22 December 2016

THREE NEW MINERALISED PORPHYRY CENTRES IDENTIFIED AT KHARMAGTAI

HIGHLIGHTS

- **Bedrock drilling delivers immediate success at Kharmagtai;**
- **New drilling identifies copper and gold mineralisation under shallow (20 to 50m) cover in at least seven new targets;**
- **High-density stockwork mineralisation intersected in three targets, including grades greater than 0.3% Cu and 3g/t Au over two metre intervals;**
- **New gravity data enhance the prospectivity of the Kharmagtai copper-gold district;**
- **A priority follow-up drill program to commence immediately; and**
- **Drilling activities are fully funded from existing cash reserves of $9.8 million.**

Xanadu Mines Ltd (**ASX: XAM – "Xanadu"** or **"Company"**) is pleased to announce that first assays have been received from an undercover bedrock drilling program over the Kharmagtai copper-gold district, in the South Gobi region of Mongolia (Figure 1), as foreshadowed in the last Quarterly Report. The drill program consisted of 259 holes for approximately 11,140m of drilling designed to systematically test district-scale anomalies buried under shallow cover identified through 2015 and 2016, and new conceptual structural targets not previously tested by drilling.

New top of basement drilling results confirms continuity of mineralisation under shallow (20 to 50m) cover with drilling intersecting anomalous bedrock copper and gold mineralisation over a widespread area, approximately 25 square kilometres. At least seven new targets were identified, with 38 drill holes returning gold grades greater than 0.1 g/t Au and 12 holes more than 0.1% Cu over two metre intervals (Figure 2).

The drilling also provided important information on depth of cover gravels, which typically ranged from 20 to 50m. The shallow depths significantly enhance the prospectivity for further open pit resources within the Kharmagtai district.

Xanadu's Managing Director & Chief Executive Officer, Dr Andrew Stewart, said *"The results of this targeted bedrock drilling program have proved very exciting. We set out to test several shallow (within 50m surface) high-potential copper-gold and gold targets that occur under shallow cover, looking for both high-grade gold-rich stockwork mineralisation and tourmaline breccia mineralisation. The identification of the high-density stockwork copper-gold mineralisation in at least three of the new targets associated with copper over 0.3% Cu and gold over 3g/t Au is an outstanding result, and is validation of our belief that there are undiscovered porphyry centres at Kharmagtai under only 20 to 50m of cover. Drill testing is expected to start immediately and we are looking forward to what we might learn from the next program of RC drilling."*

At Kharmagtai most previous exploration has focused on the three outcropping porphyry deposits (Altan Tolgoi, Tsagaan Sudal and Zesen Uul; Figure 2) where Xanadu has already defined over 1.5 Mlb copper and over 2 million ounces of gold resource (see Xanadu's ASX announcement – 19 March 2015). Away from these three deposits the prospective rocks of the Kharmagtai Igneous Complex (KIC) are covered by either younger unconsolidated gravels or are obscured by younger volcanic rocks (Figure 2).

TOP OF BASEMENT DRILLING

To date, 11,140m of drilling has been conducted with 9,578m of rotary mud drilling and 1,562m of diamond tails. Drill holes were drilled on a nominal 250m by 250m spaced grid then infilled to 125m spacing as needed. This grid spacing was determined by analysing existing surface data from the three outcropping porphyries at Kharmagtai and would be a sufficient resolution to discover any of these deposits should they be covered. Each hole was drilled an average of six metres into the top of basement and three, two metre samples were collected in each hole. Importantly, this work is generating a robust geology and geochemical map of the basement surface which is a first for the Kharmagtai district. The significance of this cannot be understated considering 70% of the lease is covered shallow sediment and the outcropping 30% contains three known porphyry centres. Assays results have been returned for 70% of the drilling. Remaining results are expected in the coming weeks.

DRILLING IDENTIFIES MULTIPLE COPPER-GOLD AND GOLD TARGETS UNDER SHALLOW COVER

Five new high-priority copper-gold porphyry/tourmaline breccia anomalies and two new epithermal gold targets have been generated from the initial bedrock drilling and a detailed ground gravity survey over shallow cover within at the Kharmagtai project (Figure 3). Table 1 presents the key geological characteristics of seven coper-gold and gold anomalies identified in the first pass bedrock drilling. Drill hole details are shown in Table 2 and significant assay results in Table 3.

Bedrock samples below shallow cover were generally heavily leached and weathered. When interpreting the assay results from bedrock drilling of this style of copper and gold mineralisation results are usually subdued and ranges up to 0.1 - 0.2g/t Au and +1000ppm Cu are often sufficient to identify a valid anomaly.

Results are pending for approximately 30% of completed drill program conducted under the previously untested 25km^2 of the prospective rocks under cover which comprises 30 holes. Samples have been submitted to the laboratory for analysis and should be available in the March 2017 quarter.

NEW GRAVITY DATA DEFINES NEW DRILL TARGETS

New detailed gravity survey covered the entire district, an area of approximately 67.5km^2 (10km x 6.75km). The total survey distance was approximately 2,225 stations with line spacing of ~100 metres. Detailed processing of the data is currently being conducted by Fathom Geophysicists in Australia. The gravity dataset will be inverted in three dimensions and constrained using lithological and density data obtained from the top of basement drilling to ensure the most accurate models possible. This inversion model will be used to guide deep drilling of targets identified by the bedrock geochemistry, alteration and lithology.

All three known porphyry deposits within Kharmagtai occur as discrete gravity highs. The new gravity survey at Kharmagtai has identified numerous gravity features which may be indicative of porphyry mineralisation (Figure 4). When these features are interpreted relative to the magnetics, known geology and geochemistry a compelling picture emerges where multiple mineralised intrusive potentially lie beneath shallow cover.

COMPETENT PERSON STATEMENT

The information in this announcement that relates to exploration results is based on information compiled by Dr Andrew Stewart who is responsible for the exploration data, comments on exploration target sizes, QA/QC and geological interpretation and information. Dr Stewart, who is an employee of Xanadu and is a Member of the Australasian Institute of Geoscientists, has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as the “Competent Person” as defined in the 2012 Edition of the “Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves”. Dr Stewart consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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. Grades have not been adjusted for metallurgical or refining recoveries and the copper equivalent grades are of an exploration nature only and intended for summarising grade. The copper equivalent calculation is intended as an indicative value only. The following copper equivalent conversion factors and long term price assumptions have been adopted: Copper Equivalent Formula (CuEq) = Cu% + (Au (ppm) x 0.6378). Based on a copper price of $2.60/lb and a gold price of $1,300/oz.

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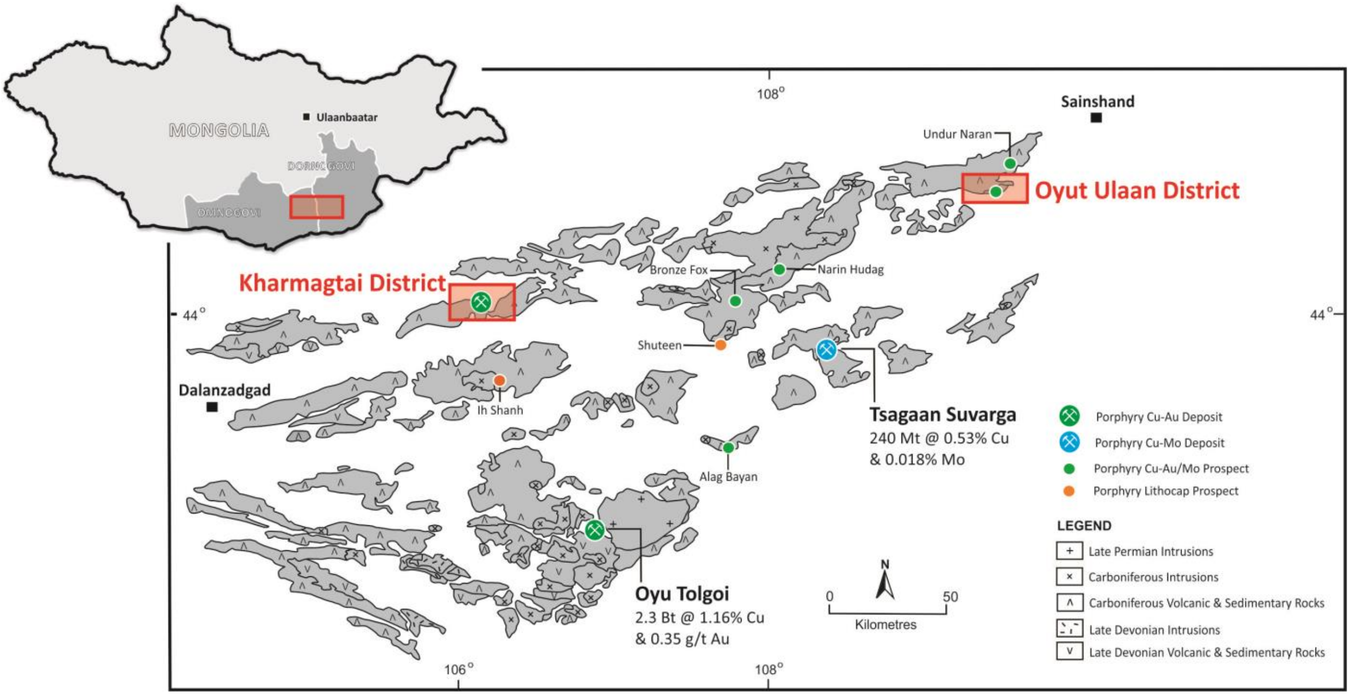

FIGURE 1: Location of the Kharmagtai Project, in the South Gobi porphyry copper belt.

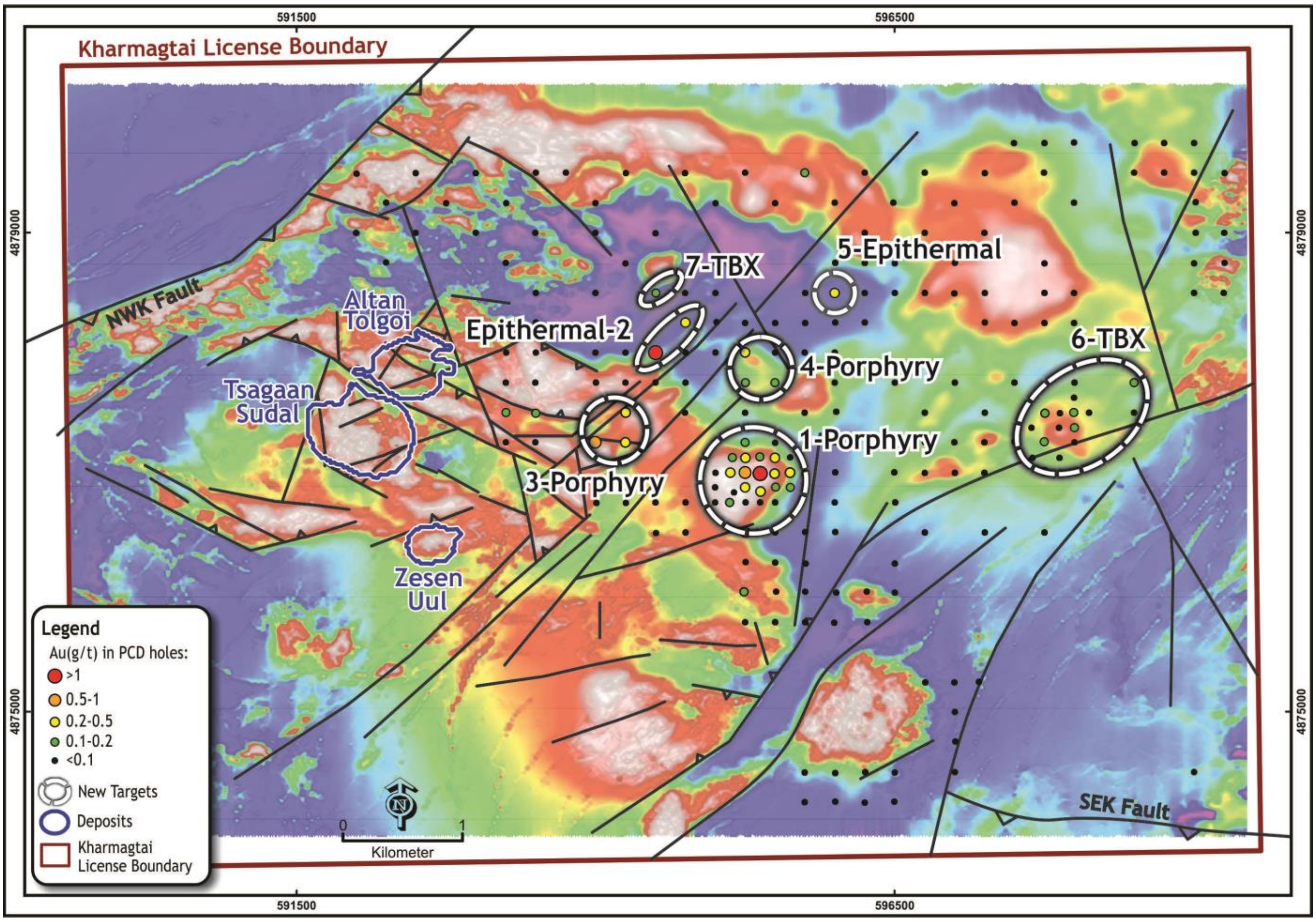

FIGURE 2: The Kharmagtai Mining Licence showing ground magnetic data and known porphyry deposits. Location of bedrock drilling collars and seven new targets are also shown.

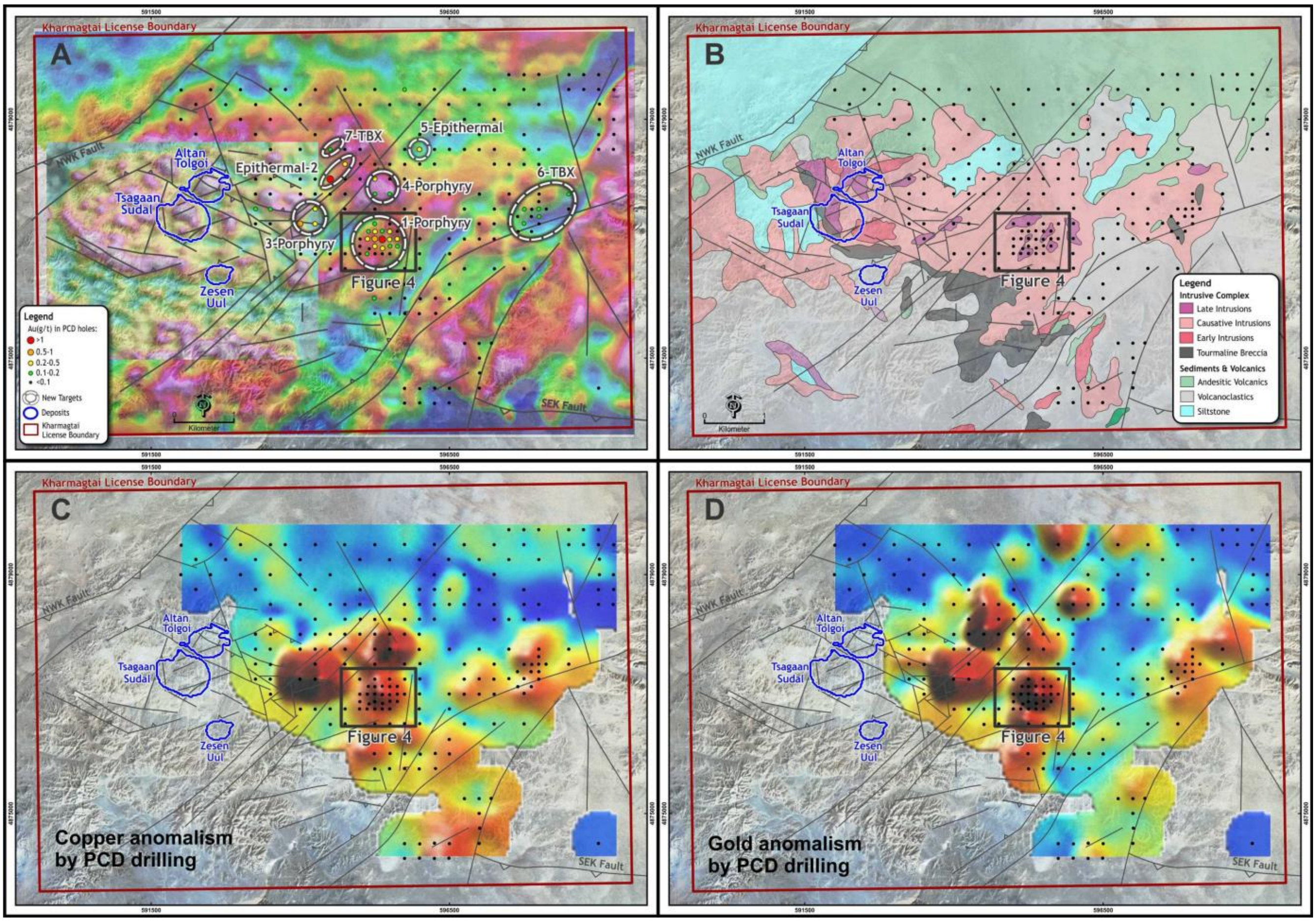

FIGURE 3: Basement drilling program. (A) New gravity data, showing location of coincident gravity and geochemical anomalies. (B) New interpreted geology map of the Kharmagtai district. (C) Copper anomalism under shallow cover based on the bedrock drill program. (D) Gold anomalism under shallow cover based on the bedrock drill program.

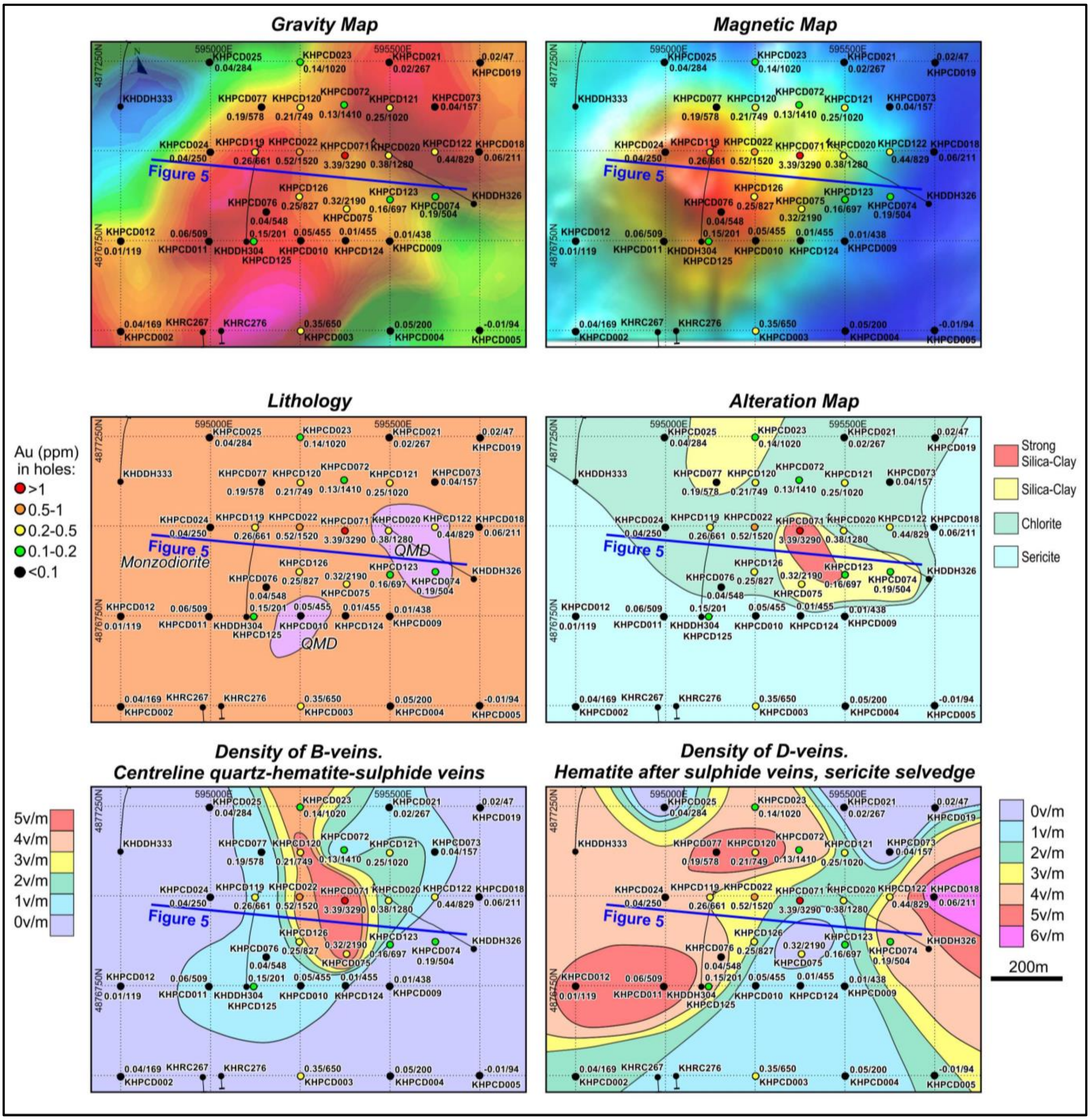

FIGURE 4: New porphyry Target 1 identified from bedrock drilling showing returned gold results. (A) Bedrock holes over newly acquire gravity (B) Bedrock holes over reduced to pole magnetics (C) Lithology map from bedrock drilling (D) Alteration zonation map from bedrock drilling (E) Stockwork b-vein density from bedrock drilling. B-veins generally form near the centre of a porphyry deposit and can be used to define the size and shape of a potential porphyry system. (F) Sulphide d-vein density from bedrock drilling. Sulphide d-veins generally form on the periphery of porphyry systems and can be used to help define the size and shape of a potential porphyry system.

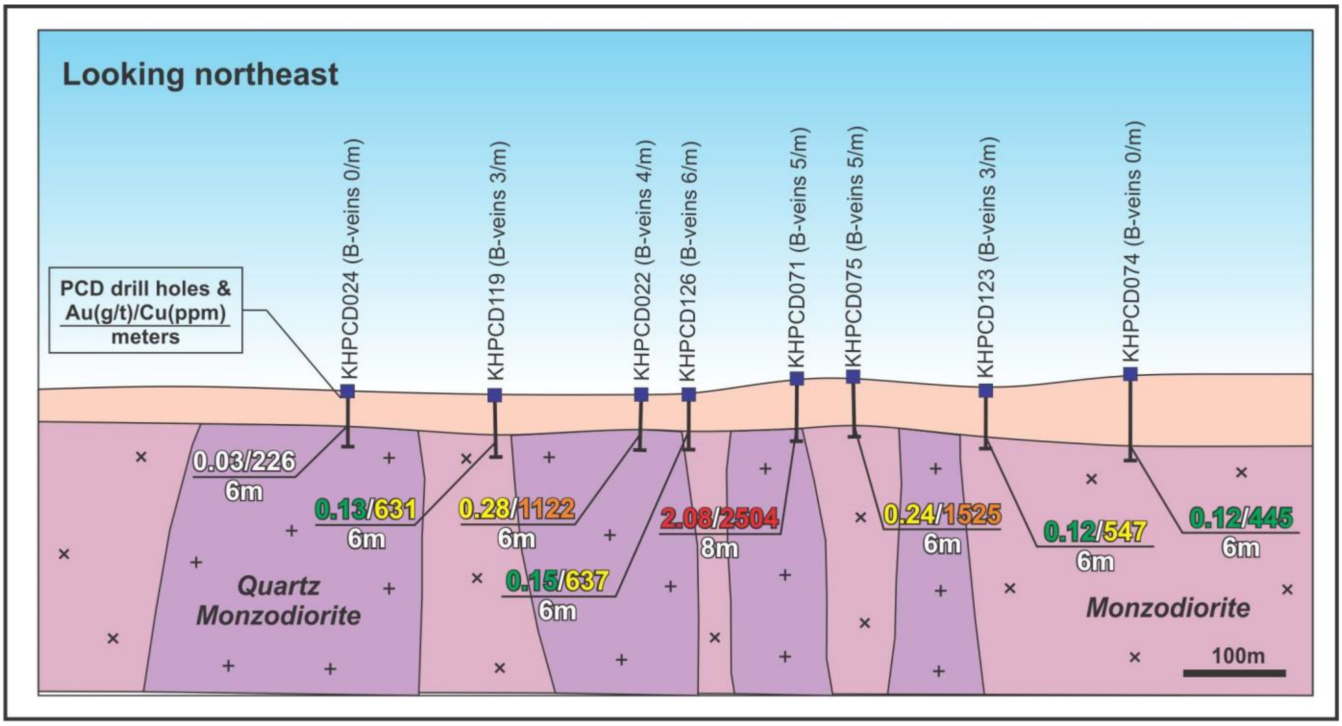

FIGURE 5: Cross section through new porphyry Target 1 showing depth to bedrock and widespread copper and gold mineralisation associated with stockwork mineralisation hosted in quartz monzodiorite porphyry. Mineralisation occurs over an area of 500m x 300m.

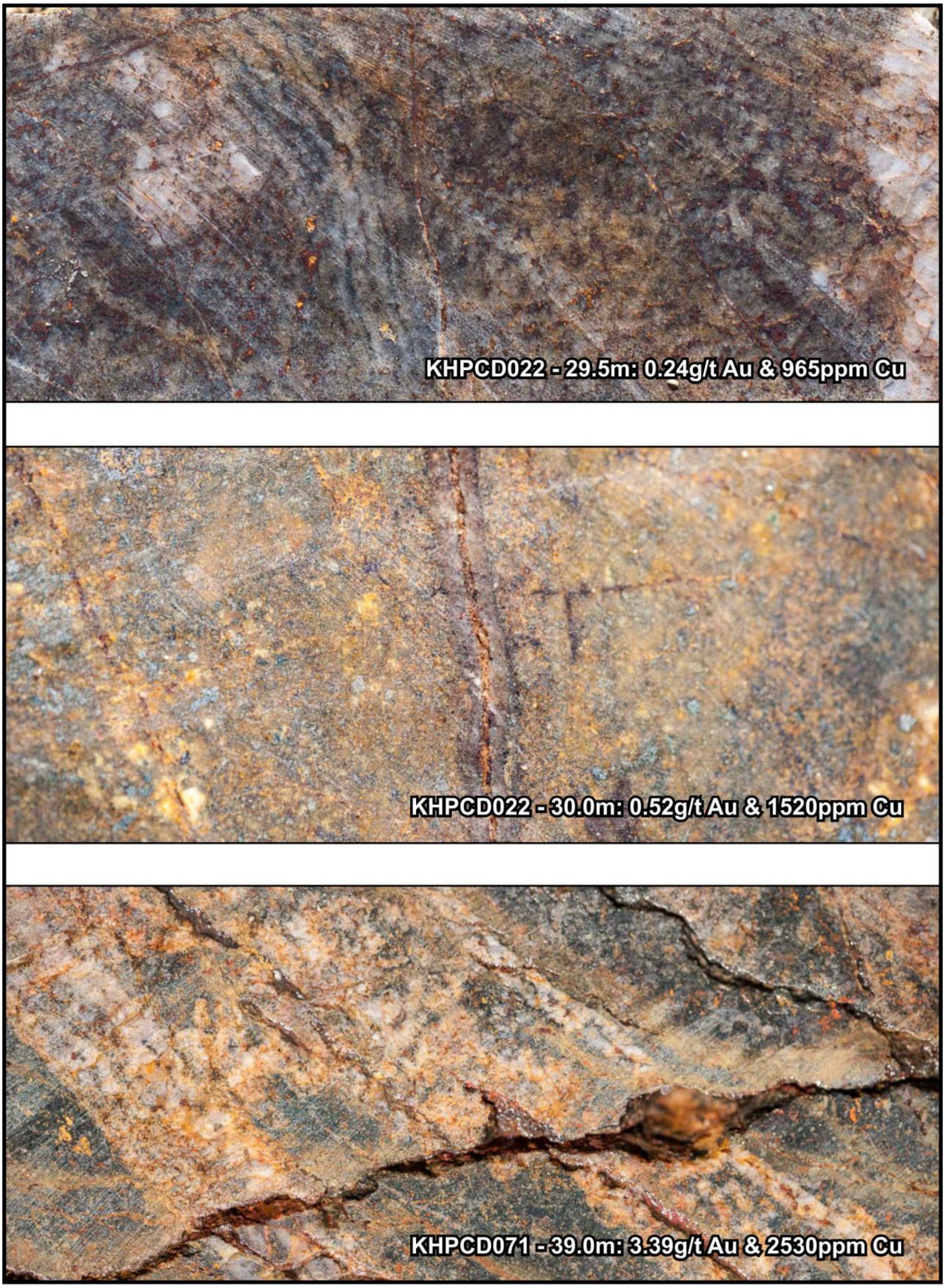

FIGURE 6: Porphyry stockwork veining from bedrock drilling over Target 1.

Table 1: Geological characteristics of seven coper-gold and gold anomalies.

Target	Style	Current size	Depth to top	Host	Gold max	Copper max	Comments
Target 1	Porphyry	500m x 300m	35m	Monzodiorite and quartz monzodiorite porphyry	3.39g/t	0.32%	High density porphyry veining associated with porphyry style alteration (Figures 4 to 6)
Target 2	Epithermal	Unknown	41m	Sheared monzodiorite	1.21g/t	Unknown	Strongly sheared with carbonate replacement and abundant sulphide
Target 3	Porphyry	500m x 300m	19m	Monzodiorite and quartz monzodiorite porphyry	0.59g/t	0.52%	High density porphyry veining associated with porphyry style alteration
Target 4	Porphyry	300m x 300m	27m	Monzodiorite and quartz monzodiorite porphyry	0.27g/t	0.40%	High density D (sulphide) veins indicative of the edges of a porphyry system
Target 5	Epithermal	Unknown	57m	Sheared monzodiorite	0.36g/t	Unknown	Strongly sheared with carbonate replacement and abundant sulphide
Target 6	Tourmaline Breccia	500m x 300m	35m	Sulphide bearing tourmaline breccia's in monzodiorite and quartz monzodiorite porphyry	0.19g/t	0.1%	Sulphide bearing tourmaline breccia's
Target 7	Tourmaline Breccia	Unknown	18m	Tourmaline fracture networks in strongly hornfelsed siltstones	0.2g/t	Unknown	Tourmaline fracture networks in strongly hornfelsed siltstones

Table 2: Kharmagtai PCD drill hole details.

Hole ID	Prospect	East	North	RL	Azimuth (^{0})	Dip	Depth (m)
KHPCD001	The Basin	594503	4876493	1280	0	-90	27.5
KHPCD002	The Basin	594750	4876499	1277	0	-90	21.5
KHPCD003	The Basin	595251	4876500	1271	0	-90	27.0
KHPCD004	The Basin	595501	4876501	1271	0	-90	33.0
KHPCD005	The Basin	595750	4876502	1271	0	-90	45.0
KHPCD006	The Basin	596001	4876503	1275	0	-90	45.0
KHPCD007	The Basin	596500	4876751	1272	0	-90	28.5
KHPCD008	The Basin	595997	4876750	1273	0	-90	50.0
KHPCD009	The Basin	595500	4876751	1270	0	-90	35.6
KHPCD010	The Basin	595251	4876753	1270	0	-90	32.4
KHPCD011	The Basin	594995	4876750	1273	0	-90	27.8
KHPCD012	The Basin	594750	4876750	1273	0	-90	42.2

Hole ID	Prospect	East	North	RL	Azimuth (^{0})	Dip	Depth (m)
KHPCD013	The Basin	594500	4876748	1276	0	-90	24.0
KHPCD014	The Basin	594250	4876746	1279	0	-90	19.8
KHPCD015	The Basin	594003	4876747	1283	0	-90	18.4
KHPCD016	The Basin	595999	4877000	1272	0	-90	51.3
KHPCD017	The Basin	596000	4877252	1272	0	-90	48.8
KHPCD018	The Basin	595748	4876999	1268	0	-90	43.0
KHPCD019	The Basin	595751	4877248	1268	0	-90	38.8
KHPCD020	The Basin	595496	4876989	1269	0	-90	43.0
KHPCD021	The Basin	595497	4877249	1268	0	-90	30.5
KHPCD022	The Basin	595248	4877000	1268	0	-90	32.8
KHPCD023	The Basin	595250	4877250	1267	0	-90	30.3
KHPCD024	The Basin	595000	4876999	1271	0	-90	33.5
KHPCD025	The Basin	594998	4877249	1267	0	-90	28.4
KHPCD026	The Basin	596497	4877001	1272	0	-90	48.0
KHPCD027	The Basin	596748	4876997	1271	0	-90	31.0
KHPCD028	The Basin	597000	4876999	1266	0	-90	25.0
KHPCD029	The Basin	597248	4876998	1269	0	-90	27.7
KHPCD030	The Basin	597248	4877250	1267	0	-90	31.8
KHPCD031	The Basin	596999	4877253	1265	0	-90	28.2
KHPCD032	The Basin	596750	4877251	1269	0	-90	47.5
KHPCD033	The Basin	597750	4877258	1264	0	-90	48.4
KHPCD034	The Basin	598001	4877250	1268	0	-90	56.2
KHPCD035	The Basin	597996	4877500	1265	0	-90	64.0
KHPCD036	The Basin	597754	4877495	1262	0	-90	56.8
KHPCD037	The Basin	593498	4876995	1287	0	-90	28.4
KHPCD038	The Basin	593247	4877251	1292	0	-90	25.4
KHPCD039	The Basin	593497	4877251	1289	0	-90	31.0
KHPCD040	The Basin	593996	4877250	1277	0	-90	26.8
KHPCD041	The Basin	594248	4877250	1275	0	-90	26.5
KHPCD042	The Basin	593250	4877501	1287	0	-90	18.6
KHPCD043	The Basin	593499	4877495	1288	0	-90	25.0
KHPCD044	The Basin	594250	4877500	1280	0	-90	24.4
KHPCD045	The Basin	594249	4877499	12071	0	-90	28.8
KHPCD046	The Basin	594747	4877499	1267	0	-90	21.7
KHPCD047	The Basin	595249	4877499	1266	0	-90	30.2
KHPCD048	The Basin	595749	4877502	1268	0	-90	39.0
KHPCD049	The Basin	596010	4877507	12071	0	-90	47.4
KHPCD050	The Basin	595997	4877749	1270	0	-90	56.6
KHPCD051	The Basin	595499	4877751	1265	0	-90	30.4
KHPCD052	The Basin	595250	4877750	1264	0	-90	27.4
KHPCD053	The Basin	594750	4877751	1266	0	-90	23.0

Hole ID	Prospect	East	North	RL	Azimuth (^{0})	Dip	Depth (m)
KHPCD054	The Basin	594500	4877750	1268	0	-90	30.1
KHPCD055	The Basin	594249	4877751	1274	0	-90	28.0
KHPCD056	The Basin	594001	4877751	1278	0	-90	26.4
KHPCD057	The Basin	593497	4877750	1285	0	-90	19.2
KHPCD058	The Basin	593248	4877750	1281	0	-90	16.9
KHPCD059	The Basin	593249	4877999	1278	0	-90	17.3
KHPCD060	The Basin	593499	4878000	1277	0	-90	24.0
KHPCD061	The Basin	594000	4877998	1279	0	-90	36.0
KHPCD062	The Basin	594249	4878000	1273	0	-90	37.1
KHPCD063	The Basin	594501	4877999	1269	0	-90	47.0
KHPCD064	The Basin	594749	4878001	1264	0	-90	65.4
KHPCD065	The Basin	594999	4878001	1262	0	-90	39.8
KHPCD066	The Basin	595249	4878001	1264	0	-90	39.0
KHPCD067	The Basin	595497	4878001	1264	0	-90	41.0
KHPCD068	The Basin	595747	4878001	1267	0	-90	52.6
KHPCD069	The Basin	595997	4878001	1269	0	-90	66.5
KHPCD070	The Basin	596248	4878251	1267	0	-90	66.0
KHPCD071	The Basin	595375	4876989	1280	0	-90	51.0
KHPCD072	The Basin	595372	4877131	1269	0	-90	38.2
KHPCD073	The Basin	595625	4877125	1280	0	-90	37.2
KHPCD074	The Basin	595626	4876875	1280	0	-90	61.8
KHPCD075	The Basin	595379	4876841	1280	0	-90	38.4
KHPCD076	The Basin	595156	4876832	1280	0	-90	33.5
KHPCD077	The Basin	595142	4877124	1280	0	-90	38.0
KHPCD078	The Basin	595999	4878252	1267	0	-90	60.0
KHPCD079	The Basin	595751	4878250	1267	0	-90	50.7
KHPCD080	The Basin	595499	4878250	1267	0	-90	46.2
KHPCD081	The Basin	595249	4878250	1267	0	-90	41.4
KHPCD082	The Basin	595008	4878253	1267	0	-90	39.0
KHPCD083	The Basin	594749	4878251	1267	0	-90	33.0
KHPCD084	The Basin	594249	4878251	1267	0	-90	28.8
KHPCD085	The Basin	593499	4878252	1267	0	-90	14.0
KHPCD086	The Basin	593499	4878502	1267	0	-90	6.0
KHPCD087	The Basin	593998	4878500	1267	0	-90	20.5
KHPCD088	The Basin	594502	4878498	1267	0	-90	24.0
KHPCD089	The Basin	594746	4878499	1267	0	-90	27.0
KHPCD090	The Basin	594999	4878498	1267	0	-90	33.0
KHPCD091	The Basin	595749	4878498	1267	0	-90	60.0
KHPCD092	The Basin	595998	4878498	1267	0	-90	63.3
KHPCD093	The Basin	596249	4878497	1267	0	-90	75.0
KHPCD094	The Basin	596500	4878500	1267	0	-90	66.2

Hole ID	Prospect	East	North	RL	Azimuth (°)	Dip	Depth (m)
KHPCD095	The Basin	596750	4878500	1267	0	-90	68.0
KHPCD096	The Basin	596999	4878496	1267	0	-90	63.3
KHPCD097	The Basin	597250	4878250	1267	0	-90	70.3
KHPCD098	The Basin	597249	4878498	1267	0	-90	70.0
KHPCD099	The Basin	597499	4878250	1267	0	-90	70.0
KHPCD100	The Basin	597750	4878248	1267	0	-90	78.0
KHPCD101	The Basin	597999	4878249	1267	0	-90	78.0
KHPCD102	The Basin	597996	4878499	1267	0	-90	88.3
KHPCD103	The Basin	597749	4878500	1267	0	-90	90.0
KHPCD104	The Basin	596499	4878747	1267	0	-90	83.0
KHPCD105	The Basin	596250	4878749	1267	0	-90	77.5
KHPCD106	The Basin	596000	4878750	1267	0	-90	78.0
KHPCD107	The Basin	596999	4878750	1267	0	-90	75.0
KHPCD108	The Basin	596499	4878747	1267	0	-90	69.0
KHPCD109	The Basin	596000	4878750	1267	0	-90	58.5
KHPCD110	The Basin	595005	4878748	1267	0	-90	42.0
KHPCD111	The Basin	594249	4878746	1267	0	-90	26.2
KHPCD112	The Basin	593248	4878751	1267	0	-90	10.1
KHPCD113	The Basin	592248	4878752	1267	0	-90	9.0
KHPCD114	The Basin	597748	4878745	1267	0	-90	85.5
KHPCD115	The Basin	597249	4879001	1267	0	-90	82.0
KHPCD116	The Basin	596749	4878999	1267	0	-90	89.0
KHPCD117	The Basin	596248	4879000	1267	0	-90	78.3
KHPCD118	The Basin	594501	4878997	1267	0	-90	27.0
KHPCD119	The Basin	595125	4876999	1267	0	-90	37.9
KHPCD120	The Basin	595251	4877123	1267	0	-90	36.0
KHPCD121	The Basin	595499	4877123	1267	0	-90	39.0
KHPCD122	The Basin	595625	4876999	1267	0	-90	40.7
KHPCD123	The Basin	595503	4876879	1267	0	-90	43.0
KHPCD124	The Basin	595376	4876753	1267	0	-90	39.2
KHPCD125	The Basin	595120	4876750	1267	0	-90	36.0
KHPCD126	The Basin	595247	4876875	1267	0	-90	38.8
KHPCD127	The Basin	594997	4876875	1267	0	-90	32.0
KHPCD128	The Basin	597500	4877258	1267	0	-90	43.2
KHPCD129	The Basin	597750	4877008	1267	0	-90	41.0
KHPCD130	The Basin	597641	4877374	1267	0	-90	60.0
KHPCD131	The Basin	597650	4877123	1267	0	-90	28.1
KHPCD132	The Basin	597871	4877374	1267	0	-90	45.1
KHPCD133	The Basin	597875	4877123	1267	0	-90	54.0
KHPCD134	The Basin	593998	4878999	1267	0	-90	26.0
KHPCD135	The Basin	593497	4878999	1267	0	-90	14.3

Hole ID	Prospect	East	North	RL	Azimuth (^{0})	Dip	Depth (m)
KHPCD136	The Basin	592997	4878999	1267	0	-90	30.2
KHPCD137	The Basin	592494	4878999	1267	0	-90	24.0
KHPCD138	The Basin	591996	4879000	1267	0	-90	15.7
KHPCD139	The Basin	598001	4877375	1267	0	-90	54.3
KHPCD140	The Basin	597879	4877495	1288	0	-90	48.1
KHPCD141	The Basin	597996	4877624	1288	0	-90	39.7
KHPCD142	The Basin	598121	4877499	1288	0	-90	45.0
KHPCD143	The Basin	592250	4879253	1267	0	-90	29.8
KHPCD144	The Basin	592748	4879250	1267	0	-90	38.9
KHPCD145	The Basin	593249	4879250	1267	0	-90	20.0
KHPCD146	The Basin	593999	4879249	1267	0	-90	26.5
KHPCD147	The Basin	594998	4879250	1267	0	-90	43.0
KHPCD148	The Basin	595498	4879250	1260	0	-90	54.2
KHPCD149	The Basin	595998	4879252	1258	0	-90	60.0
KHPCD150	The Basin	596489	4879253	1262	0	-90	70.0
KHPCD151	The Basin	596998	4879250	1262	0	-90	84.0
KHPCD152	The Basin	597499	4879252	1258	0	-90	87.6
KHPCD153	The Basin	597999	4879251	1258	0	-90	85.7
KHPCD154	The Basin	597747	4879501	1257	0	-90	74.5
KHPCD155	The Basin	597249	4879500	1260	0	-90	91.0
KHPCD156	The Basin	596749	4879501	1261	0	-90	82.0
KHPCD157	The Basin	596249	4879502	1258	0	-90	63.5
KHPCD158	The Basin	595747	4879502	1258	0	-90	60.0
KHPCD159	The Basin	595248	4879501	1258	0	-90	50.1
KHPCD160	The Basin	594746	4879500	1256	0	-90	45.0
KHPCD161	The Basin	594252	4879499	1256	0	-90	30.0
KHPCD162	The Basin	593749	4879501	1259	0	-90	23.1
KHPCD163	The Basin	592998	4879500	1266	0	-90	21.0
KHPCD164	The Basin	592497	4879500	1266	0	-90	13.0
KHPCD165	The Basin	592004	4879493	1270	0	-90	17.7
KHPCD166	The Basin	593499	4879501	1261	0	-90	21.2
KHPCD167	The Basin	597497	4879750	1256	0	-90	77.6
KHPCD168	The Basin	597748	4879751	1255	0	-90	76.0
KHPCD169	The Basin	597998	4879753	1256	0	-90	68.0
KHPCD170	The Basin	598504	4879750	1258	0	-90	74.0
KHPCD171	The Basin	598750	4879751	1258	0	-90	86.0
KHPCD172	The Basin	599000	4879750	1258	0	-90	83.5
KHPCD173	The Basin	599254	4879498	1265	0	-90	10.0
KHPCD174	The Basin	599000	4879501	1260	0	-90	72.4
KHPCD175	The Basin	598750	4879500	1260	0	-90	88.5
KHPCD176	The Basin	598501	4879501	1260	0	-90	87.8

Hole ID	Prospect	East	North	RL	Azimuth (^{0})	Dip	Depth (m)
KHPCD177	The Basin	599013	4879258	1262	0	-90	52.5
KHPCD178	The Basin	599013	4878999	1267	0	-90	39.0
KHPCD179	The Basin	599251	4879000	1268	0	-90	16.7
KHPCD180	The Basin	599253	4878751	1275	0	-90	7.0
KHPCD181	The Basin	598998	4878747	1270	0	-90	39.0
KHPCD182	The Basin	598999	4878500	1271	0	-90	15.3
KHPCD183	The Basin	599249	4878500	1277	0	-90	8.7
KHPCD184	The Basin	596498	4876240	1277	0	-90	23.0
KHPCD185	The Basin	596499	4875999	1281	0	-90	22.2
KHPCD186	The Basin	596262	4876003	1280	0	-90	18.5
KHPCD187	The Basin	596011	4875995	1281	0	-90	18.0
KHPCD188	The Basin	595751	4876003	1278	0	-90	34.5
KHPCD189	The Basin	595506	4876003	1274	0	-90	22.0
KHPCD190	The Basin	595240	4876002	1274	0	-90	12.3
KHPCD191	The Basin	595250	4876251	1273	0	-90	27.0
KHPCD192	The Basin	595502	4876247	1272	0	-90	29.0
KHPCD193	The Basin	595758	4876240	1273	0	-90	34.0
KHPCD194	The Basin	595248	4875748	1276	0	-90	13.2
KHPCD195	The Basin	595499	4875751	1277	0	-90	21.0
KHPCD196	The Basin	595750	4875751	1280	0	-90	25.1
KHPCD197	The Basin	595995	4875744	1285	0	-90	17.7
KHPCD198	The Basin	596269	4875751	1284	0	-90	14.0
KHPCD199	The Basin	596754	4875250	1291	0	-90	12.0
KHPCD200	The Basin	596998	4875248	1295	0	-90	11.0
KHPCD201	The Basin	597000	4874999	1299	0	-90	9.0
KHPCD202	The Basin	597006	4874756	1303	0	-90	11.0
KHPCD203	The Basin	597002	4874498	1306	0	-90	11.5
KHPCD204	The Basin	596499	4874495	1300	0	-90	13.0
KHPCD205	The Basin	596251	4874502	1299	0	-90	9.5
KHPCD206	The Basin	596001	4874491	1293	0	-90	59.0
KHPCD207	The Basin	595748	4874496	1294	0	-90	33.4
KHPCD208	The Basin	595747	4874250	1294	0	-90	36.5
KHPCD209	The Basin	596000	4874253	1296	0	-90	70.4
KHPCD210	The Basin	596249	4874247	1300	0	-90	60.6
KHPCD211	The Basin	596495	4874251	1303	0	-90	50.4
KHPCD212	The Basin	597201	4875252	1301	0	-90	12.0
KHPCD213	The Basin	596500	4877750	1300	0	-90	54.3
KHPCD214	The Basin	597000	4877750	1300	0	-90	58.5
KHPCD215	The Basin	597500	4877750	1300	0	-90	46.0
KHPCD216	The Basin	598000	4877750	1300	0	-90	49.0
KHPCD217	The Basin	598250	4877750	1300	0	-90	47.5

Hole ID	Prospect	East	North	RL	Azimuth (^{0})	Dip	Depth (m)
KHPCD218	The Basin	598500	4877750	1300	0	-90	50.0
KHPCD219	The Basin	598500	4877500	1300	0	-90	63.0
KHPCD220	The Basin	597250	4877500	1300	0	-90	36.6
KHPCD221	The Basin	596750	4877500	1300	0	-90	49.0
KHPCD222	The Basin	596500	4877250	1300	0	-90	47.4
KHPCD223	The Basin	597000	4876750	1300	0	-90	28.8
KHPCD224	The Basin	597500	4876750	1300	0	-90	41.4
KHPCD225	The Basin	598000	4876750	1300	0	-90	21.0
KHPCD226	The Basin	597750	4876500	1300	0	-90	21.0
KHPCD227	The Basin	597250	4876500	1300	0	-90	30.0
KHPCD228	The Basin	596750	4876500	1300	0	-90	31.0
KHPCD229	The Basin	599000	4875500	1300	0	-90	23.2
KHPCD230	The Basin	599000	4875000	1300	0	-90	24.0
KHPCD231	The Basin	599000	4874500	1300	0	-90	30.0
KHPCD232	The Basin	596500	4878250	1300	0	-90	66.0
KHPCD233	The Basin	597000	4878250	1300	0	-90	67.3
KHPCD234	The Basin	596750	4878000	1300	0	-90	61.7
KHPCD235	The Basin	597750	4878000	1300	0	-90	53.0
KHPCD236	The Basin	598250	4878250	1300	0	-90	75.0
KHPCD237	The Basin	592999	4879989	1300	0	-90	16.5
KHPCD238	The Basin	598250	4877875	1300	0	-90	58.0
KHPCD239	The Basin	598375	4877875	1300	0	-90	57.0
KHPCD240	The Basin	598244	4879750	1290	0	-90	69.0
KHPCD241	The Basin	598500	4879250	1290	0	-90	61.0
KHPCD242	The Basin	598500	4878750	1290	0	-90	73.0
KHPCD243	The Basin	598500	4878250	1300	0	-90	61.5
KHPCD244	The Basin	598250	4878000	1300	0	-90	66.7
KHPCD245	The Basin	597250	4878000	1300	0	-90	65.5
KHPCD246	The Basin	596250	4878000	1290	0	-90	55.2
KHPCD247	The Basin	596250	4877500	1290	0	-90	50.0
KHPCD248	The Basin	596250	4877000	1300	0	-90	54.0
KHPCD249	The Basin	596250	4876500	1300	0	-90	26.0
KHPCD250	The Basin	596250	4876250	1300	0	-90	33.4
KHPCD251	The Basin	596000	4876250	1300	0	-90	69.0
KHPCD252	The Basin	595500	4878750	1300	0	-90	50.3
KHPCD253	The Basin	595750	4879000	1300	0	-90	53.0
KHPCD254	The Basin	595250	4879000	1300	0	-90	47.0
KHPCD255	The Basin	595250	4878500	1300	0	-90	40.2
KHPCD256	The Basin	598248	4878634	1290	0	-90	83.0
KHPCD257	The Basin	598748	4878634	1290	0	-90	58.0
KHPCD258	The Basin	598748	4879001	1290	0	-90	65.5

Hole ID	Prospect	East	North	RL	Azimuth (⁰)	Dip	Depth (m)
KHPCD259	The Basin	598248	4879001	1290	0	-90	78.0

Table 3: Kharmagtai significant assay results

Hole ID	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (ppm)	CuEq (%)
KHPCD003	21.2	27	5.8	0.22	545	0.19
KHPCD020	37	43	6	0.35	1168	0.34
KHPCD022	26.8	32.8	6	0.28	1122	0.29
KHPCD023	24.3	30.3	6	0.1	698	0.13
KHPCD035	58	64	6	0.06	312	0.07
KHPCD036	50.8	56.8	6	0.15	494	0.15
KHPCD040	20.8	26.8	6	0.33	2201	0.43
Including	22.8	24.8	2	0.59	2290	0.61
KHPCD041	21.5	26.5	5	0.33	3630	0.57
Including	25.5	26.5	1	0.46	5190	0.81
KHPCD044	18.4	24.4	6	0.21	868	0.22
KHPCD045	22.8	28.8	6	0.05	689	0.10
KHPCD047	24.2	30.2	6	0.07	1128	0.16
KHPCD051	24.4	30.4	6	0.11	3730	0.44
KHPCD053	17	23	6	0.04	636	0.09
KHPCD063	41	47	6	0.64	85	0.42
KHPCD066	33	39	6	0.12	471	0.12
KHPCD071	39	51	12	1.64	2159	1.26
Including	39	41	2	3.39	2530	2.42
Including	39	47	8	2.08	2504	1.58
KHPCD072	32.2	38.2	6	0.09	1258	0.18
KHPCD074	55.8	61.8	6	0.12	445	0.12
KHPCD075	32.4	38.4	6	0.24	1525	0.31
KHPCD077	36	38	2	0.19	578	0.18
KHPCD083	27	29	2	0.32	54	0.21
KHPCD088	22	24	2	0.2	65	0.13
KHPCD092	61.3	63.3	2	0.36	20	0.23
KHPCD119	31.9	37.9	6	0.13	631	0.15
KHPCD120	30	36	6	0.08	591	0.11
KHPCD121	33	39	6	0.2	965	0.22
KHPCD122	34.7	40.7	6	0.32	735	0.28
KHPCD123	37	43	6	0.12	548	0.13
KHPCD125	30	36	6	0.11	374	0.11
KHPCD126	32.8	38.8	6	0.15	636	0.16
KHPCD133	48	54	6	0.05	601	0.09
KHPCD140	42.1	46.1	4	0.06	505	0.09
KHPCD141	33.7	39.7	6	0.04	912	0.12

Hole ID	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (ppm)	CuEq (%)
KHPCD190	6.3	12.3	6	0.15	801	0.18
KHPCD193	28	34	6	0.04	664	0.09
KHPCD204	7	13	6	0.01	668	0.07
KHPCD210	54.6	60.6	6	0.05	873	0.12
KHPCD211	44.4	50.4	6	0.04	592	0.08

APPENDIX 1: 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 31 October 2016.

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

Criteria	JORC Code (Section 1) Explanation	Commentary
Sampling techniques	• Nature and quality of sampling and assaying. • Measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report.	• Representative 2 meter samples were taken from ½ HQ diamond core. • Only assay result results from recognised, independent assay laboratories were used after QAQC was verified.
Drilling techniques	• Drill type and details.	• DDH drilling has been the primary drilling method in basement. Basin rocks were drilled with rotary mud. Samples only come from DDH drilling.
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• DDH core recoveries have been very good, averaging between 95% and 99% for all of the deposits. In localised areas of faulting and/or fracturing the recoveries decrease; however this is a very small percentage of the overall mineralised zones. • Recovery measurements were collected during all DDH programs. The methodology used for measuring recovery is standard industry practice. • Analysis of recovery results vs. grade indicates no significant trends. Indicating bias of grades due to diminished recovery and / or wetness of samples.
Logging	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged.	• Drill and trench samples are logged for lithology, mineralisation and alteration and geotechnical aspects using a standardised logging system, including the recording of visually estimated volume percentages of major minerals. • Drill core was photographed after being logged by a geologist. • The entire interval drilled and trenched has been logged by a geologist.
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximize representivity of samples.	• DDH Core is cut in half with a diamond saw, following the line marked by the geologist. The rock saw is regularly flushed with fresh water. • Sample intervals are a constant 2m interval down-hole in length. • 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

Criteria	JORC Code (Section 1) Explanation	Commentary
	• Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled.	Ulaanbaatar. • All samples were prepared to meet standard quality control procedures as follows: Crushed to 90% passing 3.54 mm, split to 1kg, pulverised to 90% - 95% passing 200 mesh (75 microns) and split to 150g. • Certified reference materials (CRMs), blanks and pulp duplicate were randomly inserted to manage the quality of data. • Sample sizes are well in excess of standard industry requirements.
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	• 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 submitted to ALS Perth for the Complete characterization package for whole rock package ME-ICP06 plus carbon and sulfur by combustion furnace (ME-IR08) to quantify the major elementsin a sample. Trace elements including the full rare earth element suites are reported from three digestions with either ICP-AES or ICP-MS finish: a lithium borate fusion for theresistive elements (ME-MS81), a four acid digestion for the base metals (ME-4ACD81) andan aqua regia digestion for the volatile gold related trace elements (ME-MS42).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). Samples are 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 is over-range (>1% Cu), it is analysed by a second analytical technique (AAS22S), which has a higher upper detection limit (UDL) of 5% copper. • Quality assurance was provided by introduction of known certified standards, blanks and duplicate samples on a routine basis. • Assay results outside the optimal range for methods were re-analysed by appropriate methods. • Ore Research Pty Ltd certified copper and gold standards have been implemented as

Criteria	JORC Code (Section 1) Explanation	Commentary
		a part of QAQC procedures, as well as coarse and pulp blanks, and certified matrix matched copper-gold standards. • QAQC monitoring is an active and ongoing processes on batch by batch basis by which unacceptable results are re-assayed as soon as practicable.
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	• All assay data QAQC is checked prior to loading into the Geobank data base. • The data is managed XAM geologists. • The data base and geological interpretation is collectively managed by XAM.
Location of data points	• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control.	• Diamond drill holes have been surveyed with a differential global positioning system (DGPS) to within 10cm accuracy. • All diamond drill holes have been down hole surveyed to collect the azimuth and inclination at specific depths. Two principal types of survey method have been used over the duration of the drilling programs including Eastman Kodak and Flexit. • UTM WGS84 48N grid. • The DTM is based on 1m contours with an accuracy of ±0.01m.
Data spacing and distribution	• Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied.	• Holes were drilled on an initial 250m grid which has been infilled to 125m where needed. • Holes are vertical. • The data spacing and distribution is sufficient to establish anomalism and targeting for both porphyry, tourmaline breccia and epithermal target types.
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• Drilling is conducted in a predominantly regular grid to allow unbiased interpretation and targeting.
Sample security	• The measures taken to ensure sample security.	• Samples are dispatched from site through via company employees and secure company vehicles to the Laboratories. • Samples are signed for at the Laboratory with confirmation of receipt emailed through. • Samples are then stored at the lab and returned to a locked storage site.

Criteria	JORC Code (Section 1) Explanation	Commentary
Audits or reviews	• The results of any audits or reviews of sampling techniques and data	• Internal audits of sampling techniques and data management on a regular basis, to ensure industry best practice is employed at all times.

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

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

Criteria	JORC Code (Section 2) Explanation	Commentary
Mineral tenement and land tenure status	• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. • The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	• The Project comprises 1 Mining Licence (MV 17387A). • 100% owned by Oyut Ulaan LLC. • Xanadu and its joint venture partner, Mongol Metals can earn a 90% interest in the Kharmagtai porphyry copper-gold project. The remaining 10% is owned by Quincunx Ltd, which in turn is owned by an incorporated joint venture between Kerry Holdings Ltd. and MCS Holding LLC. • 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	• Acknowledgment and appraisal of exploration by other parties.	• Previous exploration was conducted by Quincunx Ltd, Ivanhoe Mines Ltd and Turquoise Hill Resources Ltd including extensive drilling, surface geochemistry, geophysics, mapping and mineral resource estimation to NI 43-101 standards.
Geology	• Deposit type, geological setting and style of mineralisation.	• 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	• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:	• Diamond drill holes are the principal source of geological and grade data for the Project. • See figures in main report.

Criteria	JORC Code (Section 2) Explanation	Commentary
	– easting and northing of the drill hole collar. – elevation or RL Reduced Level – elevation above sea level in metres) of the drill hole collar. – dip and azimuth of the hole – down hole length and interception depth – hole length. • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data Aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• A nominal cut-off of 0.1% Cu is used for identification of potentially significant intercepts for reporting purposes. • 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). • Metal equivalents used the following formula: CuEq = Cu% x(Aug/t x 0.6378 Formula is based on a $2.60/lb copper price and a $1,300/oz gold price. A gold recovery factor of 78.72% was used.
Relationship between mineralisation on widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	• 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	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	• See figures in main report.
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable,	• Resources have been reported at a range of cut-off grades, above a minimum

Criteria	JORC Code (Section 2) Explanation	Commentary
	representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	suitable for open pit mining, and above a minimum suitable for underground mining.
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• Extensive work in this area has been done, and is reported separately.
Further work	• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• 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.

1.3 JORC TABLE 1 – SECTION 3 ESTIMATION AND REPORTING OF MINERAL RESOURCES

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

Criteria	JORC Code (Section 3) Explanation	Commentary
Database integrity	• Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. • Data validation procedures used.	• The database is a Geobank data base system. • Data is logged directly into an Excel spread sheet logging system with drop down field lists. • Validation checks are written into the importing program ensures all data is of high quality. • Digital assay data is obtained from the Laboratory, QAQC checked and imported • Geobank exported to Access, and connected directly to the GemcomSurpac Software. • Data was validated prior to resource estimation by the reporting of basic statistics for each of the grade fields, including examination of maximum values, and visual checks of drill traces and grades on sections and plans.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• Andrew Vigar of Mining Associates visited site from 24 and 25 October 2014. • The site visit included a field review of the exploration area, an inspection of core, sample cutting and logging procedures and discussions of geology and mineralisation

Criteria	JORC Code (Section 3) Explanation	Commentary
		with exploration geologists.
Geological interpretation	• Confidence in (or conversely, the uncertainty of the geological interpretation of the mineral deposit. • Nature of the data used and of any assumptions made. • The effect, if any, of alternative interpretations on Mineral Resource estimation. • The use of geology in guiding and controlling Mineral Resource estimation. • The factors affecting continuity both of grade and geology.	• Mineralisation resulted in the formation of comprises quartz-chalcopyrite-pyrite-magnetite stockwork veins and minor breccias. • The principle ore minerals of economic interest are chalcopyrite, bornite and gold, which occur primarily as infill within these veins. Gold is intergrown with chalcopyrite and bornite. • The ore mineralised zones at Altan Tolgoi, Tsagaan Sudal and Zesen Uul are associated with a core of quartz veins that were intensely developed in and the quartz diorite intrusive stocks and/or dykes rocks. These vein arrays can be described as stockwork, but the veins have strong developed preferred orientations. • Sulphidemineralisation is zoned from a bornite-rich core that zone outwards to chalcopyrite-rich and then outer pyritic haloes, with gold closely associated with bornite. • Drilling indicates that the supergene profile has been oxidised to depths up to 60 metres below the surface. The oxide zone comprises fracture controlled copper and iron oxides; however there is no obvious depletion or enrichment of gold in the oxide zone.
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	• Altan Tolgoi comprises two main mineralised zones, northern and southern stockwork zones (AT-N and AT-S) which are approximately 100 metres apart and hosted in diorite and quartz diorite porphyries. The AT-S is at least 550 metres long, 600 metres deep and contains strong quartz-chalcopyrite-pyrite stockwork veining and associated high grade copper-gold mineralisation. The stockwork zone widens eastward from a 20 to 70 metres wide high-grade zone in the western and central sections to a 200 metres wide medium-grade zone in the eastern most sections. Mineralisation remains open at depth and along strike to the east. • The AT-N consists of a broad halo of quartz that is 250 metres long, 150 metres wide long and at least 350 metres deep. • TS consists of a broad halo of quartz veins that is 850 metres long, 550 metres wide long and at least 500 metres deep, and forms a pipe like geometry. • ZU forms a sub vertical body of stockwork approximately 350 × 100 metres by at least

Criteria	JORC Code (Section 3) Explanation	Commentary
		200 metres and plunges to the southeast.
Estimation and modelling techniques	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. • The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. • The assumptions made regarding recovery of by-products. • Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). • In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. • Any assumptions behind modelling of selective mining units. • Any assumptions about correlation between variables. • Description of how the geological interpretation was used to control the resource estimates. • Discussion of basis for using or not using grade cutting or capping. • The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	• The estimate Estimation Performed using Ordinary Kriging. • Variograms are reasonable along strike. • Minimum & Maximum Informing samples is 5 and 20 (1st pass), Second pass is 3 and 20. • Copper and Gold Interpreted separately on NS sections and estimated as separate domains. • Halo mineralisation defined as 0.12% Cu and 0.12g/t Au Grade. • The mineralised domains were manually digitised on cross sections defining mineralisation. Three dimensional grade shells (wireframes) for each of the metals to be estimated were created from the sectional interpretation. Construction of the grade shells took into account prominent lithological and structural features. For copper, grade shells were constructed for each deposit at a cut-off of 0.12% and 0.3% Cu. For gold, wireframes were constructed at a threshold of 0.12g/t and 0.3 g/t. These grade shells took into account known gross geological controls in addition to broadly adhering to the above mentioned thresholds. • Cut off grades applied are copper-equivalent (CuEq) cut off values of 0.3% for appropriate for a large bulk mining open pit and 0.5% for bulk block caving underground. • A set of plans and cross-sections that displayed colour-coded drill holes were plotted and inspected to ensure the proper assignment of domains to drill holes. • The faulting interpreted to have had considerable movement, for this reason, the fault surface were used to define two separate structural domains for grade estimation. • Six metre down-hole composites were chosen for statistical analysis and grade estimation of Cu and Au. Compositing was carried out downhole within the defined mineralisation halos. Composite files for individual domains were created by selecting those samples within domain wireframes, using a fix length and 50% minimum composite length. • A total of 4,428 measurements for specific gravity are recorded in the database, all of which were determined by the water immersion method. The average density of all samples is 2.74 t/m3. In detail there are

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		some differences in density between different rock types, but since the model does not include geological domains a single pass ID2 interpolation was applied. • Primary grade interpolation for the two metals was by ordinary kriging of capped 6m composites. A two-pass search approach was used, whereby a cell failing to receive a grade estimate in a previous pass would be resubmitted in a subsequent and larger search pass. • The Mineral Resource estimate meets the requirements of JORC 2012 and has been reported considering geological characteristics, grade and quantity, prospects for eventual economic extraction and location and extents. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories using relevant copper-equivalent cut-off values; CuEq = Cu% x(Aug/t x 0.6378 Formula is based on a $2.60/lb copper price and a $1,300/oz gold price. A gold recovery factor of 78.72% was used.
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• All tonnages are reported on a dry basis.
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• Cut off grades applied are copper-equivalent (CuEq) cut off values of 0.3% for possible open pit and 0.5% for underground.
Mining factors or assumptions	• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	• No mining factors have been applied to the in situ grade estimates for mining dilution or loss as a result of the grade control or mining process. • The deposit is amenable to large scale bulk mining. • The Mineral resource is reported above an optimised pit shell. (Lerch Grossman algorithm), mineralisation below the pit shell is reported at a higher cut-off to reflect the increased costs associated with block cave underground mining
Metallurgical factors or assumptions	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made	• No metallurgical factors have been applied to the in situ grade estimates.

Criteria	JORC Code (Section 3) Explanation	Commentary
	when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	
Environmental factors or assumptions	• Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	• An environmental baseline study was completed in 2003 by Eco Trade Co. Ltd. of Mongolia in cooperation with Sustainability Pty Ltd of Australia. The baseline study report was produced to meet the requirements for screening under the Mongolian Environmental Impact Assessment (EIA) Procedures administered by the Mongolian Ministry for Nature and Environment (MNE).
Bulk density	• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. • The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. • Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	• A total of 4,428 measurements for specific gravity are recorded in the database, all of which were determined by the water immersion method. • The average density of all samples is approximately 2.74 t/m3. In detail there are some differences in density between different rock types, but since the model does not include geological domains a single estimation pass (ID2) was applied to a density attribute. • There is no material impact on global tonnages, but it should be noted that density is a function of both lithology and alteration (where intense magnetite/sulphide is present).
Classification	• The basis for the classification of the Mineral Resources into varying confidence categories. • Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). • Whether the result appropriately reflects the Competent Person's view of the deposit.	• The mineral resource classification protocols, for drilling and sampling, sample preparation and analysis, geological logging, database construction, interpolation, and estimation parameters are described in the Main Report have been used to classify the 2015 resource. • The Mineral Resource statement relates to global estimates of in situ tonnes and grade • The Mineral Resource estimate has been classified in accordance with the JORC Code, 2012 Edition using a qualitative approach. The classifications reflect the competent person's view of the Kharmagtai Copper Gold Project.
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	• XAM's internal review and audit of the Mineral Resource Estimate consisted of data analysis and geological interpretation

Criteria	JORC Code (Section 3) Explanation	Commentary
		of individual cross-sections, comparing drill-hole data with the resource estimate block model. • Good correlation of geological and grade boundaries were observed • 2013 - Mining Associates Ltd. was engaged to conduct an Independent Technical Report to review drilling, sampling techniques, QAQC and previous resource estimates. Methods were found to conform to international best practice.
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• An approach to the resource classification was used which combined both confidence in geological continuity (domain wireframes) and statistical analysis. The level of accuracy and risk is therefore reflected in the allocation of the measured, indicated and inferred resource categories. • Resource categories were constrained by geological understanding, data density and quality, and estimation parameters. It is expected that further work will extend this considerably. • Resources estimates have been made on a global basis and relates to in situ grades. • Confidence in the Indicated resource is sufficient to allow application of Modifying Factors within a technical and economic study. The confidence in Inferred Mineral Resources is not sufficient to allow the results of the application of technical and economic parameters. • The deposits are not currently being mined. • There is surface evidence of historic artisanal workings. • No production data is available.

1.4 JORC TABLE 1 – SECTION 4 ESTIMATION AND REPORTING OF ORE RESERVES

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