

# **QUARTERLY ACTIVITIES REPORT**

ACTIVITIES FOR THE QUARTER ENDING 31 MARCH 2016

#### **HIGHLIGHTS**

#### **Exploration drilling underway at Kharmagtai**

- Exploration activities continue at the Kharmagtai copper-gold project;
- Additional drill targets generated through systematic use of multiple geophysical data sets have been prioritised in current drill program;
- Drilling intersects broad zones of porphyry alteration and mineralisation;
- Significant high-grade epithermal gold mineralisation confirmed at the Shar Zam prospect;
- KHRC256 intersects several significant zones of epithermal gold mineralisation:
  - 4m grading 1.36g/t Au 0.17% Cu from 132m; and
  - 1.4m grading 14.74g/t Au and 1.82% Cu from 202.6m, including 0.3m grading 43g/t Au and 5.38% Cu;
- Reconnaissance drilling expected to be complete at the end June;
- Metallurgical testing work on copper-gold mineralisation has commenced;
- Reconnaissance exploration, field mapping, and infill geochemical sampling are ongoing.

#### Significant high-grade gold mineralisation discovered at Oyut Ulaan

- New surface rock chips including 305.8 g/t Au, 171.6 g/t Au and 123.2 g/t Au from newly discovered quartz-carbonate-sulphide veins at Oyut Ulaan;
- Trench results confirm the existence of a continuous zone of shallow high-grade narrow vein gold mineralisation;
- Systematic sampling along and within three parallel zones display remarkable continuity along the strike;
- Trenching confirms lower-grade gold mineralisation (0.1 g/t to 1.0 g/t Au) in host rocks;
- Geophysics indicates the prospective area of mineralisation is 4.5km long and 300m wide;
- · New trenching results enhance drilling target.

#### Strong financial position and new appointment to Board

- Kharmagtai project deferred consideration repaid and project fully secured;
- Cash and equivalents of A\$4.7 million;
- Appointment of Dr Andrew Stewart as an Executive Director of the Company, in addition to his role as Chief Executive Officer (CEO).

ASX XAM

ABN 92 114 249 026

**COMPANY DIRECTORS** 

Mark Wheatley

**Executive Chairman** 

Ganbayar Lkhagvasuren

Executive Director

Hannah Badenach
Non-Executive Director

Darryl Clark

Non-Executive Director

Barry Lavin

Non-Executive Director

Marcus Engelbrecht

Non-Executive Director

Andrew Stewart

**CEO & Executive Director** 

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#### Ulaanbaatar Office

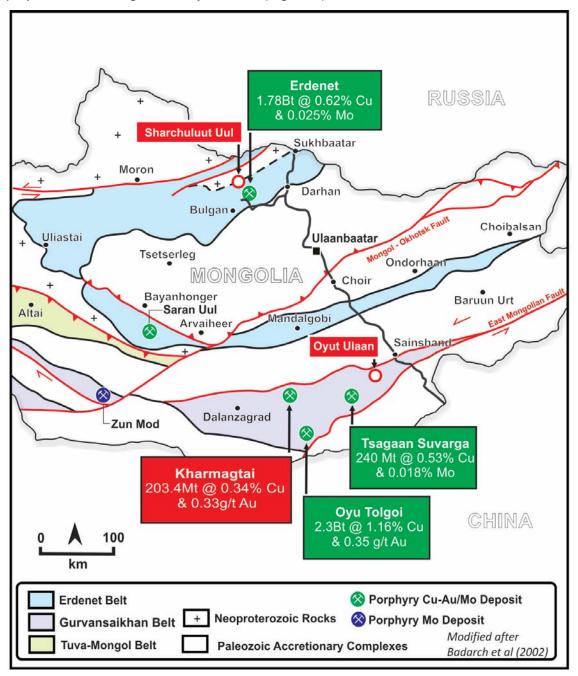
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Xanadu Mines Ltd (**ASX: XAM – "Xanadu"**) is pleased to provide shareholders with an update of exploration results from Kharmagtai and Oyut Ulaan during a strong first quarter.

#### **EXPLORATION ACTIVITES**

Exploration activities during this quarter continued to focus on the companies South Gobi copper projects at Kharmagtai and Oyut Ulaan (Figure 1).



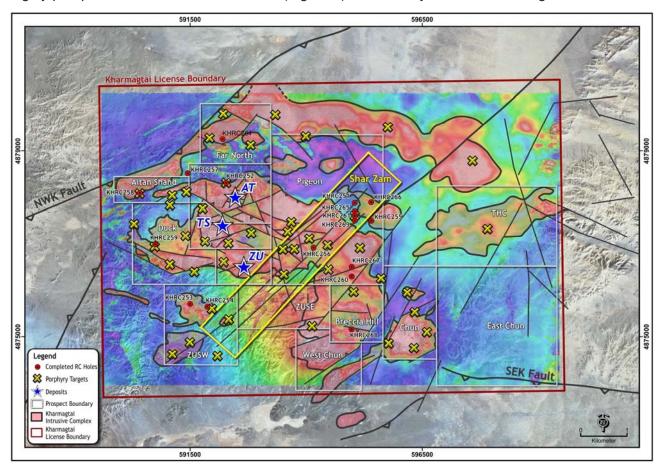
**Figure 1**: Location of Xanadu Mines copper projects, with Kharmagtai and Oyut Ulaan within Mongolia's South Gobi Copper Belt (Gurvansaikhan Belt).



#### **Kharmagtai Copper-Gold Project**

The Kharmagtai copper-gold project is located within the South Gobi porphyry copper province of Mongolia, approximately 420km south-southwest of Ulaanbaatar (Figure 1), and is one of the most advanced porphyry copper-gold projects in Asia.

Exploration drilling at the Kharmagtai project continues to test a combination of targets which includes high level gold-rich porphyry mineralisation and deeper tourmaline breccia mineralisation within the highly prospective 25 km² area of interest (Figure 2) which has yielded outstanding results to date.



**Figure 2**: Kharmagtai porphyry copper-gold district showing Altan Tolgoi, Tsagaan Sudal and Zesen Uul deposits. At a district scale the emplacement of the known porphyry and tourmaline breccia mineralisation lies on the intersection of WNW-trending arc-parallel reverse faults and NNE-trending transverse faults.

#### Reprocessing of the extensive geophysical database

Numerous new drill targets have been defined following detailed reprocessing of the extensive geophysical database, by integrating multiple 3D geophysical inversions with models derived from geological data to make rigorous predictions about the subsurface geology (Figure 2). This detailed review conducted with the assistance of Fathom Geophysics (http://www.fathomgeophysics.com) utilised the latest geophysical technologies and successfully defined over 40 new drill targets along and within the highly prospective west-northwest trending magnetite-altered corridors that controlled porphyry mineralisation at Altan Tolgoi and Zesen Uul that extend several kilometres out under cover and the potential for further discoveries remains high.



Given at least 70% of the strongly mineralised Kharmagtai Igneous Complex (Figure 2) lies under unexplored shallow cover, the new target generation means the Company has taken a significant step forward in its search for addition porphyry copper-gold centres at its flagship Kharmagtai copper-gold project in Mongolia. In addition to drilling, the warmer weather will allow renewed activities in defining the surface extent of the high grade gold occurrences found on both Kharmagtai and Oyut Ulaan, and provide a basis for a potential future exploration drilling program.

#### Reconnaissance exploration drilling underway to test wider shallow porphyry potential

Exploration drilling continues to provide significant advances in our understanding of the Kharmagtai project and continues to indicate potential for a large-scale mineralised breccia system along-side the established Mineral Resource and is transforming the Company's view of the growth potential of Kharmagtai.

Drilling has achieved a high hit rate to date with virtually every hole drilled encountering porphyry alteration and associated copper-gold mineralisation. Much of this success can be attributed to the integrated use of geological and geochemical exploration, drilling information and advanced geophysical modelling which continues to provide an evolving insight into the geometry of copper and gold mineralisation and the potential source of intrusions.

Eighteen RC drill holes have been completed for approximately 3,112.60m in the last quarter of exploration. Recent drill hole details are set out in Figure 2 and Table 1 and significant assay results in Table 2.

**Table 1:** Kharmagtai drill hole details from first quarter.

Hole ID	Prospect	East	North	RL	Azi (°)	Dip	Depth (m)
KHRC251	Pigeon	595051	4877882	1247	180.00	-70.00	59.00
KHRC252	North Altan Tolgoi	592278	4878312	1269	180.00	-70.00	200.00
KHRC253	South West Zesen Uul	591502	4875699	1315	180.00	-70.00	200.00
KHRC254	South West	591868	4875637	1315	180.00	-70.00	180.00
KHRC255	Pigeon	595404	4877503	1258	180.00	-70.00	100.00
KHRC256	Pigeon	594162	4876916	1277	65.00	-77.00	218.60
KHRC257	Far North	591444	4878523	1274	180.00	-60.00	120.00
KHRC258	Altan Shand	590416	4878093	1282	360.00	-65.00	100.00
KHRC259	Duck	590747	4876990	1315	180.00	-65.00	186.00
KHRC260	Pigeon	594980	4876298	1274	180.00	-70.00	200.00
KHRC261	Pigeon	595047	4877602	1271	180.00	-70.00	200.00
KHRC262	West Chun	594928	4875180	1298	180.00	-70.00	200.00
KHRC263	Pigeon	595050	4877500	1271	180.00	-70.00	201.00
KHRC264	Far North	592200	4879250	1271	180.00	-70.00	150.00
KHRC265	Pigeon	595050	4877700	1271	180.00	-70.00	183.00
KHRC266	Pigeon	595400	4877895	1270	180.00	-70.00	165.00
KHRC267	Pigeon	594980	4876500	1273	180.00	-70.00	250.00
KHRC268	Breccia Hill	595002	4875187	1283	180.00	-70.00	200.00



Table 2: Kharmagtai significant drill results from first quarter.

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Cu (%)	Au (g/t)	CuEq (%)
KHRC251*	Pigeon	No significar	nt assays				
KHRC252*	Altan Tolgoi	8	10	2		0.12	0.08
and		74	76	2		0.11	0.07
KKRC253*	SW ZU	58	60	2		0.12	0.08
and		86	88	2		0.13	0.08
and		176	178	2		0.73	0.47
KHRC254*	SW ZU	14	20	6	0.1	0.14	0.19
and		92	98	6	0.12	0.11	0.19
and		130	140	10	0.21	0.27	0.38
KHRC255*	Pigeon	54	61	7	0.02	0.23	0.17
KHRC256*	Pigeon	132	136	4	0.17	1.36	1.04
and		166	181	15	0.04	0.45	0.33
and		202.6	204	1.4	1.82	14.74	11.22
including		203.2	203.5	0.3	5.38	43.8	33.32
and		205	207	2	0.18	0.23	0.33
KHRC257*	Far North	114	116	2		0.11	0.07
KHRC258*	Altan Shand	2	6	4		0.235	0.15
KHRC259*	Duck	56	58	2	0.35	0.44	0.63
KHRC260*	Pigeon	18	22	4	0.02	0.38	0.26
		170	178	8	0.08	0.21	0.21
KHRC261*	Pigeon	42	50	8	0.04	0.14	0.13
and		60	64	4	0.03	0.14	0.12
and		70	84	14	0.04	0.15	0.14
and		90	116	24	0.06	0.13	0.14
and		164	174	10	0.07	0.14	0.16
KHRC262*	Breccia Hill	42	54	12	0.11	0.03	0.13
and		76	86	10	0.12	0.02	0.13
and		90	154	64	0.19	0.04	0.22
including		126	128	2	0.53	0.05	0.56
including		142	144	2	0.48	0.19	0.60
KHRC263*	Pigeon	124	126	2	0.12	0.56	0.48
and		136	144	8	0.08	0.28	0.26
and		174	182	8	0.05	0.15	0.15
and		188	201	13	0.09	0.23	0.24
KHRC264*	Far North	No significar	nt assays				
KHRC265*	Pigeon	54	60	6	0.02	0.2	0.15
and		142	144	2	0.18	0.15	0.28
and		162	164	2	0.36	0.07	0.40
KHRC266*	Pigeon	No significar	nt assays				



							-
Hole ID	Prospect	From (m)	To (m)	Interval (m)	Cu (%)	Au (g/t)	CuEq (%)
KHRC267	Pigeon	62	76	14	0.08	0.29	0.26
and		82	88	6	0.04	0.16	0.14
and		124	126	2	0.04	0.11	0.11
and		132	134	2	0.06	0.14	0.16
and		144	146	2	0.42	0.11	0.50
and		164	170	6	0.07	0.12	0.15
and		216	226	10	0.1	0.24	0.35
KHRC268*	Breccia Hill	0	180	180	0.11		0.11
including		160	162	2	0.21	2.83	2.01

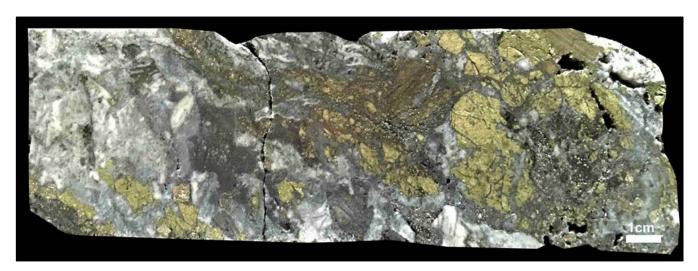


Figure 3: High-grade carbonate-base metal vein. KHRC256-203.2m; From 0.3m interval grading 43g/t Au and 5.38% Cu.



**Figure 4:** Tourmaline-pyrite-chalcopyrite cemented breccia. KHRC267- 132m: From 2m interval grading **0.14g/t Au and 0.06% Cu**.



#### Exploration drilling intersects high-grade gold mineralisation at Shar Zam

One drill hole (KHRC256) targeted potential strike extensions 60m along strike from high-grade carbonate-base metal gold vein epithermal mineralisation previously intersected in KHDDH335 (2m interval which assayed 98.5g/t and 1.68% Cu, from 198m). KHRC256 intersected several zones of moderate to strong quartz sericite alteration and quartz-carbonate gold vein mineralisation including 4m grading 1.36g/t Au 0.17% Cu from 132m and 1.4m grading 14.74g/t Au and 1.82% Cu from 202.6m including 0.3m grading 43g/t Au and 5.38% Cu. The gold mineralisation is associated with massive quartz-carbonate +/- pyrite-sphalerite-chalcopyrite veins and mineralogical similar breccia's with some fracture-related dissemination in wall-rocks (Figure 3).

The recent intersection of potentially significant carbonate-base metal (CBM) gold mineralisation within the newly defined Shar Zam Prospect broadens the range of targets at Kharmagtai and opens up a whole new area for exploration. High-grade gold mineralisation is hosted in a series of north-east trending reverse faults. The gold mineralisation appears to be telescoped upon tourmaline coppergold breccia mineralisation, indicating a link between CBM mineralisation and the adjacent porphyry/breccia alteration and mineralisation that provides a conceptual model that can aid exploration zones of mineralisation. Given the potential for bonanza grades and significant strike (up to several kilometres); this style of mineralisation is considered to be a very attractive target and follow-up drilling will target the up-dip extensions of this high-grade gold mineralisation (Figure 2).

#### Exploration drilling intersects broad zones of porphyry alteration and mineralisation

Two drill holes (KHRC253 and KHRC254) drilled geophysical targets south-west of Zesen Uul. Both holes intersected moderately chlorite-epidote-magnetite altered monzodiorite porphyry with sparse developed quartz-pyrite-chalcopyrite B-veins. The monzodiorite porphyry intrusive phase is similar to that observed at Zesen Uul and follow-up drilling will continue to test this highly prospective area.

Eight drill holes target (KHRC251, KHRC255, KHRC260 KHRC261, KHRC263, KHRC265, KHRC266 and KHRC267) tested buried geophysical targets around the Pigeon porphyry. The Pigeon prospect comprises a 1-kilometre wide circular magnetic high with an underlying extensive strong chargeability high. Several holes failed to reach their target depths. All holes intersected moderate to strong porphyry related alteration and broad zones of weak porphyry veining and tourmaline breccia. The upper part of the hole KHRC267 intersected over 170m of tourmaline breccia mineralisation (Figure 4) associated with narrow zones of copper-gold mineralisation. This hole clipped the outer edge of the tourmaline breccia complex, and requires follow-up drilling.

Two drill holes (KHRC262 and KHRC268) tested coincident geophysical anomalies and sub cropping tourmaline breccia mineralisation at the Breccia Hill prospect. Drill hole KHRC262 interested intensely quartz-sericite altered quartz monzodiorite porphyry with weakly disseminated chalcopyrite and bornite (grading 0.1 to 0.2% Cu; Table 2). The combination of strong phyllic alteration and disseminated style mineralisation indicates the hole potentially intersected margin of another porphyry centre. Follow-up drilling will continue to target this zone of anomalous porphyry mineralisation.

Xanadu is focused on further boosting its mineral resource base by making new high-grade coppergold and gold discoveries in the highly prospective Kharmagtai porphyry district. This 6,000m reverse circulation (RC) drilling program will allow the Company to cover more ground faster and more economically. The program has been carefully developed around a realistic geological model and will test selected high-potential targets over 40 square kilometres within the Kharmagtai intrusive complex



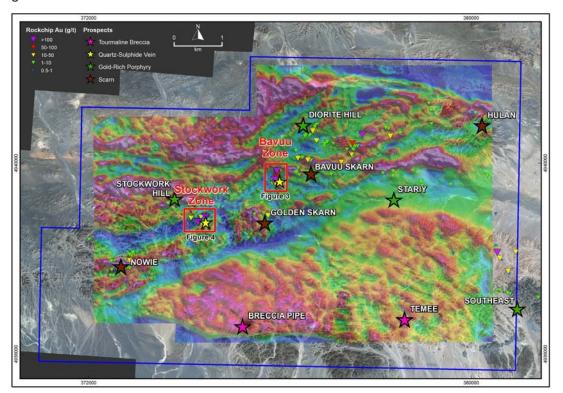
with the objective of identify additional shallow resources expanding the current shallow high-grade (>0.6-0.8% CuEq) resource estimate at Kharmagtai (see ASX Release 19 March 2015).

#### **Oyut Ulaan Copper-Gold Project**

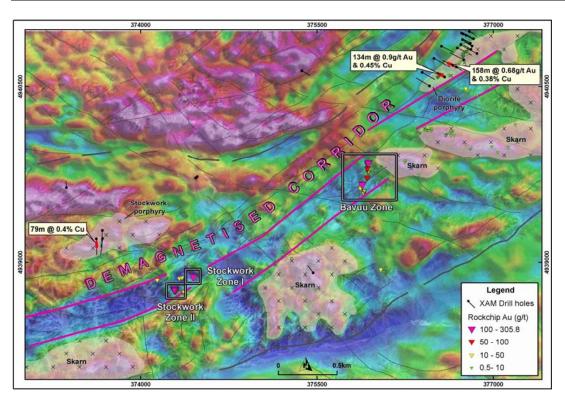
Oyut Ulaan is a large and underexplored porphyry district (covering approximately 40km²) and consists of multiple co-genetic porphyry copper-gold centres, mineralised tourmaline breccia pipes and copper-gold/base metal magnetite skarns, which occur within the central part of Mining Licence 17129A (Oyut Ulaan; Figure 1). Previous exploration at Oyut Ulaan delivered good results from several different prospects with a spectrum of mineralisation styles, any combination of which could possibly transform Oyut Ulaan into a significant mining camp.

Following the previously reported discovery of potentially significant outcropping quartz-sulphide vein and breccia mineralisation (see XAM's ASX announcement - 29 January 2016) at Oyut Ulaan the Company has undertaken systematic geological mapping and rock chip sampling (Figure 5). This sampling has delivered exceptional gold results including 305.8 g/t Au, 171.6 g/t Au and 123.2 g/t Au confirming the existence of outcropping high-grade gold mineralisation occurring within at least three sub parallel structural zones within 1.5km of each other (Figure 6). Exploration work is currently focused understanding shallow high-grade gold mineralisation. This work will investigate the potential shallow high-grade resources that could support a small-scale development.

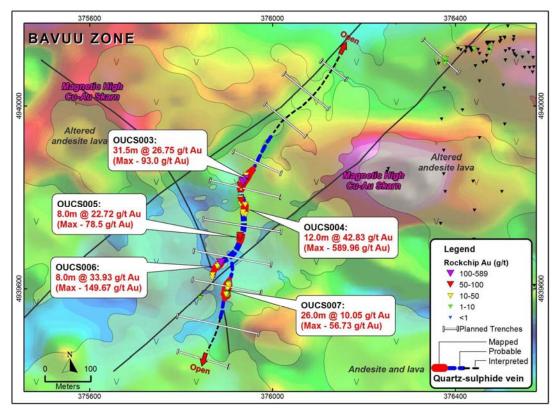
Trench sampling at the Stockwork and Bavuu Zones reported here have delivered exceptional gold results with assays up to 589.96 g/t confirming the existence of continuous sub-outcropping high-grade gold mineralisation. The program was also successful in demonstrating zones of lower grade gold mineralisation in the chlorite-sericite altered wall-rock.



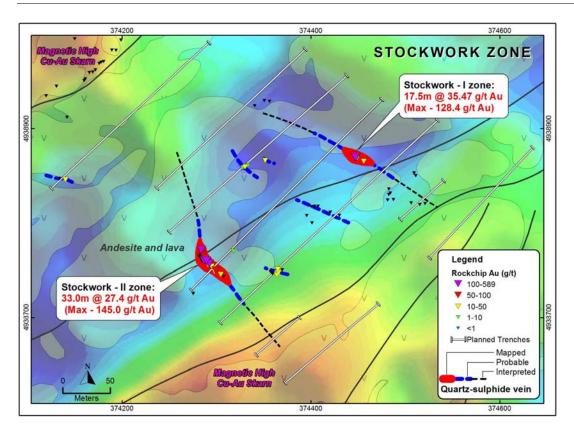
**Figure 5:** Oyut Ulaan copper-gold project, showing main prospects and location of new gold mineralisation at Bavuu Zone and Stockwork Zones.



**Figure 6:** Ground magnetic data showing the prospective area for the gold mineralisation is greater than 4.5km long by approximately 300m wide.



**Figure 7:** Geological map of the Bavuu Zone showing sampled strike length of the vein and interpreted strike under shallow cover. The figure shows planned exploration trenches.



**Figure 8:** Geological map of the Stockwork Zone showing sampled strike length of the vein and interpreted strike under shallow cover. The figure shows planned exploration trenches.

#### SHALLOW GOLD MINERALISATION

Exploration at the Oyut Ulaan copper-gold project has identified multiple zones of potentially significant outcropping quartz-sulphide vein mineralisation (see XAM's ASX announcement – 2 March 2016). The Company has now completed initial surface exploration of the three parallel epithermal lode structures that occur within 1.5km of each other (Stockwork Zone I, Stockwork Zone II and Bavuu Zone; Tables 3 and 4; Figures 5 and 8).

**TABLE 3:** Trench details.

Zone	Trench ID	Length (m)	Azimuth (°)
Stockwork Zone-II	OUCS001	33	342
Stockwork Zone-I	OUCS002	17.5	290
	OUCS003	31.5	10
	OUCS004	12	10
Bavuu Zone	OUCS005	8	18
	OUCS006	8	62
	OUCS007	26	60



**TABLE 4:** Average grades for newly discovered veins.

7	Length	Number of	Au (g/t)		Cu	As	Ag	Pb	Zn	Мо
Zone	(m)	samples taken	Average	Highest	(%)	(ppm)	(g/t)	(ppm)	(ppm)	(ppm)
Stockwork Zone-II	33	66	27.4	145	0.30	149.37	15.96	81.57	140.16	14.87
Stockwork Zone-I	17.5	35	35.47	128.4	0.44	699.4	11.33	108.2	289.68	28.8
	31.5	63	26.75	93	0.33	6363.8	13.5	142.46	235.15	12.7
_	12	24	42.83	589.96	0.3	2269.4	12.47	146.95	217.41	56.86
Bavuu Zone	8	16	22.72	78.5	0.43	1397.87	12.12	163.25	218.31	33.5
20110	8	16	33.93	149.67	0.12	2761.5	6.75	101.68	122.68	122.43
	26	52	10.05	56.73	0.15	818.36	11.97	29.07	96.6	58.15

#### Bavuu Vein Zone

High-grade gold mineralisation in the Bavuu Zone is typically associated with a series of discontinuous shallow dipping quartz-sulphide (now gossan) veins that range from 20cm up to 80cm wide (Figures 9 to 11) and are hosted by intensely chlorite-sericite-pyrite altered host volcanic rocks (Figures 12 to 14). The wall-rock is mostly stained red by hematite from weathering of sulphide in the rock. Some of the original sulphide in the quartz veins is pyrite (but other gossan in the cores of the veins may be from chalcopyrite Figures 16 to 18). The Bavuu Zone vein strikes at least 300m and the vein orientation is north-northwest, and dip from approximately 20 to 45 degrees west to northwest. At several locations in the trench fault gouge was removed either by erosion or by ancient mining and was subsequently backfilled by sand prior to the current transported cover.

Channel sampling reported here is along the vein exposed in the trench (Tables 3 to 5) and displays exceptional continuity and supports a conclusion of very continuous gold mineralisation within the vein. No conclusion regarding width and grade of the mineralised vein can be drawn from this data. The results also confirm the intensity of mineralisation within narrow, high-grade quartz-sulphide veins.

A key objective of the trenching program was to determine if the gold mineralisation was restricted to the quartz veins or if the host rock was also carrying gold mineralisation. New results demonstrate zones of lower grade gold mineralisation (up to 1.0 g/t Au) in the chlorite-sericite altered wall-rock demonstrating continuity over intervals of several metres (Figure 12).

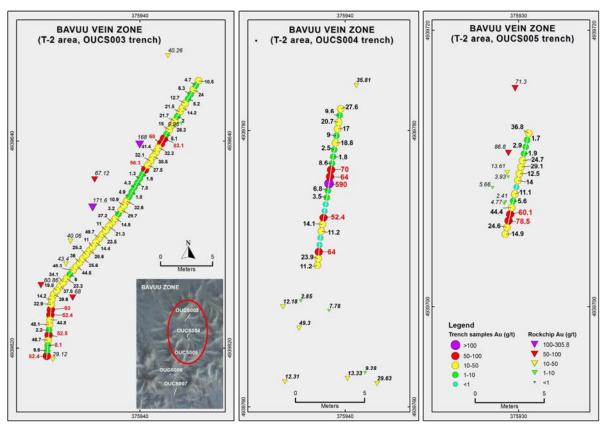


Figure 9: Bavuu vein zone, showing location of trench samples.

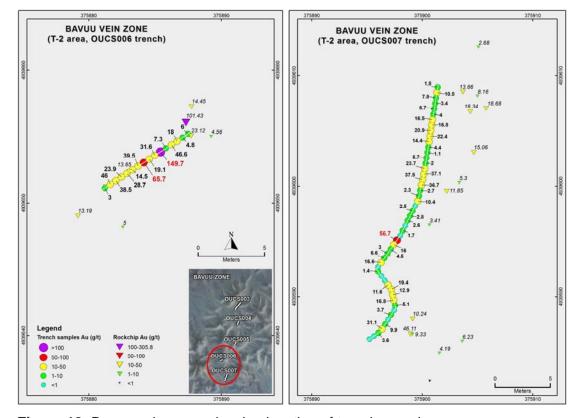
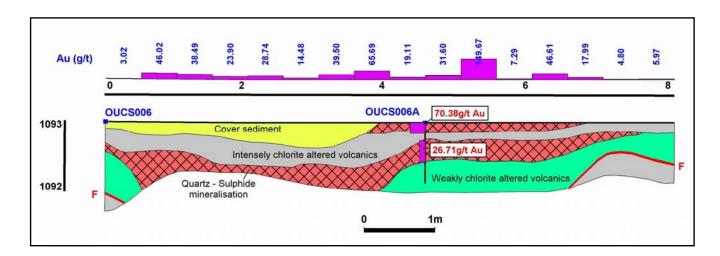


Figure 10: Bavuu vein zone, showing location of trench samples.





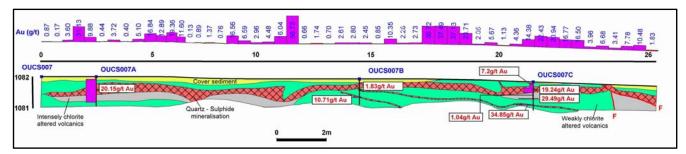
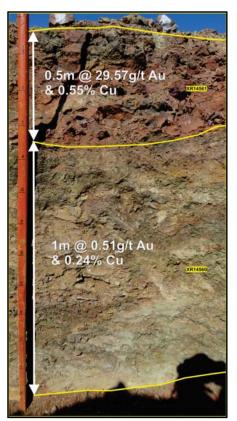


Figure 11: Bavuu vein zone, showing trench wall sections (OUCS006 and OUCS007).



**Figure 12:** Trench map of the Bavuu vein zone, showing the high-grade shallow dipping quartz-sulphide vein zone and relationship to faults.



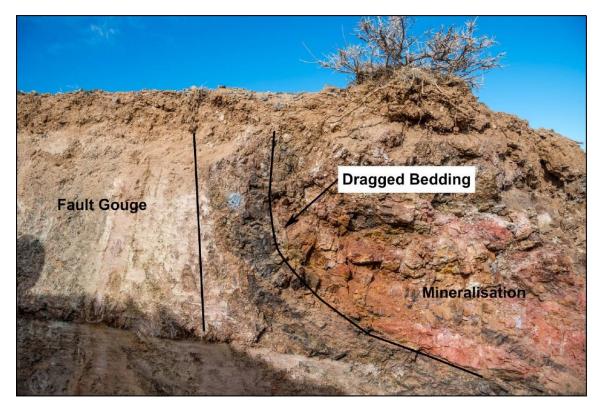


Figure 13: High-grade quartz sulphide vein truncated by a fault at the southern end of Bavuu vein zone.



**Figure 14:** High-grade quartz sulphide vein (in the vicinity of the geologic hammer) that failed to reach surface.



#### Stockwork I Zone

High-grade vein mineralisation within the Stockwork I zone is identical to the style of other two zones. The core of mineralisation and highest grades are the quartz gossan veins which range in size from very small to over 60cm wide. The veins are surrounded by intense chlorite alteration of the host volcanic rocks. This is mostly stained red by hematite from weathering of sulphide in the rock. The exposure at the Stockwork I zone is approximately 17.5m long. Mineralisation was terminated on the southern and northern end by a near vertical fault infilled with variable thicknesses of poorly cemented fault gouge. From the 35 channel samples collected along the entire length the average gold grade is 35.47g/t Au and the highest grade sample is 128.4g/t Au. The mineralisation is characterised by moderate silver grades (averaging 11.33g/t Ag) and low base metal and arsenic contents (Tables 3 to 5; Figure 15).

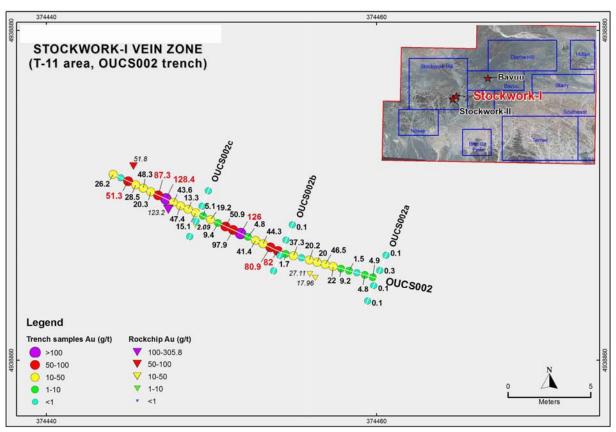


Figure 15: Stockwork- I vein zone, showing location of trench samples.





Figure 16: Quartz-hematite (after sulphide) vein. XR14247. 80.92g/t Au and 0.97% Cu.

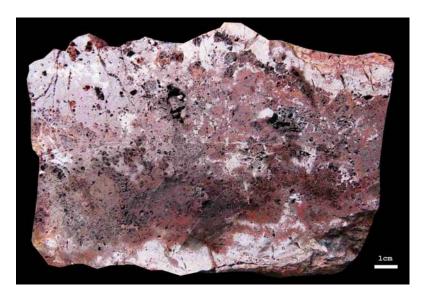


Figure 17: Quartz-hematite (after sulphide) vein. XR14261. 128.4g/t Au and 1.72% Cu.



Figure 18: Quartz-hematite (after sulphide) vein. XR14437. 149.67g/t Au and 0.04% Cu.



**TABLE 5:** Samples returned gold grades higher than 1g/t.

Sample ID	Au (g/t)	Cu (%)	Ag (g/t)	As (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)	Description
XR14233	4.86	0.06	9	305	33	180	6	Quartz-hematite vein
XR14234	4.82	0.11	10	379	48	220	7	Quartz-hematite vein
XR14236	1.52	0.08	3	328	32	176	4	Quartz-hematite vein
XR14237	9.17	0.03	4	382	54	135	7	Quartz-hematite vein
XR14238	22.02	0.03	16	697	95	190	15	Quartz-hematite vein
XR14239	46.55	0.04	13	628	111	194	9	Quartz-hematite vein
XR14240	19.97	0.03	12	613	74	230	9	Quartz-hematite vein
XR14241	20.17	0.04	14	696	82	253	11	Quartz-hematite vein
XR14244	37.26	0.39	6	325	57	240	17	Quartz-hematite vein
XR14245	1.74	0.07	3	118	28	202		Quartz-hematite vein
XR14246	82.00	1.09	16	948	164	442	48	Quartz-hematite vein
XR14247	80.92	0.97	15	914	136	339	38	Quartz-hematite vein
XR14248	44.34	0.51	8	532	88	242	24	Quartz-hematite vein
XR14249	41.42	0.72	8	690	91	271	28	Quartz-hematite vein
XR14250	4.83	0.17	7	580	60	293	17	Quartz-hematite vein
XR14251	126.00	0.93	29	1267	187	511	60	Quartz-hematite vein
XR14252	97.93	0.62	21	1237	170	420	46	Quartz-hematite vein
XR14253	50.92	1.05	12	957	172	427	53	Quartz-hematite vein
XR14254	9.45	0.55	4	890	85	372	30	Quartz-hematite vein
XR14255	19.22	0.42	5	623	70	250	23	Quartz-hematite vein
XR14256	5.12	0.13	8	699	52	154	19	Quartz-hematite vein
XR14257	15.10	0.15	15	1116	92	205	40	Quartz-hematite vein
XR14258	13.28	0.27	7	436	59	373	11	Quartz-hematite vein
XR14259	47.43	0.75	25	776	137	490	36	Quartz-hematite vein
XR14260	43.64	1.06	15	796	137	460	38	Quartz-hematite vein
XR14261	128.40	1.72	26	1445	248	465	78	Quartz-hematite vein
XR14262	87.30	1.05	17	1140	187	432	68	Quartz-hematite vein
XR14264	20.25	0.29	6	550	126	177	27	Quartz-hematite vein
XR14265	48.31	0.45	9	1166	263	276	49	Quartz-hematite vein
XR14266	28.54	0.47	8	1026	195	304	35	Quartz-hematite vein
XR14267	51.27	0.37	13	1002	232	258	38	Quartz-hematite vein
XR14269	26.21	0.61	6	940	156	347	27	Quartz-hematite vein
XR14283	82.40	0.21	16	5910	68	137	8	Quartz-hematite vein
XR14284	9.57	0.19	5	2708	115	128	7	Quartz-hematite vein
XR14286	8.11	0.28	4	4153	200	218	11	Quartz-hematite vein
XR14287	46.74	0.48	9	7164	207	368	12	Quartz-hematite vein
XR14288	52.49	0.41	13	7060	138	340	9	Quartz-hematite vein
XR14289	2.19	0.39	3	1143	78	603		Quartz-hematite vein
XR14290	48.10	0.59	11	6541	201	285	22	Quartz-hematite vein



Sample ID	Au (g/t)	Cu (%)	Ag (g/t)	As (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)	Description
XR14291	44.76	1.07	11	4994	86	288	8	Quartz-hematite vein
XR14292	52.35	0.20	10	6540	179	260	11	Quartz-hematite vein
XR14293	93.00	0.16	18	7284	205	325	10	Quartz-hematite vein
XR14294	32.91	0.24	11	4965	170	295	11	Quartz-hematite vein
XR14295	14.22	0.30	3	5526	91	306	8	Quartz-hematite vein
XR14296	39.58	0.20	10	6622	171	318	13	Quartz-hematite vein
XR14297	19.82	0.23	5	3716	177	220	6	Quartz-hematite vein
XR14298	37.76	0.50	10	4306	203	480	11	Quartz-hematite vein
XR14299	34.06	0.31	14	2812	133	450	10	Quartz-hematite vein
XR14300	23.27	0.19	8	3522	203	115	6	Quartz-hematite vein
XR14301	6.02	0.19	3	3602	176	265	8	Quartz-hematite vein
XR14302	46.31	0.11	18	13500	689	273	4	Quartz-hematite vein
XR14303	44.53	0.18	18	12900	535	505	8	Quartz-hematite vein
XR14304	35.97	0.23	12	8278	235	313	8	Quartz-hematite vein
XR14305	25.58	0.13	14	5798	292	257	5	Quartz-hematite vein
XR14307	25.25	0.10	13	6600	331	190	4	Quartz-hematite vein
XR14308	28.64	0.12	16	5138	332	172	4	Quartz-hematite vein
XR14309	11.02	0.13	11	3443	141	194	6	Quartz-hematite vein
XR14310	14.41	0.11	9	4874	199	165	5	Quartz-hematite vein
XR14311	49.74	0.14	19	7427	415	291	9	Quartz-hematite vein
XR14312	23.48	0.30	25	2055	102	380	14	Quartz-hematite vein
XR14313	10.98	0.35	14	1045	65	535	8	Quartz-hematite vein
XR14314	21.27	0.28	23	2080	104	338	14	Quartz-hematite vein
XR14315	37.17	0.22	12	4459	70	134	7	Quartz-hematite vein
XR14316	14.47	0.17	10	6435	51	97	7	Quartz-hematite vein
XR14318	3.24	0.20	31	4391	51	131	15	Quartz-hematite vein
XR14319	29.66	0.42	28	5211	113	242	23	Quartz-hematite vein
XR14320	10.90	0.14	8	2114	106	225	14	Quartz-hematite vein
XR14321	32.57	0.24	25	3388	177	282	19	Quartz-hematite vein
XR14322	4.90	0.18	6	1738	99	217	14	Quartz-hematite vein
XR14323	1.77	0.35	9	1315	78	226	14	Quartz-hematite vein
XR14324	4.29	0.22	17	3374	64	145	12	Quartz-hematite vein
XR14325	7.81	0.28	30	2710	70	181	24	Quartz-hematite vein
XR14326	1.32	0.11	3	594	35	271	6	Quartz-hematite vein
XR14327	1.59	0.12	10	1331	33	222	11	Quartz-hematite vein
XR14329	56.30	0.18	32	2889	89	220	14	Quartz-hematite vein
XR14330	27.48	0.64	18	5150	88	187	18	Quartz-hematite vein
XR14331	32.07	0.62	14	6007	103	169	19	Quartz-hematite vein
XR14332	38.45	0.32	11	6174	45	85	12	Quartz-hematite vein
XR14333	41.44	0.32	17	9079	46	184	17	Quartz-hematite vein



Sample ID	Au (g/t)	Cu (%)	Ag (g/t)	As (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)	Description
XR14334	32.34	0.40	11	15600	53	144	15	Quartz-hematite vein
XR14335	68.00	0.55	22	16500	46	106	18	Quartz-hematite vein
XR14336	83.10	1.05	41	21800	48	136	24	Quartz-hematite vein
XR14337	8.06	0.33	10	3715	52	228	14	Quartz-hematite vein
XR14338	15.02	0.66	6	30400	82	181	18	Quartz-hematite vein
XR14339	26.29	0.86	12	30700	89	138	22	Quartz-hematite vein
XR14340	21.66	0.28	10	4776	31	156	21	Quartz-hematite vein
XR14341	2.00	0.33	12	3439	25	168	9	Quartz-hematite vein
XR14342	21.49	0.47	21	3937	132	136	39	Quartz-hematite vein
XR14343	14.19	0.38	7	5983	308	166	58	Quartz-hematite vein
XR14344	12.70	0.33	7	2926	85	110	9	Quartz-hematite vein
XR14345	5.22	0.39	4	5266	50	184	8	Quartz-hematite vein
XR14346	6.29	0.33	17	3889	33	196	8	Quartz-hematite vein
XR14347	24.02	0.64	13	8532	177	220	11	Quartz-hematite vein
XR14348	4.70	0.24	14	2371	67	113	4	Quartz-hematite vein
XR14350	10.47	0.32	6	6726	138	201	3	Quartz-hematite vein
XR14368	11.21	0.34	26	1325	80	141	27	Quartz-hematite vein
XR14369	23.91	0.43	22	2919	93	210	39	Quartz-hematite vein
XR14370	64.02	0.18	27	5457	120	85	33	Quartz-hematite vein
XR14374	11.21	0.17	9	1220	77	89	27	Quartz-hematite vein
XR14375	14.09	0.11	10	862	63	81	32	Quartz-hematite vein
XR14376	52.40	0.28	20	2659	160	161	38	Quartz-hematite vein
XR14379	3.51	0.19	10	892	56	97	18	Quartz-hematite vein
XR14380	6.83	0.14	2	1321	52	37	14	Quartz-hematite vein
XR14381	589.96	0.16	38	769	54	52	15	Quartz-hematite vein
XR14382	64.00	0.23	18	1486	109	133	30	Quartz-hematite vein
XR14383	70.00	0.24	19	1224	103	109	26	Quartz-hematite vein
XR14384	8.56	0.45	5	3812	608	521	440	Quartz-hematite vein
XR14385	1.80	0.33	5	2567	186	404	80	Quartz-hematite vein
XR14386	2.46	0.35	5	3068	456	451	268	Quartz-hematite vein
XR14387	18.77	0.39	8	3648	216	352	54	Quartz-hematite vein
XR14388	8.99	0.44	11	2944	213	357	46	Quartz-hematite vein
XR14389	17.02	0.60	17	5760	239	406	45	Quartz-hematite vein
XR14390	20.71	0.32	5	5316	200	278	28	Quartz-hematite vein
XR14391	9.58	0.24	5	2807	130	181	11	Quartz-hematite vein
XR14393	27.59	0.23	5	3162	231	225	24	Quartz-hematite vein
XR14402	14.89	0.71	5	1158	135	263	16	Quartz-hematite vein
XR14404	24.60	0.86	10	2077	179	431	27	Quartz-hematite vein
XR14405	78.50	0.38	20	2484	241	555	20	Quartz-hematite vein
XR14406	60.08	0.39	19	2051	162	456	24	Quartz-hematite vein



Sample ID	Au (g/t)	Cu (%)	Ag (g/t)	As (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)	Description
XR14407	44.44	0.60	30	2250	221	283	23	Quartz-hematite vein
XR14408	5.59	0.45	20	659	73	175	14	Quartz-hematite vein
XR14409	11.06	0.90	16	893	115	164	15	Quartz-hematite vein
XR14411	14.03	0.25	3	1968	300	103	57	Quartz-hematite vein
XR14412	12.50	0.23	2	2216	340	152	83	Quartz-hematite vein
XR14413	29.06	0.17	13	1842	279	139	75	Quartz-hematite vein
XR14415	24.74	0.22	12	1951	276	150	68	Quartz-hematite vein
XR14416	1.89	0.22	8	518	45	82	22	Quartz-hematite vein
XR14417	2.94	0.39	10	492	43	108	26	Quartz-hematite vein
XR14418	1.73	0.40	11	462	37	124	22	Quartz-hematite vein
XR14419	36.83	0.29	8	1184	103	189	38	Quartz-hematite vein
XR14426	3.02	0.09	3	3444	39	121	39	Quartz-hematite vein
XR14427	46.02	0.04	5	9171	155	131	93	Quartz-hematite vein
XR14428	38.49	0.04	5	4235	97	135	70	Quartz-hematite vein
XR14429	23.90	0.13	5	6070	446	403	65	Quartz-hematite vein
XR14430	28.74	0.08	10	3267	219	176	42	Quartz-hematite vein
XR14431	14.48	0.30	5	1273	61	313	24	Quartz-hematite vein
XR14432	39.50	0.14	9	2505	52	135	36	Quartz-hematite vein
XR14433	65.69	0.10	14	3562	55	88	29	Quartz-hematite vein
XR14434	19.11	0.07	7	1469	25	68	16	Quartz-hematite vein
XR14435	31.60	0.05	9	2230	37	53	37	Quartz-hematite vein
XR14437	149.67	0.05	15	2427	217	45	556	Quartz-hematite vein
XR14438	7.29	0.13	3	666	67	49	159	Quartz-hematite vein
XR14439	46.61	0.03	7	1598	122	33	224	Quartz-hematite vein
XR14440	17.99	0.24	4	866	14	77	163	Quartz-hematite vein
XR14441	4.80	0.17	3	794	9	64	153	Quartz-hematite vein
XR14442	5.97	0.25	4	607	12	72	253	Quartz-hematite vein
XR14454	3.60	0.17	4	435	31	119	77	Quartz-hematite vein
XR14455	31.13	0.17	9	1402	92	116	134	Quartz-hematite vein
XR14456	9.88	0.19	13	1438	32	90	29	Quartz-hematite vein
XR14459	3.72	0.33	9	437	25	77	25	Quartz-hematite vein
XR14461	5.10	0.21	22	518	29	159	19	Quartz-hematite vein
XR14462	16.84	0.22	13	2517	35	201	26	Quartz-hematite vein
XR14463	12.89			10	18	57		Quartz-hematite vein
XR14464	19.36	0.23	9	2041	89	237	19	Quartz-hematite vein
XR14465	11.60	0.21	14	1430	48	235	13	Quartz-hematite vein
XR14468	1.37	0.08	3	151	17	52	16	Quartz-hematite vein
XR14470	16.56	0.20	7	329	55	115	391	Quartz-hematite vein
XR14471	6.59	0.22	9	130	42	133	240	Quartz-hematite vein
XR14472	2.96	0.09	4	429	21	121	147	Quartz-hematite vein



Sample ID	Au (g/t)	Cu (%)	Ag (g/t)	As (ppm)	Pb (ppm)	Zn (ppm)	Mo (ppm)	Description
XR14473	4.48	0.21	5	507	27	179	231	Quartz-hematite vein
XR14474	16.04	0.20	11	188	23	119	71	Quartz-hematite vein
XR14475	56.73	0.08	21	316	37	60	106	Quartz-hematite vein
XR14477	1.74	0.14	3	218	23	77	93	Quartz-hematite vein
XR14480	2.61	0.16	12	251	19	55	47	Quartz-hematite vein
XR14481	2.80	0.12	4	261	23	73	62	Quartz-hematite vein
XR14482	2.45	0.05	9	296	32	11	15	Quartz-hematite vein
XR14484	10.35	0.11	4	90	16	110	28	Quartz-hematite vein
XR14485	2.28	0.04	9	1055	19	36	17	Quartz-hematite vein
XR14486	2.73	0.12	7	1314	13	71	17	Quartz-hematite vein
XR14487	36.72	0.29	29	2785	32	126	81	Quartz-hematite vein
XR14488	37.49	0.11	26	3506	31	74	126	Quartz-hematite vein
XR14489	37.13	0.13	24	2818	29	73	79	Quartz-hematite vein
XR14491	23.71	0.10	21	1329	20	56	51	Quartz-hematite vein
XR14492	2.05	0.29	15	513	30	130	87	Quartz-hematite vein
XR14493	5.67	0.22	21	852	55	122	183	Quartz-hematite vein
XR14494	1.13	0.15	6	409	19	117	39	Quartz-hematite vein
XR14495	4.36	0.06	9	2007	28	73	62	Quartz-hematite vein
XR14496	14.38	0.19	14	1168	31	87	45	Quartz-hematite vein
XR14497	22.43	0.04	42	1936	23	35	32	Quartz-hematite vein
XR14498	20.94	0.07	49	1622	19	41	24	Quartz-hematite vein
XR14499	16.77	0.10		2150	24	60	30	Quartz-hematite vein
XR14500	16.50	0.04	25	1868	25	35	25	Quartz-hematite vein
XR14502	3.96	0.11	5	457	25	55	15	Quartz-hematite vein
XR14503	6.68	0.12	11	439	48	62	15	Quartz-hematite vein
XR14504	3.41	0.13	7	193	37	67	19	Quartz-hematite vein
XR14505	7.78	0.03		128	32	46	11	Quartz-hematite vein
XR14506	10.48	0.05	3	392	27	55	15	Quartz-hematite vein
XR14507	1.83	0.04		165	25	38	8	Quartz-hematite vein

#### **IMPLICATIONS OF EXPLORATION MODEL**

The exploration model raises the possibility that there could be repeated parallel veins at depth in both the Stockwork and Bavuu Zones which are not exposed at the current surface level (see Figure 14). The typical nature of this style of vein mineralisation is such that surface exposure could be limited but vertical extent down the near vertical controlling faults could be extensive. The intensely altered host volcanic rocks also carry anomalous gold mineralisation (varying from 0.1 to 1.0 g/t gold) associated with fine disseminated sulphides and fine quartz-hematite veinlets. Because of the similarities between the multiple parallel mineralised structures exposed in the district, as well as widespread anomalous rock samples, it seems possible there is potential for more mineralisation of similar style to that in Stockwork and Bavuu Zones throughout the Oyut Ulaan district.



The strong chlorite-sericite alteration is likely to have demagnetised the zones of basaltic-andesite volcanic rocks which host the gold mineralisation. Ground magnetic data indicates that the prospective area for the mineralisation is greater than 4.5km long by approximately 300m wide (Figure 6). The demagnetised area is interpreted to be caused by upwelling hydrothermal solutions along the north-east trending faults observed in the trenches and it is likely that these were circulated from either the porphyry intrusions hosting the know gold-rich porphyry mineralisation located less than 100m to the north or undiscovered porphyry intrusions at depth.

Additional exploration of this high-grade gold discovery is now in the planning stage and is expected to include diamond drilling in addition to metallurgical testing during the first half of 2016.

#### BACKGROUND GEOLOGY & POTENTIAL CONNECTION TO PORPHYRY MINERALISATION

The Oyut Ulaan copper-gold project is strategically located within the South Gobi Copper Belt (which hosts the world class Oyu Tolgoi copper-gold project) and 260km east of Xanadu's flagship Kharmagtai copper-gold project (Figure 1). The project comprises a large and underexplored porphyry district (covering approximately 40km2) and consists of multiple co-genetic porphyry copper-gold centres, mineralised tourmaline breccia pipes and copper-gold/base metal magnetite skarns, which occur within the central part of Mining Licence 17129A (Oyut Ulaan; Figure 5).

The recent discovery of potentially significant gold vein mineralisation broadens the range of targets at Oyut Ulaan and opens up a whole new area for exploration. Given the bonanza grades and significant strike, this style of mineralisation is considered to be a very attractive target. Copper grades within the samples from the Stockwork II zone average 0.3% Cu (Table 4), which supports the possibility that the precursor sulphide mineralisation is at least partially chalcopyrite. The presence of low grade copper suggests a likely link to the porphyry copper mineralisation along strike or at depth. The zonation seen world-wide for this association includes upwards transitions from copper-gold porphyry veins to shallow level gold systems.

The results of this first part of the trenching program are extremely encouraging and indicate Oyut Ulaan is developing into one of the most prospective districts in the South Gobi with a series of copper-gold and gold prospects at different stages of exploration. Recent exploration drilling has also intersected porphyry copper mineralisation within two quartz-chalcopyrite stockwork zones at the Diorite Hill and Stockwork Hill Prospects which are approximately 3 kilometres apart (Figure 3; see XAM's ASX announcement – 5 May 2015). Xanadu will continue its systematic, low cost exploration at Oyut Ulaan with further reconnaissance exploration, field mapping, and infill sampling ongoing.

#### **CORPORATE ACTIVITIES**

Corporate activities during the quarter include the appointment of Dr Andrew Stewart as an Executive Director of the Company, in addition to his role as Chief Executive Officer (CEO). Dr Andrew Stewart (BSc, PhD, MAIG & MSEG) is an exploration geologist with over 15 years' experience with porphyry copper-gold and epithermal gold systems around the world and has primarily been involved with front end exploration, project generation and business development strategies. During his time with Ivanhoe Mines he was instrumental in the recognition of the porphyry mineralisation systems in the under-explored South Gobi region of Mongolia including the Oyu Tolgoi and Kharmagtai Cu-Au porphyry deposits.

The final \$US1 million payment for the Kharmagtai project was paid on 1 April 2016 and the project is now fully secured.



Discussions continue with numerous strategic investors. Continued exploration success at Kharmagtai over the past year indicates it is one of the most promising copper-gold projects globally, and recent discovery of the tourmaline breccia mineralisation ranks it as one of the highest grade porphyry discoveries in last 12 months. Xanadu is funded to progress exploration but our strategy is also to keep a healthy dialogue open with potential strategic partners as an option for future collaboration.

#### **Share Capital**

As at 31 March 2016, the Company had 445,285,489 fully paid shares, 5,250,000 performance rights and 38,000,000 unlisted options on issue, of which 35,000,000 options issued pursuant to the restructure of the Oyut Ulaan Acquisition terms.

#### **Financial position**

As at 31 March 2016, the Company's cash position was A\$4.7 million.

For further information please visit www.xanadumines.com or contact:

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#### **COMPETENT PERSON STATEMENT**

The information in this report 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, which is incorporated in the database that was provided to Mining Associates for undertaking a resource estimate. Dr Stewart, who is an employee of Xanadu and is a Member of the Australasian Institute of Geoscientists, Dr Stewart 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 \$1300/oz.

#### **TABLE 6: TENEMENTS HELD AS AT 31 MARCH 2016**

Set out below is the relevant information in relation to Xanadu's mining tenements as required under ASX Listing Rule 5.3.3.

Tenement No.	Tenement Name	Location	Change in % Interest	% Interest as at 31 March
MV17387A1	Kharmagtai	Umnugovi Province	-	72%
MV017129	Oyut Ulaan	Dornogovi Province	-	90%
13670x	Sharchuluut	Bulgan Province	-	100%

<sup>&</sup>lt;sup>1.</sup> The Kharmagtai project has been funded through Xanadu's interest in Mongol Metals LLC by a combination of equity and shareholder advances converted to equity periodically. Xanadu's interest in Mongol Metals LLC is equivalent to approximately 79.8% as at 31 March 2016 (an effective 71.8% interest in the Kharmagtai project).



#### **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 6 April 2016.

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

Criteria	JORC Code (Section 1) Explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling and assaying.</li> <li>Measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> </ul>	<ul> <li>The resource estimate is based on drill samples only.</li> <li>Representative 2 metre samples were taken from ½ NQ or HQ diamond core and chip channel samples from trenches.</li> <li>Only assay result results from recognised, independent assay laboratories were used in Resource calculation after QAQC was verified.</li> </ul>
Drilling techniques	Drill type and details.	DDH drilling has been the primary drilling method.
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul> <li>DDH core recoveries have been very good, averaging between 97% 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.</li> <li>Recovery measurements were collected during all DDH programs. The methodology used for measuring recovery is standard industry practice.</li> <li>Analysis of recovery results vs. grade indicates no significant trends. Indicating bias of grades due to diminished recovery and / or wetness of samples.</li> </ul>
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>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.</li> <li>Drill core was photographed after being logged by a geologist.</li> <li>The entire interval drilled and trenched has been logged by a geologist.</li> </ul>
Sub- sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all</li> </ul>	<ul> <li>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.</li> <li>Sample intervals are a constant 2m interval down-hole in length.</li> <li>Trench chip channel samples taken close to the base of the trench wall (about 10cm above the floor). Samples are about 3kg.</li> </ul>



Criteria	JORC Code (Section 1) Explanation	Commentary
	sub-sampling stages to maximise representivity of samples.  • 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.	<ul> <li>Trench Sample collected with a plastic sheet or tray.</li> <li>Routine sample preparation and analyses of DDH samples were carried out by SGS Mongolia LLC (SGS Mongolia), who operates an independent sample preparation and analytical laboratory in Ulaanbaatar.</li> <li>All samples were prepared to meet standard quality control procedures as follows: Crushed to 90% passing 3.54 mm, split to 1kg, pulverised to 90% - 95% passing 200 mesh (75 microns) and split to 150g.</li> <li>Certified reference materials (CRMs), blanks and pulp duplicate were randomly inserted to manage the quality of data.</li> <li>Sample sizes are well in excess of standard industry requirements.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul> <li>All samples were routinely assayed by SGS Mongolia for gold, copper, silver, lead, zinc, arsenic and molybdenum.</li> <li>Au is determined using a 30g 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.</li> <li>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 (&gt;1% Cu), it is analysed by a second analytical technique (AAS22S), which has a higher upper detection limit (UDL) of 5% copper.</li> <li>Quality assurance was provided by introduction of known certified standards, blanks and duplicate samples on a routine basis.</li> <li>Assay results outside the optimal range for methods were re-analysed by appropriate methods.</li> <li>Ore Research Pty Ltd certified copper and gold standards have been implemented as a part of QAQC procedures, as well as coarse and pulp blanks, and certified matrix</li> </ul>



Criteria	JORC Code (Section 1) Explanation	Commentary
		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	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>All assay data QAQC is checked prior to loading into the Geobank data base.</li> <li>The data is managed XAM geologists.</li> <li>The data base and geological interpretation is collectively managed by XAM.</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Diamond drill holes and trenches have been surveyed with a differential global positioning system (DGPS) to within 10cm accuracy.</li> <li>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.</li> <li>UTM WGS84 48N grid.</li> <li>The DTM is based on 1m contours with an accuracy of ±0.01m.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Drilling and trenching has been completed on nominal north-south sections, commencing at 120m spacing and then closing to 40m for resource estimation.</li> <li>Vertical spacing of intercepts on the mineralised zones similarly commences at 100m spacing and then closing to 50m for resource estimation.</li> <li>Drilling has predominantly occurred with angled holes approximately 70° to 60° inclination below the horizontal and either drilling to north or south, depending on the dip of the target mineralised zone.</li> <li>Holes have been drilled to 1,000m vertical depth</li> <li>The data spacing and distribution is sufficient to establish geological and grade continuity appropriate for the Mineral Resource estimation procedure and has been taken into account in 3D space when determining the classifications to be applied.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key</li> </ul>	Drilling and trenching has been predominantly completed on north-south section lines along the strike of the known mineralised zones and from either the north or the south depending on the dip.      Limited trenching has been completed



Criteria	JORC Code (Section 1) Explanation	Commentary
	mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	along strike (subparallel) orientations to mineralisation - no conclusion regarding width and grade can be drawn from this data;  • Vertical to South dipping ore bodies were predominantly drilled to the north.  • Scissor drilling, (drilling from both north and south), as well as vertical drilling, has been used in key mineralised zones to achieve unbiased sampling of possible structures and mineralised zones.
Sample security	The measures taken to ensure sample security.	<ul> <li>Samples are dispatched from site through via company employees and secure company vehicles to the Laboratories.</li> <li>Samples are signed for at the Laboratory with confirmation of receipt emailed through.</li> <li>Samples are then stored at the lab and returned to a locked storage site.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data	<ul> <li>Internal audits of sampling techniques and data management on a regular basis, to ensure industry best practice is employed at all times.</li> <li>External review and audit have been conducted by the following groups.</li> <li>2012 – AMC Consultants Pty Ltd. was engaged to conduct an Independent Technical Report which reviewed drilling and sampling procedures. It was concluded that sampling and data record was appropriate for use in resource estimation including that required by the NI 43-101 standards.</li> <li>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.</li> </ul>

#### 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	<ul> <li>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.</li> <li>The security of the tenure held at the time</li> </ul>	<ul> <li>The Project comprises 1 Mining Licence (MV 17387A).</li> <li>100% owned by Oyut Ulaan LLC.</li> <li>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</li> </ul>



Criteria	JORC Code (Section 2) Explanation	Commentary
	of reporting along with any known impediments to obtaining a licence to operate in the area.	<ul> <li>incorporated joint venture between Kerry Holdings Ltd. and MCS Holding LLC.</li> <li>The Mongolian Minerals Law (2006) and Mongolian Land Law (2002) govern exploration, mining and land use rights for the project.</li> </ul>
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.	<ul> <li>The mineralisation is characterised as porphyry copper-gold type.</li> <li>Porphyry copper-gold deposits are formed from magmatic hydrothermal fluids typically associated with felsic intrusive stocks that have deposited metals as sulphides both within the intrusive and the intruded host rocks. Quartz stockwork veining is typically associated with sulphides occurring both within the quartz veinlets and disseminated 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.</li> </ul>
Drill hole Information	<ul> <li>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:         <ul> <li>easting and northing of the drill hole collar.</li> <li>elevation or RL Reduced Level – elevation above sea level in metres) of the drill hole collar .</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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</li> </ul>	<ul> <li>Diamond drill holes are the principal source of geological and grade data for the Project.</li> <li>See figures in main report.</li> </ul>
Data Aggregation methods	<ul> <li>clearly explain why this is the case.</li> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of</li> </ul>	A nominal cut-off of 0.1% Cu is used for identification of potentially significant intercepts for reporting purposes.



Criteria	JORC Code (Section 2) Explanation	Commentary
	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.	<ul> <li>Most of the reported intercepts are shown in sufficient detail, including maxima and subintervals, to allow the reader to make an assessment of the balance of high and low grades in the intercept.</li> <li>Informing Samples have been composited to two metre lengths honouring the geological domains and adjusted where necessary to ensure that no residual sample lengths have been excluded (best fit).</li> <li>Metal equivalents used the following formula:         CuEq = Cu% x(Aug/t x 0.6378     </li> <li>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.</li> </ul>
Relationship between mineralisation on widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul> <li>Mineralised structures are variable in orientation, and therefore drill orientations have been adjusted from place to place in order to allow intersection angles as close as possible to true widths.</li> <li>Exploration results have been reported as an interval with 'from' and 'to' stated in tables of significant economic intercepts. Tables clearly indicate that true widths will generally be narrower than those reported.</li> <li>Limited trenching has been completed along strike (subparallel) orientations to mineralisation - no conclusion regarding width and grade can be drawn from this data;</li> <li>Resource estimation, as reported later, was done in 3D space.</li> </ul>
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, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	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	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	Extensive work in this area has been done, and is reported separately.



Criteria	JORC Code (Section 2) Explanation	Commentary
	results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>The mineralisation is open at depth and along strike.</li> <li>Current estimates are restricted to those expected to be reasonable for open pit mining. Limited drilling below this depth (-300m rl) shows widths and grades potentially suitable for underground extraction.</li> <li>Exploration on going.</li> </ul>

#### 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	<ul> <li>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.</li> <li>Data validation procedures used.</li> </ul>	<ul> <li>The database is a Geobank data base system.</li> <li>Data is logged directly into an Excel spread sheet logging system with drop down field lists.</li> <li>Validation checks are written into the importing program ensures all data is of high quality.</li> <li>Digital assay data is obtained from the Laboratory, QAQC checked and imported</li> <li>Geobank exported to Access, and connected directly to the GemcomSurpac Software.</li> <li>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.</li> </ul>
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>Andrew Vigar of Mining Associates visited site from 24 and 25 October 2014.</li> <li>The site visit included a field review of the exploration area, an inspection of core, sample cutting and logging procedures and discussions of geology and mineralisation with exploration geologists.</li> </ul>
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> </ul>	<ul> <li>Mineralisation resulted in the formation of comprises quartz-chalcopyrite-pyrite-magnetite stockwork veins and minor breccias.</li> <li>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</li> </ul>



Criteria	JORC Code (Section 3) Explanation	Commentary
	<ul> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>and bornite.</li> <li>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.</li> <li>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.</li> <li>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.</li> </ul>
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.	<ul> <li>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.</li> <li>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.</li> <li>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.</li> <li>ZU forms a sub vertical body of stockwork approximately 350 x 100 metres by at least 200 metres and plunges to the southeast.</li> </ul>
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.	<ul> <li>The estimate Estimation Performed using Ordinary Kriging.</li> <li>Variograms are reasonable along strike.</li> <li>Minimum &amp; Maximum Informing samples is 5 and 20 (1st pass), Second pass is 3 and 20.</li> </ul>



Criteria	JORC Code (Section 3) Explanation	Commentary
	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.	<ul> <li>Copper and Gold Interpreted separately on NS sections and estimated as separate domains.</li> <li>Halo mineralisation defined as 0.12% Cu and 0.12g/t Au Grade.</li> <li>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.</li> <li>Cut off grades applied are copperequivalent (CuEq) cut off values of 0.3% for appropriate for a large bulk mining open pit and 0.5% for bulk block caving underground.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>A total of 4,428 measurements for specific gravity are recorded in the database, all of which were determined by the water immersion method. The average density of all samples is 2.74 t/m³. In detail there are some differences in density between different rock types, but since the model does not include geological domains a single pass ID² interpolation vas</li></ul>



Criteria	JORC Code (Section 3) Explanation	Commentary
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	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 copperequivalent 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.  • 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.	<ul> <li>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.</li> <li>The deposit is amenable to large scale bulk mining.</li> <li>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</li> </ul>
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 when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation	No metallurgical factors have been applied to the in situ grade estimates.



Criteria	JORC Code (Section 3) Explanation	Commentary
	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	<ul> <li>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.</li> <li>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.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>A total of 4,428 measurements for specific gravity are recorded in the database, all of which were determined by the water immersion method.</li> <li>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.</li> <li>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).</li> </ul>
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>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).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>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.</li> <li>The Mineral Resource statement relates to global estimates of in situ tonnes and grade</li> <li>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.</li> </ul>
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



Criteria	JORC Code (Section 3) Explanation	Commentary
		data analysis and geological interpretation of individual cross-sections, comparing drill-hole data with the resource estimate block model.  Good correlation of geological and grade boundaries 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	<ul> <li>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.</li> <li>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.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>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.</li> <li>Resource categories were constrained by geological understanding, data density and quality, and estimation parameters. It is expected that further work will extend this considerably.</li> <li>Resources estimates have been made on a global basis and relates to in situ grades.</li> <li>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.</li> <li>The deposits are not currently being mined.</li> <li>There is surface evidence of historic artisanal workings.</li> <li>No production data is available.</li> </ul>

#### 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.

Rule 5.5

# **Appendix 5B**

# Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/2013

Name of entity

# XANADU MINES LIMITED

ABN

92 114 249 026

Quarter ended ("current quarter")

31 March 2016

#### Consolidated statement of cash flows

Cash	flows related to operating activities	Current quarter \$A'000	Year to date (12 months) \$A'000
1.1	Receipts from product sales and related debtors	-	-
1.2	Payments for (a) exploration & evaluation (b) development	(559)	(559) -
1.3	(c) production (d) administration Dividends received	(524)	(524)
1.4	Interest and other items of a similar nature received	7	7
1.5 1.6 1.7	Interest and other costs of finance paid Income taxes paid Other (provide details if material)	(104)	(104)
1.7	Net Operating Cash Flows	(1,180)	(1,180)
	Cash flows related to investing activities		
1.8	Payment for purchases of: (a) prospects	-	-
	<ul><li>(b) equity investments</li><li>(c) other fixed assets</li></ul>	-	-
1.9	Proceeds from sale of: (a) prospects (b) equity investments	-	- -
1.10	(c) other fixed assets Loans to other entities	-	-
1.10	Loans to other entities  Loans repaid by other entities	-	-
1.12	Other (provide details if material)	(2,607)	(2,607)
	Net investing cash flows	-	-
1.13	Total operating and investing cash flows (carried forward)	(3,787)	(3,787)

<sup>+</sup> See chapter 19 for defined terms.

### Appendix 5B Mining exploration entity and oil and gas exploration entity quarterly report

1.13	Total operating and investing cash flows (brought forward)	(3,787)	(3,787)
1.14 1.15 1.16 1.17	Cash flows related to financing activities Proceeds from issues of shares, options, etc. Proceeds from sale of forfeited shares Proceeds from borrowings Repayment of borrowings	- - -	- - - -
1.18 1.19	Dividends paid Other (share issue costs)	-	-
	Net financing cash flows	-	-
	Net increase (decrease) in cash held	(3,787)	(3,787)
1.20 1.21	Cash at beginning of quarter/year to date Exchange rate adjustments to item 1.20	8,639 (140)	8,639 (140)
1.22	Cash at end of quarter	4,712	4,712

# Payments to directors of the entity, associates of the directors, related entities of the entity and associates of the related entities

		Current quarter \$A'000
1.23	Aggregate amount of payments to the parties included in item 1.2	141
1.24	Aggregate amount of loans to the parties included in item 1.10	-

1.25 Explanation necessary for an understanding of the transactions

Item 1.12 includes part payment of deferred consideration of \$2,607K for the acquisition of the Kharmagtai project in FY2014.

# Non-cash financing and investing activities

2.1	Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows				
	N/A				

2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest

N/A			

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<sup>+</sup> See chapter 19 for defined terms.

Financing facilities available

Add notes as necessary for an understanding of the position.

		Amount available \$A'000	Amount used \$A'000
3.1	Loan facilities	\$5,226	\$3,266
		(US\$4,000)	(US\$2,500)
3.2	Credit standby arrangements	-	-

## Estimated cash outflows for next quarter

	Total	1,225
4.4	Administration	514
4.3	Production	-
4.2	Development	-
4.1	Exploration and evaluation	711
		\$A'000

## **Reconciliation of cash**

show	onciliation of cash at the end of the quarter (as on in the consolidated statement of cash flows) are related items in the accounts is as follows.	Current quarter \$A'000	Previous quarter \$A'000
5.1	Cash on hand and at bank	4,712	8,639
5.2	Deposits at call	-	-
5.3	Bank overdraft	-	-
5.4	Other (provide details)	-	-
	Total: cash at end of quarter (item 1.22)	4,712	8,639

<sup>+</sup> See chapter 19 for defined terms.

### Changes in interests in mining tenements and petroleum tenements

		Tenement reference and location	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
6.1	Interests in mining tenements and petroleum tenements relinquished, reduced or lapsed	N/A			
6.2	Interests in mining tenements and petroleum tenements acquired or increased	MV17387A Kharmagtai Omnogovi Province Mongolia	Share subscription	64%	72%

### Issued and quoted securities at end of current quarter

Description includes rate of interest and any redemption or conversion rights together with prices and dates.

		Total number	Number quoted	Issue price per security (see note 3) (cents)	Amount paid up per security (see note 3) (cents)
7.1	Preference +securities (description)	N/A			
7.2	Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy- backs, redemptions				
7.3	<sup>+</sup> Ordinary securities	445,285,489	445,285,489		
7.4	Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy- backs	N/A			
7.5	+Convertible debt securities (description)	N/A			

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<sup>+</sup> See chapter 19 for defined terms.

# Appendix 5B Mining exploration entity and oil and gas exploration entity quarterly report

7.6	Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted			
7.7	Options (description and conversion factor)	Options 1,000,000 1,000,000 1,000,000 15,000,000 20,000,000 Share Rights 1,200,000 700,000 1,000,000 1,350,000 1,000,000	Exercise price \$0.60 \$1.20 \$1.80 Nil subject to share price and tenure hurdles Nil subject to share price and tenure hurdles	Expiry date 30/6/2016 30/6/2016 30/6/2016 14/1/2019 14/1/2019 21/5/2016 01/6/2017 18/9/2017 1/2/2018 16/6/2018
7.8	Issued during quarter	N/A		
7.9	Exercised during quarter	N/A		
7.10	Expired during quarter	Share Rights 1,250,000	N/A (Share price hurdle not met)	28/2/2016
7.11	Debentures (totals only)	N/A	,	
7.12	Unsecured notes (totals only)	N/A		

<sup>+</sup> See chapter 19 for defined terms.

## **Compliance statement**

- This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act or other standards acceptable to ASX (see note 5).
- This statement does /<del>does not\*</del> (*delete one*) give a true and fair view of the matters disclosed.

Sign here: Date: 29 April 2016

Company Secretary

Print name: Janine Rolfe

#### **Notes**

- The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.
- The "Nature of interest" (items 6.1 and 6.2) includes options in respect of interests in mining tenements and petroleum tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement or petroleum tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.
- 3 **Issued and quoted securities** The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.
- The definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report.
- Accounting Standards ASX will accept, for example, the use of International Financial Reporting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.

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<sup>+</sup> See chapter 19 for defined terms.