31 January 2020

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QUARTERLY ACTIVITIES REPORT

FOR THE QUARTER ENDED 31 DECEMBER 2019

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 December 2019.

HIGHLIGHTS

Large scale copper-gold Exploration Target

- Exploration Target upgraded for the Kharmagtai Project above and beyond 2018 Mineral Resource Estimate
- Compelling vectors to a significantly larger copper-gold system below the surface deposits has been uncovered

New metallurgical work completed at Kharmagtai

- Metallurgical test work yields high quality copper and gold concentrates at Kharmagtai
- Improved metallurgical recoveries indicate a major value uplift for Kharmagtai including:
    - An estimated 4.5% increase in copper recovery to achieve an average recovery of 89.5% for the two main metallurgical composites
    - An estimated 3% increase in gold recovery to achieve an average recovery of 69.7% for the two main metallurgical composites
- Concentrate grades averaged 25.2% copper and 25.8g/t gold for the two locked cycle tests
- Further optimisation work may lead to further improvements

Corporate activities

- On 28 November 2019, the Company announced retirement of Dr Darryl Clark as non-executive director and Chairman of the Company, and the appointment of his successor, Mr Colin Moorhead
- On 18 October 2019, the Company announced the resignation of Ms Hannah Badenach as a non-executive director of the Company as the representative of Noble Resources International Pte Ltd, and the appointment of Mr Stephen Motteram as Ms Badenach's replacement
- The quarter closing cash balance of A$1.2 million. On 16 January 2020, the Company announced a capital raising of A$2.5 million

EXPLORATION ACTIVITIES

Chief Executive Officer, Dr Andrew Stewart, said *"We have always had a strong belief in the large-scale copper-gold potential of the Kharmagtai district. This upgraded Global Exploration Target outlines the areas we are aiming to convert to resources in the near to mid-term. Additionally, our geologists have highlighted a series of compelling geochemical and geophysical vectors which suggest mineralisation within this Exploration Target is just the tip of a much larger porphyry system at depth. We know these systems exist in Mongolia as the giant Oyu Tolgoi is currently being developed some 120km to the south, which we believe is a similar type of system to Kharmagtai.*

Additionally, we are extremely pleased with the new metallurgical results, which are in line with or better than expected at this stage in the project's life and we are comfortable that additional improvements can be made further down the track. These early stage flotation test results are very encouraging and indicate that a standard crushing, grinding and flotation process will be enough to deliver good extraction of the economic minerals from the deposit. In combination with the low content of deleterious elements, we foresee no significant hurdles to producing a high-quality concentrate via standard processing pathways that will be in high demand from all the major global copper smelters, at a time the time of production.

Finally, I would like to thank Dr Darryl Clark for his hard work and dedication over the years including helping secure the Kharmagtai copper-gold Project for the Company and we wish him all the best in the future. I would also like to welcome Mr Moorhead to the team and look forward to working with him and the Board as we look to take Xanadu through the next stage of the Company's growth strategy."

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 a review of sulphide floatation metallurgical results and the generation of a large-scale copper gold Exploration Target for Kharmagtai.

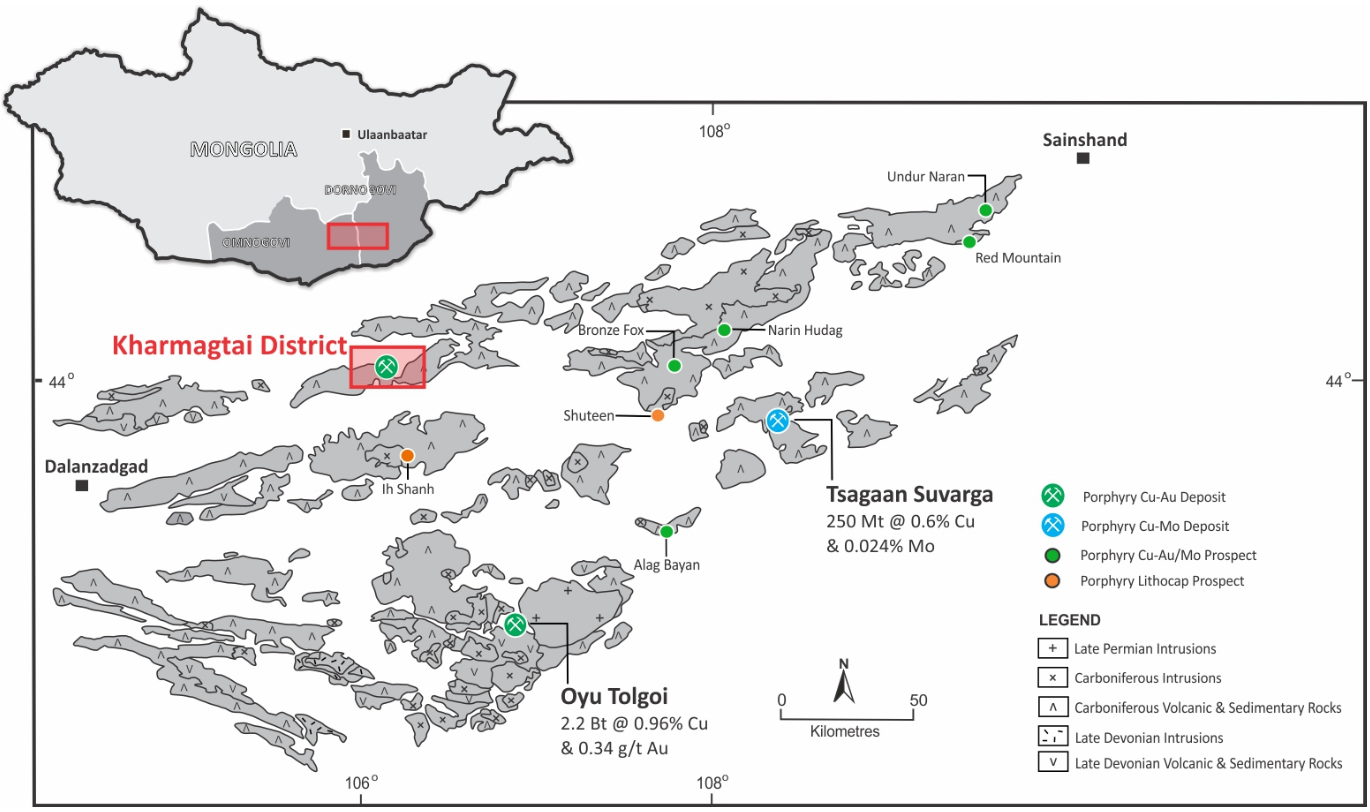


FIGURE 1: Location of the Kharmagtai Project in the South Gobi porphyry copper belt.

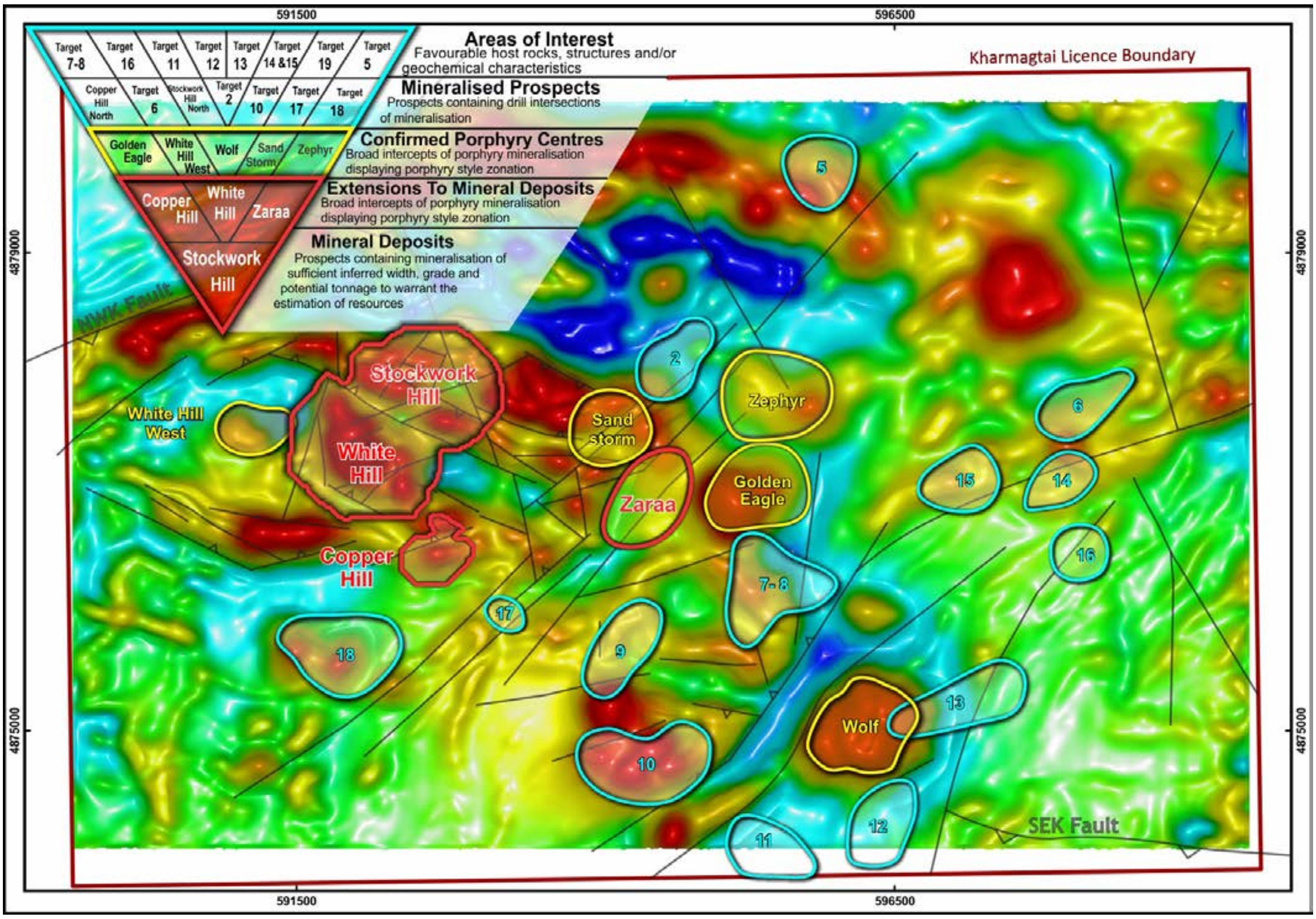


FIGURE 2: The Kharmagtai District showing ground magnetic data and location of the Kharmagtai Deposits (Stockwork Hill, White Hill and Copper Hill), porphyry centres and targets.

Updated Sulphide Metallurgical Test Work

Additional metallurgical testing has been completed on the Kharmagtai Project. This work was conducted at SGS Canada in Vancouver, BC (**SGS**) under the direction of David Middleditch and Andy Holloway of AGP Mining Consultants Inc. (**AGP**). New composites, three domain composites and nine variability composites were selected by Xanadu geologists with input from AGP personnel to represent the main geological and alteration domains within the open pit portion of the three existing deposits and to be representative of material in the 2018 Mineral Resource Estimate (**MRE**).

Copper and gold recoveries average 89.5% and 69.7% respectively for the two main master composites, ranging from 89.3% to 89.7% for copper and 60.8% to 78.7% for gold. Copper concentrates graded at an average of 25.2% Cu and 26.5g/t Au and ranged from 24.8 to 25.6% Cu and 21.5 to 30.0g/t Au.

The 2019 metallurgical test program was designed to improve upon metallurgical assumptions in the 2018 Mineral Resource Estimate (see Xanadu's ASX/TSX Announcement dated 31 October 2018) and 2019 Scoping Study (see Xanadu's ASX/TSX Announcement dated 11 April 2019). Three domain composites and nine variability composites were selected to represent the main geometallurgical domains within the open pits designed during the 2018 MRE.

Each composite was run using the same base parameters as the 2008 metallurgical tests as a starting point. Selected composites were then optimised for the effect of primary grind and changes to cleaner parameters, flotation times and additive dosages. Locked cycle test characteristics for the two major alteration domains (Albite and Chlorite-Sericite) which represent around 80% of the mill feed from the 2018 MRE and 2019 Scoping Study can be found in **Table 1**.

Table 1: Locked cycle test results for the two main master composites at Kharmagtai

Test	Products	Wt. %	Assays, g/t, %				Distribution, %			
			Cu	Fe	Au	S	Cu	Fe	Au	S
Alb MC-LCT1	**3rd Cleaner Con**	**1.0**	**25.57**	**31.60**	**30.04**	**35.80**	**89.7**	**5.4**	**78.7**	**41.2**
	1st Cleaner Tailing	20.2	0.03	7.36	0.13	2.25	2.1	24.9	7.0	51.9
	Rougher Tailing	78.8	0.03	5.28	0.07	0.08	8.2	69.7	14.3	6.9
	Feed		0.29	5.97	0.39	0.88				
Ser_Chl MC-LCT1	**3rd Cleaner Con**	**1.2**	**24.77**	**21.50**	**21.49**	**34.96**	**89.3**	**5.0**	**60.8**	**14.1**
	1st Cleaner Tailing	21.8	0.06	14.47	0.55	11.51	3.9	41.6	27.9	83.4
	Rougher Tailing	77.0	0.03	5.25	0.06	0.10	6.9	53.4	11.4	2.5
	Feed		0.34	7.58	0.43	3.00				
Average	**3rd Cleaner Con**	**1.1**	**25.2**	**26.5**	**25.8**	**35.4**	**89.5**	**5.2**	**69.7**	**27.7**

2019 samples were selected from all three deposits with variability domains within each deposit defined by a geometallurgical model developed to represent the key rock type and alteration types.

Full details of this metallurgical work can be found in Xanadu's ASX/TSX announcement dated 19 December 2019.

Large-Scale Copper-Gold Exploration Target Developed for Kharmagtai

An exploration target has been developed for the Kharmagtai lease with the aim of highlighting the large-scale copper-gold potential of the project (**Figure 3**). The recently released Mineral Resource Upgrade and Scoping Study (please see Xanadu's ASX/TSX Announcements dated 31 October 2018 and 11 April 2019) have demonstrated a robust and viable copper-gold project, but this work only included a small portion of the known mineralisation at Kharmagtai. This Exploration Target has been developed to demonstrate the upside potential of the Kharmagtai Mining Lease and show the areas which could potentially be added to the resource inventory in the near to mid-term.

Five targets have been reviewed across the lease ranging from extensions to existing resources at Stockwork Hill, White Hill and Copper Hill to the recently discovered Zaraa and Golden Eagle deposits.

The Exploration Target is conceptual in nature as there has been insufficient exploration to define a Mineral Resource. It is uncertain if further exploration will result in the determination of a Mineral Resource under the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, the JORC Code* (**JORC 2004**). The Exploration Target is not being reported as part of any Mineral Resource or Ore Reserve and the areas of mineralisation that have been reported in the 2018 Mineral Resource Upgrade have been removed from the exploration target area.

Additionally, two styles of exploration target have been defined. **Table 2** shows the exploration targets as a range define based on drill results and extensions of the 2018 Mineral Resource Upgrade only.

Table 3 shows exploration targets as a range where corroborating geophysical and geological data at Zaraa highlight potential extensions to that target.

Table 2: Kharmagtai copper-gold exploration targets – drill result and block model extension data only

Target Name	Length*1 (m)	Width*2 (m)	Height*3 (m)	Density*4 (t/m3)	Tonnage Range*4	Grade Range*6 (eCu)	Comments
White Hill	1200 to 1800	400 to 500	250 to 500	2.76	331Mt to 1.24Bt	0.3% to 0.5% eCu	See Figure 4 for dimension details
Stockwork Hill	800 to 900	200 to 400	150 to 250	2.76	66Mt to 248Mt	0.3% to 0.5% eCu	See Figure 5 for dimension details
Copper Hill	200 to 300	100 to 200	200 to 300	2.76	11 to 50Mt	0.3% to 0.5% eCu	See Figure 6 for dimension details
Golden Eagle	300 to 350	200 to 250	200 to 250m	2.76	33 to 60Mt	0.3% to 0.5% eCu	See Figure 7 for dimension details
Target Name	**Length*1 (m)**	**Width*2 (m)**	**Height*3 (m)**	**Density*4 (t/m3)**	**Tonnage Range*4**	**Grade Range*6 (eCu)**	**Comments**
Stockwork Hill	300-450	150-200	150-250	2.78	19Mt - 63Mt	0.5% to 1% eCu	See Figure 5 for dimension details
Zaraa	600-700	100-150	200-250	2.78	33Mt - 73Mt	0.5% to 1% eCu	See Figure 8 for dimension details

1* - Length of the exploration target is defined as a conservative maximum and minimum length estimation based off the distances over which drill intercepts are observed
2* - Width of the exploration targets is defined as a conservative maximum and minimum width estimation based off the distances over which drill intercepts are observed
3* - Height information is defined as a conservative maximum and minimum height estimation based off the distances over which drill intercepts are observed
4* - Density data is taken from drilling data and assumed to be the average rock density in the Kharmagtai dataset at grade ranges above 0.3% eCu (2.76 t/m3) and 0.5% eCu (2.78 t/m3)
5* - Tonnage range is estimated as a calculation of the maximum and minimum length, width and depth multiplied by the density.
6* - Grade range is taken directly from drill results
7* - Numbers are rounded to avoid the false impression of a level of accuracy which may have led to the misrepresentation that this Exploration Target is akin to a Resource Estimation.
8* - Metallurgical recovery information is built into the eCu calculation and therefore should not be applied in addition to the tonnages reported here
9* - A floor of 600m from surface has been applied to the 0.3% eCu cut-off target to represent a realistic maximum depth for a potential open cut
10* - cut off grades of 0.3%eCu have been used to represent potential open cut material and 0.5% eCu for underground material to match that used in the 2018 MRE

Table 3: Kharmagtai copper-gold exploration target – drill result with geophysical extensions

Target Name	Length*1 (m)	Width*2 (m)	Height*3 (m)	Density*4 (t/m3)	Bulk Tonnage Range*5	Minus Table 1 (above) tonnage range*6	Geophysical Extension Tonnage Range*7	Grade Range*6 (eCu)	Comments
Zaraa	800 to 1300	150 to 200	500 to 600	2.78	167Mt – 434Mt	33Mt - 73Mt	134Mt – 361Mt	0.5% to 1% eCu	See Figure 9 for dimension details

1* - Length of the exploration target is defined as a conservative maximum and minimum length estimation based off the distances over which drill intercepts are observed and geological or geophysical characteristics associated with the mineralisation are observed
2* - Width of the exploration targets is defined as a conservative maximum and minimum width estimation based off the distances over which drill intercepts are observed and geological or geophysical characteristics associated with the mineralisation are observed
3* - Height information is defined as a conservative maximum and minimum height estimation based off the distances over which drill intercepts are observed and geological or geophysical characteristics associated with the mineralisation are observed.
4* - Density data is taken from drilling data and assumed to be the average rock density in the Kharmagtai dataset at grade ranges above 0.3 eCu (2.76 t/m3) and 0.5% eCu (2.78 t/m3)
5* - Tonnage range is estimated as a calculation of the maximum and minimum length, width and depth multiplied by the density.
6* - Grade range is taken directly from drill results and shown in Table 1
7* - The Exploration target from Table one is subtracted to give an extension to the Table one result
8* - Numbers are rounded to avoid the false impression of a level of accuracy which may have led to the misrepresentation that this Exploration Target is akin to a Resource Estimation.
9* - Metallurgical recovery information is built into the eCu calculation and therefore should not be applied in addition to the tonnages reported here
10* - cut off grades of 0.3% eCu have been used to represent potential open cut material and 0.5% eCu for underground material to match that used in the 2018 MRE

Full details for the Exploration Target can be found in Xanadu's ASX/TSX Announcement dated 27 November, 2019.

LARGE SCALE POTENTIAL OF THE KHARMAGTAI LEASE

The undercover initiative implemented in 2016 is still being followed up upon. There are large parts of the Kharmagtai Mining Lease which exhibit significant copper and gold geochemical anomalism (**Figure 10**) that require follow up drilling to test. The shallow open pit potential of the lease is still significant. Additionally, porphyry mineral systems form as copper and gold are concentrated through a series of vertically staged magma chambers. It is this characteristic that makes these systems so large. At Oyu Tolgoi, 120km south of Kharmagtai, the main mineral deposit does not start until >600m vertically from surface and extends to some 2,400m below surface to where drilling stopped.

At Kharmagtai, there are a set of compelling vectors that suggest the mineralisation seen at surface is just the top of a much larger system. The first of these vectors is the gravity data. When the low frequency gravity data is reviewed, a very large, higher density body is seen below the surface mineralisation (**Figure 11**). This body could represent another, larger staging chamber, from which the currently drilled mineralisation may have evacuated. Additional vectors specific to high-grade extensions to the existing deposits, have been described and can be found in Xanadu's ASX/TSX Announcement dated 27 November 2019. When combined, these vectors paint the picture of a giant porphyry system below the existing mineralisation.

PROGRAM REQUIRED TO CONVERT EXPLORATION TARGETS TO RESOURCES AND DISCOVER LARGE-SCALE POTENTIAL

A geophysical and drill program has been designed and costed to convert the above Exploration Targets into inferred Mineral Resources and discover the hypothesised very large-scale copper gold porphyry system beneath the existing resources.

The first phase of exploration would consist of a tenement wide seismic survey conducted in parallel with a similar spaced deep seeing magnetotellurics (**MT**) program. Seismic would be used to define the fault architecture of the entire mining lease to ensure the drill targeting is as accurate as possible. A magnetotellurics program would be conducted to identify large zones of sulphide mineralisation located beneath the structures highlighted by the seismic survey. This program has been costed at between $300k to $600k depending on the geophysical contractor used and would form the basis of the drill targeting for the Oyu Tolgoi sized system at Kharmagtai.

Drill holes have been planned for Stockwork Hill, Copper Hill, Zaraa and elsewhere within the tenement to convert the above exploration target into an inferred mineral resources. Costing for this program is summarised in Xanadu's ASX/TSX Announcement dated 27 November, 2019.

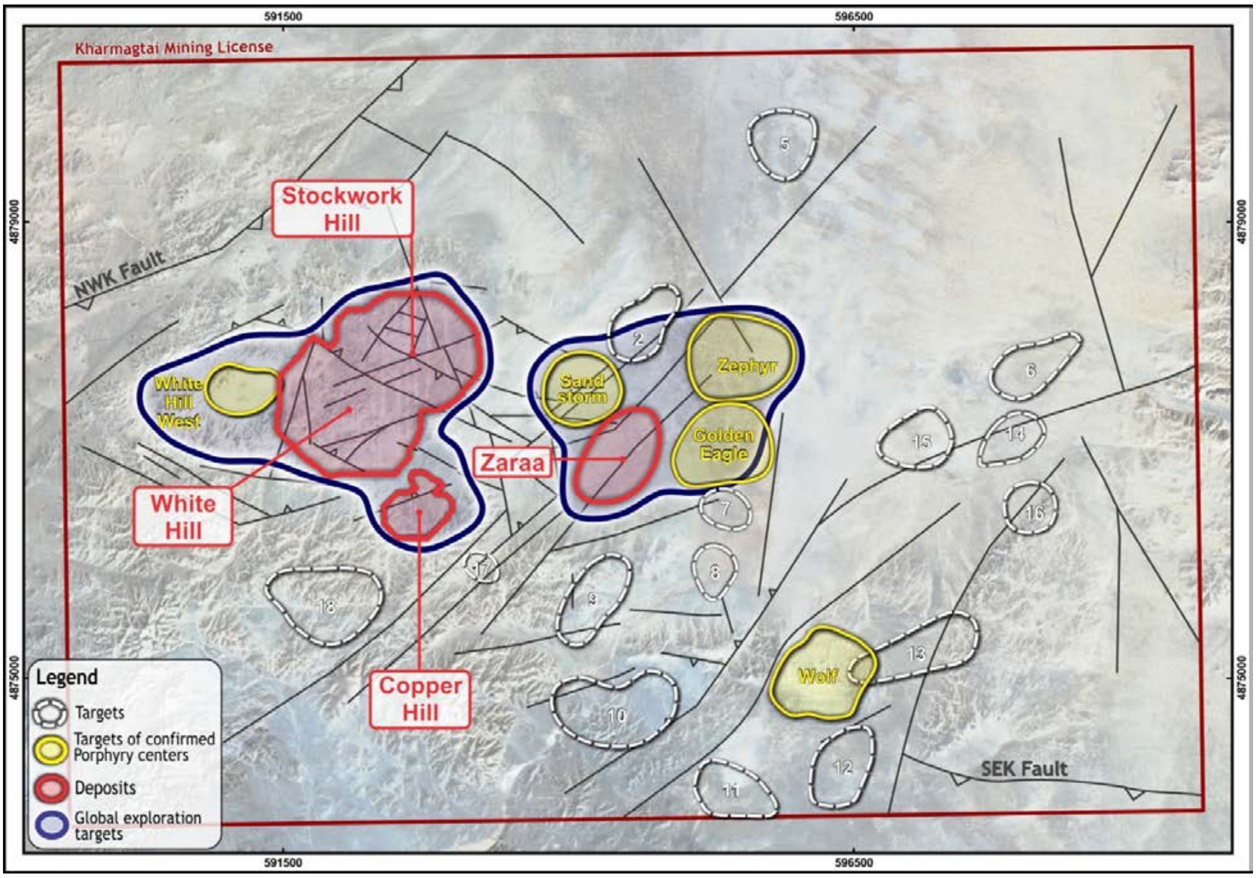


FIGURE 3: The Kharmagtai Mining Licence showing location of the Kharmagtai Deposits (Stockwork Hill, White Hill, Copper Hill) and areas covered within the Global Exploration Target.

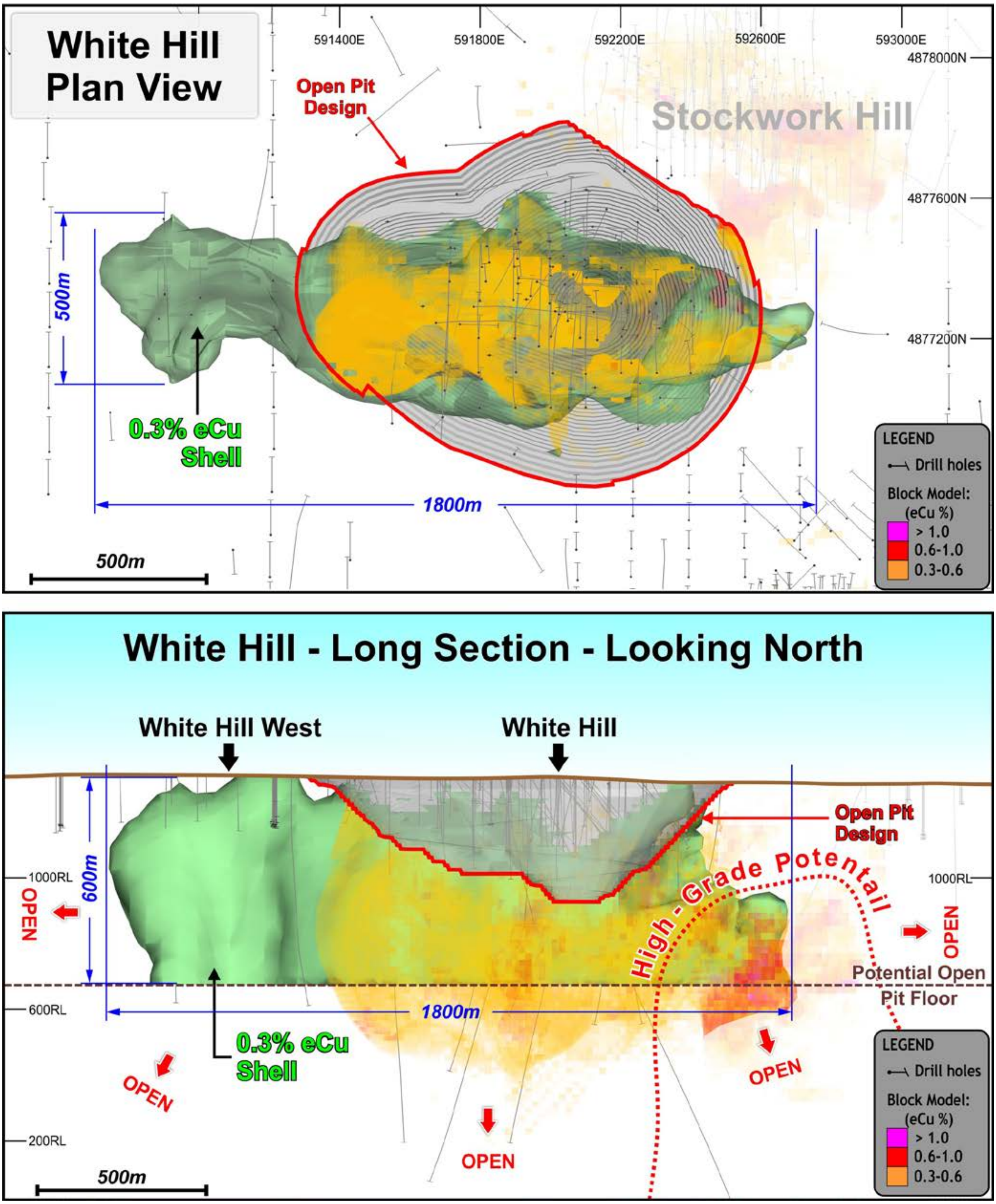


FIGURE 4: Plan and long section of White Hill showing drilling, 2018 Mineral Resource Upgrade ultimate pit and block model outside what has been reported. Dimensions showing the exploration target for 0.3%eCu, **Table 2** only uses a 500m height dimension (rather than the depicted 600m) to compensate for and remove the mineralisation reported within the current 2018 MRE.

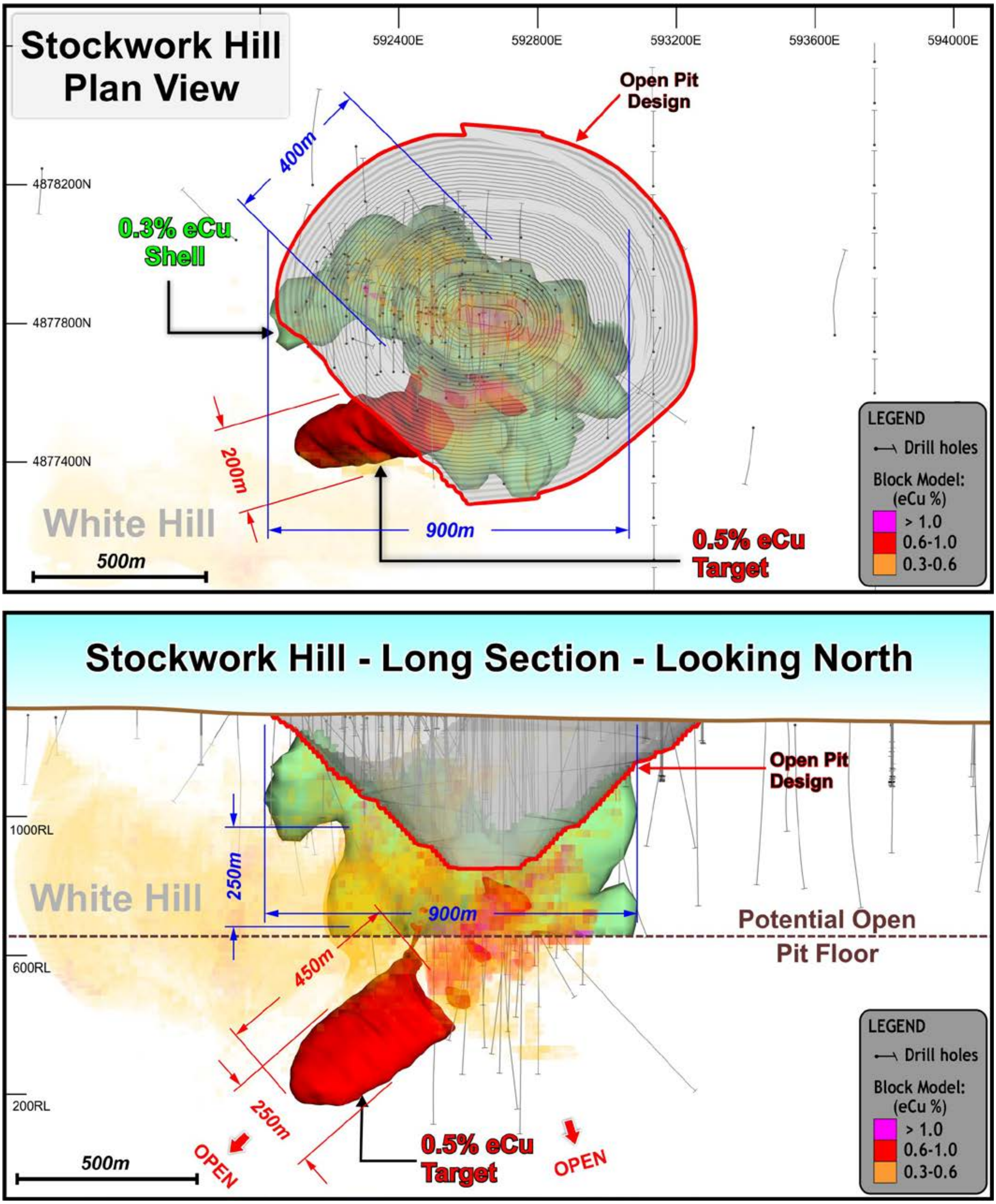


FIGURE 5: Long Section of Stockwork Hill showing 2018 Mineral Resource Upgrade ultimate pit and block model outside what was reported in the 2018 MRE. Dimensions showing the exploration target for 0.3%eCu and 0.5%eCu are shown with a floor at 600m to symbolise the potential depth of an open pit.

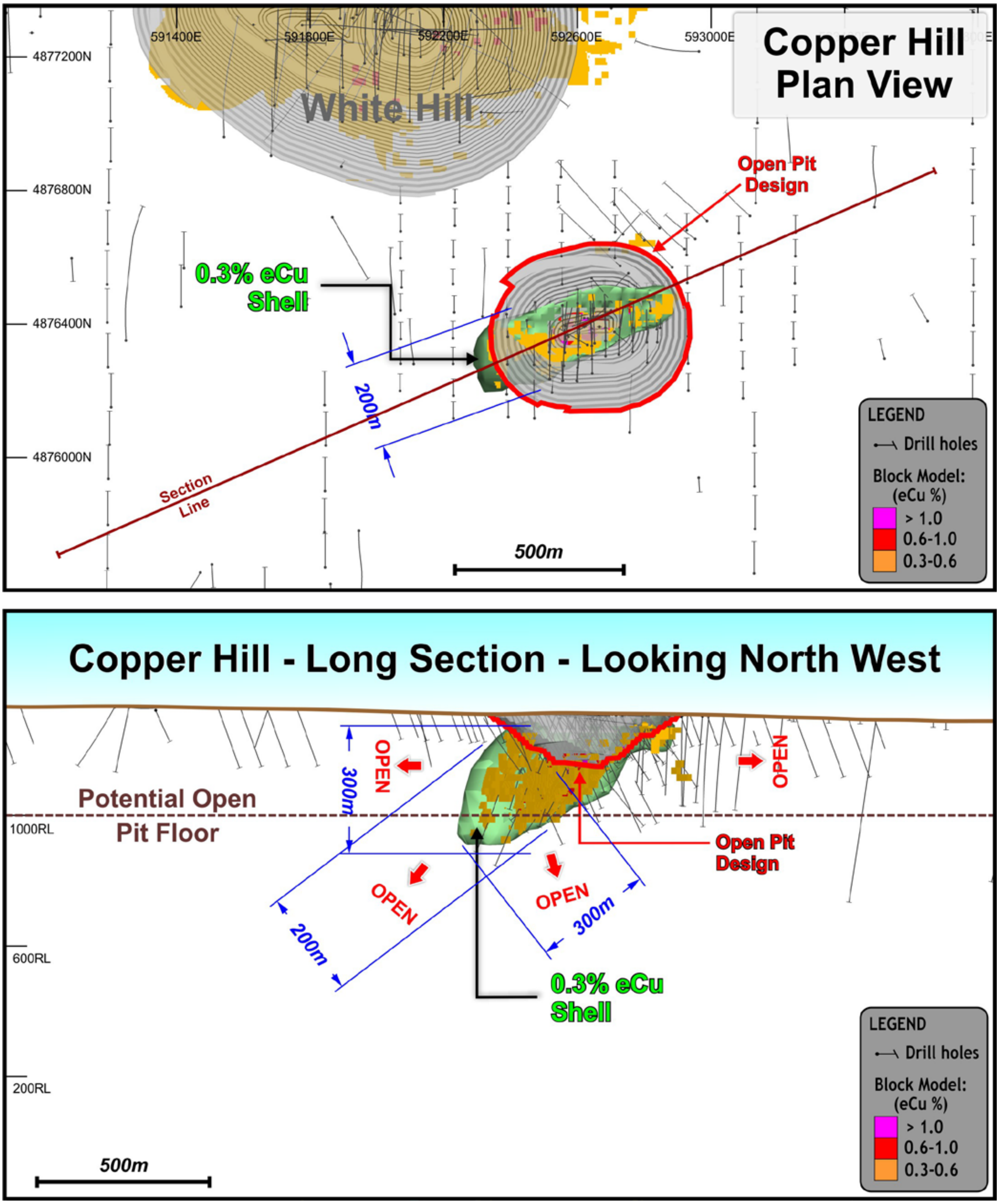
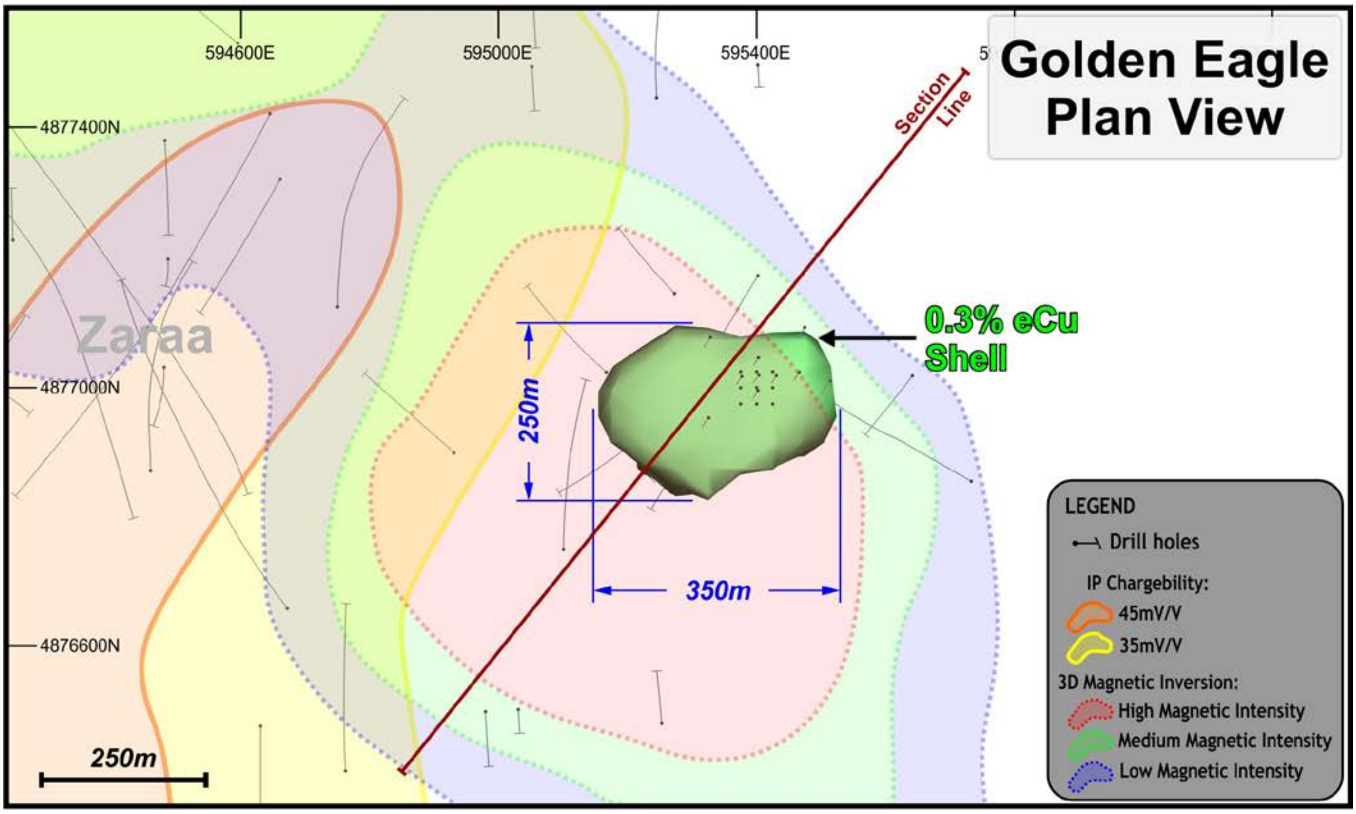


FIGURE 6: Plan and long section of Copper Hill showing 2018 Mineral Resource Upgrade ultimate pit and block model outside what was reported in the 2018 MRE. Dimensions showing the exploration target for 0.3%eCu are shown with a floor at 300m to symbolise the potential depth of an open pit. There is significant potential for repeated high-grade zones at depth down plunge of Copper Hill and drilling for this is included in the exploration plan.



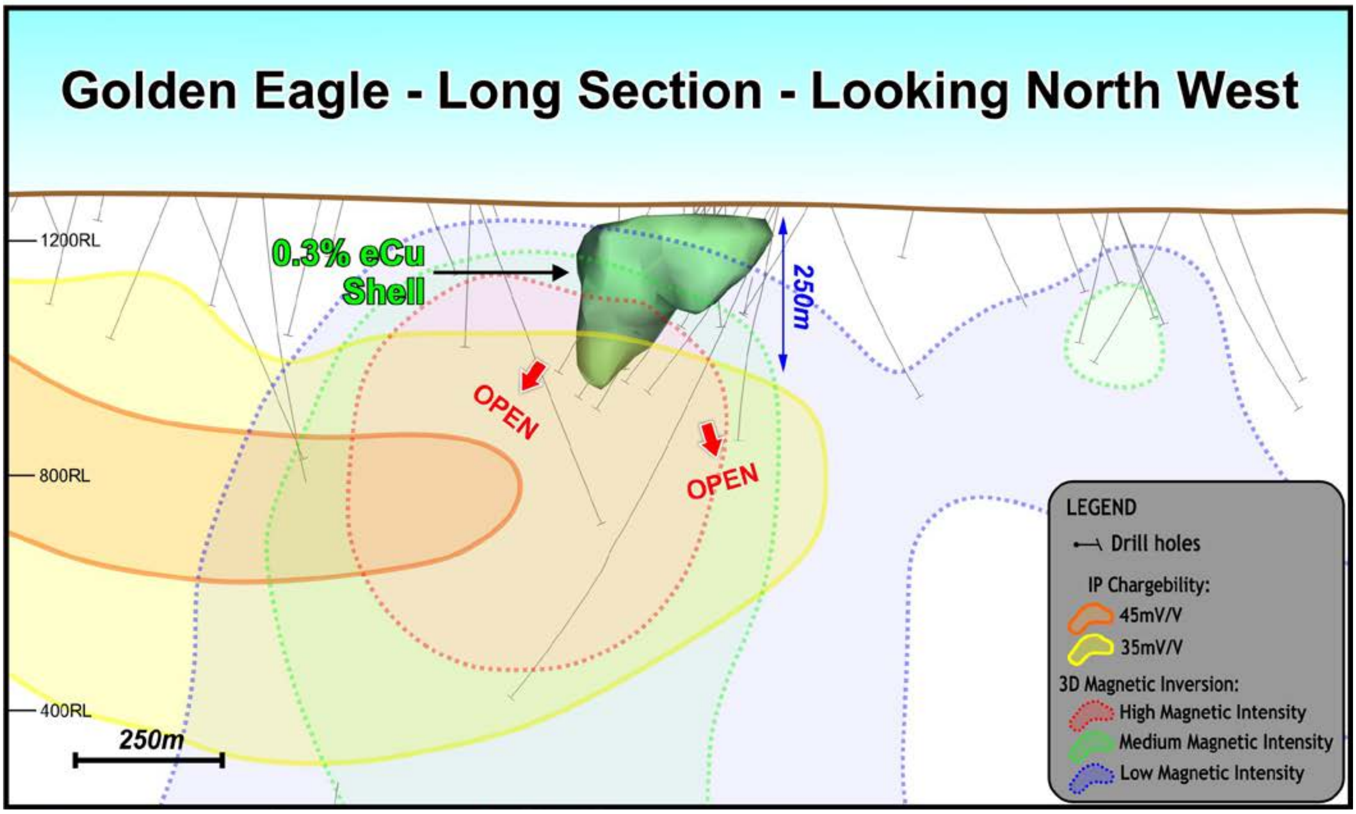


FIGURE 7: Plan and long section of Golden Eagle showing drilling, exploration target, inverted 3DIP and VRMI data and 0.3%eCu boundary based off drilling.

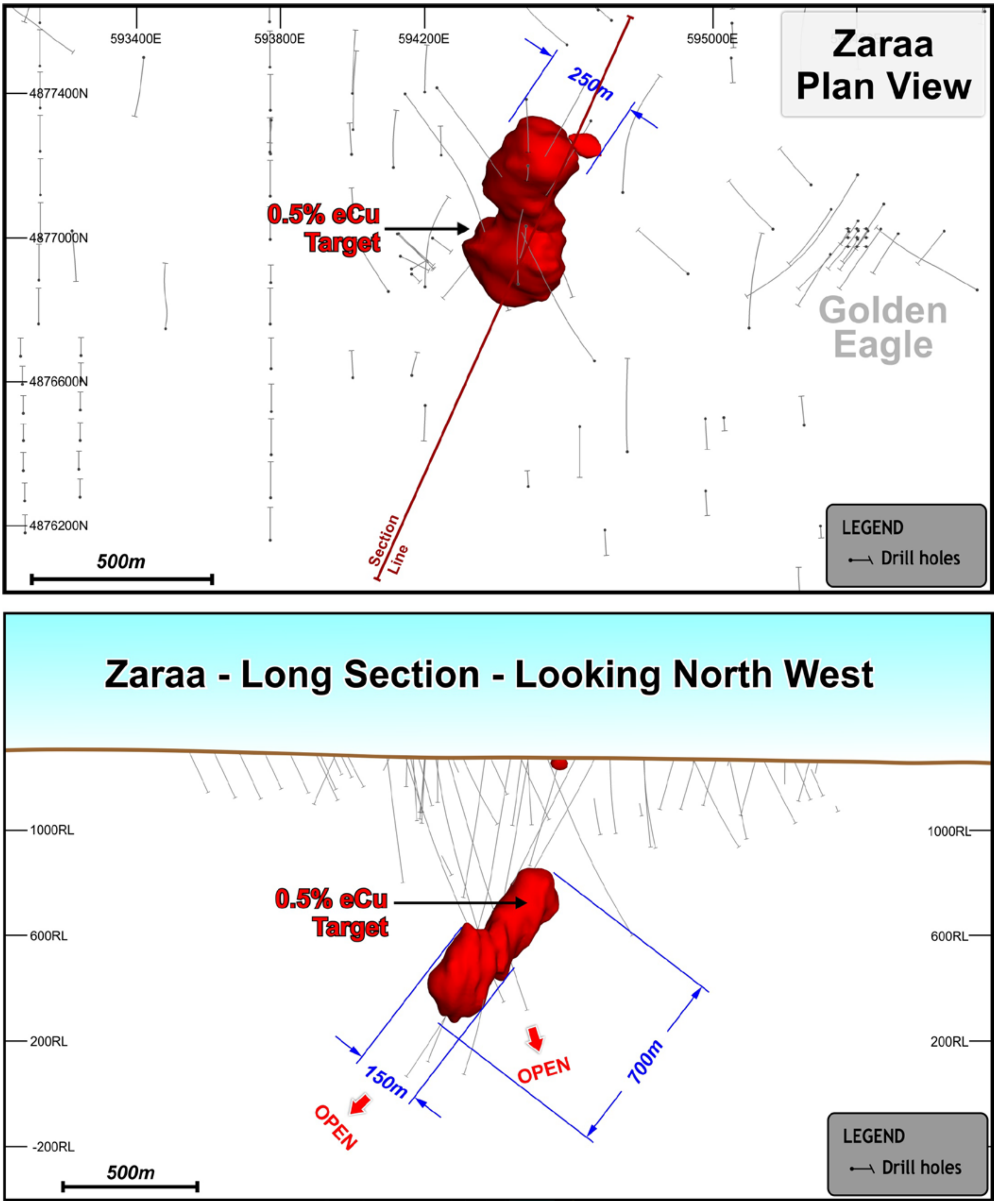


FIGURE 8: Plan and long section of Zaraa showing drilling and dimensions of Exploration Target.

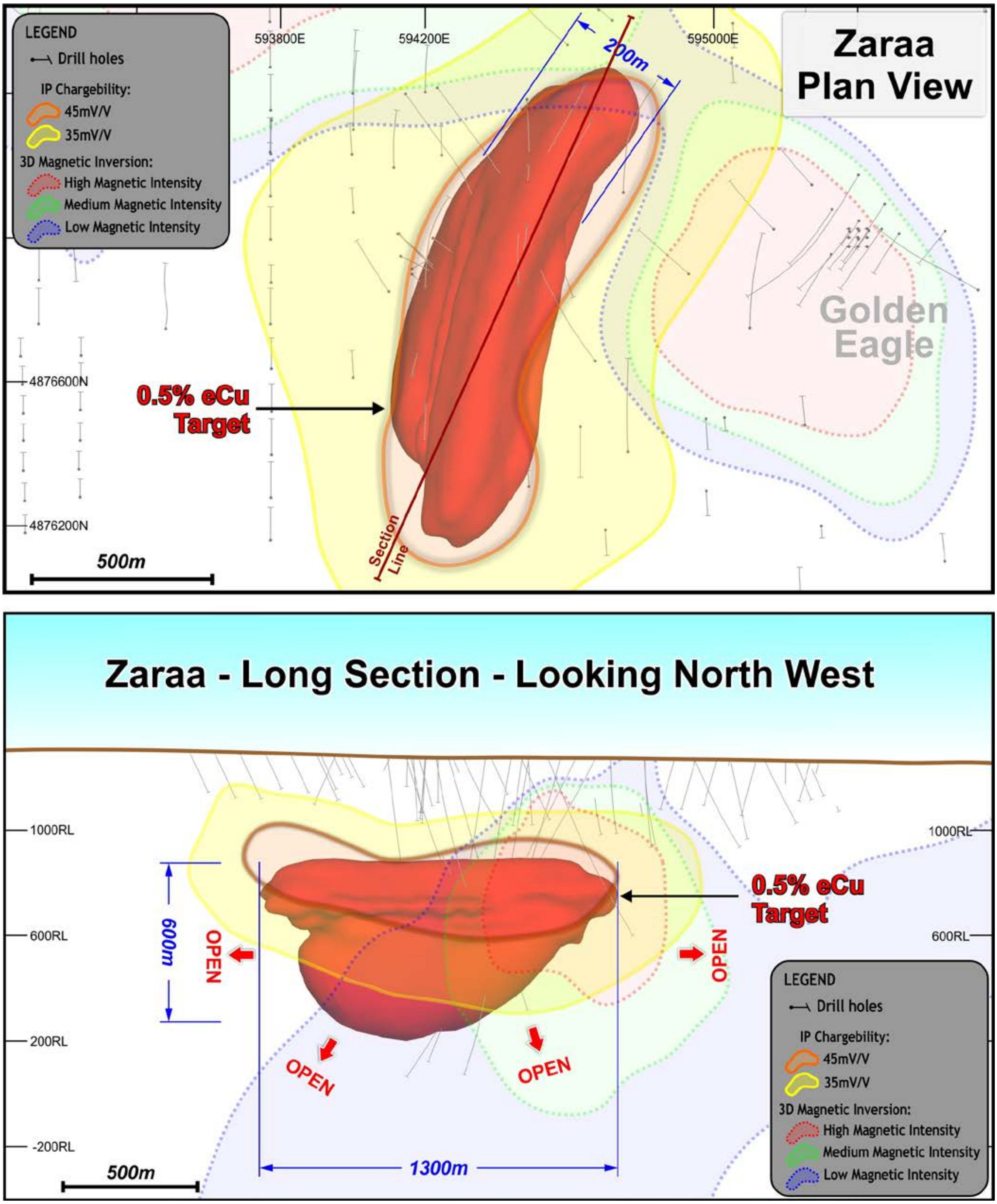


Figure 9: Plan and section of Zaraa showing extended Exploration Target based off drilling and geophysics.

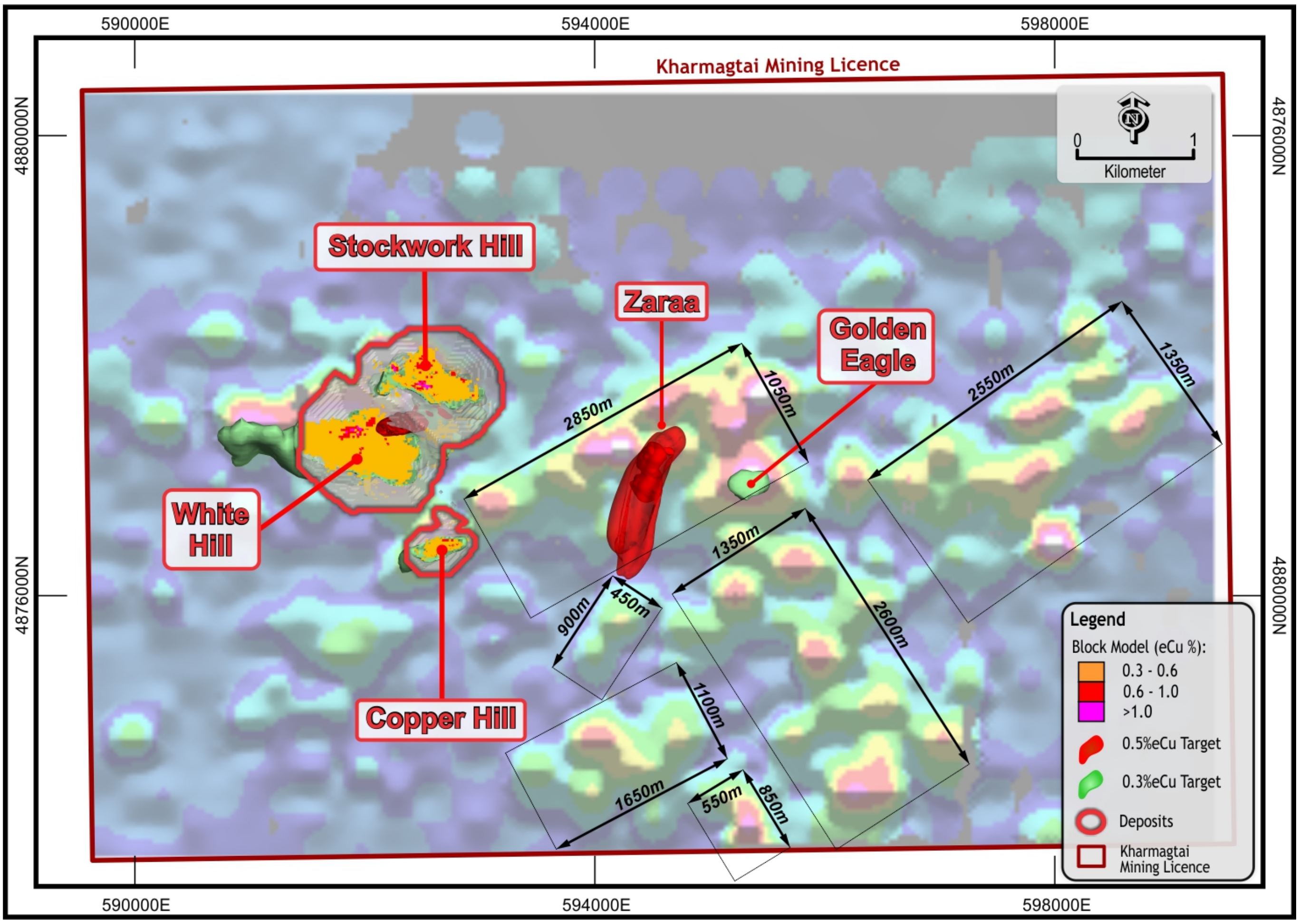


FIGURE 10: Geochemical anomalism (eCu) across the Kharmagtai Lease. The undercover initiative geochemistry program initiated in 2016 is still being followed up on. There remains a significant surface area of geochemical anomalism that required additional exploration for shallower resources within the Kharmagtai Lease.

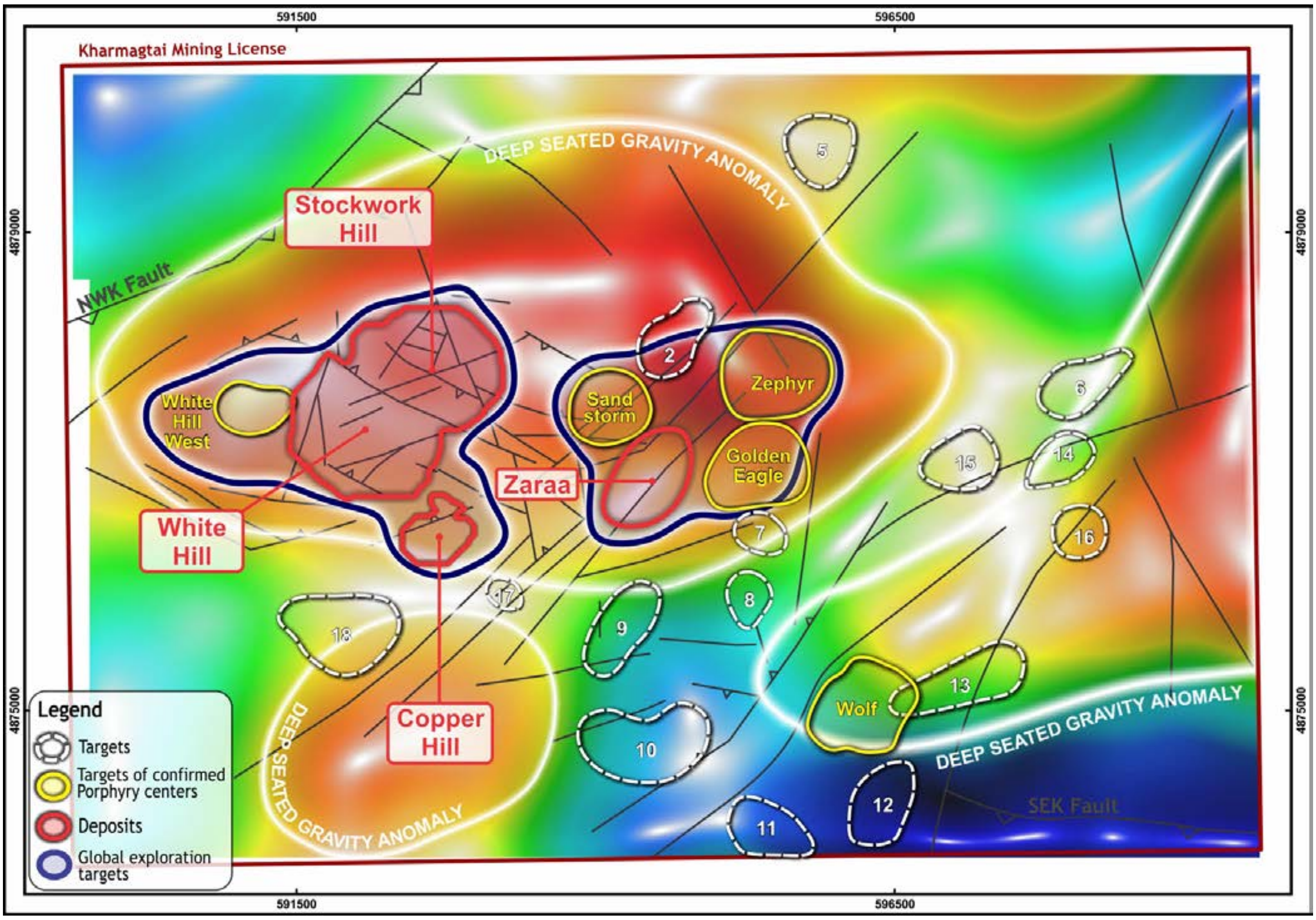


FIGURE 11: Bougier gravity anomaly beneath Kharmagtai is suggestive of a very large staging chamber beneath the known mineralisation.

CORPORATE ACTIVITIES

On 28 November 2019, the Company announced retirement of Dr Darryl Clark as non-executive director and Chairman of the Company, and the appointment of his successor, Mr Colin Moorhead.

Mr Moorhead is an experienced industry executive with a demonstrated track record of over three decades building value in mining companies through innovation, discovery, project development and safe, efficient operations. Colin has extensive experience in development and financing significant mining projects internationally. He also has experience with global mining operations as well as experience in successful mergers & acquisitions.

A geologist by training, Colin is known for strong leadership, strategy and execution that saw him rise through the ranks from a graduate with BHP in 1987 to an executive level manager responsible for global exploration and resource development at Newcrest Mining from 2008 to 2015, a period of significant growth for the company. Colin has significant relevant experience as CEO of emerging Indonesian listed producer PT Merdeka Copper Gold, where he built and led the team that constructed and commissioned the highly successful Tujuh Bukit Gold Mine. Colin is a Fellow and immediate Past President of AUSIMM, a graduate of AICD and Harvard Business School Advanced Management Program (AMP).

On 18 October 2019, the Company announced the resignation of Ms Hannah Badenach as a non-executive director of the Company as the representative of Noble Resources International Pte Ltd, and the appointment of Mr Stephen Motteram as Ms Badenach's replacement.

Stephen Motteram has over 20 years' experience in financial institutions and trading houses, specialising in commodities trading, project & structured finance, equity and equity-linked investments. He has originated, executed and managed natural resource, energy and infrastructure transactions in Australia, Indonesia, Africa, India, Brazil and China.

Stephen has worked for Noble since January 2011 and prior to that, worked with National Austral Bank in Hong Kong and Australia for approximately 10 years, and previously was a trader with Louis Dreyfus.

Mr Motteram holds a B. Agricultural Science (Honours) from the University of Melbourne and an MBA from the Melbourne Business School. He is an Associate Member of CPA Australia and a Graduate of the Australian Institute of Company Directors

Subsequent to the quarter end, on 16 January 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 ASX 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 raising, PCG holds approximately 9.9% of Xanadu.

Share Capital

As at 31 December 2019, the Company had 712,848,544 fully paid ordinary shares and 29,411,759 unlisted options. Following the Placement, the Company's has 791,174,855 fully paid ordinary shares on issue.

Financial Position

As at 31 December 2019, the Company had A$1.2 million in cash prior to receipt of the Placement funds of $2.58 million on 20 January 2020.

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

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COMPETENT PERSON STATEMENT

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

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

The information in this announcement that relates to metallurgical test work is based on a summary of results compiled by Andrew Holloway who is responsible for metallurgical and process engineering aspects of the project. Mr. Holloway, who is a principal of AGP Mining Consultants Inc. (Toronto, Canada) and is a Professional Engineer in Ontario, Canada, 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. Mr Holloway consents to the inclusion in the 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:

eCu = Cu + 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 6834 $/t)
- Gold price - 1320 $/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.

Table 4: Tenements held as at 31 December 2019

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

Tenement No.	Tenement Name	Location	Change in % Interest	% Interest as at 31 December 2019
MV17387A1	Kharmagtai	Umnugovi Province	-	76.5%[1]
MV017129	Red Mountain	Dornogovi Province	-	90%
13670x	Yellow Mountain	Bulgan Province	-	100%

1. The Kharmagtai Project has been funded through Xanadu's interest in Mongol Metals LLC. Xanadu's interest in Mongol Metals LLC is equivalent to 85% as at 31 December 2019 (an effective 76.5% 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 for the Kharmagtai project. Data has been 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 METALLURGICAL TEST WORK

Criteria	JORC Code explanation	Commentary
Sampling techniques	• Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling. • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report. • In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling	• Metallurgical Samples – As described in the body of the above announcement metallurgical work was conducted on domain and nine variability composites selected from the three main deposits (Stockwork Hill, White Hill and Copper Hill). Samples were selected using a geometallurgical domain model developed via 3D analysis of ASD spectral data and four acid digest multi-element assay data. Table two in the body of the announcement provides a detailed description of these samples including ore type, weights of samples, percentages of the projected mill feed for the open pit mines and detailed notes on the criteria which separates the various ore types. Samples consisted of ½ HQ core. Samples were transported to SGS laboratories in Canada within securely sealed plastic drums via air courier (DHL). • Metallurgical samples were selected with the aim to satisfy the following conditions o Ore that would be mined within the proposed open pits o Reflect the main ore type variability domains within the proposed open pits o Represent grade profiles across the proposed open pits • The resource estimate is based on diamond drill core samples, RC chip samples and channel samples from surface trenches. • Representative ½ core samples were split from PQ, HQ & NQ diameter diamond drill core on site using rock saws, on a routine 2m sample interval that also honors lithological/intrusive contacts. • The orientation of the cut line is controlled using the core orientation line ensuring uniformity of core splitting wherever the core has been successfully oriented. • Sample intervals are defined and subsequently checked by geologists, and sample tags are attached (stapled) to the plastic core trays for every sample interval. • RC chip samples are ¼ splits from one meter intervals using a 75%:25% riffle splitter to obtain a 3kg sample • RC samples are uniform 2m samples formed from the combination of two ¼ split 1m samples.

Criteria	JORC Code explanation	Commentary
	problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	
Drilling techniques	• Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	• The Mineral Resource estimation has been based upon diamond drilling of PQ, HQ and NQ diameters with both standard and triple tube core recovery configurations, RC drilling and surface trenching with channel sampling. • All drill core drilled by Xanadu has been oriented using the “Reflex Ace” tool.
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• Diamond drill core recoveries were assessed using the standard industry (best) practice which involves: removing the core from core trays; reassembling multiple core runs in a v-rail; measuring core lengths with a tape measure, assessing recovery against core block depth measurements and recording any measured core loss for each core run. • Diamond core recoveries average 97% through mineralization. • Overall, core quality is good, with minimal core loss. Where there is localized faulting and or fracturing core recoveries decrease, however, this is a very small percentage of the mineralized intersections. • RC recoveries are measured using whole weight of each 1m intercept measured before splitting • Analysis of recovery results vs grade shows no significant trends that might indicate sampling bias introduced by variable recovery in fault/fracture zones.
Logging	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Whether logging is qualitative or quantitative in nature. Core (or costean,	• All drill core is geologically logged by well-trained geologists using a modified “Anaconda-style” logging system methodology. The Anaconda method of logging and mapping is specifically designed for porphyry Cu-Au mineral systems and is entirely appropriate to support Mineral Resource Estimation, mining and metallurgical studies. • Logging of lithology, alteration and mineralogy is intrinsically qualitative in nature. However, the logging is subsequently supported by 4 Acid ICP-MS (48 element) geochemistry and SWIR spectral mineralogy (facilitating semi-quantitative/calculated mineralogical, lithological and alteration classification) which is integrated with the logging to improve cross section interpretation and 3D geological model

Criteria	JORC Code explanation	Commentary
	channel, etc.) photography. • The total length and percentage of the relevant intersections logged.	development. • Drill core is also systematically logged for both geotechnical features and geological structures. Where drill core has been successfully oriented, the orientation of structures and geotechnical features are also routinely measured. • Both wet and dry core photos are taken after core has been logged and marked-up but before drill core has been cut.
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled.	• All drill core samples are ½ core splits from either PQ, HQ or NQ diameter cores. A routine 2m sample interval is used, but this is varied locally to honour lithological/intrusive contacts. The minimum allowed sample length is 30cm. • Core is appropriately split (onsite) using diamond core saws with the cut line routinely located relative to the core orientation line (where present) to provide consistency of sample split selection. • The diamond saws are regularly flushed with water to minimize potential contamination. • A field duplicate ¼ core sample is collected every 30th sample to ensure the "representivity of the in situ material collected". The performance of these field duplicates are routinely analysed as part of Xanadu's sample QC process. • Routine sample preparation and analyses of DDH samples were carried out by ALS Mongolia LLC (ALS Mongolia), who operates an independent sample preparation and analytical laboratory in Ulaanbaatar. • All samples were prepared to meet standard quality control procedures as follows: Crushed to 75% passing 2mm, split to 1kg, pulverised to 85% passing 200 mesh (75 microns) and split to 150g sample pulp. • ALS Mongolia Geochemistry labs quality management system is certified to ISO 9001:2008. • The sample support (sub-sample mass and comminution) is appropriate for the grainsize and Cu-Au distribution of the porphyry Cu-Au mineralization and associated host rocks. • Metallurgical samples - 90 individual samples were shipped to SGS in Vancouver. o Total weight of 392kg o Each sample was characterized and blended in to 9 composite samples o Mass range for samples was 34kg to 53kg o Each met composite was formed, stage crushed to -6 mesh and 8kg was riffled to be further crushed to -10 mesh o Minus 10 mesh material was blended well and rotary split to create 4 x 2 kg test charges

Criteria	JORC Code explanation	Commentary
		o Test charges were stored in a freezer o Three Master composites were generated form the remaining -6 mesh material o A 10kg charge was riffled out for BWI testing o The remaining Master composite material was stage crushed to -10 mesh and riffled split into as many 2kg test charges as possible
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	• Metallurgical tests were conducted by SGS in Vancouver, BC, Canada. o Each variability and master composite was sub-sampled and underwent head chemical analysis for Cu, Fe, S and Au (in triplicate), Ag, S-total and a multielement ICP scan. o Bond Ball Mill Grindability tests were conducted as per the original Bond procedure o QEMSCAN was conducted on each variability sample o Grind calibrations were conducted on each variability and master composite to determine the grind time-particle size relationships. o Variability rougher floatation tests were conducted on the variability samples based on previous test parameters. o Cleaner variability and optimized variability cleaner tests were conducted on the variability metallurgical samples o Optimization floatation testing was conducted on Master Composites. o Master Composite locked cycle testing was conducted. • All samples were routinely assayed by ALS Mongolia for gold • Au is determined using a 25g fire assay fusion, cupelled to obtain a bead, and digested with Aqua Regia, followed by an atomic absorption spectroscopy (AAS) finish, with a lower detection (LDL) of 0.01 ppm. • All samples were also submitted to ALS Mongolia for the 48 element package ME-ICP61 using a four acid digest (considered to be an effective total digest for the elements relevant to the MRE). Where copper is over-range (>1% Cu), it is analysed by a second analytical technique (Cu-OG62), which has a higher upper detection limit (UDL) of 5% copper. • Quality assurance has been managed by insertion of appropriate Standards (1:30 samples – suitable Ore Research Pty Ltd certified standards), Blanks (1:30 samples), Duplicates (1:30 samples – ¼ core duplicate) by XAM. • Assay results outside the optimal range for methods were re-analysed by appropriate methods. • Ore Research Pty Ltd certified copper and gold standards have been implemented as a part of QC

Criteria	JORC Code explanation	Commentary
		procedures, as well as coarse and pulp blanks, and certified matrix matched copper-gold standards. • QC monitoring is an active and ongoing processes on batch by batch basis by which unacceptable results are re-assayed as soon as practicable. • Prior to 2014: Cu, Ag, Pb, Zn, As and Mo were routinely determined using a three-acid-digestion of a 0.3g sub-sample followed by an AAS finish (AAS21R) at SGS Mongolia. Samples were digested with nitric, hydrochloric and perchloric acids to dryness before leaching with hydrochloric acid to dissolve soluble salts and made to 15ml volume with distilled water. The LDL for copper using this technique was 2ppm. Where copper was over-range (>1% Cu), it was analysed by a second analytical technique (AAS22S), which has a higher upper detection limit (UDL) of 5% copper. Gold analysis method was essentially unchanged.
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	• All assay data QAQC is checked prior to loading into XAM's Geobank data base. • The data is managed by XAM geologists. • The data base and geological interpretation is managed by XAM. • Check assays are submitted to an umpire lab (SGS Mongolia) for duplicate analysis. • No twinned drill holes exist. • There have been no adjustments to any of the assay data.
Location of data points	• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control.	• Diamond drill holes have been surveyed with a differential global positioning system (DGPS) to within 10cm accuracy. • The grid system used for the project is UTM WGS-84 Zone 48N • Historically, Eastman Kodak and Flexit electronic multi-shot downhole survey tools have been used at Kharmagtai to collect down hole azimuth and inclination information for the majority of the diamond drill holes. Single shots were typically taken every 30m to 50m during the drilling process, and a multi-shot survey with readings every 3-5m are conducted at the completion of the drill hole. As these tools rely on the earth's magnetic field to measure azimuth, there is some localised interference/inaccuracy introduced by the presence of magnetite in some parts of the Kharmagtai mineral system. The extent of this interference cannot be quantified on a reading-by-reading basis. • More recently (since September 2017), a north-seeking gyro has been employed by the drilling crews on site (rented and operated by the drilling contractor), providing accurate downhole orientation

Criteria	JORC Code explanation	Commentary
		measurements unaffected by magnetic effects. Xanadu have a permanent calibration station setup for the gyro tool, which is routinely calibrated every 2 weeks (calibration records are maintained and were sighted) • The project DTM is based on 1 m contours from satellite imagery with an accuracy of ±0.1 m.
Data spacing and distribution	• Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied.	• Holes spacings range from <50m spacings within the core of mineralization to +500m spacings for exploration drilling. Hole spacings can be determined using the sections and drill plans provided. • Holes range from vertical to an inclination of -60 degrees depending on the attitude of the target and the drilling method. • The data spacing and distribution is sufficient to establish anomalism and targeting for porphyry Cu-Au, tourmaline breccia and epithermal target types. • Holes have been drilled to a maximum of 1,300m vertical depth. • The data spacing and distribution is sufficient to establish geological and grade continuity, and to support the Mineral Resource classification.
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• Drilling is conducted in a predominantly regular grid to allow unbiased interpretation and targeting. • Scissor drilling, as well as some vertical and oblique drilling, has been used in key mineralised zones to achieve unbiased sampling of interpreted structures and mineralised zones, and in particular to assist in constraining the geometry of the mineralised hydrothermal tourmaline-sulphide breccia domains.
Sample security	• The measures taken to ensure sample security.	• Samples are delivered from the drill rig to the core shed twice daily and are never left unattended at the rig. • Samples are dispatched from site in locked boxes transported on XAM company vehicles to ALS lab in Ulaanbaatar. • Sample shipment receipt is signed off at the Laboratory with additional email confirmation of receipt. • Samples are then stored at the lab and returned to a locked storage site.

Criteria	JORC Code explanation	Commentary
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• Internal audits of sampling techniques and data management are undertaken on a regular basis, to ensure industry best practice is employed at all times. • External reviews and audits have been conducted by the following groups: • 2012: AMC Consultants Pty Ltd. was engaged to conduct an Independent Technical Report which reviewed drilling and sampling procedures. It was concluded that sampling and data record was to an appropriate standard. • 2013: Mining Associates Ltd. was engaged to conduct an Independent Technical Report to review drilling, sampling techniques and QAQC. Methods were found to conform to international best practice. • 2018: CSA Global reviewed the entire drilling, logging, sampling, sample shipping and laboratory processes during the competent persons site visit for the 2018 MRe, and found the systems and adherence to protocols to be to an appropriate standard.

JORC TABLE 1 - SECTION 1 - SAMPLING TECHNIQUES AND DATA – EXPLORATION TARGET

Criteria	JORC Code explanation	Commentary
Sampling techniques	• Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling. • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report. • In cases where 'industry standard' work	• The exploration target is based on diamond drill core samples, RC chip samples and channel samples from surface trenches. • Representative ½ core samples were split from PQ, HQ & NQ diameter diamond drill core on site using rock saws, on a routine 2m sample interval that also honours lithological/intrusive contacts. • The orientation of the cut line is controlled using the core orientation line ensuring uniformity of core splitting wherever the core has been successfully oriented. • Sample intervals are defined and subsequently checked by geologists, and sample tags are attached (stapled) to the plastic core trays for every sample interval. • RC chip samples are ¼ splits from one meter intervals using a 75%:25% riffle splitter to obtain a 3kg sample • RC samples are uniform 2m samples formed from the combination of two ¼ split 1m samples.

Criteria	JORC Code explanation	Commentary
	has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	
Drilling techniques	• Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	• The Exploration Target has been based upon diamond drilling of PQ, HQ and NQ diameters with both standard and triple tube core recovery configurations, RC drilling and surface trenching with channel sampling. • All drill core drilled by Xanadu has been oriented using the "Reflex Ace" tool.
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• Diamond drill core recoveries were assessed using the standard industry (best) practice which involves: removing the core from core trays; reassembling multiple core runs in a v-rail; measuring core lengths with a tape measure, assessing recovery against core block depth measurements and recording any measured core loss for each core run. • Diamond core recoveries average 97% through mineralization. • Overall, core quality is good, with minimal core loss. Where there is localized faulting and or fracturing core recoveries decrease, however, this is a very small percentage of the mineralized intersections. • RC recoveries are measured using whole weight of each 1m intercept measured before splitting • Analysis of recovery results vs grade shows no significant trends that might indicate sampling bias introduced by variable recovery in fault/fracture zones.

Criteria	JORC Code explanation	Commentary
Logging	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. • The total length and percentage of the relevant intersections logged.	• All drill core is geologically logged by well-trained geologists using a modified "Anaconda-style" logging system methodology. The Anaconda method of logging and mapping is specifically designed for porphyry Cu-Au mineral systems and is entirely appropriate to support Mineral Resource Estimation, mining and metallurgical studies. • Logging of lithology, alteration and mineralogy is intrinsically qualitative in nature. However, the logging is subsequently supported by 4 Acid ICP-MS (48 element) geochemistry and SWIR spectral mineralogy (facilitating semi-quantitative/calculated mineralogical, lithological and alteration classification) which is integrated with the logging to improve cross section interpretation and 3D geological model development. • Drill core is also systematically logged for both geotechnical features and geological structures. Where drill core has been successfully oriented, the orientation of structures and geotechnical features are also routinely measured. • Both wet and dry core photos are taken after core has been logged and marked-up but before drill core has been cut.
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc., and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate	• All drill core samples are ½ core splits from either PQ, HQ or NQ diameter cores. A routine 2m sample interval is used, but this is varied locally to honour lithological/intrusive contacts. The minimum allowed sample length is 30cm. • Core is appropriately split (onsite) using diamond core saws with the cut line routinely located relative to the core orientation line (where present) to provide consistency of sample split selection. • The diamond saws are regularly flushed with water to minimize potential contamination. • A field duplicate ¼ core sample is collected every 30th sample to ensure the "representivity of the in situ material collected". The performance of these field duplicates are routinely analysed as part of Xanadu's sample QC process. • Routine sample preparation and analyses of DDH samples were carried out by ALS Mongolia LLC (ALS Mongolia), who operates an independent sample preparation and analytical laboratory in Ulaanbaatar. • All samples were prepared to meet standard quality control procedures as follows: Crushed to 75% passing 2mm, split to 1kg, pulverised to 85% passing 200 mesh (75 microns) and split to 150g sample pulp. • ALS Mongolia Geochemistry labs quality management system is certified to ISO 9001:2008. • The sample support (sub-sample mass and comminution) is appropriate for the grainsize and Cu-Au

Criteria	JORC Code explanation	Commentary
	to the grain size of the material being sampled.	distribution of the porphyry Cu-Au mineralization and associated host rocks.
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	• All samples were routinely assayed by ALS Mongolia for gold • Au is determined using a 25g fire assay fusion, cupelled to obtain a bead, and digested with Aqua Regia, followed by an atomic absorption spectroscopy (AAS) finish, with a lower detection (LDL) of 0.01 ppm. • All samples were also submitted to ALS Mongolia for the 48 element package ME-ICP61 using a four acid digest (considered to be an effective total digest for the elements relevant to the MRE). Where copper is over-range (>1% Cu), it is analysed by a second analytical technique (Cu-OG62), which has a higher upper detection limit (UDL) of 5% copper. • Quality assurance has been managed by insertion of appropriate Standards (1:30 samples – suitable Ore Research Pty Ltd certified standards), Blanks (1:30 samples), Duplicates (1:30 samples – ¼ core duplicate) by XAM. • Assay results outside the optimal range for methods were re-analysed by appropriate methods. • Ore Research Pty Ltd certified copper and gold standards have been implemented as a part of QC procedures, as well as coarse and pulp blanks, and certified matrix matched copper-gold standards. • QC monitoring is an active and ongoing processes on batch by batch basis by which unacceptable results are re-assayed as soon as practicable. • Prior to 2014: Cu, Ag, Pb, Zn, As and Mo were routinely determined using a three-acid-digestion of a 0.3g sub-sample followed by an AAS finish (AAS21R) at SGS Mongolia. Samples were digested with nitric, hydrochloric and perchloric acids to dryness before leaching with hydrochloric acid to dissolve soluble salts and made to 15ml volume with distilled water. The LDL for copper using this technique was 2ppm. Where copper was over-range (>1% Cu), it was analysed by a second analytical technique (AAS22S), which has a higher upper detection limit (UDL) of 5% copper. Gold analysis method was essentially unchanged.
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data	• All assay data QAQC is checked prior to loading into XAM's Geobank data base. • The data is managed by XAM geologists. • The data base and geological interpretation is managed by XAM. • Check assays are submitted to an umpire lab (SGS Mongolia) for duplicate analysis. • No twinned drill holes exist.

Criteria	JORC Code explanation	Commentary
	storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	• There have been no adjustments to any of the assay data.
Location of data points	• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control.	• Diamond drill holes have been surveyed with a differential global positioning system (DGPS) to within 10cm accuracy. • The grid system used for the project is UTM WGS-84 Zone 48N • Historically, Eastman Kodak and Flexit electronic multi-shot downhole survey tools have been used at Kharmagtai to collect down hole azimuth and inclination information for the majority of the diamond drill holes. Single shots were typically taken every 30m to 50m during the drilling process, and a multi-shot survey with readings every 3-5m are conducted at the completion of the drill hole. As these tools rely on the earth's magnetic field to measure azimuth, there is some localised interference/inaccuracy introduced by the presence of magnetite in some parts of the Kharmagtai mineral system. The extent of this interference cannot be quantified on a reading-by-reading basis. • More recently (since September 2017), a north-seeking gyro has been employed by the drilling crews on site (rented and operated by the drilling contractor), providing accurate downhole orientation measurements unaffected by magnetic effects. Xanadu have a permanent calibration station setup for the gyro tool, which is routinely calibrated every 2 weeks (calibration records are maintained and were sighted) • The project DTM is based on 1 m contours from satellite imagery with an accuracy of ±0.1 m.
Data spacing and distribution	• Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied.	• Holes spacings range from <50m spacings within the core of mineralization to +500m spacings for exploration drilling. Hole spacings can be determined using the sections and drill plans provided. • Holes range from vertical to an inclination of -60 degrees depending on the attitude of the target and the drilling method. • The data spacing and distribution is sufficient to establish anomalism and targeting for porphyry Cu-Au, tourmaline breccia and epithermal target types. • Holes have been drilled to a maximum of 1,300m vertical depth. • The data spacing and distribution is sufficient to establish geological and grade continuity, and to support the Mineral Resource classification.

Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• Drilling is conducted in a predominantly regular grid to allow unbiased interpretation and targeting. • Scissor drilling, as well as some vertical and oblique drilling, has been used in key mineralised zones to achieve unbiased sampling of interpreted structures and mineralised zones, and in particular to assist in constraining the geometry of the mineralised hydrothermal tourmaline-sulphide breccia domains.
Sample security	• The measures taken to ensure sample security.	• Samples are delivered from the drill rig to the core shed twice daily and are never left unattended at the rig. • Samples are dispatched from site in locked boxes transported on XAM company vehicles to ALS lab in Ulaanbaatar. • Sample shipment receipt is signed off at the Laboratory with additional email confirmation of receipt. • Samples are then stored at the lab and returned to a locked storage site.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• Internal audits of sampling techniques and data management are undertaken on a regular basis, to ensure industry best practice is employed at all times. • External reviews and audits have been conducted by the following groups: • 2012: AMC Consultants Pty Ltd. was engaged to conduct an Independent Technical Report which reviewed drilling and sampling procedures. It was concluded that sampling and data record was to an appropriate standard. • 2013: Mining Associates Ltd. was engaged to conduct an Independent Technical Report to review drilling, sampling techniques and QAQC. Methods were found to conform to international best practice. • 2018: CSA Global reviewed the entire drilling, logging, sampling, sample shipping and laboratory processes during the competent persons site visit for the 2018 MRe, and found the systems and adherence to protocols to be to an appropriate standard.

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

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

Criteria	JORC Code (Section 2) Explanation	Commentary
Mineral tenement and land tenure status	• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. • The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.	• The Project comprises 1 Mining Licence (MV 17387A). • 100% owned by Oyut Ulaan LLC. • Xanadu and its joint venture partner, Mongol Metals LLC has a 90% interest in the Kharmagtai porphyry copper-gold Project. The remaining 10% is owned by Quincunx Ltd. • The Mongolian Minerals Law (2006) and Mongolian Land Law (2002) govern exploration, mining and land use rights for the project.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• Previous exploration was conducted by Quincunx Ltd, Ivanhoe Mines Ltd and Turquoise Hill Resources Ltd including extensive drilling, surface geochemistry, geophysics, mapping.
Geology	• Deposit type, geological setting and style of mineralisation.	• The mineralisation is characterized as porphyry copper-gold type. • Porphyry copper-gold deposits are formed from magmatic hydrothermal fluids typically associated with felsic intrusive stocks that have deposited metals as sulphides both within the intrusive and the intruded host rocks. Quartz stockwork veining is typically associated with sulphides occurring both within the quartz veinlets and disseminated thought out the wall rock. Porphyry deposits are typically large tonnage deposits ranging from low to high grade and are generally mined by large scale open pit or underground bulk mining methods. The deposits at Kharmagtai are atypical in that they are associated with intermediate intrusions of diorite to quartz diorite composition; however the deposits are in terms of contained gold significant, and similar gold-rich porphyry deposits.
Drill hole Information	• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: • easting and northing of the drill hole collar.	• Diamond drill holes are the principal source of geological and grade data for the Project. • See figures in ASX/TSX Announcement.

Criteria	JORC Code (Section 2) Explanation	Commentary
	• elevation or RL Reduced Level – elevation above sea level in metres) of the drill hole collar. • dip and azimuth of the hole • down hole length and interception depth • hole length. • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data Aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• A nominal cut-off of 0.1% 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. • 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. • Maximum contiguous dilution within each intercept is 9m for 0.1%, 0.3%, 0.6% and 1% eCu. • Most of the reported intercepts are shown in sufficient detail, including maxima and subintervals, to allow the reader to make an assessment of the balance of high and low grades in the intercept. • Informing samples have been composited to two metre lengths honouring the geological domains and adjusted where necessary to ensure that no residual sample lengths have been excluded (best fit). • Metal equivalents used the following formula: 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

Criteria	JORC Code (Section 2) Explanation	Commentary
		off the eCu calculation defined by CSA in the 2018 Mineral Resource Upgrade. Copper equivalent (eCu) grade values were calculated using the following formula: eCu = Cu + 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 6834 $/t) • Gold price - 1320 $/oz • Copper recovery - 85% • Gold recovery - 70% Relative recovery of gold to copper = 70% / 85% = 82.35%.
Relationship between mineralisation on widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	• Mineralised structures are variable in orientation, and therefore drill orientations have been adjusted from place to place in order to allow intersection angles as close as possible to true widths. • Exploration results have been reported as an interval with 'from' and 'to' stated in tables of significant economic intercepts. Tables clearly indicate that true widths will generally be narrower than those reported.
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a	• See figures in ASX/TSX Announcement.

Criteria	JORC Code (Section 2) Explanation	Commentary
	plan view of drill hole collar locations and appropriate sectional views.	
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• Resources have been reported at a range of cut-off grades, above a minimum suitable for open pit mining, and above a minimum suitable for underground mining.
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• Extensive work in this area has been done and is reported separately.
Further work	• The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• The mineralisation is open at depth and along strike. • Current estimates are restricted to those expected to be reasonable for open pit mining. Limited drilling below this depth (-300m RLl) shows widths and grades potentially suitable for underground extraction. • Exploration on going.

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

Mineral Resources are not reported so this is not applicable to this report.

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

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