

# QUARTERLY ACTIVITIES REPORT

ACTIVITIES FOR THE QUARTER ENDING 30 JUNE 2015

## HIGHLIGHTS

### New drilling results reinforce significant upside of the Kharmagtai project

- Drilling continues to reinforce the potential of the Tourmaline Breccia unit to host high grade mineralisation on a large scale;
- **KHDDH371** intersects a significant interval of high-grade breccia mineralisation:
  - **415.2m @ 0.63% Cu and 0.24g/t Au (0.79% CuEq) from 88.8m including;**
  - **243.8m @ 0.81% Cu and 0.32g/t Au (1% CuEq) from 242.2m;**

With a high-grade core of breccia hosted massive sulphide breccia mineralisation included:

- **50m @ 1.84% Cu and 0.73g/t Au (2.31% CuEq) from 374m including;**
- **27m @ 2.55% Cu and 0.94g/t Au (3.15% CuEq) from 384m.**
- **KHDDH374** (50m step-out from 371) also intersected a significant interval of copper-gold breccia mineralisation;
  - **593m @ 0.45% Cu and 0.23g/t Au (0.6% CuEq) from 68m; including;**
  - **204m @ 0.8% Cu and 0.36g/t Au (1.03% CuEq) from 300m.**
- Recognition of a large-scale mineralised breccia system along-side the established Mineral Resource is transforming the growth potential;

### Exploration Targeting New Discoveries at Kharmagtai

- Additional copper-gold targets generated from a detailed structural interpretation and geophysics currently underway within the large Kharmagtai district;

### Future growth from exploration success on several fronts

- Exploration drilling at Oyut Ulaan delivers encouraging results from several different prospects and increases scale and potential of the Oyut Ulaan project;
- Significant mineralised porphyry stockwork intervals including:
  - **68m @ 0.37% Cu & 0.55 g/t Au (0.72% CuEq) from 108m (OUDDH024);**
  - **237.5m @ 0.33% Cu & 0.58 g/t Au (0.70% CuEq) from surface (OUDDH026).**

### Strong financial position and new appointment to leadership team

- Strong balance sheet with A\$4.1m cash at 30 June;
- Marcus Engelbrecht was appointed as Non-Executive Director (17 June 2015).

**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**

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Xanadu Mines Ltd (ASX: XAM – “**Xanadu**”) is pleased to provide shareholders with an update of exploration results from a strong second quarter.

## **EXPLORATION ACTIVITIES**

The second quarter for 2015 has seen Xanadu commence an exciting exploration drill program at its flagship Kharmagtai copper-gold project (Figure 1) and conclude successful drilling activities at the Oyut Ulaan project.

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

The Kharmagtai 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 projects in Asia and continues to be Xanadu’s top exploration priority in 2015.

Exploration drilling at the Kharmagtai project is currently focused on defining near-surface strike extensions of current deposits and investigating several high-priority targets laying under shallow cover that have the same geophysical response and geometry as existing deposits within the Kharmagtai project.

Thirteen diamond holes have been completed for approximately 5,205m (Tables 1 and 2; Figure 2) in the current phase of the drill program at Kharmagtai that commenced in late April. Significant assay results from drilling of the other regional targets are presented in Tables 1 and 2. Drilling has provided significant advances in our understanding of the Kharmagtai project and clearly indicates potential for a large-scale mineralised breccia system along-side the established Mineral Resource is transforming the Company’s view of the growth potential of Kharmagtai.

Four diamond drill holes (KHDDH364, KHDDH371, KHDDH372 and KHDDH374) targeted extensions of strongly mineralised tourmaline breccia below and east of the Altan Tolgoi resource. All drill holes intersected significant intervals of mineralised tourmaline breccia hosted copper-gold mineralisation of varying widths, confirming the presence and continuity of mineralisation over large strike distances. Importantly, these wide zones of higher grade copper remain open toward the east and at depth. The best examples of this breccia mineralisation are from recent holes which represent the highest grade copper mineralisation discovered to date within the Kharmagtai project and include the following:

KHDDH371 intersects a significant interval of high-grade breccia mineralisation (Figure 3):

- **415.2m @ 0.63% Cu and 0.24g/t Au (0.79% CuEq) from 88.8m including;**
- **243.8m @ 0.81% Cu and 0.32g/t Au (1% CuEq) from 242.2m;**

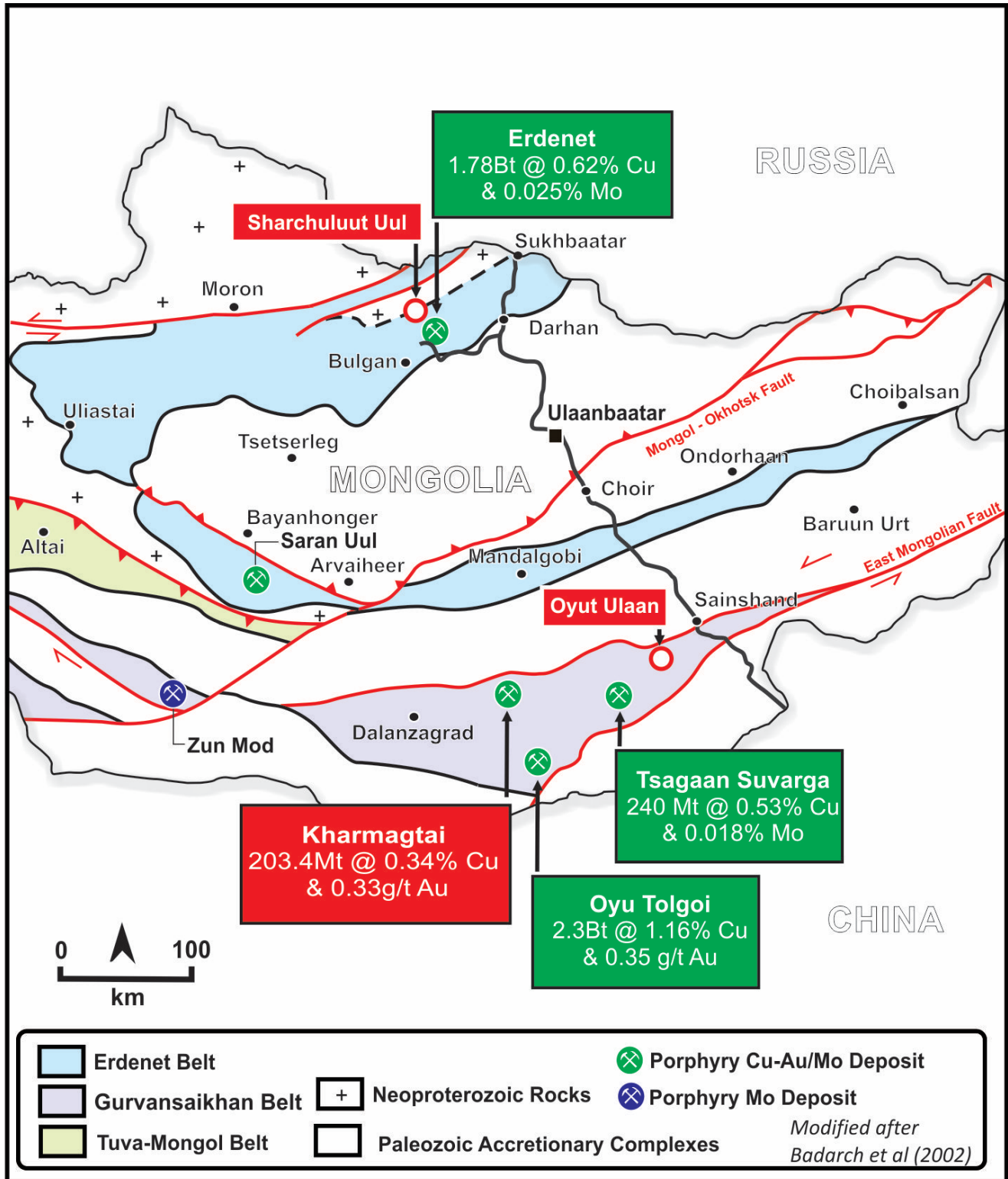
With a high-grade core of breccia hosted massive sulphide mineralisation included:

- **50m @ 1.84% Cu and 0.73g/t Au (2.31% CuEq) from 374m including;**
- **27m @ 2.55% Cu and 0.94g/t Au (3.15% CuEq) from 384m;**

KHDDH374 (50m step-out from 371) also intersected a significant interval of copper-gold breccia mineralisation (Figure 4);

- **593 @ 0.45% Cu and 0.23g/t Au (0.6% CuEq) from 68m; including;**
- **204m @ 0.8% Cu and 0.36g/t Au (1.03% CuEq) from 300m.**

**Figure 1:** Location of the Kharmagtai and Oyut Ulaan copper-gold projects within Mongolia's South Gobi Copper Belt.



Recent drilling is confirmation that discovery of the tourmaline-breccia-style mineralisation adjacent to one of the main porphyry deposits at Altan Tolgoi is an exciting development in the growth of Kharmagtai into a multi-deposit copper-gold project. These intercepts represent a significant breakthrough in terms of the discovery in close proximity to current resources and represent a very exciting development. Importantly this style of breccia mineralisation has significant implications for the growth potential of Kharmagtai as it is a bulk-style of mineralisation with multi-high grade zones not previously identified at the project. The addition of mineralisation and any further porphyry-style discoveries will underpin substantial increases to the Kharmagtai Mineral Resources.

A detailed infill ground magnetic survey was completed over the central Kharmagtai area (Figure 7) and allowed development of a new structural interpretation. Generative efforts have identified several large-scale untested copper porphyry targets that have same structural setting, geophysical response and geometry as existing deposits within the Kharmagtai project. Each target has a variety of different geological and geophysical features suggestive of alteration associated with hydrothermal porphyry mineralisation. Follow-up is scheduled to test the best targets in the second half of the 2015 drill program.

Xanadu geologists continue to review its future exploration strategy to target any near-surface, large-scale porphyry copper potential within the Kharmagtai district.



**Figure 2:** Kharmagtai porphyry copper-gold district showing location of Altan Tolgoi, Tsagaan Sudal and Zesen Uul deposits, as well as other porphyry targets. The figure also shows location of recently completed diamond drill holes.

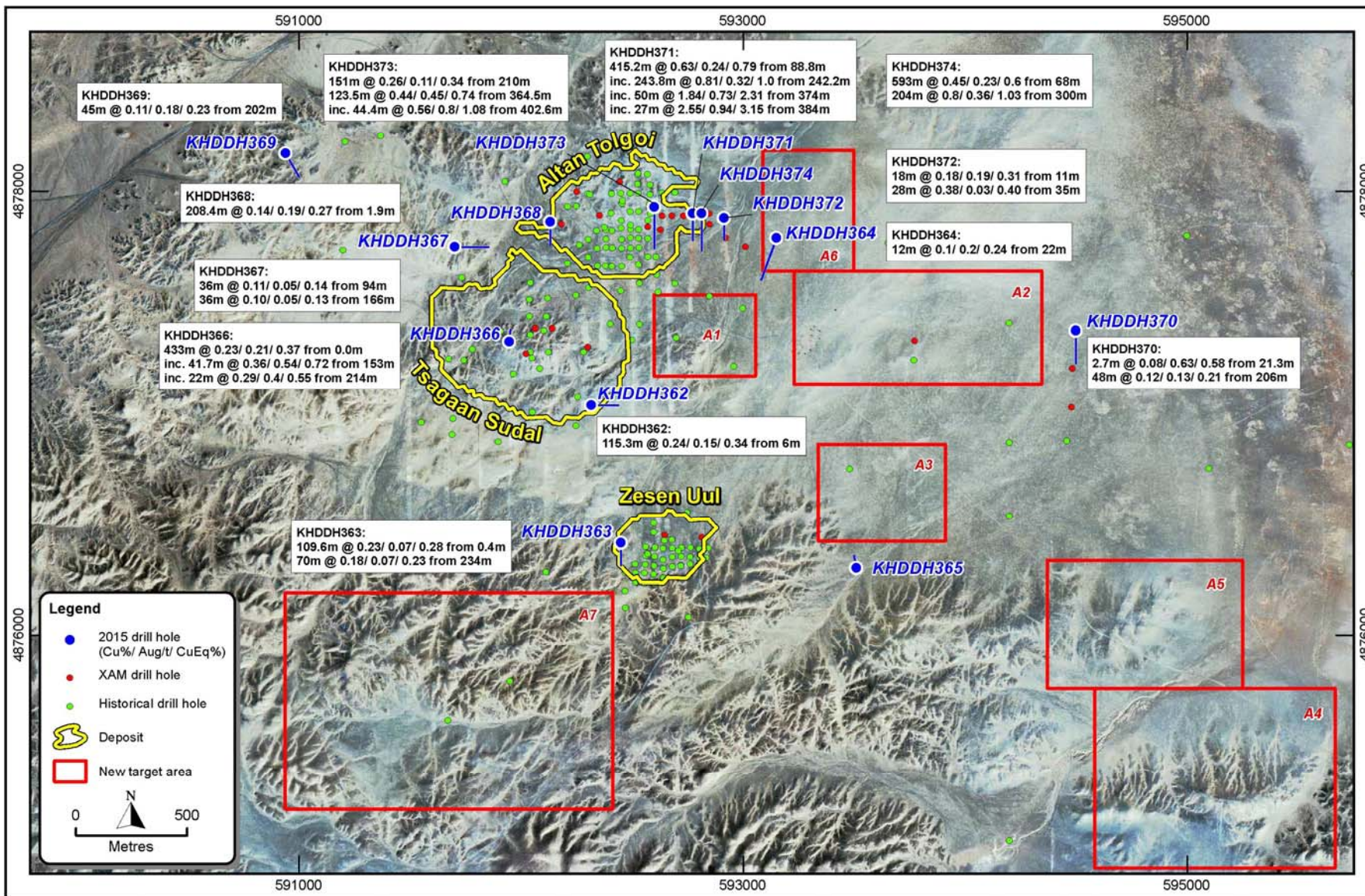
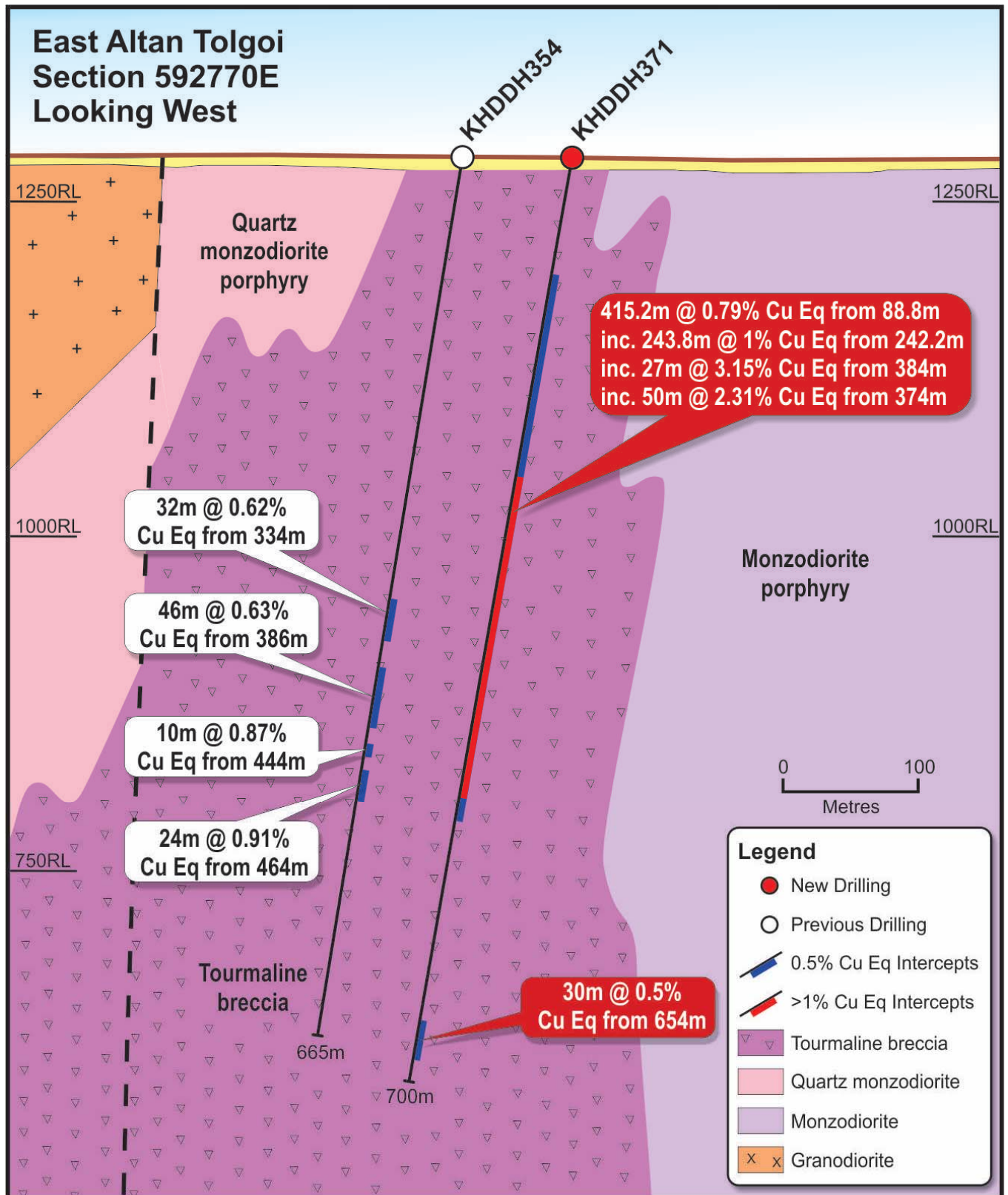


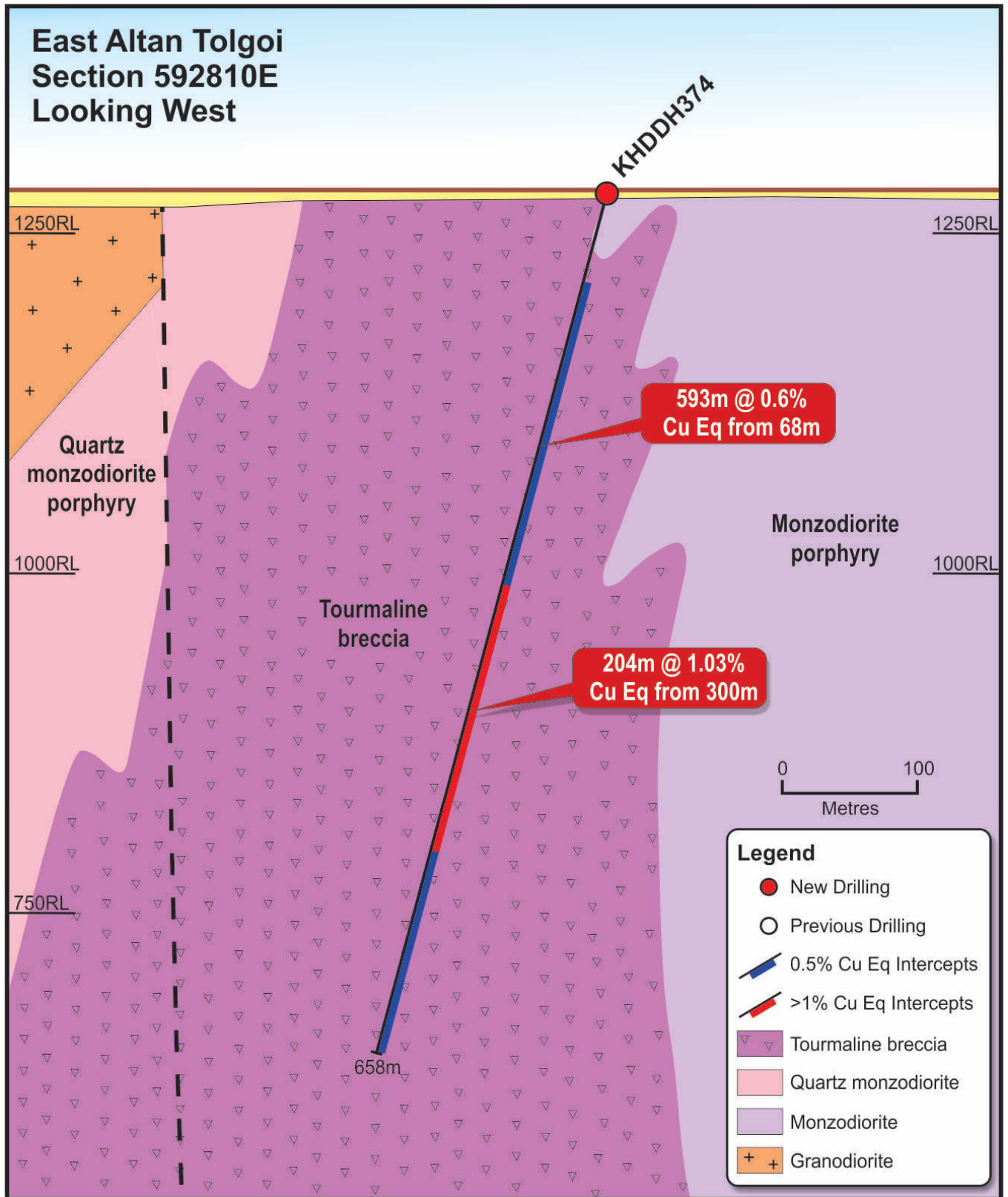




Figure 3: East Altan Tolgoi section 592770mE

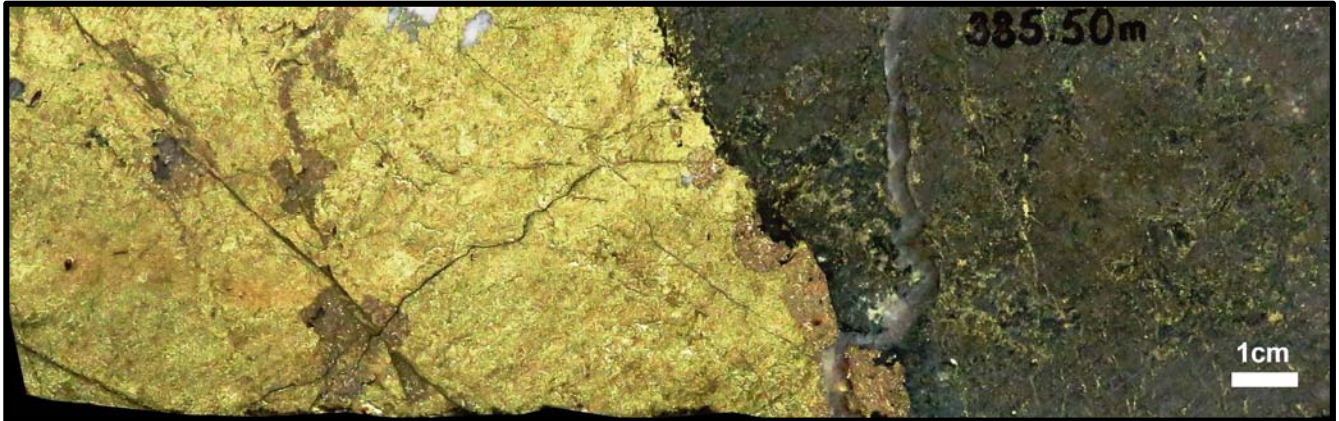


**Figure 4:** East Altan Tolgoi section 592810mE

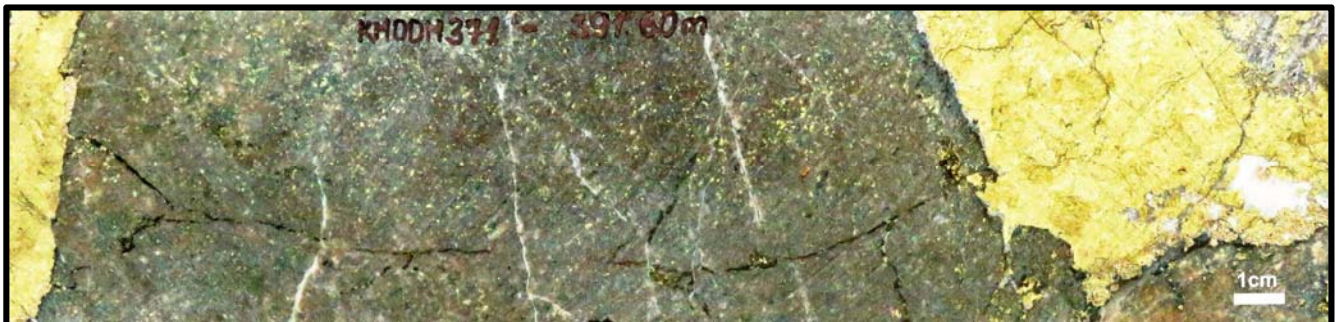




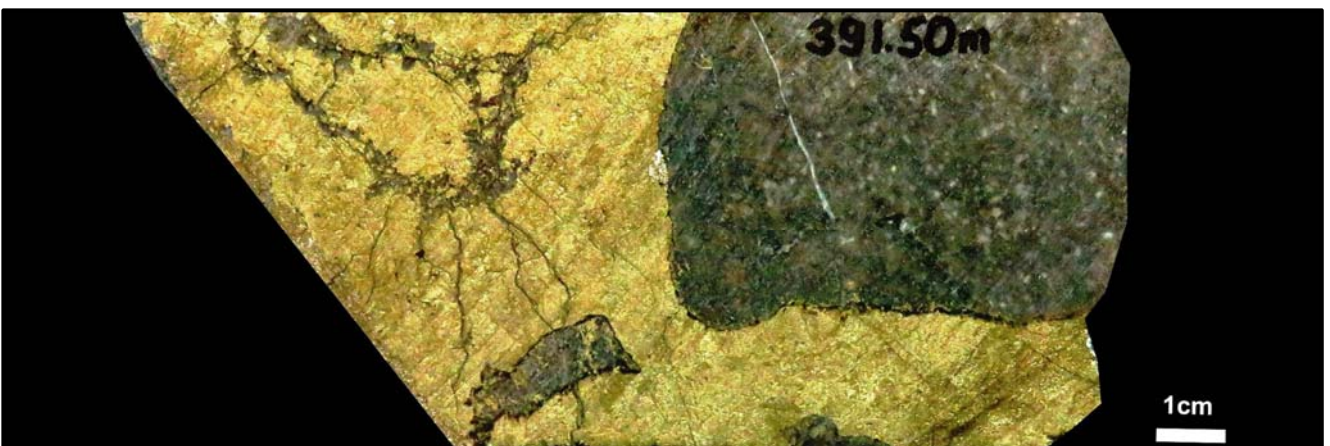
**Figure 5:** Massive chalcopyrite-pyrite mineralisation. KHDDH371 – 385.50m from a 1.7m interval (385.30 to 387m) which assayed 4.92% Cu and 0.93g/t Au (5.51% CuEq).



**Figure 6:** Massive chalcopyrite-pyrite and disseminated chalcopyrite mineralisation. KHDDH371 – 391.7m from a 2m interval (391 to 393m) which assayed 5.82% Cu and 2.11g/t Au (7.17% CuEq).

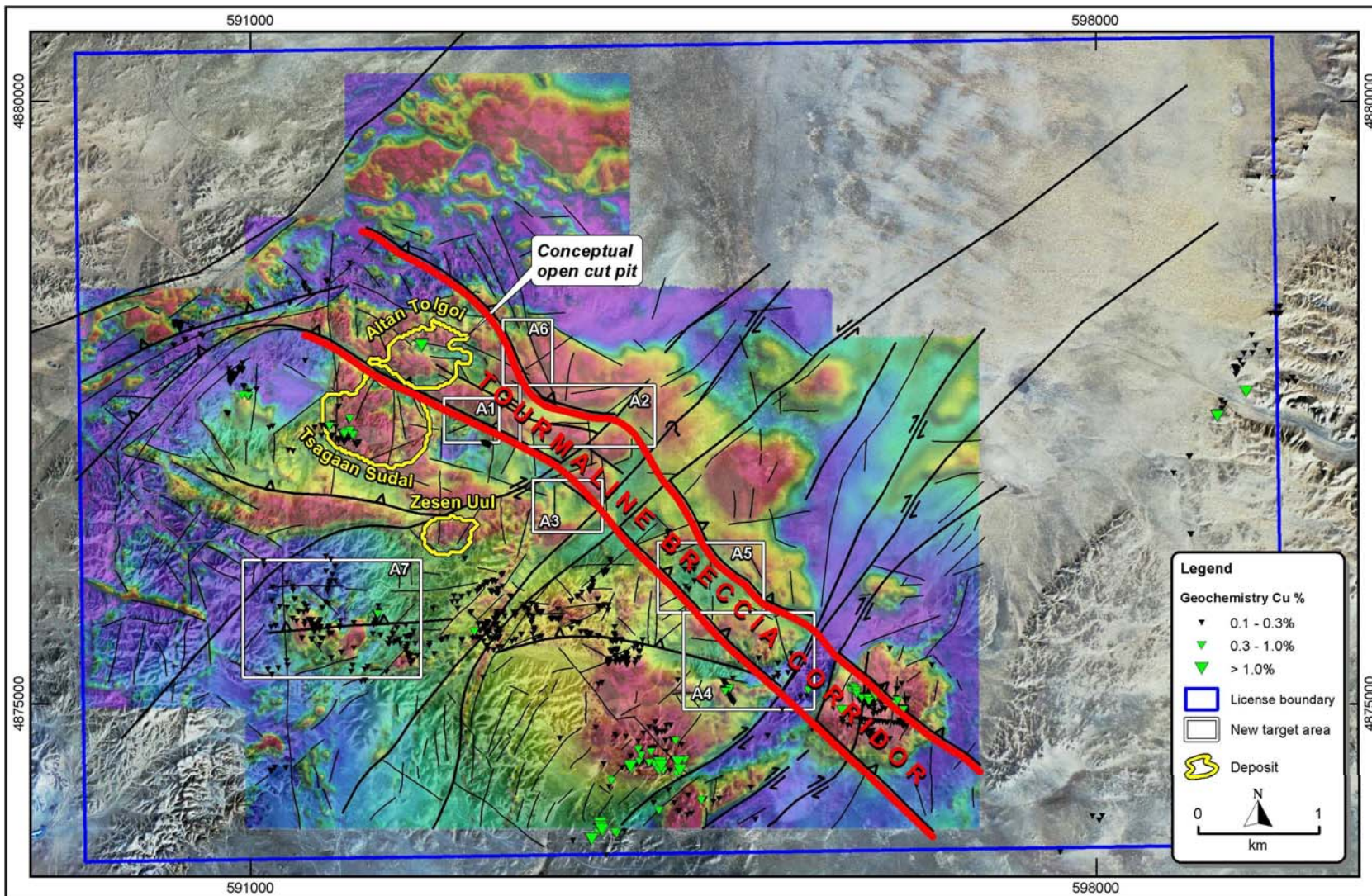


**Figure 7:** Massive chalcopyrite-pyrite with a clast of altered quartz monzodiorite porphyry. KHDDH371 – 391.5m. From a 2m interval (391 to 393m) which assayed 5.82% Cu and 2.11g/t Au (7.17% CuEq).





**Figure 8:** Kharmagtai porphyry copper-gold district with detailed magnetic data and location of new targets



### **Oyut Ulaan copper-gold project**

Xanadu recently completed 9 drill holes for approximately 2,049.60m of diamond drilling and other exploration activities at the Oyut Ulaan project. Xanadu's 90% owned Oyut Ulaan copper-gold project is located within the Dornogovi Province of southern Mongolia, approximately 420km southeast of Ulaanbaatar. It 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).

Oyut Ulaan is a large and underexplored porphyry district (covering approximately 40km<sup>2</sup>) 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 9).

Drilling extended known near-surface high-grade mineralisation at Diorite Hill, discovered shallow high-grade skarn mineralisation at Hulan and discovered new porphyry centre at Temee.

Nine inclined diamond drill holes were completed within the Oyut Ulaan project during March and April 2015, totalling 2,049.6m. Drill hole data and assay results are presented in Tables 3 and 4. The drilling program targeted multiple structural, geochemical and geophysical targets identified in Xanadu's regional targeting program (Figure 9).

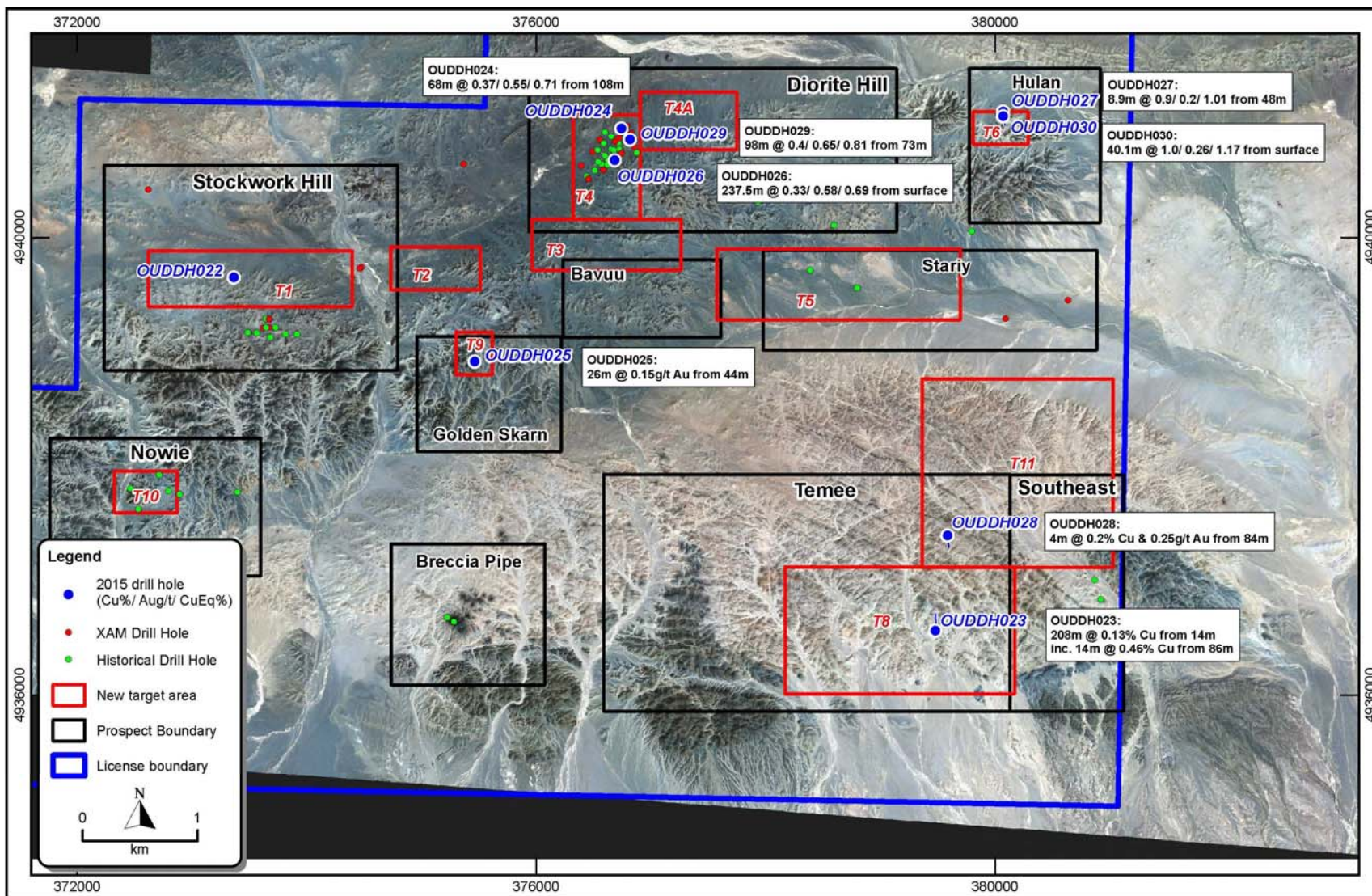
- Three diamond drill holes targeted outcropping quartz-sulphide and coincident geophysical anomalies at Diorite Hill Prospect;
- Three diamond drill holes targeted outcropping magnetite skarn mineralisation and coincident geophysical anomalies at Golden Skarn and Hulan Prospects;
- Two diamond drill holes target outcropping tourmaline breccia mineralisation associated with a large (2,000m long by 200m wide) buried geophysical anomaly at the Temee Prospect; and
- One diamond drill hole targeted outcropping quartz-sulphide and coincident geophysical anomalies at Stockwork Hill Prospect.

The results of this 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 prospects at different stages of exploration.

Xanadu will continue its systematic, low cost exploration at Oyut Ulaan. Current drill holes are mostly shallow and widely spaced, and the existing licence is large and relatively unexplored. The exploration upside for discovering additional porphyry systems within the large underexplored licence is exciting and the next phase of exploration will focus on identifying the 'engine room' to this large system.



**Figure 9:** Oyut Ulaan porphyry copper-gold district showing key prospects as well as other porphyry targets





## **CORPORATE ACTIVITIES**

### **Management Changes**

During the quarter Marcus Engelbrecht was appointed to the Company's Board of Directors as a Non-Executive Director. Mr. Engelbrecht is a well-rounded senior mining executive with exploration and mining management experience with a strong finance background. He has worked in various emerging markets including Indonesia and the Philippines and brings a good network and reputation across the international institutional investment community. Mr. Engelbrecht spent 20 years at BHP Billiton through to 2005 where he rose to become Chief Financial Officer of the diamonds and specialty products business. He then served as Chief Financial Officer of ASX, TSX and NZX listed Oceania Gold during 2009 to 2011 and oversaw a period of restructuring, recapitalisation and success, including a thirteen-fold increase in market capitalisation. Marcus then served as Managing Director and Chief Executive Officer of Singapore based and London AIM listed Archipelago Resources Plc in 2011 to 2013 delivering 150,000 ounces of gold production in 2012 from its Indonesian operations.

Mr. Engelbrecht will serve as the nominee of Asia Capital Advisors Pte Ltd (ACA) pursuant to the \$13.6 million Placement Agreement dated 6 October 2014 as approved by shareholders on 28 November 2014. The ACA associated group of shareholders' current combined ownership is approximately 32%.

This appointment is an important step for Xanadu as the Company focuses on its Mongolian copper-gold strategy and continued exploration success.

### **Share Capital**

As at 30 June 2015, the Company had 374,678,226 fully paid shares, 5,500,000 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 30 June 2015, the Company was in a strong position with A\$4.1m in cash.

For further information please visit [www.xanadumines.com](http://www.xanadumines.com) or contact:

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## **KHARMAGTAI PROJECT & THE MONGOL METALS JV**

Xanadu and its joint venture partner, Mongol Metals LLC, announced the acquisition of a 90% interest in the Kharmagtai porphyry copper-gold project from Turquoise Hill Resources in February 2014. Under the Mongol Metals LLC joint venture terms, Xanadu has the right to earn an 85% interest in Mongol Metals LLC, equivalent to a 76.5% effective project interest, by funding acquisition and exploration costs.

The Kharmagtai project is located in the under-explored South Gobi porphyry copper province which hosts the world-class Oyu Tolgoi copper-gold operation, the Tsagaan Suvarga porphyry copper-molybdenum development and Xanadu's Oyut Ulaan copper-gold exploration project. The Kharmagtai project is located within the Omnogovi Province, approximately 420km south southwest of Ulaanbaatar and 60km north of the Tavan Tolgoi coal deposit.

The Kharmagtai project is an advanced exploration project consisting of multiple co-genetic gold-rich porphyry copper centres and tourmaline breccia pipes occurring within the Lower Carboniferous Kharmagtai Igneous Complex. Exploration has identified significant shallow high-grade porphyry copper-gold mineralisation. A majority of the mineralised porphyry complex lies under un-explored shallow sediments. The large licence area has only been partially explored and the potential for further discoveries remains high.

## **COMPETENT PERSON STATEMENTS**

### **Exploration Results**

*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 the 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.*

### **Kharmagtai Mineral Resource Estimate**

*The information in this report that relates to Kharmagtai Mineral Resource Estimate is extracted from an ASX announcements dated 19 March 2015 and is available to view at <http://www.xanadumines.com>. The information that relates to Mineral Resources is based on information compiled by Mr Andrew J. Vigar, who is a Fellow of The Australasian Institute of Mining and Metallurgy. Mr Vigar is employed by Mining Associates Limited in Hong Kong. Mr Vigar has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a "Competent Person" as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Vigar consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.*

**QUALIFYING STATEMENT**

The Kharmagtai project – JORC compliant Resource Estimate Statement (Reported 19 March 2015)

**MINERAL RESOURCE ESTIMATE @ 0.3% CuEq CUT-OFF**

Mineral Resource Estimate tabulation for Kharmagtai Deposit - March 2015. Reported at a 0.3% CuEq cut-off constrained within optimised pit shells and CuEq cut-off 0.5% CuEq applied to the underground resources.

Deposit	Mining	Cut-Off	Resource	Material	Grade			Metal	
	Method	CuEq(%)	Category	(Mt)	Cu(%)	Au(g/t)	CuEq(%)	Cu(Mlb)	Au(Koz)
AT	OC	0.3	Indicated	14.5	0.37	0.56	0.73	119	262
			Inferred	7.5	0.30	0.44	0.58	49	106
			Subtotal	22.0	0.35	0.52	0.68	168	368
	UG	0.5	Indicated	23.2	0.43	0.47	0.73	219	350
			Inferred	32.8	0.43	0.43	0.70	311	453
			Subtotal	55.9	0.43	0.45	0.71	530	803
	Combined	Indicated	37.7	0.41	0.50	0.73	338	612	
		Inferred	40.2	0.41	0.43	0.68	360	559	
		Total	78.0	0.41	0.47	0.70	698	1,171	
TS	OC	0.3	Indicated	-	-	-	-	-	-
			Inferred	97.7	0.27	0.23	0.41	581	722
			Subtotal	97.7	0.27	0.23	0.41	581	722
	UG	0.5	Indicated	-	-	-	-	-	-
			Inferred	17.7	0.39	0.24	0.54	152	136
			Subtotal	17.7	0.39	0.24	0.54	152	136
	Combined	Indicated	-	-	-	-	-	-	
		Inferred	115.4	0.29	0.23	0.43	733	859	
		Total	115.4	0.29	0.23	0.43	733	859	
ZU	OC	0.3	Indicated	8.0	0.5	0.5	0.8	84.6	138.8
			Inferred	1.4	0.3	0.1	0.4	10.5	5.4
			Subtotal	9.4	0.46	0.48	0.76	95	144
	UG	0.5	Indicated	0.6	0.4	0.4	0.7	5.7	8.8
			Inferred	0.1	0.3	0.5	0.6	0.5	1.3
			Subtotal	0.7	0.40	0.44	0.67	6	10
	Combined	Indicated	8.6	0.47	0.53	0.81	90	148	
		Inferred	1.5	0.34	0.14	0.42	11	7	
		Total	10.1	0.45	0.47	0.75	101	154	
All	OC	0.3	Indicated	23	0.41	0.55	0.76	203	401
			Inferred	107	0.27	0.24	0.42	641	833
			Subtotal	129	0.30	0.30	0.48	844	1,234
	UG	0.5	Indicated	24	0.43	0.47	0.73	225	359
			Inferred	51	0.42	0.36	0.64	463	591
			Subtotal	74	0.42	0.40	0.67	688	950
	Combined	Indicated	46	0.42	0.51	0.74	428	759	
		Inferred	157	0.32	0.28	0.49	1,104	1,424	
		Total	203	0.34	0.33	0.55	1,533	2,184	



**MINERAL RESOURCE ESTIMATE @ 0.6% CuEq CUT-OFF**

Mineral Resource Estimate tabulation for Kharmagtai Deposit - March 2015. Reported at a 0.6% CuEq cut-off.

Deposit	Mining	Cut-Off	Resource	Material	Grade			Metal	
	Method	CuEq(%)	Category	(Mt)	Cu(%)	Au(g/t)	CuEq(%)	Cu(Mlb)	Au(Koz)
AT	OC	0.6	Indicated	4.7	0.47	0.92	1.06	49	140
			Inferred	1.2	0.38	0.88	0.95	10	33
			Subtotal	5.9	0.45	0.91	1.04	59	173
	UG	0.6	Indicated	19.0	0.46	0.57	0.83	193	349
			Inferred	22.1	0.46	0.52	0.79	224	369
			Subtotal	41.1	0.46	0.54	0.81	417	718
	Combined		Indicated	23.8	0.46	0.64	0.88	242	489
			Inferred	23.3	0.46	0.54	0.80	234	402
			Total	47.0	0.46	0.59	0.84	476	891
TS	OC	0.6	Indicated	-	-	-	-	-	-
			Inferred	0.1	0.41	0.32	0.61	1	1
			Subtotal	0.1	0.41	0.32	0.61	1	1
	UG	0.6	Indicated	-	-	-	-	-	-
			Inferred	3.6	0.48	0.41	0.74	38	48
			Subtotal	3.6	0.48	0.41	0.74	38	48
	Combined		Indicated	-	-	-	-	-	-
			Inferred	3.7	0.48	0.41	0.74	39	48
			Total	3.7	0.48	0.41	0.74	39	48
ZU	OC	0.6	Indicated	4.1	0.6	0.8	1.1	52.8	107.6
			Inferred	0.1	0.4	0.4	0.6	0.7	0.9
			Subtotal	4.2	0.58	0.80	1.09	54	109
	UG	0.6	Indicated	0.9	0.5	0.7	0.9	9.8	19.3
			Inferred	0.0	0.3	0.6	0.7	0.3	0.7
			Subtotal	1.0	0.47	0.65	0.88	10	20
	Combined		Indicated	5.1	0.56	0.78	1.06	63	127
			Inferred	0.1	0.39	0.44	0.67	1	2
			Total	5.2	0.56	0.77	1.05	64	129
All	OC	0.6	Indicated	9	0.52	0.87	1.08	102	248
			Inferred	1	0.38	0.82	0.92	11	34
			Subtotal	10	0.50	0.86	1.06	113	282
	UG	0.6	Indicated	20	0.46	0.57	0.83	203	368
			Inferred	26	0.46	0.50	0.78	263	418
			Subtotal	46	0.46	0.53	0.80	465	786
	Combined		Indicated	29	0.48	0.66	0.91	305	616
			Inferred	27	0.46	0.52	0.79	274	452
			Total	56	0.47	0.59	0.85	578	1,068

**Table 1: Kharmagtai drill hole details**

Hole Name	Prospect	East	North	RL	Azi (°)	Dip	Depth (m)
KHDDH362	Tsagaan Sudal	592315	4877033	1290	90	-60	250
KHDDH363	Zesen Uul	592450	4876414	1306	180	-65	304
KHDDH364	East AT	593150	4877790	1282	200	-60	409
KHDDH365	Zesen Uul	593510	4876300	1280	350	-70	175
KHDDH366	Tsagaan Sudal	591946	4877321	1336	5	-82	433
KHDDH367	Tsagaan Sudal	591700	4877750	1287	90	-65	367
KHDDH368	West AT	592131	4877862	1280	180	-60	210.3
KHDDH369	Altan Shand	590938	4878170	1328	150	-60	247
KHDDH370	Basin	594500	4877370	1280	180	-70	433
KHDDH371	East AT	592773	4877901	1272	180	-80	700
KHDDH372	East AT	592915	4877880	1282	180	-75	376
KHDDH373	AT	592600	4877930	1282	180	-73	640
KHDDH374	AT	592813	4877901	1272	180	-75	661

**Table 2: Kharmagtai significant drill results from second quarter**

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Cu (%)	Au (g/t)	CuEq (%) **
KHDDH362*	Tsagaan Sudal	6	121.3	115.3	0.26	0.16	0.36
Including		50	58	8	0.42	0.25	0.58
KHDDH363*	Zesen Uul	0.4	110	109.6	0.23	0.07	0.28
and		142	152	10	0.38	1.92	1.61
and		194.8	216	21.2	0.23	0.1	0.31
and		234	304	70	0.18	0.07	0.23
KHDDH364*	East AT	22	34	12	0.1	0.2	0.24
and		374	378	4	0.01	0.31	0.21
KHDDH365*	Zesen Uul	No significant assays					
KHDDH366*	Tsagaan Sudal	0	433	433	0.23	0.21	0.37
Including		46	56	10	0.64	0.47	0.95
Including		153	194.7	41.7	0.36	0.54	0.72
Including		214	236	22	0.29	0.4	0.55
KHDDH367*	Tsagaan Sudal	94	130	36	0.11	0.05	0.14
and		166	202	36	0.1	0.05	0.13
and		218	222	4	0.18	0.11	0.25



Hole ID	Prospect	From (m)	To (m)	Interval (m)	Cu (%)	Au (g/t)	CuEq (%) **
and		256	262.2	6.2	0.07	0.51	0.4
KHDDH368*	West AT	1.9	210.3	208.4	0.14	0.19	0.27
KHDDH369*	Altan Tolgoi	202	247	45	0.11	0.18	0.23
KHDDH370*	Basin	21.3	24	2.7	0.08	0.63	0.58
and		158	164	6	0.11	0.25	0.28
and		206	274	68	0.12	0.16	0.23
and		302	304	2	0.17	2.8	1.96
and		320	351.8	31.8	0.15	0.14	0.25
and		370	406	36	0.15	0.11	0.22
and		410	433	23	0.17	0.15	0.27
KHDDH371*	East AT	32	38	6	0.19	0.08	0.25
and		60	68	8	0.14	0.05	0.18
and		88.8	504	415.2	0.63	0.24	0.79
Including		242	486	243.8	0.81	0.32	1.02
Including		374	424	50	1.84	0.73	2.31
and		550	574	24	0.13	0.05	0.17
and		654	684	30	0.41	0.14	0.5
Including		655.3	661	5.7	1.57	0.36	1.8
and		688	700	12	0.14	0.07	0.19
KHDDH372*	East AT	11	29	18	0.18	0.19	0.31
and		35	63	28	0.38	0.03	0.4
Including		43	45	2	1.62	0.11	1.69
and		93	103	10	0.29	0.02	0.3
and		108	116	8	0.23	0.06	0.28
and		128	136	8	0.39	0.05	0.43
and		154	156	2	0.08	3.06	2.04
and		246	250	4	0.46	0.07	0.51
and		274	298	24	0.13	0.03	0.15
and		328	332	4	0.15	0.01	0.17
KHDDH373*	AT	36	38	2	0.53	0.08	0.58
and		39.3	39.7	0.4	1.76	0.12	1.84
and		62	64	2	0.37	0.06	0.41
and		70	82	12	0.17	1.92	1.4
Including		72	74	2	0.14	11.25	7.32



Hole ID	Prospect	From (m)	To (m)	Interval (m)	Cu (%)	Au (g/t)	CuEq (%) **
and		94	102	8	0.19	0.14	0.28
and		140	144	4	0.15	0.07	0.21
and		154	158	4	0.14	0.03	0.17
and		188	192	4	0.13	0.02	0.15
and		200	204	4	0.14	0.04	0.17
and		210	361	151	0.26	0.11	0.34
Including		289	297	8	0.51	0.06	0.56
Including		335	357.7	22.7	0.45	0.23	0.61
and		364.5	488	123.5	0.44	0.45	0.74
Including		402.6	447	44.4	0.56	0.8	1.08
and		505.2	530	24.8	0.27	0.34	0.5
and		546.4	586	39.6	0.3	0.14	0.39
Including		546.4	550	3.6	0.91	0.26	1.08
and		596	598	2	0.06	5.46	3.55
and		600	606	6	0.1	0.17	0.21
KHDDH374*	AT	1.5	10	8.5	0.17	0.05	0.21
and		18	48	30	0.15	0.07	0.19
and		68	661	593	0.45	0.23	0.6
Including		300	504	204	0.8	0.36	1.03
Including		534	560	24	0.59	0.74	1.07
Including		606	650	44	0.52	0.35	0.75

\* Intervals calculated using a 0.1 percent copper cut-off grade with unlimited internal dilution

\*\*Intervals calculated using a 0.6 percent copper equivalent grade up to/including 4m internal dilution

**Table 3: Oyut Ulaan drill hole details**

Hole Name	Prospect	East	North	RL	Azi (°)	Dip	Depth (m)
OUDDH022	Stockwork Hill	373368	4939642	1075	5	-70	150.5
OUDDH023	Temee	379484	4936561	1100	5	-65	368.6
OUDDH024	Diorite Hill	376746	4940949	1069	121	-76	250
OUDDH025	Golden Skarn	375468	4938912	1075	330	-70	220
OUDDH026	Diorite Hill	376689	4940668	1073	290	-57	246.5
OUDDH027	Hulan	380076	4941096	1046	175	-55	200.5
OUDDH028	Temee	379589	4937390	1055	175	-70	309.5
OUDDH029	Diorite Hill	376820	4940849	1064	300	-70	228.5
OUDDH030	Hulan	380074	4941054	1055	5	-77	102.5

**Table 4: Oyut Ulaan significant drill results from second quarter.**

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Cu (%)	Au (g/t)	CuEq (%) **
OUDDH023*	Temee	86	100	14	0.46		0.46
OUDDH024*	Diorite Hill	108	176	68	0.37	0.55	0.72
Including		108	122	14	0.53	0.56	0.89
Including		158	176	18	0.45	0.97	1.07
OUDDH026	Diorite Hill	0	237.5	237.5	0.33	0.58	0.7
Including		0	54.9	54.9	0.62	1.5	1.58
Including		103	114.4	11.4	0.95	1.15	1.68
Including		142	158	16	0.36	0.4	0.62
Including		224	230	6	0.48	0.82	1
OUDDH027*	Hulan	48	56.9	8.9	0.9	0.2	1.03
OUDDH028*	Temee	84	88	4	0.2	0.25	0.36
OUDDH029*	Diorite Hill	73	171	98	0.4	0.65	0.81
Including		103	138	35	0.46	0.79	0.96
OUDDH030*	Hulan	0	40.1	40.1	1	0.26	1.17
Including		22.1	40.1	18	1.76	0.4	2.02

\* Intervals calculated using a 0.1 percent copper cut-off grade with unlimited internal dilution

\*\*Intervals calculated using a 0.6 percent copper equivalent grade up to/including 4m internal dilution

**TABLE 5: TENEMENTS HELD AS AT 30 JUNE 2015**

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 30 June
MV17387A <sup>1</sup>	Kharmagtai	Umnugovi Province	-	64%
MV017129	Oyut Ulaan	Dornogovi Province	-	90%
13670x	Sharchuluut	Bulgan Province	-	100%

<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 71.3% as at 30 June 2015 (an effective 64.2% 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 Turquoise Hill and Xanadu. This Table 1 updates the JORC Table 1 disclosure dated 30 April 2015.

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

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

Criteria	JORC Code Explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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.</li> <li>Only assay result results from recognised, independent assay laboratories were used in Resource calculation after QAQC was verified.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type and details.</li> </ul>	<ul style="list-style-type: none"> <li>DDH drilling has been the primary drilling method.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <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</li> </ul>	<ul style="list-style-type: none"> <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</li> </ul>



Criteria	JORC Code Explanation	Commentary
	preferential loss/gain of fine/coarse material.	<p>methodology used for measuring recovery is standard industry practice.</p> <ul style="list-style-type: none"> <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>
<b>Logging</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Drill 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 has been logged by a geologist.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <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 sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <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>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>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <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,</li> </ul>	<ul style="list-style-type: none"> <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</li> </ul>

Criteria	JORC Code Explanation	Commentary
	duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	<p>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.</p> <ul style="list-style-type: none"> <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 matched copper-gold standards.</li> <li>• QAQC monitoring is an active and ongoing processes on batch by batch basis by which unacceptable results are re-assayed as soon as practicable.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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>
<b>Location of data points</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• All DDH's have been surveyed with a differential global positioning system (DGPS) to within 10cm accuracy.</li> <li>• All DDH's 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 1 metre contours with an accuracy of <math>\pm 0.01</math> metre.</li> </ul>
<b>Data spacing</b>	<ul style="list-style-type: none"> <li>• Data spacing for reporting of Exploration</li> </ul>	<ul style="list-style-type: none"> <li>• Drilling has been completed on nominal north-south sections, commencing at</li> </ul>

Criteria	JORC Code Explanation	Commentary
<b>and distribution</b>	<p>Results.</p> <ul style="list-style-type: none"> <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>	<p>120m spacing and then closing to 40m for resource estimation.</p> <ul style="list-style-type: none"> <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 1000m 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>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <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 mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>Drilling 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.</li> <li>Vertical to South dipping ore bodies were predominantly drilled to the north.</li> <li>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.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <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>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data</li> </ul>	<ul style="list-style-type: none"> <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</li> </ul>

Criteria	JORC Code Explanation	Commentary
		<p>estimation including that required by the NI 43-101 standards.</p> <ul style="list-style-type: none"> <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 Explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <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 of reporting along with any known impediments to obtaining a license to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <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 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>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The mineralisation is characterised as porphyry copper-gold type.</li> <li>Porphyry copper-gold deposits are formed from magmatic hydrothermal fluids typically associated with felsic intrusive stocks that have deposited metals as sulphides both within the intrusive and the intruded host rocks. Quartz stockwork veining is typically associated with sulphides occurring both within the quartz veinlets and disseminated throughout the wall rock. Porphyry deposits are typically large tonnage deposits ranging from low to high grade and are generally mined by large</li> </ul>



Criteria	JORC Code Explanation	Commentary
		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.
<b>Drill hole information</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>easting and northing of the drill hole collar.</li> <li>elevation or Reduced Level (RL) 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 clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond drill holes are the principal source of geological and grade data for the Project.</li> <li>See Table 1 in main report.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>A nominal cut-off of 0.1% Cu is used for identification of potentially significant intercepts for reporting purposes.</li> <li>Most of the reported intercepts are shown in sufficient detail, including maxima and subintervals, to allow the reader to make an assessment of the balance of high and low grades in the intercept.</li> <li>Informing Samples have been composited to two metre lengths honoring 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:</li> <li><math>CuEq = Cu\% \times (Aug/t \times 0.6378)</math></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>
<b>Relationship between mineralisation</b>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>Mineralised structures are variable in orientation, and therefore drill orientations have been adjusted from place to place in</li> </ul>

Criteria	JORC Code Explanation	Commentary
<b>on widths and intercept lengths</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>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>Resource estimation, as reported later, was done in 3D space.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>See figures in main report.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Resources have been reported at a range of cut-off grades, above a minimum suitable for open pit mining, and above a minimum suitable for underground mining.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Extensive work in this area has been done, and is reported separately.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The 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 style="list-style-type: none"> <li>The mineralisation is open at depth and along strike.</li> <li>Current estimates are restricted to those expected to be reasonable for open pit mining. Limited drilling below this depth (-300m 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 & REPORTING OF MINERAL RESOURCES

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

Criteria	JORC Code Explanation	Commentary
<b>Database integrity</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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 Gemcom Surpac 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>
<b>Site visits</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <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> <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 style="list-style-type: none"> <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 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>Sulphide mineralisation is zoned from a bornite-rich core that zone outwards to chalcopyrite-rich and then outer pyritic</li> </ul>

Criteria	JORC Code Explanation	Commentary
		<p>haloes, with gold closely associated with bornite.</p> <ul style="list-style-type: none"> <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>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <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.</li> <li>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 × 100 metres by at least 200 metres and plunges to the southeast.</li> </ul>
<b>Estimation and modeling techniques</b>	<ul style="list-style-type: none"> <li>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.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes</li> </ul>	<ul style="list-style-type: none"> <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> <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</li> </ul>



Criteria	JORC Code Explanation	Commentary
	<p>appropriate account of such data.</p> <ul style="list-style-type: none"> <li>• The assumptions made regarding recovery of by-products.</li> <li>• Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>• Any assumptions behind modelling of selective mining units.</li> <li>• Any assumptions about correlation between variables.</li> <li>• Description of how the geological interpretation was used to control the resource estimates.</li> <li>• Discussion of basis for using or not using grade cutting or capping.</li> <li>• The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<p>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.</p> <ul style="list-style-type: none"> <li>• 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.</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 4428 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/m<sup>3</sup>. 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 was applied.</li> <li>• 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</li> </ul>

Criteria	JORC Code Explanation	Commentary
		<p>to receive a grade estimate in a previous pass would be resubmitted in a subsequent and larger search pass.</p> <ul style="list-style-type: none"> <li>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;</li> <li><math>CuEq = Cu\% \times (Aug/t \times 0.6378)</math></li> <li>Formula is based on a \$2.60/lb copper price and a \$1,300/oz gold price.</li> </ul>
<b>Moisture</b>	<ul style="list-style-type: none"> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>All tonnages are reported on a dry basis.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>Cut off grades applied are copper-equivalent (CuEq) cut off values of 0.3% for possible open pit and 0.5% for underground.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <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> <li>0.3 % CuEq cut-off constrained within an A\$4.00/lb Cu and \$1, 300/oz Au optimised pit shells.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>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 of the basis of the</li> </ul>	<ul style="list-style-type: none"> <li>No metallurgical factors have been applied to the in situ grade estimates.</li> </ul>

Criteria	JORC Code Explanation	Commentary
	metallurgical assumptions made.	
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>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).</li> </ul>
<b>Bulk density</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>A total of 4428 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/m<sup>3</sup>. 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>
<b>Classification</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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 2012 Code using a qualitative approach. The classifications reflect the competent person's view of the Kharmagtai Copper Gold Project.</li> </ul>



Criteria	JORC Code Explanation	Commentary
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>XAM's internal review and audit of the Mineral Resource Estimate consisted of data analysis and geological interpretation of individual cross-sections, comparing drill-hole data with the resource estimate block model.</li> <li>Good correlation of geological and grade boundaries were observed.</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>
<b>Discussion of relative accuracy/ confidence</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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 insitu 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 & REPORTING OF ORE RESERVES

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

## APPENDIX 2: OYUT ULAAN TABLE 1 (JORC 2012)

Set out below is Section 1 and Section 2 of Table 1 under the JORC Code, 2012 Edition for the Oyut Ulaan project. Data provided by Xanadu. This Table 1 updates the JORC Table 1 disclosure dated 5 May 2015.

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

Criteria	JORC Code Explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling.</li> <li>Include reference to 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 style="list-style-type: none"> <li>Representative 2 metre samples were taken from trenches (costeans) excavated through colluvial cover to bedrock.</li> <li>Representative 2 meter samples were taken from ½ PQ, HQ and NQ diameter diamond drill core.</li> <li>Visual checks by geologists of sampling confirm sample intervals.</li> <li>Only assay result results from recognised, independent assay laboratories were used in reporting after QAQC was verified.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type and details.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond drilling of PQ, HQ and NQ diameters has been the primary drilling method.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Diamond core recoveries averaged 98% overall in mineralised zones.</li> <li>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>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>
<b>Logging</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Diamond drill core samples and trenches are logged for geology, alteration and mineralisation using a standardised logging system.</li> <li>Rock quality data (RQD) is collected from all diamond drill core.</li> <li>Diamond drill core and trenches were photographed after being logged by a geologist.</li> <li>All diamond drill cores and trenches have been logged by a competent geologist.</li> </ul>
<b>Sub-sampling</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether</li> </ul>	<ul style="list-style-type: none"> <li>Trench channel samples are taken from</li> </ul>

Criteria	JORC Code Explanation	Commentary
<b>techniques and sample preparation</b>	<p>quarter, half or all core taken.</p> <ul style="list-style-type: none"> <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 sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<p>the base of the trench wall (about 10cm above the floor). Samples are approximately 3kg. The sample is collected with a plastic sheet and tray.</p> <ul style="list-style-type: none"> <li>Diamond drill core is cut in half with a diamond saw, following the line marked by the geologist.</li> <li>The rock saw is regularly flushed with fresh water.</li> <li>Sample intervals are a constant 2m interval down-hole in length.</li> <li>Routine sample preparation and analyses of diamond drill core and trench samples were carried out by SGS Mongolia LLC (SGS Mongolia) and ALS Mongolia LLC (ALS Geochemistry Mongolia) who operate independent sample preparation and analytical laboratories in Ulaanbaatar.</li> <li>All samples were prepared to meet standard quality control procedures as follows: crushed to 70% less than 2mm, riffle split off 1kg, pulverize split to better than 85% 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>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>All samples were routinely assayed by SGS Mongolia LLC (SGS Mongolia) and ALS Mongolia LLC (ALS Geochemistry Mongolia) who operate independent sample preparation and analytical laboratories in Ulaanbaatar.</li> <li>Gold is determined using 30g fire assay with aqua regia digestion, followed by an atomic absorption spectroscopy (AAS) finish, with a lower detection (LDL) of 0.01 ppm.</li> <li>48 elements by four-acid-digestion, ICP-MS and ICP-AES (ME-MS61 and ME-MS61m).</li> <li>Four acid digestion is considered near total digestion.</li> <li>Quality assurance was provided by introduction of known certified standards,</li> </ul>



Criteria	JORC Code Explanation	Commentary
		<p>blanks and duplicate samples on a routine basis.</p> <ul style="list-style-type: none"> <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 matched copper-gold standards.</li> <li>QAQC monitoring is an active and ongoing process on batch by batch basis by which acceptable results is re-assayed as soon as practicable.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>All assay data QAQC is checked prior to loading into the data base.</li> <li>The data is managed XAM geologists.</li> <li>No twinned drill holes exist, given the early stage of the exploration project.</li> <li>The data base and geological interpretation is collectively managed by XAM.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>All drill hole collars 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 49N grid.</li> <li>The DTM is based on 1 m contours with an accuracy of <math>\pm 0.01</math> m.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <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</li> </ul>	<ul style="list-style-type: none"> <li>Trenching has been completed on nominal northwest-southeast and north-south trending sections on widely spaced lines. Channel sampling every 2m of the 1m wide trench.</li> <li>Drilling has been completed on nominal northwest-southeast and north-south trending sections, on 100m spacing within mineralised zones.</li> </ul>

Criteria	JORC Code Explanation	Commentary
	applied.	<ul style="list-style-type: none"> <li>Vertical spacing of intercepts on the mineralised zones similarly commences at 100m spacing for mineralised zones.</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 400m vertical depth.</li> <li>The data spacing and distribution is not sufficient to establish geological and grade continuity appropriate for the a Mineral Resource estimation.</li> <li>Samples have not been composited.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <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 mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>Drilling and trenching has been predominantly completed on northwest trending section lines across the strike of the known mineralised zones and from either the north or the south depending on the dip.</li> <li>Vertical dipping mineralised zones were predominantly drilled to the northwest or north.</li> <li>Scissor drilling (drilling from both north and south) has been used in key mineralised zones to achieve unbiased sampling of possible structures and mineralised zones.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Samples are dispatched from site through via company employees 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>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data</li> </ul>	<ul style="list-style-type: none"> <li>Internal audits of sampling techniques and data management on a regular basis, to ensure industry best practice is employed at all times.</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 Explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, over riding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The Project comprises 1 Mining Licences (MV-17129A).</li> <li>Xanadu now owns 90% of Vantage LLC, the 100% owner of the Oyut Ulaan mining licence.</li> <li>The Mongolian Minerals Law (2006 and Mongolian Land Law (2002) govern exploration, mining and land use rights for the project.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Previous exploration was conducted by Ivanhoe Mines Ltd and Vantage LLC including surface mapping and geochemistry, diamond drilling and geophysics.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The mineralisation is characterised as porphyry copper-gold type.</li> <li>Porphyry copper-gold deposits are formed from magmatic hydrothermal fluids typically associated with felsic intrusive stocks that have deposited metals as sulphides both within the intrusive and the intruded host rocks. Quartz stockwork veining is typically associated with sulphides occurring both within the quartz veinlets and disseminated throughout the wall rock. Porphyry deposits are typically large tonnage deposits ranging from low to high grade and are generally mined by large scale open pit or underground bulk mining methods. The prospects at Oyut Ulaan 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 globally.</li> </ul>
<b>Drill hole information</b>	<ul style="list-style-type: none"> <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: 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</li> </ul>	<ul style="list-style-type: none"> <li>See Table in main report.</li> </ul>

Criteria	JORC Code Explanation	Commentary
	<p>and interception depth, hole length.</p> <ul style="list-style-type: none"> <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 clearly explain why this is the case.</li> </ul>	
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>A nominal cut-off of 0.1% Cu is used for identification of potentially significant intercepts for reporting purposes.</li> <li>Most of the reported intercepts are shown in sufficient detail to allow the reader to make an assessment of the balance of high and low grades in the intercept.</li> <li>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 <math>(CuEq) = Cu\% + (Au \text{ (ppm)} \times 0.6378)</math>. Based on a copper price of \$2.60/lb and a gold price of \$1300/oz.</li> </ul>
<b>Relationship between mineralization on widths and intercept lengths</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Mineralised structures are variable in orientation, and therefore drill orientations have been adjusted from place to place in order to allow intersection angles as close as possible to true widths.</li> <li>Exploration results have been reported as an interval with 'from' and 'to' stated in tables of significant economic intercepts.</li> <li>Tables clearly indicate that true widths will generally be narrower than those reported.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>See figures in main report.</li> </ul>



Criteria	JORC Code Explanation	Commentary
	of drill hole collar locations and appropriate sectional views.	
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration results have been reported at a range of grades, predominantly above a minimum for potentially significant intercepts for reporting purposes.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Extensive work in this area has been done, and is reported separately</li> <li>Detailed geological mapping</li> <li>Surface geochemistry (1,253 rock-chip samples).</li> <li>Geophysics includes ground magnetics (332 km).</li> <li>Diamond drill includes 17 holes (5000 metres).</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work.</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 style="list-style-type: none"> <li>The mineralisation is open at depth and along strike.</li> <li>A multi-disciplinary exploration program is planned to test areas previously drilled with high-grade, near-surface results, which have the potential to host further mineralisation at depth and along strike; and test the many untested geophysical and geochemical anomalies remain within the Oyut Ulaan area district, as there is a strong possibility of discovering additional mineralised porphyry centres.</li> <li>Exploration on going.</li> </ul>

# 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")

30 June 2015

### Consolidated statement of cash flows

Cash flows related to operating activities		Current quarter \$A'000	Year to date (6 months) \$A'000
1.1	Receipts from product sales and related debtors	-	-
1.2	Payments for (a) exploration & evaluation	(1,439)	(1,789)
	(b) development	-	-
	(c) production	-	-
	(d) administration	(734)	(1,746)
1.3	Dividends received	-	-
1.4	Interest and other items of a similar nature received	10	21
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Other (provide details if material)	-	-
<b>Net Operating Cash Flows</b>		<b>(2,163)</b>	<b>(3,514)</b>
<b>Cash flows related to investing activities</b>			
1.8	Payment for purchases of: (a) prospects	-	-
	(b) equity investments	-	-
	(c) other fixed assets	-	-
1.9	Proceeds from sale of: (a) prospects	-	-
	(b) equity investments	-	-
	(c) other fixed assets	-	-
1.10	Loans to other entities	-	-
1.11	Loans repaid by other entities	-	-
1.12	Other (provide details if material)	-	(838)
<b>Net investing cash flows</b>		<b>-</b>	<b>(838)</b>
1.13	Total operating and investing cash flows (carried forward)	<b>(2,163)</b>	<b>(4,352)</b>

+ 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)	(2,163)	(4,352)
1.14	<b>Cash flows related to financing activities</b>		
1.14	Proceeds from issues of shares, options, etc.	-	910
1.15	Proceeds from sale of forfeited shares	-	-
1.16	Proceeds from borrowings	-	-
1.17	Repayment of borrowings	-	-
1.18	Dividends paid	-	-
1.19	Other (share issue costs)	(23)	(23)
	<b>Net financing cash flows</b>	(23)	887
	<b>Net increase (decrease) in cash held</b>	(2,186)	(3,465)
1.20	Cash at beginning of quarter/year to date	6,366	7,508
1.21	Exchange rate adjustments to item 1.20	(36)	101
1.22	<b>Cash at end of quarter</b>	4,144	4,144

### 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	113
1.24 Aggregate amount of loans to the parties included in item 1.10	-

1.25 Explanation necessary for an understanding of the transactions

N/A

### 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

+ 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	\$5,202	\$3,265
3.2 Credit standby arrangements	-	-

### **Estimated cash outflows for next quarter**

	\$A'000
4.1 Exploration and evaluation	1,904
4.2 Development	-
4.3 Production	-
4.4 Administration	678
<b>Total</b>	<b>2,582</b>

### **Reconciliation of cash**

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.

	Current quarter \$A'000	Previous quarter \$A'000
5.1 Cash on hand and at bank	4,144	6,366
5.2 Deposits at call	-	-
5.3 Bank overdraft	-	-
5.4 Other (provide details)	-	-
<b>Total: cash at end of quarter (item 1.22)</b>	<b>4,144</b>	<b>6,366</b>

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+ 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	N/A		

### 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	<b>Preference</b>	N/A		
7.2	<b>*securities</b> (description) Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions			
7.3	<b>*Ordinary securities</b>	374,678,226	374,678,226	
7.4	Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs	2,700,000 ordinary shares	2,700,000 ordinary shares	nil
7.5	<b>*Convertible debt securities</b> (description)	N/A		

+ See chapter 19 for defined terms.

**Appendix 5B**

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

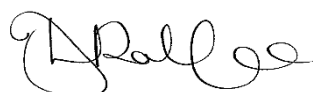
7.6	Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted				
7.7	<b>Options</b> (description and conversion factor)	Options 1,000,000 1,000,000 1,000,000  15,000,000 20,000,000  Share Rights 1,250,000 1,200,000 700,000 1,000,000 1,350,000		Exercise price \$0.60 \$1.20 \$1.80  Nil subject to share price and tenure hurdles  Nil subject to share price and tenure hurdles	Expiry date 31/12/2016 31/12/2016 31/12/2016  14/1/2019 14/1/2019  28/2/2016 21/5/2016 01/6/2017 18/9/2017 1/2/2018
7.8	Issued during quarter	Share Rights 450,000 450,000 450,000		Nil subject to individual KPI performance hurdles	1/2/2016 1/2/2017 1/2/2018
7.9	Exercised during quarter	2,700,000 (Share Rights)	2,700,000 (issued and quoted as ordinary shares as described in 7.4)	Nil. Share Rights were issued for nil financial consideration after share price and tenure hurdles were achieved.	N/A. Shares issued upon vesting of Share Rights are fully paid ordinary shares.
7.10	Expired during quarter				
7.11	<b>Debentures</b> (totals only)	N/A			
7.12	<b>Unsecured notes</b> (totals only)	N/A			

+ See chapter 19 for defined terms.

## Compliance statement

- 1 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).
- 2 This statement does ~~/does not~~\* (*delete one*) give a true and fair view of the matters disclosed.

Sign here:



.....  
(Company secretary)

Date: 31 July 2015

Print name:

Janine Rolfe

## Notes

- 1 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.
- 2 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.
- 4 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.
- 5 **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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+ See chapter 19 for defined terms.