



## QUARTERLY ACTIVITIES REPORT

FOR THE QUARTER ENDED 31 MARCH 2020

### 29 April 2020

Xanadu Mines Ltd (**ASX: XAM, TSX: XAM**) (**Xanadu** or the **Company**) is pleased to provide shareholders with an update on exploration and associated activities undertaken during the quarter ended 31 March 2020.

### HIGHLIGHTS

#### Exploration activities

- A significant new drill intercept at Kharmagtai demonstrates that the higher-grade Stockwork Hill Zone extends to the East and remains open in that direction
- Xanadu and Japan Oil, Gas and Metals National Corporation (**JOGMEC**) enter into a \$7.2M USD Joint Venture to explore and progress the highly prospective Red Mountain Project area, Xanadu's second of three projects in Mongolia

#### Corporate activities

- The Company completed a non-brokered institutional placement raising A\$2.58M AUD
- The quarter closing cash balance was A\$2.6M AUD
- Changes to Xanadu's 2020 work plan resulting in an approximately 35% reduction in forecast 2020 total administrative expenses in response to the spread of COVID-19 pandemic

### EXPLORATION ACTIVITIES

**Chief Executive Officer, Dr Andrew Stewart, said,** *"This quarter has been another strong one for Xanadu on both the exploration and corporate fronts. At our flagship exploration project, Kharmagtai, a pivotal drill hole KHDDH526 successfully intersected a significant new zone of mineralisation outside the defined resources at Stockwork Hill, increasing the potential strike of the Stockwork Hill Deposit. We have always believed that the high-grade mineralisation at Stockwork Hill should extend to the east, but previous drilling was unable to locate those eastern extensions. KHDDH526 now confirms this extension, opening-up potential all the way to the Sandstorm prospect over 1km away. These outstanding results support Xanadu's interpretations that the porphyry-breccia complex at Kharmagtai has the potential to be a significant higher-grade copper-gold zones with similarities to other very strongly mineralised tourmaline breccia deposits globally.*

*At our Red Mountain copper-gold project, we are honoured to be collaborating with JOGMEC. This partnership and increased exploration funding allow a focussed and accelerated exploration program at Red Mountain, thereby maximising the chances of success while minimising shareholder dilution. We look forward to kicking-off this exciting partnership with JOGMEC to refine and test several large-scale copper-gold targets in 2Q 2020. Both parties perceive the Red Mountain area to have high potential for discovery of a globally significant copper-gold deposit and look forward to demonstrating the value of this new relationship.*

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Over the coming quarter, Xanadu will continue to progress and fund exploration at its flagship Kharmagtai copper-gold project, located approximately 265km west of Red Mountain. Kharmagtai has emerged as one of the most globally promising porphyry copper-gold projects, where recent drilling has intersected a significant new zone of high-grade copper and gold mineralisation outside the defined resources containing 1.9Mt Cu and 4.3Moz Au\*.”

\*ASX announcement dated 30 October 2018 “Major increase in Kharmagtai open-cut resource to 1.9mt cu & 4.3moz au.” Table 1 information dated 30 October 2018 continues to apply.

## Mining Tenements

The Mining Tenements held by the Company as at 31 March 2020 were:

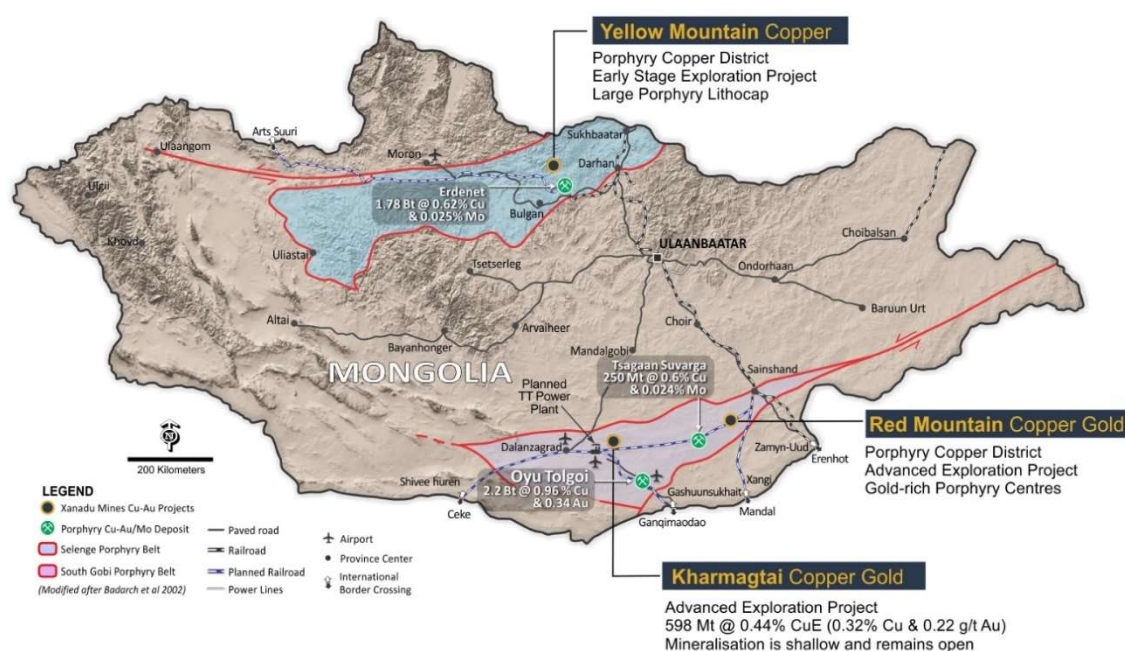
Area of Interest	Tenements	Location	Interest
Kharmagtai	MV17387A	Omnogovi Province	76.5%
Red Mountain	MV017129	Dornogovi Province	90%
Yellow Mountain	13670x	Bulgan Province	100%

Details of the Company’s substantive exploration activities during the quarter are set out below.

## Kharmagtai Copper-Gold Project

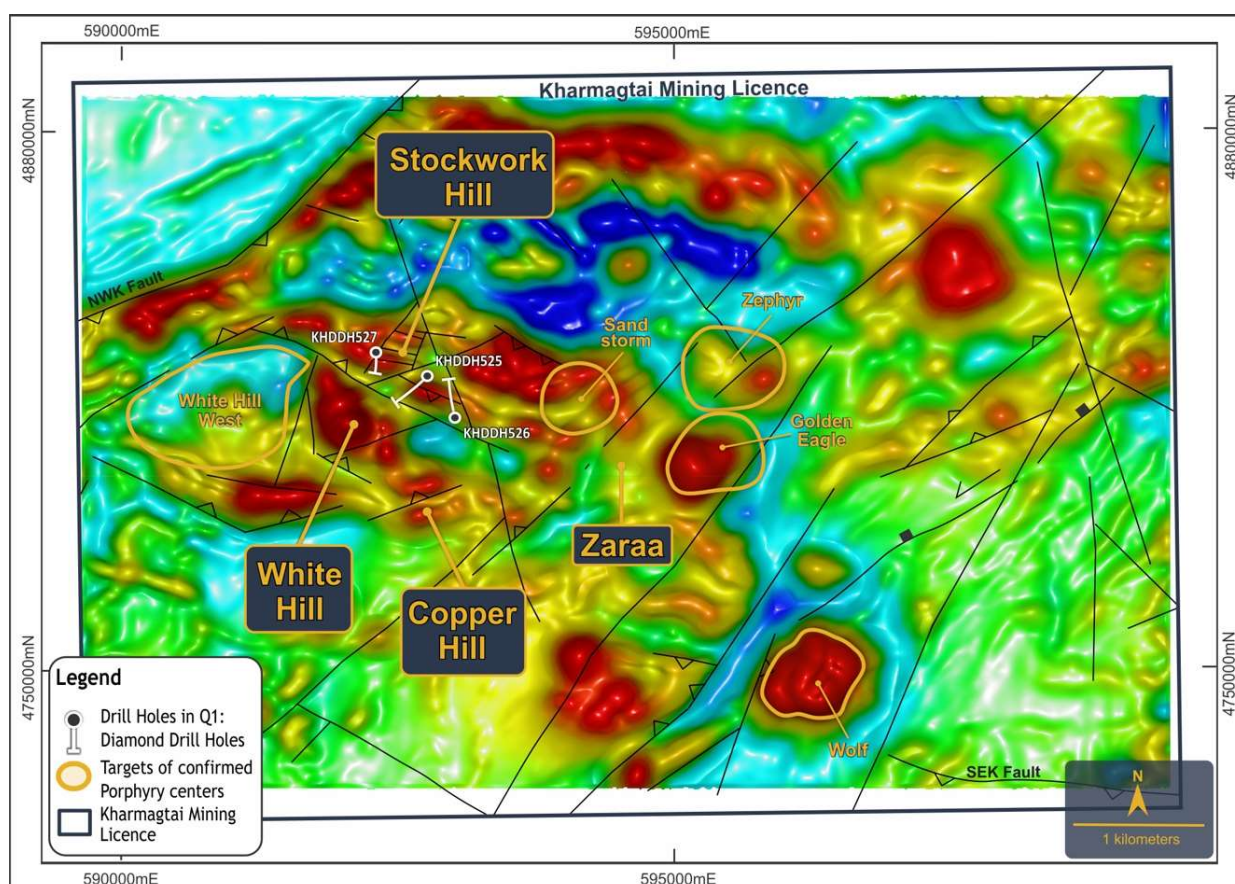
The Kharmagtai copper-gold Project is located within the South Gobi porphyry copper province of Mongolia, approximately 440 kilometres (km) south-southwest of the capital, Ulaanbaatar and 120km north of Turquoise Hill’s Oyu Tolgoi copper-gold mine (**Figure 1**). Access from Ulaanbaatar to Kharmagtai is via sealed highway for 450km and then along a well-used gravel road for 70km. Activities during this quarter focused on testing three along strike, high-grade targets for the Stockwork Hill Deposit (**Figure 2**).

Exploration during the quarter consisted of drilling three diamond drill holes for a total of 2,462.6m targeting extensions to high-grade mineralisation at the Stockwork Hill Deposit (**Figure 3**).

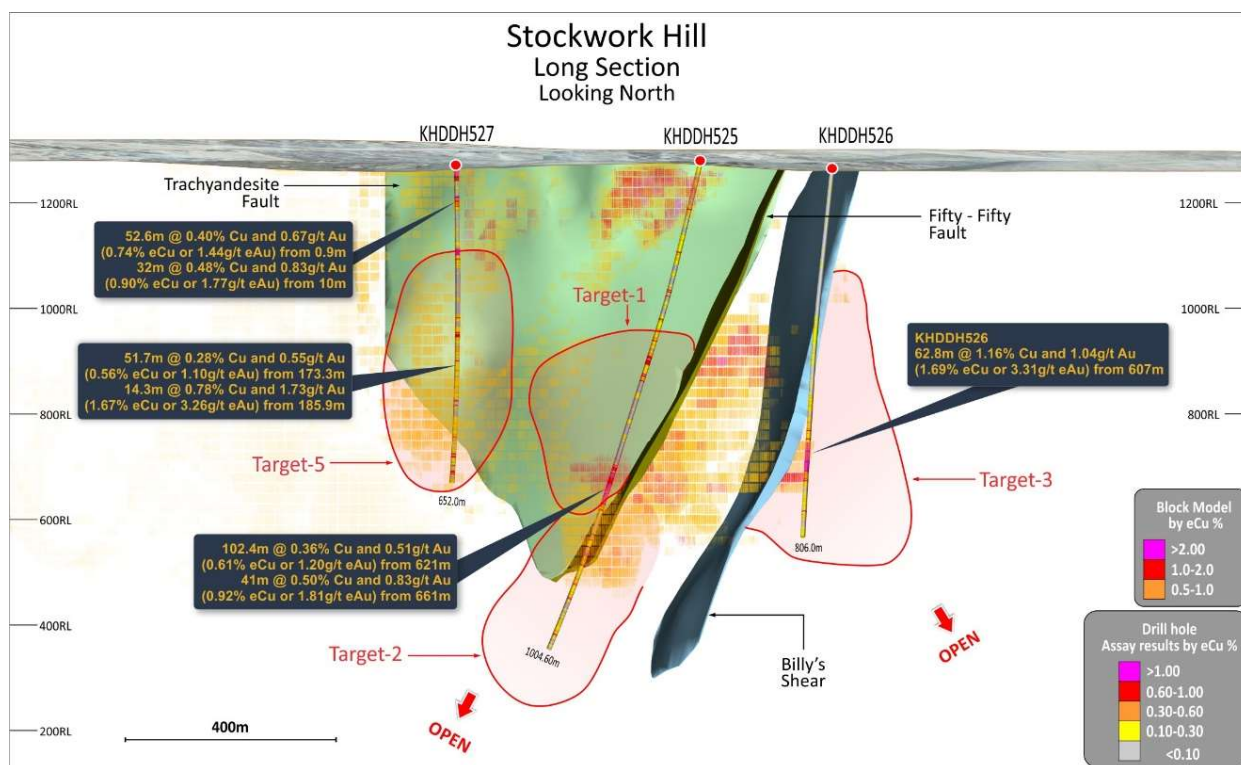


**FIGURE 1:** Location of Xanadu’s projects in the South Gobi porphyry copper belt.





**FIGURE 2:** The Kharmagtai Mining Lease showing ground magnetics, deposit and prospect locations and the location of drilling conducted during Q1 2020.



**FIGURE 3:** Long section showing KHDDH525, KHDDH526 and KHDDH527.

Drill hole KHDDH526 targeted the eastern offset of the high-grade tourmaline breccia mineralisation. This hole encountered a broad zone of high-grade mineralisation on the eastern side to Billy's Basalt Shear, a small to medium sized structure which was the previous limit to mineralisation at Stockwork Hill (**Figure 4**). This drill hole has opened the potential for the Stockwork Hill mineralisation to extend over 1km to the east, towards Sandstorm Prospect.

Previous shallow drilling between Stockwork Hill and Sandstorm had encountered zones of tourmaline breccia with sulphide mineralisation, similar the top of the known body of tourmaline breccia at Stockwork Hill. The tourmaline breccia at Stockwork Hill is vertically zoned from shallow tourmaline-chlorite infill, to deeper tourmaline-pyrite infill and then into copper bearing tourmaline-chalcopryite-pyrite infill. These shallow holes displayed the tourmaline-chlorite and tourmaline-pyrite zones with minor chalcopryite (**Figure 4**) which suggests copper mineralisation should be below these intercepts.

Assays have been returned for KHDDH526:

KHDDH526 - 117m @ 0.68% Cu & 0.58/t Au (0.98% copper equivalent (**eCu**)) from 555m,

*including* 70.8m @ 1.04% Cu and 0.93g/t Au (1.52% eCu) from 599m,

*and* 62.8m @ 1.16% Cu and 1.04g/t Au (1.69% eCu) from 607m.

KHDDH525 was drilled targeting the upper and lower extensions of the high-grade bornite zone at Stockwork Hill (**Figure 3**). This hole encountered some shallow bornite which is encouraging and suggests bornite could be brought towards surface. A moderate grade intercept was intercepted at depth. Key intercepts for this drill hole were:

KHDDH525 - 102.4m @ 0.36% Cu and 0.51g/t Au (0.61% eCu) from 621

*including* 41m @ 0.50% Cu and 0.83g/t Au (0.92% eCu)

*and* 14m @ 0.61% Cu and 1.12g/t Au (1.18% eCu)

Drill hole KHDDH527 targeted the western extension of the shallow southern stockwork zone and encountered narrow bands of gold rich stockwork separated by andesite dykes. Key intercepts for this hole include:

KHDDH527 - 52.6m @ 0.40% Cu and 0.67g/t Au (0.74% eCu) from 0.9m

29.3m @ 0.16% Cu and 0.65g/t Au (0.50% eCu) from 83.2m

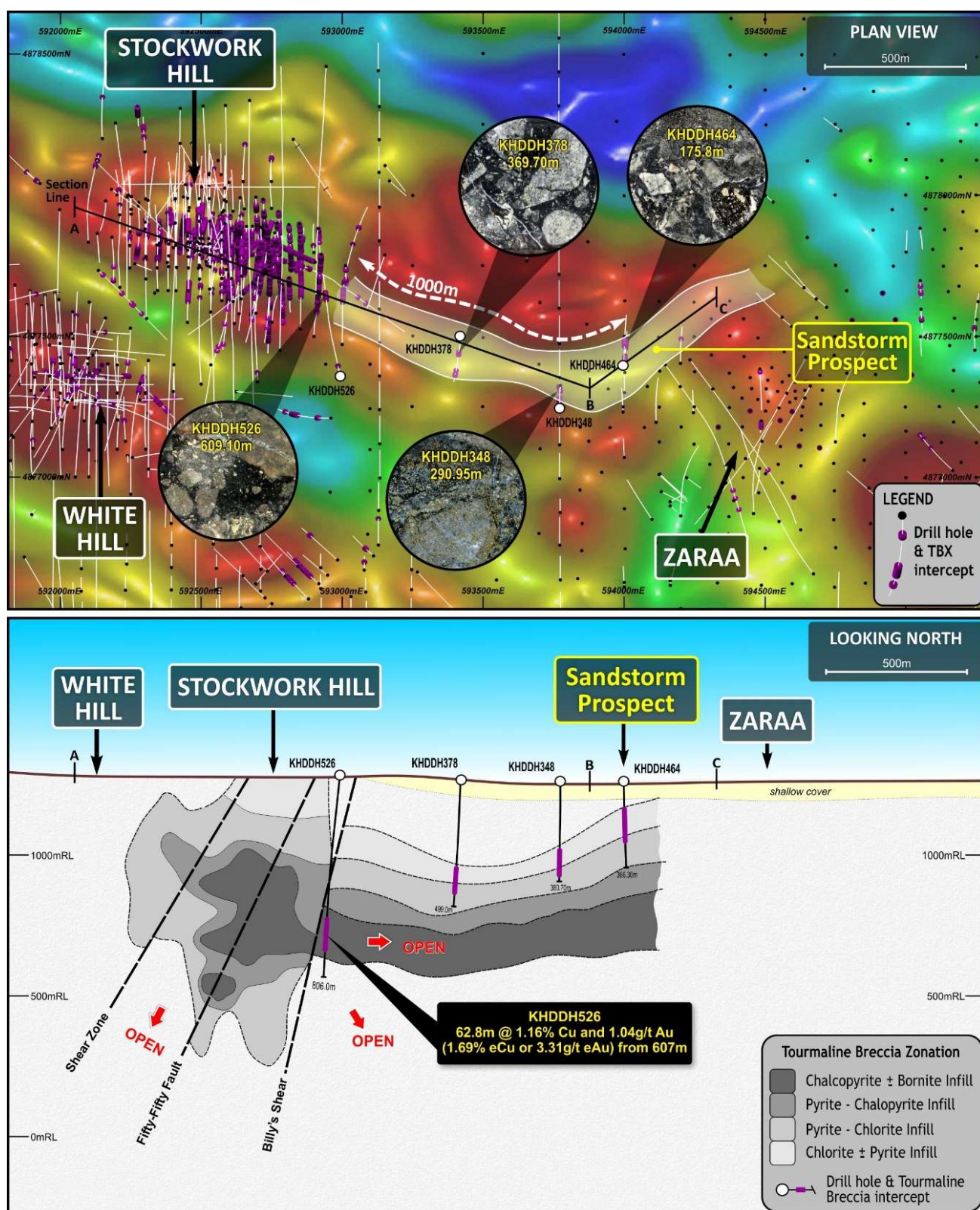
*including* 4.8m @ 0.25% Cu and 2.86g/t Au (1.71% eCu)

*and* 51.7m @ 0.28% Cu and 0.55g/t Au (0.56% eCu) from 173.3m

*including* 14.3m @ 0.78% Cu and 1.73g/t Au (1.67% eCu)

The results of this drill program are being combined into the 3D geological model for Stockwork Hill and additional drill targets are being developed to expand Stockwork Hill to the east.





**FIGURE 4:** Tourmaline breccia mineralisation at Kharmagtai appears to correlate with a zone of magnetic destruction that extends for over a kilometre to the Sandstorm Prospect. Shallow drilling between Stockwork Hill and Sandstorm has encountered tourmaline breccia mineralisation reminiscent of the top of the mineralisation at Stockwork Hill.

Table 1: Kharmagtai drill hole details from the first quarter

Hole ID	Prospect	East	North	RL	Azimuth (°)	Inc (°)	Depth (m)
KHDDH525	Stockwork Hill	592740	4877746	1285	223	-70	1,004.6
KHDDH526	Stockwork Hill	592991	4877362	1288	350	-65	806.0
KHDDH527	Stockwork Hill	592276	4877962	1292	178	-72	652.0

Table 2: Kharmagtai significant drill results from the first quarter

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (%)	CuEq (%)	AuEq (g/t)
KHDDH525	Stockwork Hill	47	54	7	0.09	0.06	0.11	0.2
	<i>and</i>	164	212	48	0.06	0.11	0.14	0.3
	<i>and</i>	258	304.5	46.5	0.08	0.10	0.14	0.3
	<i>including</i>	264	278	14	0.06	0.20	0.23	0.5
	<i>and</i>	317.4	419.2	101.8	0.11	0.14	0.20	0.4
	<i>including</i>	399	418.2	19.2	0.27	0.27	0.41	0.8
	<i>and</i>	431	450.7	19.7	0.27	0.14	0.28	0.5
	<i>including</i>	435	450.7	15.7	0.33	0.16	0.32	0.6
	<i>and</i>	475	482.9	7.9	0.07	0.07	0.10	0.2
	<i>and</i>	621	723.4	102.4	0.51	0.36	0.61	1.2
	<i>including</i>	621	716	95	0.54	0.38	0.65	1.3
	<i>including</i>	633	650	17	0.38	0.35	0.55	1.1
	<i>including</i>	637.4	648	10.6	0.47	0.42	0.67	1.3
	<i>including</i>	661	702	41	0.83	0.50	0.92	1.8
	<i>including</i>	676	690	14	1.12	0.61	1.18	2.3
	<i>and</i>	761.4	831	69.6	0.11	0.17	0.23	0.4
	<i>including</i>	803	809	6	0.27	0.82	0.96	1.9
	<i>and</i>	855	907	52	0.10	0.14	0.19	0.4
	<i>and</i>	945	977	32	0.14	0.09	0.16	0.3
	<i>and</i>	989	1001	12	0.04	0.06	0.08	0.2
KHDDH526	Stockwork Hill	352	364	12	0.05	0.07	0.09	0.2
	<i>and</i>	389	399	10	0.08	0.07	0.12	0.2
	<i>and</i>	511	541	30	0.05	0.10	0.12	0.2
	<i>and</i>	555	672	117	0.58	0.68	0.98	1.9
	<i>including</i>	599	669.8	70.8	0.93	1.04	1.52	3.0
	<i>including</i>	607	669.8	62.8	1.04	1.16	1.69	3.3
	<i>and</i>	682	698	16	0.32	0.07	0.23	0.4
	<i>including</i>	684	690	6	0.73	0.08	0.46	0.9
	<i>and</i>	716	732	16	0.06	0.09	0.12	0.2
	<i>and</i>	744	778	34	0.03	0.09	0.11	0.2

Hole ID	Prospect	From (m)	To (m)	Interval (m)	Au (g/t)	Cu (%)	CuEq (%)	AuEq (g/t)
KHDDH527		0.9	53.5	52.6	0.67	0.40	0.74	1.4
<i>including</i>		0.9	44.3	43.4	0.77	0.42	0.81	1.6
<i>including</i>		10	42	32	0.83	0.48	0.90	1.8
<i>and</i>		66	73.1	7.1	0.06	0.08	0.11	0.2
<i>and</i>		83.2	112.5	29.3	0.65	0.16	0.50	1.0
<i>and</i>		83.2	104	20.8	0.89	0.18	0.63	1.2
<i>including</i>		83.2	88	4.8	2.86	0.25	1.71	3.3
<i>and</i>		173.3	225	51.7	0.55	0.28	0.56	1.1
<i>including</i>		184.9	208	23.1	1.14	0.53	1.12	2.2
<i>including</i>		185.9	200.2	14.3	1.73	0.78	1.67	3.3
<i>and</i>		286	290	4	0.20	0.08	0.18	0.4
<i>and</i>		316.7	326	9.3	0.19	0.14	0.23	0.5
<i>and</i>		347	372	25	0.07	0.18	0.21	0.4
<i>including</i>		352	362	10	0.10	0.26	0.31	0.6
<i>and</i>		382	500	118	0.06	0.14	0.17	0.3
<i>including</i>		408	412.3	4.3	0.08	0.38	0.42	0.8
<i>including</i>		486	499	13	0.05	0.50	0.53	1.0
<i>and</i>		524	572	48	0.03	0.11	0.13	0.3
<i>and</i>		582.7	602	19.3	0.07	0.27	0.31	0.6
<i>including</i>		592.5	602	9.5	0.08	0.46	0.50	1.0
<i>and</i>		617	650	33	0.09	0.17	0.21	0.4
<i>including</i>		628	636	8	0.18	0.37	0.46	0.9

### Kharmagtai Oxide Gold Project

During the Quarter, Xanadu completed an internal desktop study review, which considered a standalone gold project sourcing feed from the oxide gold caps above Stockwork Hill, Copper Hill and Golden Eagle. Findings indicate that while potentially viable, the Kharmagtai Oxide Gold opportunity ranks below other investment opportunities in Xanadu's portfolio and would require significant drilling to progress further. As a result, and consistent with Xanadu's approach to disciplined capital management, Xanadu decided to shelve this standalone project and focus expenditure on large scale copper gold porphyry deposits within the lease. It is anticipated that a significant proportion of the gold may be recoverable as a byproduct if and when a larger scale copper operation is developed.

### Red Mountain Copper-Gold Project

Xanadu's Red Mountain porphyry copper-gold Project is located within the Dornogovi Province of southern Mongolia, approximately 420km southeast of Ulaanbaatar (**Figure 1**), and 70km west from the provincial centre of Sainshand. The project holds a 30-year mining licence over an underexplored porphyry district (covering approximately 57km<sup>2</sup>) consisting of multiple co-genetic porphyry copper-gold centres, mineralised tourmaline breccia pipes, copper-gold/base metal magnetite skarns and epithermal gold veins.

During the quarter, Xanadu and Japan Oil, Gas and Metals National Corporation (JOGMEC) entered into a new exploration **earn-in agreement** over Xanadu's Red Mountain project. The exploration objective is discovery of a Tier-1 porphyry copper-gold discovery.



The key terms of the earn-in and joint venture agreement are as follows:

- JOGMEC may earn a 51% interest in the project by sole funding USD7.2 million of expenditure over four years;
- during the earn-in, Xanadu will be the Manager of the Project;
- upon JOGMEC completing the earn-in, a joint venture will be formed, and the parties must contribute funds based on their percentage interest to maintain their respective interests; and
- standard dilution clauses will apply to the parties' interests. Should a party's interest dilute to below 10%, it shall automatically convert to a net smelter royalty.

A significant exploration program is intended for the remainder of 2020 and expected to include additional geophysics and further application of geochemistry followed by reverse circulation and/or diamond drilling.

Exploration activity at Red Mountain is scheduled to recommence in April/May 2020 and continue through to November 2020. The scheduling of the exploration activity will be determined in conjunction with JOGMEC in the coming months, with updates provided as specific exploration programs commence.

There were no other material changes in the Company's exploration activities during the quarter.

## MINING ACTIVITIES

No mining production or development activities were conducted during the quarter.

## CORPORATE ACTIVITIES

On January 16, 2020, the Company completed a non-brokered placement raising \$2.58 million (Placement). The Placement was conducted at \$0.033 per share and it resulted in 78,326,311 new ordinary shares being issued. Shareholder approval was not required for the Placement, which was undertaken under Xanadu's Listing Rule 7.1, 15% placement capacity. The New Shares were issued to Precious Capital Gold Mining & Metals Fund (PCG), managed by SSI Asset Management AG, a Zurich based fund. Following completion of the Placement, PCG holds approximately 9.9% of Xanadu's issued capital.

The COVID-19 outbreak was declared a pandemic by the World Health Organisation in March 2020, and in that same month, Mongolia reported its first transported case of COVID-19. As a response, the country closed its borders and halted all international flights. As at date of this report, Mongolia had reported 31 cases of COVID-19. Xanadu has not yet seen a significant impact on our business to date, and there are currently no restrictions on transportation locally. However, any further deterioration of the situation may result in quarantines that affect the Company's ability to undertake exploration activities in the South Gobi.

The outbreak and the response of Government in dealing with the pandemic may interfere with general activity levels within the community, the economy, and the operations of our business. The scale and duration of these developments remains uncertain, but it is likely that our forecast cash flow and financial condition will be impacted. Much will depend on global Governments' varying efforts to combat the outbreak and support businesses, and as such, we do not consider it practicable to provide an estimate of the potential impact of this outbreak on the Group at this time.

Xanadu's priority is to protect the health and safety of our people, contractors and communities, while ensuring the operational and financial integrity of our business. Xanadu has been pro-active in responding to the evolving crisis, implementing a host of controls and procedures designed to prevent transmission of the virus.

Xanadu has been pro-active implementing a prudent approach to cash flow management, given the considerable uncertainty in the near-term investment environment and the magnitude of forward capital investment decisions.

Xanadu's 2020 work plan has been reviewed and non-essential activities have been cancelled or deferred.



Appropriate changes to Xanadu's 2020 work plan are targeting an approximately 35% or \$1.3 million reduction in forecast 2020 total administrative expenses compared to 2019. This reduction would be on top of a 20% cut in expenses achieved in the second half of 2019. The targeted expenditure reductions do not impact the safety of our facilities or their integrity, and compliance with regulatory requirements is unaffected.

The company maintains a strong cash balance as at February 2020 of \$AUD2.6 million and a new earn-in deal with JOGMEC to sole fund up to \$USD7.2 million in exploration expenditure at the Company's Red Mountain copper-gold Project (refer to Xanadu's ASX/TSX announcement dated 24 March 2020), means Xanadu is entering an exciting period of cost-effective discovery and growth and news flow from this program which may deliver strong, positive catalysts for the share price.

### **Share Capital**

As at 31 March 2020, the Company had 791,174,855 fully paid ordinary shares and 29,411,759 unlisted options.

### **Financial Position**

As at 31 March 2020, the Company had A\$2.6 million in cash.

## **MINERAL RESOURCES AND ORE RESERVES**

The previously reported resource estimates for Kharmagtai have not changed. For information regarding these resources please see ASX/TSX announcement dated 31 October 2018.

## **ABOUT XANADU MINES**

Xanadu is an ASX and TSX listed Exploration company that seeks to Discover and Define globally significant porphyry copper-gold assets in Mongolia. We give investors exposure to large scale copper-gold discoveries, and we create liquidity events for our shareholders at peak value points in the mining life cycle. Xanadu delivers this through a low cost of discovery, inventory growth, and by progressing projects from Discovery towards Pre-Feasibility.

## **MINERAL RESOURCES AND ORE RESERVES REPORTING REQUIREMENTS**

The 2012 Edition of the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* (the **JORC Code 2012**) sets out minimum standards, recommendations and guidelines for Public Reporting in Australasia of Exploration Results, Mineral Resources and Ore Reserves. The Information contained in this Announcement has been presented in accordance with the JORC Code 2012.

## **COMPETENT PERSON STATEMENT**

The information in this Announcement that relates to exploration results is based on information compiled by Dr Andrew Stewart who is responsible for the exploration data, comments on exploration target sizes, Quality Assurance and Quality Control (**QA/QC**) and geological interpretation and information. Dr Stewart, who is an employee of Xanadu and is a Member of the Australasian Institute of Geoscientists, has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as the "Competent Person" as defined in JORC Code 2012 and the National Instrument 43-101 *Standards of Disclosure for Mineral Projects*. Dr Stewart consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

## **COPPER EQUIVALENT CALCULATIONS**

The copper equivalent (**eCu**) calculation represents the total metal value for each metal, multiplied by the conversion factor, summed and expressed in equivalent copper percentage with a metallurgical recovery factor

applied. The copper equivalent calculation used is based off the eCu calculation defined by CSA in the 2018 Mineral Resource Upgrade.

Copper equivalent (**eCu**) grade values were calculated using the following formula:

$$\text{eCu} = \text{Cu} + \text{Au} * 0.62097 * 0.8235,$$

Where:

- Cu - copper grade (%)
- Au - gold grade (g/t)
- 0.62097 - conversion factor (gold to copper)
- 0.8235 - relative recovery of gold to copper (82.35%).

The copper equivalent formula was based on the following parameters (prices are in USD):

- Copper price - 3.1 \$/lb (or 6,834 \$/t)
- Gold price - 1,320 \$/oz
- Copper recovery - 85%
- Gold recovery - 70%

Relative recovery of gold to copper = 70% / 85% = 82.35%.

## FORWARD-LOOKING STATEMENTS

Certain statements contained in this Announcement, including information as to the future financial or operating performance of Xanadu and its projects may also include statements which are 'forward-looking statements' that may include, amongst other things, statements regarding targets, estimates and assumptions in respect of mineral reserves and mineral resources and anticipated grades and recovery rates, production and prices, recovery costs and results, capital expenditures and are or may be based on assumptions and estimates related to future technical, economic, market, political, social and other conditions. These 'forward-looking statements' are necessarily based upon a number of estimates and assumptions that, while considered reasonable by Xanadu, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies and involve known and unknown risks and uncertainties that could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward-looking statements.

Xanadu disclaims any intent or obligation to update publicly or release any revisions to any forward-looking statements, whether as a result of new information, future events, circumstances or results or otherwise after the date of this Announcement or to reflect the occurrence of unanticipated events, other than required by the Corporations Act 2001 (Cth) and the Listing Rules of the Australian Securities Exchange (**ASX**) and Toronto Stock Exchange (**TSX**). The words 'believe', 'expect', 'anticipate', 'indicate', 'contemplate', 'target', 'plan', 'intends', 'continue', 'budget', 'estimate', 'may', 'will', 'schedule' and similar expressions identify forward-looking statements.

All 'forward-looking statements' made in this Announcement are qualified by the foregoing cautionary statements. Investors are cautioned that 'forward-looking statements' are not guarantee of future performance and accordingly investors are cautioned not to put undue reliance on 'forward-looking statements' due to the inherent uncertainty therein.

For further information, please visit the Xanadu Mines website [www.xaadumines.com](http://www.xaadumines.com).

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**APPENDIX 1: KHARMAGTAI TABLE 1 (JORC 2012)**

Set out below is Section 1 and Section 2 of Table 1 under the JORC Code, 2012 Edition for the Kharmagtai project. Data provided by Xanadu. This Table 1 updates the JORC Table 1 disclosure dated 11 April 2019.

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

Criteria	JORC Code (Section 1) 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>Representative 2 metre samples were taken from ½ HQ diamond core.</li> <li>Only assay result results from recognised, independent assay laboratories were used 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 Drill Hole (“DDH”) drilling has been the primary drilling method. Some RC (reverse circulation) is conducted. RC holes are denoted by the KHRC prefix. Diamond Drill Holes are denoted by the KHDDH prefix.</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>DDH core recoveries have been very good, averaging between 95% and 99% for all of the deposits. In localised areas of faulting and/or fracturing the recoveries decrease; however, this is a very small percentage of the overall mineralised zones.</li> <li>Recovery measurements were collected during all DDH and RC programs. The methodology used for measuring recovery is standard industry practice.</li> <li>Analysis of recovery results vs. grade indicates no significant trends. Indicating bias of grades due to diminished recovery and / or wetness of samples.</li> </ul>
<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 and trench samples are logged for lithology, mineralisation and alteration and geotechnical aspects using a standardised logging system, including the recording of visually estimated volume percentages of major minerals.</li> <li>Drill core was photographed after being logged by a geologist.</li> <li>The entire interval drilled and trenched has been logged by a geologist.</li> </ul>



Criteria	JORC Code (Section 1) Explanation	Commentary
<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 maximize 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 generally a constant 2m interval down-hole in length unless subdivided at geological contacts.</li> <li>• Routine sample preparation and analyses of DDH samples were carried out by ALS Mongolia LLC ("ALS Mongolia"), who operates an independent sample preparation and analytical laboratory in Ulaanbaatar.</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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>• All samples were routinely assayed by ALS Mongolia for gold</li> <li>• Au is determined using a 25g fire assay fusion, cupelled to obtain a bead, and digested with Aqua Regia, followed by an atomic absorption spectroscopy (AAS) finish, with a lower detection limit ("LDL") of 0.01 ppm.</li> <li>• All samples were submitted to ALS Mongolia for the package ME-ICP61 using a four acid digest. Where copper is over-range (&gt;1% Cu), it is analysed by a second analytical technique (Cu-OG62), which has a higher upper detection limit (UDL) of 5% copper.</li> <li>• Quality assurance was provided by introduction of known certified standards, blanks and duplicate samples on a routine basis.</li> <li>• Assay results outside the optimal range for methods were re-analysed by appropriate methods.</li> <li>• Ore Research Pty Ltd certified copper and gold standards have been implemented as</li> </ul>

Criteria	JORC Code (Section 1) Explanation	Commentary
		<p>a part of QA/QC procedures, as well as coarse and pulp blanks, and certified matrix matched copper-gold standards.</p> <ul style="list-style-type: none"> <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 QA/QC is checked prior to loading into the Geobank data base.</li> <li>• The data is managed by Xanadu geologists.</li> <li>• The database and geological interpretation is collectively managed by Xanadu.</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>• Diamond drill holes have been surveyed with a differential global positioning system ("DGPS") to within 10cm accuracy.</li> <li>• All diamond drill holes have been down hole surveyed to collect the azimuth and inclination at specific depths. Two principal types of survey method have been used over the duration of the drilling programs including Eastman Kodak and Flexit.</li> <li>• UTM WGS84 48N grid.</li> <li>• The digital terrain model ("DTM") is based on 1m contours with an accuracy of <math>\pm 0.01\text{m}</math>.</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 applied.</li> </ul>	<ul style="list-style-type: none"> <li>• Holes spacings range from 50m spacings within the core of mineralization to +500m spacings for exploration drilling. Hole spacings can be determined using the sections and drill plans provided</li> <li>• Holes range from vertical to an inclination of -60 degrees depending on the attitude of the target and the drilling method.</li> <li>• The data spacing and distribution is sufficient to establish anomalism and targeting for both porphyry, tourmaline breccia and epithermal target types.</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</li> </ul>	<ul style="list-style-type: none"> <li>• Drilling is conducted in a predominantly regular grid to allow unbiased interpretation and targeting.</li> </ul>

Criteria	JORC Code (Section 1) Explanation	Commentary
	have introduced a sampling bias, this should be assessed and reported if material.	
<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> </ul>

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

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

Criteria	JORC Code (Section 2) Explanation	Commentary
<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 2 Mining Licences (MV-17129A Oyut Ulaan and (MV-17387A Kharmagtai) <ul style="list-style-type: none"> <li>Xanadu now owns 90% of Vantage LLC, the 100% owner of the Oyut Ulaan mining licence.</li> <li>The Kharmagtai mining license MV-17387A is 100% owned by Oyut Ulaan LLC. Xanadu has an 85% interest in Mongol Metals LLC, which has 90% interest in Oyut Ulaan LLC. The remaining 10% in Oyut Ulaan LLC is owned by Quincunx (BVI) Ltd ("Quincunx").</li> </ul> </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 at Kharmagtai was conducted by Quincunx Ltd, Ivanhoe Mines Ltd and Turquoise Hill Resources Ltd including extensive drilling, surface geochemistry, geophysics, mapping.</li> <li>Previous exploration at Red Mountain (Oyut Ulaan) was conducted by Ivanhoe Mines.</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</li> </ul>



Criteria	JORC Code (Section 2) Explanation	Commentary
		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 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 RL Reduced Level – elevation above sea level in metres) of the drill hole collar.</li> <li>• dip and azimuth of the hole</li> <li>• down hole length and interception depth</li> <li>• hole length.</li> </ul> </li> <li>• If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should 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 figures in ASX/TSX Announcement.</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 (e.g. 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</li> </ul>	<ul style="list-style-type: none"> <li>• A nominal cut-off of 0.1% eCu is used in copper dominant systems for identification of potentially significant intercepts for reporting purposes. Higher grade cut-offs are 0.3%, 0.6% and 1% eCu.</li> <li>• A nominal cut-off of 0.1g/t eAu is used in gold dominant systems like Altan Burged for identification of potentially significant intercepts for reporting purposes. Higher grade cut-offs are 0.3g/t, 0.6g/t and 1g/t eAu.</li> </ul>

Criteria	JORC Code (Section 2) Explanation	Commentary
	<p>examples of such aggregations should be shown in detail.</p> <ul style="list-style-type: none"> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>Maximum contiguous dilution within each intercept is 9m for 0.1%, 0.3%, 0.6% and 1% eCu.</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 honouring the geological domains and adjusted where necessary to ensure that no residual sample lengths have been excluded (best fit).</li> </ul> <p>The copper equivalent (<b>eCu</b>) calculation represents the total metal value for each metal, multiplied by the conversion factor, summed and expressed in equivalent copper percentage with a metallurgical recovery factor applied. The copper equivalent calculation used is based off the eCu calculation defined by CSA in the 2018 Mineral Resource Upgrade.</p> <p>Copper equivalent (<b>CuEq</b> or <b>eCu</b>) grade values were calculated using the following formula:</p> $\text{eCu or CuEq} = \text{Cu} + \text{Au} * 0.62097 * 0.8235,$ <p>Gold Equivalent (<b>eAu</b>) grade values were calculated using the following formula:</p> $\text{eAu} = \text{Au} + \text{Cu} / 0.62097 * 0.8235.$ <p>Where:</p> <p>Cu - copper grade (%)</p> <p>Au - gold grade (g/t)</p> <p>0.62097- conversion factor (gold to copper)</p> <p>0.8235 - relative recovery of gold to copper (82.35%)</p>

Criteria	JORC Code (Section 2) Explanation	Commentary
		<p>The copper equivalent formula was based on the following parameters (prices are in USD):</p> <ul style="list-style-type: none"> <li>Copper price - 3.1 \$/lb (or 6834 \$/t)</li> <li>Gold price - 1320 \$/oz</li> <li>Copper recovery - 85%</li> <li>Gold recovery - 70%</li> <li>Relative recovery of gold to copper = <math>70\% / 85\% = 82.35\%</math>.</li> </ul>
<b>Relationship between mineralisation 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. 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 of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>See figures in ASX/TSX Announcement.</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>



Criteria	JORC Code (Section 2) Explanation	Commentary
<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 RLI) shows widths and grades potentially suitable for underground extraction.</li> <li>Exploration on going.</li> </ul>

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

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

Criteria	JORC Code (Section 3) Explanation	Commentary
<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 GemcomSurpac Software.</li> <li>Data was validated prior to resource estimation by the reporting of basic statistics for each of the grade fields, including examination of maximum values, and visual checks of drill traces and grades on sections and plans.</li> </ul>
<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> </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,</li> </ul>

Criteria	JORC Code (Section 3) Explanation	Commentary
	<ul style="list-style-type: none"> <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>	<p>which occur primarily as infill within these veins. Gold is intergrown with chalcopyrite and bornite.</p> <ul style="list-style-type: none"> <li>• The ore mineralised zones at Stockwork Hill, White Hill and Copper Hill 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 haloes, with gold closely associated with bornite.</li> <li>• Drilling indicates that the supergene profile has been oxidised to depths up to 60 metres below the surface. The oxide zone comprises fracture controlled copper and iron oxides; however there is no obvious depletion or enrichment of gold in the oxide zone.</li> </ul>
<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>• Stockwork Hill comprises two main mineralised zones, northern and southern stockwork zones (SH-N and SH-S) which are approximately 100 metres apart and hosted in diorite and quartz diorite porphyries.</li> <li>• The SH-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 SH-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>• WH 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> </ul>

Criteria	JORC Code (Section 3) Explanation	Commentary
		<ul style="list-style-type: none"> <li>• CH 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 modelling 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 appropriate account of such data.</li> <li>• The assumptions made regarding recovery of by-products.</li> <li>• Estimation of deleterious elements or other non-grade variables of economic significance (e.g. 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>	<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 digitised on cross sections defining mineralisation. Three dimensional grade shells (wireframes) for each of the metals to be estimated were created from the sectional interpretation. Construction of the grade shells took into account prominent lithological and structural features. For copper, grade shells were constructed for each deposit at a cut-off of 0.12% and 0.3% Cu. For gold, wireframes were constructed at a threshold of 0.12g/t and 0.3 g/t. These grade shells took into account known gross geological controls in addition to broadly adhering to the above mentioned thresholds.</li> <li>• Cut off grades applied are 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 was 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</li> </ul>

Criteria	JORC Code (Section 3) Explanation	Commentary
		<p>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.</p> <ul style="list-style-type: none"> <li>• A total of 4,428 measurements for specific gravity are recorded in the database, all of which were determined by the water immersion method. The average density of all samples is 2.74 t/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 Inverse Distance ("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 to receive a grade estimate in a previous pass would be resubmitted in a subsequent and larger search pass.</li> <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>• The copper equivalent (<b>eCu</b>) calculation represents the total metal value for each metal, multiplied by the conversion factor, summed and expressed in equivalent copper percentage with a metallurgical recovery factor applied. The copper equivalent calculation used is based off the eCu calculation defined by CSA in the 2018 Mineral Resource Upgrade.</li> <li>• Copper equivalent (<b>CuEq</b> or <b>eCu</b>) grade values were calculated using the following formula:  <math display="block">eCu \text{ or } CuEq = Cu + Au * 0.62097 * 0.8235,</math> </li> </ul>



Criteria	JORC Code (Section 3) Explanation	Commentary												
		<p>Gold Equivalent (<b>eAu</b>) grade values were calculated using the following formula:  <math display="block">\text{eAu} = \text{Au} + \text{Cu} / 0.62097 * 0.8235.</math> Where:  Cu - copper grade (%)  Au - gold grade (g/t)  0.62097- conversion factor (gold to copper)  0.8235 - relative recovery of gold to copper (82.35%)</p> <p>The copper equivalent formula was based on the following parameters (prices are in USD):</p> <table> <tr> <td>Copper price</td> <td>-</td> <td>3.1 \$/lb (or 6834 \$/t)</td> </tr> <tr> <td>Gold price</td> <td>-</td> <td>1320 \$/oz</td> </tr> <tr> <td>Copper recovery</td> <td>-</td> <td>85%</td> </tr> <tr> <td>Gold recovery</td> <td>-</td> <td>70%</td> </tr> </table> <p>Relative recovery of gold to copper = 70% / 85% = 82.35%.</p>	Copper price	-	3.1 \$/lb (or 6834 \$/t)	Gold price	-	1320 \$/oz	Copper recovery	-	85%	Gold recovery	-	70%
Copper price	-	3.1 \$/lb (or 6834 \$/t)												
Gold price	-	1320 \$/oz												
Copper recovery	-	85%												
Gold recovery	-	70%												
<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 (<b>CuEq</b>) 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> </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</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 (Section 3) Explanation	Commentary
	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 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 (<b>EIA</b>) Procedures administered by the Mongolian Ministry for Nature and Environment (<b>MNE</b>).</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 4,428 measurements for specific gravity are recorded in the database, all of which were determined by the water immersion method.</li> <li>The average density of all samples is approximately 2.74 t/m<sup>3</sup>. In detail there are some differences in density between different rock types, but since the model does not include geological domain, an 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 (i.e. relative</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</li> </ul>

Criteria	JORC Code (Section 3) Explanation	Commentary
	<p>confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</p> <ul style="list-style-type: none"> <li>• Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<p>described in the ASX/TSX Announcement above have been used to classify the 2015 resource.</p> <ul style="list-style-type: none"> <li>• The Mineral Resource statement relates to global estimates of in situ tonnes and grade</li> <li>• The Mineral Resource Estimate has been classified in accordance with the JORC Code, 2012 Edition using a qualitative approach. The classifications reflect the competent person's view of the Kharmagtai Copper Gold Project.</li> </ul>
<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>• Xanadu'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 was 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> </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 in situ grades.</li> <li>• Confidence in the Indicated Mineral Resources 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> </ul>

Criteria	JORC Code (Section 3) Explanation	Commentary
	<ul style="list-style-type: none"><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>• There is surface evidence of historic artisanal workings.</li><li>• No production data is available.</li></ul>



## Appendix 5B

### Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

XANADU MINES LTD

ABN

92 114 249 026

Quarter ended ("current quarter")

31 March 2020

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 months) \$A'000
<b>1.</b>	<b>Cash flows from operating activities</b>		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation (if expensed)	(70)	(70)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(323)	(323)
	(e) administration and corporate costs	(116)	(116)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	1	1
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	-
1.8	Other (provide details if material)	-	-
<b>1.9</b>	<b>Net cash from / (used in) operating activities</b>	<b>(508)</b>	<b>(508)</b>

<b>2.</b>	<b>Cash flows from investing activities</b>		
2.1	Payments to acquire:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) exploration & evaluation (if capitalised)	(724)	(724)
	(e) investments	-	-
	(f) other non-current assets	-	-
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>(724)</b>	<b>(724)</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	2,585	2,585
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>2,585</b>	<b>2,585</b>

## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	1,209	1,209
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(508)	(508)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(724)	(724)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	2,585	2,585
4.5	Effect of movement in exchange rates on cash held	52	52
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>2,614</b>	<b>2,614</b>

<b>5.</b>	<b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1	Bank balances	2,614	1,209
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>2,614</b>	<b>1,209</b>

<b>6.</b>	<b>Payments to related parties of the entity and their associates</b>	<b>Current quarter \$A'000</b>
6.1	Aggregate amount of payments to related parties and their associates included in item 1	-
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments

## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

7.	<b>Financing facilities</b> <i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	<b>Total financing facilities</b>	-	-
7.5	<b>Unused financing facilities available at quarter end</b>	-	
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

8.	<b>Estimated cash available for future operating activities</b>	<b>\$A'000</b>
8.1	Net cash from / (used in) operating activities (Item 1.9)	508
8.2	Capitalised exploration & evaluation (Item 2.1(d))	<u>724</u>
8.3	Total relevant outgoings (Item 8.1 + Item 8.2)	<u>1,232</u>
8.4	Cash and cash equivalents at quarter end (Item 4.6)	2,614
8.5	Unused finance facilities available at quarter end (Item 7.5)	-
8.6	Total available funding (Item 8.4 + Item 8.5)	2,614
8.7	<b>Estimated quarters of funding available (Item 8.6 divided by Item 8.3)</b>	<b>2.12</b>

8.8 If Item 8.7 is less than 2 quarters, please provide answers to the following questions:

1. Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?

Answer:

Not applicable

2. Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

Answer:

Not applicable

3. Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Answer:

Not applicable



## Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 30 April 2020

By the Board

Authorised by: .....  
(Name of body or officer authorising release - see note 4)

## Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, 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. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee - e.g. Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.