.06	0.13	0.25
and		188	199	11	0.07	0.07	0.11	0.21
KHDDH788	Exploration	141	145	4	0.18	0.03	0.12	0.23
KHDDH789	Exploration	80	85	5	0.18	0.05	0.14	0.27
and		271	275	4	0.18	0.05	0.14	0.27
KHDDH790	Exploration	112	134	22	0.06	0.04	0.07	0.13
KHDDH791	Exploration	*Assays pending*						
KHDDH792	Exploration	24	30	6	0.03	0.14	0.15	0.30
and		123	130.9	7.9	0.04	0.07	0.09	0.18
and		172	184	12	0.05	0.07	0.10	0.19
and		204	214	10	0.07	0.07	0.11	0.22
KHDDH793	Exploration	51	63	12	0.05	0.07	0.10	0.19

and		106	126	20	0.15	0.25	0.33	0.64
including		110	124	14	0.13	0.32	0.39	0.76
and		138	158	20	0.10	0.08	0.13	0.26
KHDDH794	Exploration	*No significant intercepts*						
KHDDH795	Exploration	68	94	26	0.03	0.07	0.09	0.17
and		141	151	10	0.11	0.11	0.17	0.33
and		194.1	294	99.9	0.22	0.08	0.19	0.37
including		262	279.5	17.5	0.32	0.11	0.27	0.54
and		308	330	22	0.13	0.06	0.13	0.25
and		340	435	95	0.17	0.07	0.16	0.31
including		382	388	6	0.35	0.17	0.35	0.68
including		404.5	410.8	6.3	0.14	0.10	0.18	0.34
and		491	495	4	0.17	0.06	0.15	0.30
KHDDH796	Exploration	*No significant intercepts*						
KHDDH797	Exploration	161	165	4	0.48	0.02	0.26	0.51
KHDDH798	Exploration	14	28	14	0.09	0.09	0.13	0.26
and		134	154	20	0.04	0.13	0.15	0.29
KHDDH799	Exploration	*Assays pending*						
KHDDH800	Exploration	*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 7 June 2023.

JORC TABLE 1 - SECTION 1 - SAMPLING TECHNIQUES AND DATA

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

Criteria	Commentary
Sampling techniques	• Representative ½ core samples were split from PQ, HQ & NQ diameter diamond drill core on site using rock saws, on a routine 2m sample interval that also honours lithological/intrusive contacts. • The orientation of the cut line is controlled using the core orientation line ensuring uniformity of core splitting wherever the core has been successfully oriented. • Sample intervals are defined and subsequently checked by geologists, and sample tags are attached (stapled) to the plastic core trays for every sample interval. • Reverse Circulation (**RC**) chip samples are ¼ splits from one meter (**1m**) intervals using a 75%:25% riffle splitter to obtain a 3kg sample • RC samples are uniform 2m samples formed from the combination of two ¼ split 1m samples.
Drilling techniques	• The Mineral Resource Estimation has been based upon diamond drilling of PQ, HQ and NQ diameters with both standard and triple tube core recovery configurations, RC drilling and surface trenching with channel sampling. • All drill core drilled by Xanadu has been oriented using the “Reflex Ace” tool.
Drill sample recovery	• Diamond drill core recoveries were assessed using the standard industry (best) practice which involves removing the core from core trays; reassembling multiple core runs in a v-rail; measuring core lengths with a tape measure, assessing recovery against core block depth measurements and recording any measured core loss for each core run. • Diamond core recoveries average 97% through mineralisation. • Overall, core quality is good, with minimal core loss. Where there is localised faulting and or fracturing core recoveries decrease, however, this is a very small percentage of the mineralised intersections. • RC recoveries are measured using whole weight of each 1m intercept measured before splitting • Analysis of recovery results vs grade shows no significant trends that might indicate sampling bias introduced by variable recovery in fault/fracture zones.
Logging	• All drill core is geologically logged by well-trained geologists using a modified “Anaconda-style” logging system methodology. The Anaconda method of logging and mapping is specifically designed for porphyry Cu-Au mineral systems and is entirely appropriate to support Mineral Resource Estimation, mining and metallurgical studies. • Logging of lithology, alteration and mineralogy is intrinsically qualitative in nature. However, the logging is subsequently supported by 4 Acid ICP-MS (48 element) geochemistry and SWIR spectral mineralogy (facilitating semi-quantitative/calculated mineralogical, lithological and alteration classification) which is integrated with the

Criteria	Commentary
	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 sCuEqrity	• 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 RLl) 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.