Cobre Limited A.C.N. 626 241 067 (**ASX: CBE**)
Level 10, Kyle House, 27 Macquarie Place
SYDNEY NSW 2000
Tel: + 61 407 123 143
www.cobre.com.au

15 April 2025

ASX Limited - Company Announcements Platform

Successful beneficiation and thermal testing confirm viability of high purity and furnace feedstock silica products from Cobre's HPQ Project, WA

Cobre Limited (ASX: **CBE**, **Cobre** or **Company**) is pleased to announce results from a series of beneficiation and thermal tests designed to assess the viability of its High Purity Quartz (**HPQ**) Exploration programme at the Company's wholly owned Perrinvale Project (**Perrinvale** or **Project**) in Western Australia.

Highlights:

- Beneficiation work demonstrates contaminants can be significantly reduced through crushing and standard metallurgical processes highlighting the potential to create a high purity silica end-product;
- Thermal stability and cohesion test work demonstrates the silica as suitable for furnace feedstock;
- Based on thermal stability results, samples have been sent to Malaysian based GK Silika Sdn Bhd which will oversee the next phase of silica test work; and
- Aboriginal Cultural Heritage survey focused on the HPQ Exploration Target area has been completed.

On the 7 October 2024, the Company announced the discovery of an HPQ Exploration Target estimated at 5.1 Mt to 28.3Mt at a pre-beneficiation SiO_2 grade of 99.1 to 99.6%[1] on the Perrinvale Project (***Figure 1***). Prior to advancing towards defining a mineral resource, three priority field areas have been selected and a sample collection programme completed in order to assess the HPQ targets potential to produce very high value, high-purity end products and assess suitability for silicon smelting.

[1] The potential quantity and grade of the Exploration Target is conceptual in nature, and there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of Mineral Resources

Samples were assessed using a series of beneficiation tests including: Attritioning; Heavy Liquid Separation; Magnetic Separation; and Acid Leaching. The beneficiation work has significantly increased SiO_2 content by stripping out contaminants, with Tescan Integrated Mineral Analyzer Scanning Electron Microscope (TIMA SEM) analysis suggesting the remnant contaminants are predominantly muscovite with minor kaolinite and K-Feldspar. On average the beneficiation steps have upgraded the SiO_2 content from 99.64% to 99.907% with further upgrading expected through additional grinding and flotation.

In addition to beneficiation test work, Thermal Stability (TSI) and Cohesion Index (CI) determinations were undertaken to determine the suitability for smelter furnace feedstock as an alternative product. TSI and CI results are positive and, along with the quartz rock chip sample assays reported in October 2024 and herein, have attracted interest from overseas including a silicon smelting operation in Malaysia where testing is underway.

The Aboriginal Cultural Heritage survey did not identify any sites of Aboriginal significance clearing the way, subject to any required regulatory approvals, for ground disturbing exploration such as drilling.

Commenting on the beneficiation test results for Perrinvale, Adam Wooldridge, Cobre's CEO, said:

"The bench test results received to date further support the viability of the Perrinvale HPQ Target to deliver both smelter furnace feedstock and high value, high purity silica end products offering the Company two separate potential product streams. Samples have now been dispatched to GK Silica in Malayasia to further assess the smelter feedstock opportunity. With the Heritage survey completed, the Company is in an excellent position to advance the target to a Mineral Resource Estimate."

Sample collection and preparation

Stage 2 field sampling completed in November 2024 generated 29 paired quartz samples, collected on traverses across the three priority areas shown on ***Figure* 2**. Sample pairs consisted of one fine fraction (hand-picked nominal <30mm) and one coarse fraction (nominal 30-250mm). The fine fraction samples were in the range of 1-2 kg, with a sub sample of each (29 in total) submitted for TIMA-SEM analysis. The coarse fraction samples, in the range 5-8 kg, were crushed to pass 26.5mm, with sub samples of 20-25mm particle size material utilised for TSI and CI determinations. The bulk of all samples will remain available for further test work and analysis to be guided by the results of the current programme.

Beneficiation Testing

Bench scale beneficiation work was progressed with three composited crushed samples screened to various particle sizes and each sized sample fraction assayed to assess SiO_2 and contaminant deportment based on particle size. Included sample locations are shown (labelled Bene-1, Bene-2 & Bene-3) on ***Figure* 2**. Based on this work, further beneficiation testing was advanced on material with a +0.125mm particle size. ***Table* 1** shows removing the fine (-0.125mm) material eliminates 14% of the mass, while eliminating higher proportions of Al_2O_3, Fe_2O_3, TiO_2, CaO, MgO and Na_2O.

Beneficiation testing on the +0.125mm screened material progressed sequentially through; Attritioning, Heavy Liquid Separation, Magnetic Separation, and Acid Leaching (**HCl**). With the Bene-3 final product screened to -1mm, 1-2mm and +2mm fractions for TIMA SEM analysis to determine the mineralogy and deportment of remnant contaminants. These results show remnant contaminates are dominated by muscovite (0.079%) with lesser kaolinite (0.007%) and K-Feldspar (0.004%) and indicate further particle size reduction would be expected to significantly improve liberation via basic beneficiation steps. Additionally, muscovite is typically amenable to separation via floatation, which was not applied in the first-round beneficiation.

Table 1: *Deportment of assayed contaminants to the -0.125mm fraction*

	Unit	Fraction +0.125mm	All size fractions	Proportion <0.125mm
Mass	kg	85.7%	100.0%	14%
Al_2O_3	%	0.09	0.11	23%
Fe_2O_3	%	0.007	0.015	51%
TiO_2	%	0.002	0.002	0%
CaO	%	0.008	0.010	27%
MgO	%	0.006	0.007	20%
Na_2O	%	0.016	0.020	23%
K_2O	%	0.017	0.019	12%
P_2O_5	%	0.003	0.003	15%
Mn_3O_4	%	0.001	0.001	0%
Cr_2O_3	%	0.001	0.001	0%
BaO	%	<0.001	<0.001	0%
ZrO_2	%	0.029	0.046	38%[1]
ZnO	%	<0.001	<0.001	0%
V_2O_5	%	<0.001	<0.001	0%
SrO	%	<0.001	0.001	100%[2]
LOI_{1000}	%	0.13	0.15	15%

1. Contamination likely related to pulverising in a zirconia bowl. 2. Due to rounding and lower detection limit of 0.001 there is likely to be very low levels of SrO in the +0.125mm material.

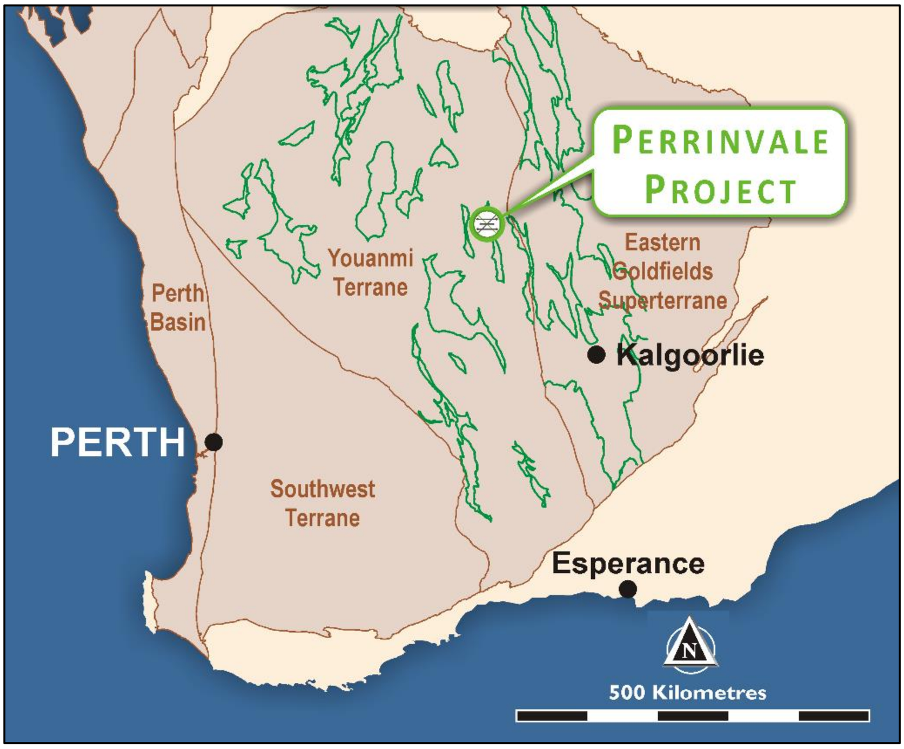

Figure 1: Perrinvale Project Location in Western Australia's Yilgarn Craton.

Mineralogical Analysis

In addition to the Bene-3 sample, a selection of quartz chip samples collected from areas labelled Stage 2.01, Stage 2.02 and Stage 2.03 on ***Figure* 2** were submitted to AXT in Perth for TIMA SEM analysis. The aim of this work was to understand mineral deportment within the quartz and the selected samples (shown in

Figure ***3)*** were chosen to represent a broad spectrum of silica units present at Perrinvale; from visually clean through fractured and discoloured to units with a distinct opaque colouration. The TIMA results range from 99.987% SiO_2 through to 94.08% SiO_2. Table *2* lists the minimum and maximum mineral contents of 12 quartz chip samples analysed via TIMA SEM. Muscovite and Kaolinite are present in all samples, in line with the Bene-3 end product analysis (included as

Table **3**), which shows these minerals along with K-Feldspar present in all fractions. At an average of 0.079%, muscovite is the major contaminant while Kaolinite at 0.008% and K-feldspar at 0.005% are minor. Chlorite-Smectite Group and Magnetite/Hematite minerals are present at the 0.001% detection limit in one size fraction along with 'other minerals' totalling 0.002%.

With an average TIMA SEM SiO_2 content of 99.907% the beneficiation steps have increased the SiO_2 content from 99.64% determined by pre-beneficiation XRF analysis.

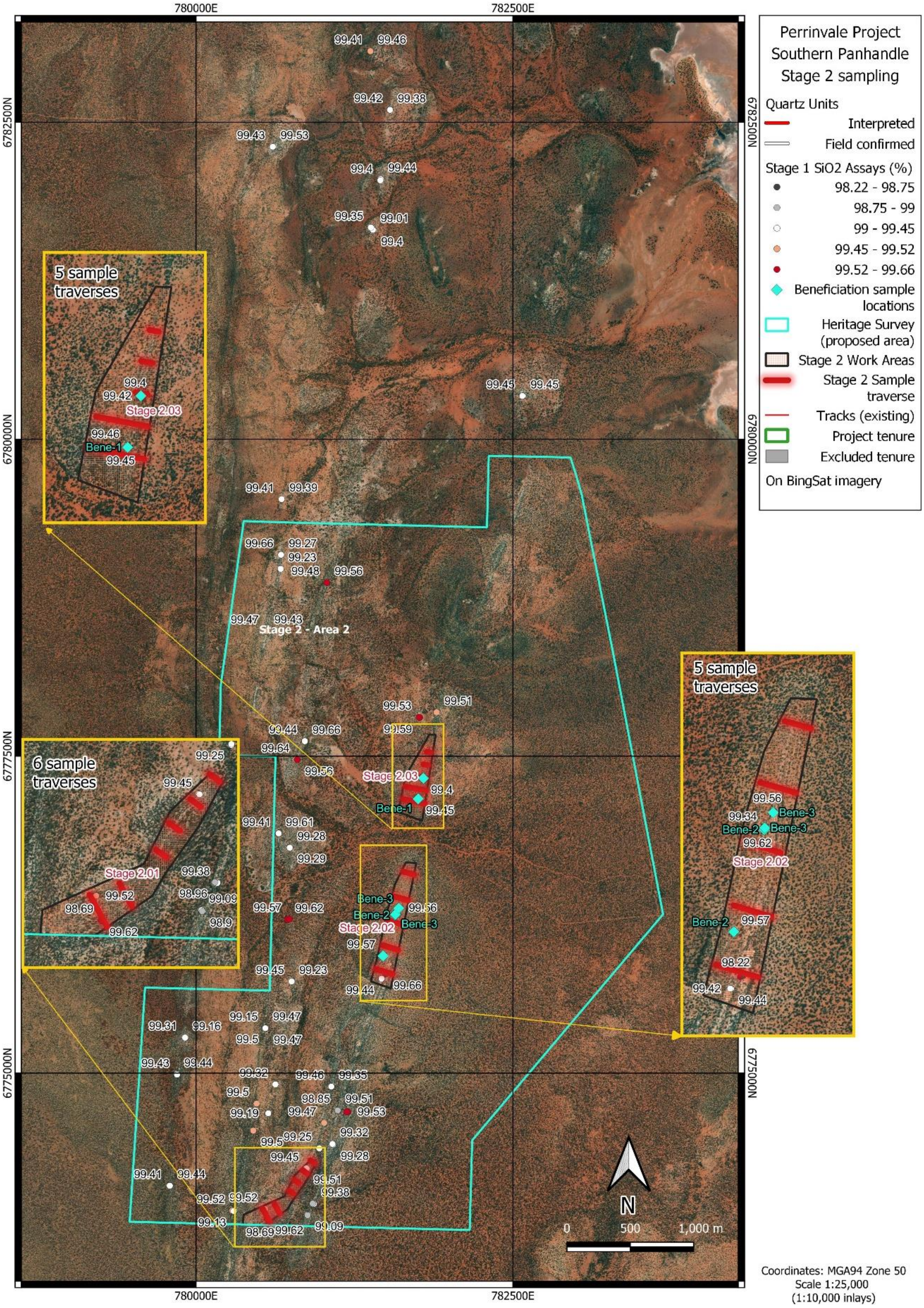

Figure 2: *Exploration program location plan*

__Table 2:__ Minimum and maximum mineral content for quartz chip samples analysed via TIMA SEM

Mineral	Minimum (%)	Maximum (%)
Quartz	94.083	99.987
Muscovite	0.008	2.509
Biotite-Annite	0.000	0.033
Kaolinite	0.004	2.526
Chlorite-Smectite Group	0.000	0.463
K-Feldspar	0.000	0.057
Albite	0.000	0.014
Plagioclase	0.000	0.000
Sulphides	0.000	0.001
Other Silicates	0.000	0.002
Magnetite/Hematite	0.000	0.551
Ti-Oxide	0.000	0.020
Ilmenite	0.000	0.007
Calcite	0.000	0.000
Dolomite-Ankerite	0.000	0.000
Apatite	0.000	0.000
Barite	0.000	0.000
Others	0.000	0.011
0.000 = below the 0.001% detection limit		

__Table 3:__ Beneficiation end-product TIMA SEM analysis mineral content by particle size fraction

Long List / Fraction	Bene 3 +2mm	Bene 3 1-2mm	Bene 3 -1mm	Avg
Quartz	99.926	99.914	99.880	99.907
Muscovite	0.060	0.072	0.104	0.079
Biotite-Annite	0.000	0.000	0.000	0.000
Kaolinite	0.007	0.007	0.008	0.007
Chlorite-Smectite Group	0.000	0.000	0.001	0.000
K-Feldspar	0.003	0.004	0.005	0.004
Albite	0.000	0.000	0.000	0.000
Plagioclase	0.000	0.000	0.000	0.000
Sulphides	0.000	0.000	0.000	0.000
Other Silicates	0.000	0.000	0.000	0.000
Gibbsite	0.000	0.000	0.000	0.000

Magnetite/Hematite	0.001	0.000	0.000	0.001
Ti-Oxide	0.000	0.000	0.000	0.000
Ilmenite	0.000	0.000	0.000	0.000
Calcite	0.000	0.000	0.000	0.000
Dolomite-Ankerite	0.000	0.000	0.000	0.000
Apatite	0.000	0.000	0.000	0.000
Gypsum	0.000	0.000	0.000	0.000
Titanite	0.000	0.000	0.000	0.000
Others	0.002	0.002	0.002	0.002
Total	**100.000**	**100.000**	**100.000**	**100.000**
0.000 = below the 0.001% detection limit				

Beneficiation Samples

The beneficiation samples were blended from retained stage 1 rock chip sample material that had been crushed to a nominal 2mm. Each beneficiation sample was made up of two stage 1 samples that were combined via riffle blending prior to riffle splitting sub-samples for further test work. Refer to 7 October announcement Significant High Purity Quartz Discovered in W.A. for details on stage 1 samples.

Table 4: *Beneficiation Sample Locations*

Beneficiation Sample ID	Original Sample [1]	Latitude	Longitude	Easting	Northing
Bene-1	310705	-29.1013	119.8953	781790	6777326
Bene-1	310707	-29.10278	119.895	781757	6777163
Bene-2	300712	-29.11401	119.8924	781473	6775924
Bene-2	300718	-29.11108	119.8933	781568	6776246
Bene-3	300719	-29.11103	119.8933	781569	6776252
Bene-3	300720	-29.11059	119.8936	781599	6776300
1. refer to ASX announcement dated 7 October 2024. Collected in Lat/Long. Coordinate System: WGS84				Converted to East/North. UTM Zone 50	

TIMA Samples

The TIMA samples are qualitative and were handpicked from a set of composited samples collected along traverses across the three areas of interest shown on ***Figure 2***; the same traverses were sampled for Thermal Stability and Cohesion Index analysis. Coordinate provided in ***Table 5*** represents the mid-point of the sample traverse area. The 12 selected samples are shown prior to preparation in

Figure ***3*** below and were selected based on visual properties to provide a range of examples from apparent high levels of contaminants (samples 15 and 19) to apparently no contamination (samples 1 and 8). The TIMA determined mineral distributions are provided in Table 6.

The collected samples, with approximate diameters of 25mm, were cut and mounted and ground flat for analysis, meaning the analysed surface will not match the surfaces displayed in ***Figure 3***.

In addition to the quartz chip samples the Bene-3 sample end product was sized to three fractions (-1mm, 1 to 2mm, and +2mm) and each fraction was mounted in resin blocks for TIMA SEM analysis.

Table 5: *TIMA SEM quartz chip sample locations*

Sample No.	Sample Area	Easting	Northing
1	Stage 2.01	780790	6774140
2	Stage 2.01	780625	6773950
5	Stage 2.01	780860	6774220
8	Stage 2.01	780640	6773925
15	Stage 2.03	781655	6777155
16	Stage 2.03	781770	6777130
18	Stage 2.03	781690	6777150
19	Stage 2.03	781675	6777255
25	Stage 2.02	781565	6776185
26	Stage 2.02	781625	6776375
27	Stage 2.02	781570	6775975
28	Stage 2.02	781535	6776195

East/North. UTM Zone 50

Table 6: *TIMA SEM Mineral Mass Distribution for quartz chip samples*

Mineral Mass Distribution %

Long List / Sample	Tourcan 1 (24163-1)	Tourcan 2 (24163-2)	Tourcan 5 (24163-5)	Tourcan 8 (24163-8)	Tourcan 15 (24163-15)	Tourcan 16 (24163-16)	Tourcan 18 (24163-18)	Tourcan 19 (24163-19)	Tourcan 25 (24163-25)	Tourcan 26 (24163-26)	Tourcan 27 (24163-27)	Tourcan 28 (24163-28)
Quartz	99.987	99.782	99.823	99.947	94.083	99.582	99.936	99.136	99.921	99.854	99.979	98.441
Muscovite	0.008	0.120	0.079	0.039	2.509	0.067	0.055	0.749	0.054	0.068	0.014	0.866
Biotite-Annite	0.000	0.000	0.001	0.000	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.033
Kaolinite	0.004	0.057	0.069	0.008	2.526	0.186	0.004	0.034	0.011	0.053	0.005	0.016
Chlorite-Smectite Group	0.000	0.021	0.005	0.001	0.463	0.114	0.002	0.011	0.005	0.006	0.001	0.036
K-Feldspar	0.000	0.002	0.002	0.001	0.016	0.002	0.001	0.057	0.001	0.002	0.000	0.053
Albite	0.000	0.009	0.014	0.001	0.000	0.006	0.000	0.000	0.000	0.008	0.000	0.000
Plagioclase	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Sulphides	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Other Silicates	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.001	0.000	0.002	0.000	0.000
Magnetite/Hematite	0.000	0.002	0.002	0.001	0.359	0.034	0.000	0.002	0.002	0.002	0.000	0.551
Ti-Oxide	0.000	0.000	0.000	0.000	0.020	0.001	0.000	0.002	0.004	0.000	0.000	0.000
Ilmenite	0.000	0.000	0.001	0.000	0.007	0.003	0.000	0.000	0.000	0.002	0.000	0.000
Calcite	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Dolomite-Ankerite	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Apatite	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Barite	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Others	0.000	0.006	0.003	0.003	0.011	0.002	0.001	0.006	0.002	0.002	0.001	0.003
Total	**100.000**	**100.000**	**100.000**	**100.000**	**100.000**	**100.000**	**100.000**	**100.000**	**100.000**	**100.000**	**100.000**	**100.000**

Figure 3: *Quartz chip samples analysed by TIMA SEM*

Silicon Smelting Potential

The assay data from all stages of sampling indicates silica and contaminant grades are suitable for silicon smelting. Another important quality assessment is the ability of the quartz to remain intact when subject to the heat of the furnace during the smelting process. Thermal Stability Index (TSI) and Cohesion Index (CI) are two measures used to assess suitability as furnace feedstock.

Coarse quartz (25 to 250mm) was collected across the traverses shown on ***Figure 2*** and then subject to crushing and screening to generate subsamples in 20 to 25mm size range for analysis. One 2kg composite sample from each of the three Stage 2 areas was tested at Queensland University of Technology. The sample locations making up the composites are listed in ***Table 7***.

The TSI/CI test program has determined the Cohesion Index of quartz samples Comp Area 2.01, Comp Area 2.02, Comp Area 2.03 to be 79.50%, 78.24%, and 85.23% respectively. These values indicate two (2) of the samples to be just below the cut-off of >80% to be deemed "good quality", while the Comp Area 2.03 sample meets the "good quality" cut-off of >80%.

The test program has also determined the Thermal Stability Index of the quartz samples TS3506 Comp Area 2.01, TS3506 Comp Area 2.02, TS3506 Comp Area 2.03 to be 75.23%, 75.44%, and 75.48% respectively. All three (3) quartz samples have a TSI quality classification "medium quartz" (70-79%).

On the basis of the results to date GK Silika, expressed interest in the project and the Company has now entered into a three-month exclusivity agreement to allow GK Silika to undertake independent testing and determine if they have an ongoing interest in the Perrinvale Project. Six samples have now been dispatched to GK Silika.

Table 7: *Location of samples making up the Thermal Stability & Cohesive Index sample composites*

Sample_ID	Easting	Northing	Composite sample ID
TS012	781810	6777430	Comp Area 2.03
TS013	781795	6777335	
TS015	781735	6777245	
TS016	781780	6777235	
TS017	781655	6777155	
TS018	781690	6777150	
TS020	781735	6777140	
TS021	781520	6775785	Comp Area 2.02
TS022	781450	6775805	
TS023	781570	6775975	
TS024	781535	6775985	
TS028	781535	6776195	
TS029	781625	6776375	
TS001	780570	6773850	Comp Area 2.01
TS002	780550	6773880	
TS003	780535	6773910	
TS004	780650	6773900	
TS005	780640	6773925	
TS006	780625	6773950	
TS007	780750	6774060	
TS008	780790	6774140	
TS009	780860	6774220	
TS010	780920	6774295	
Coordinates: MGA94 UTM Zone 50			

Heritage Survey

The Company engaged an external consultant to co-ordinate an Aboriginal heritage survey covering the area depicted on ***Figure 2***, encompassing all areas of sampling discussed in this announcement. No sites of heritage significance were identified. The Aboriginal Consultants and Anthropologist have confirmed activities such as clearing for drilling or collection of bulk samples can proceed in the survey area (subject to any other required regulatory approvals).

Conclusion

The first attempt at basic beneficiation has shown positive results and, combined with insights gained from TIMA SEM analysis, allows for a refined beneficiation process to be developed. Additionally results suggest a more selective approach to quartz unit extraction, if possible, could deliver significant benefits by reducing contained contaminants prior to beneficiation work.

With the first beneficiation work limited to a single stage of fine crushing, there is opportunity to add additional particle size reduction to improve contaminant liberation. The TIMA SEM analysis of both the quartz chips and the beneficiated product indicated muscovite and kaolin are the major contaminants; post beneficiation the contaminants are limited to muscovite, with minor kaolin and K-

Feldspar (plus one of the three samples contains 0.001% Chlorite-Smectite group minerals and another 0.001% iron oxide). Mica minerals are commonly separated via floatation, a process that was not part of the initial beneficiation regime. Furthermore, the distribution of these minerals suggests particle size reduction to those common for production of high N (99.99+ SiO_2) would be expected to expose these minerals to liberation.

The silicon smelting potential is supported by the work to date and while the TSI and CI indicate fair to good quality, the high SiO_2 content and contaminant profile has attracted the interest of GK Silika who are considering Perrinvale as potential feedstock for Malaysian smelting operations..

With Silicon Smelting able to utilise quartz with SiO_2 grades as low as 98%, the project may have the capacity to produce two feedstock streams, one into Silicon Smelting and the other refined to generate very high N (99.9999+) HPQ, which represents a smaller market attracting the highest prices.

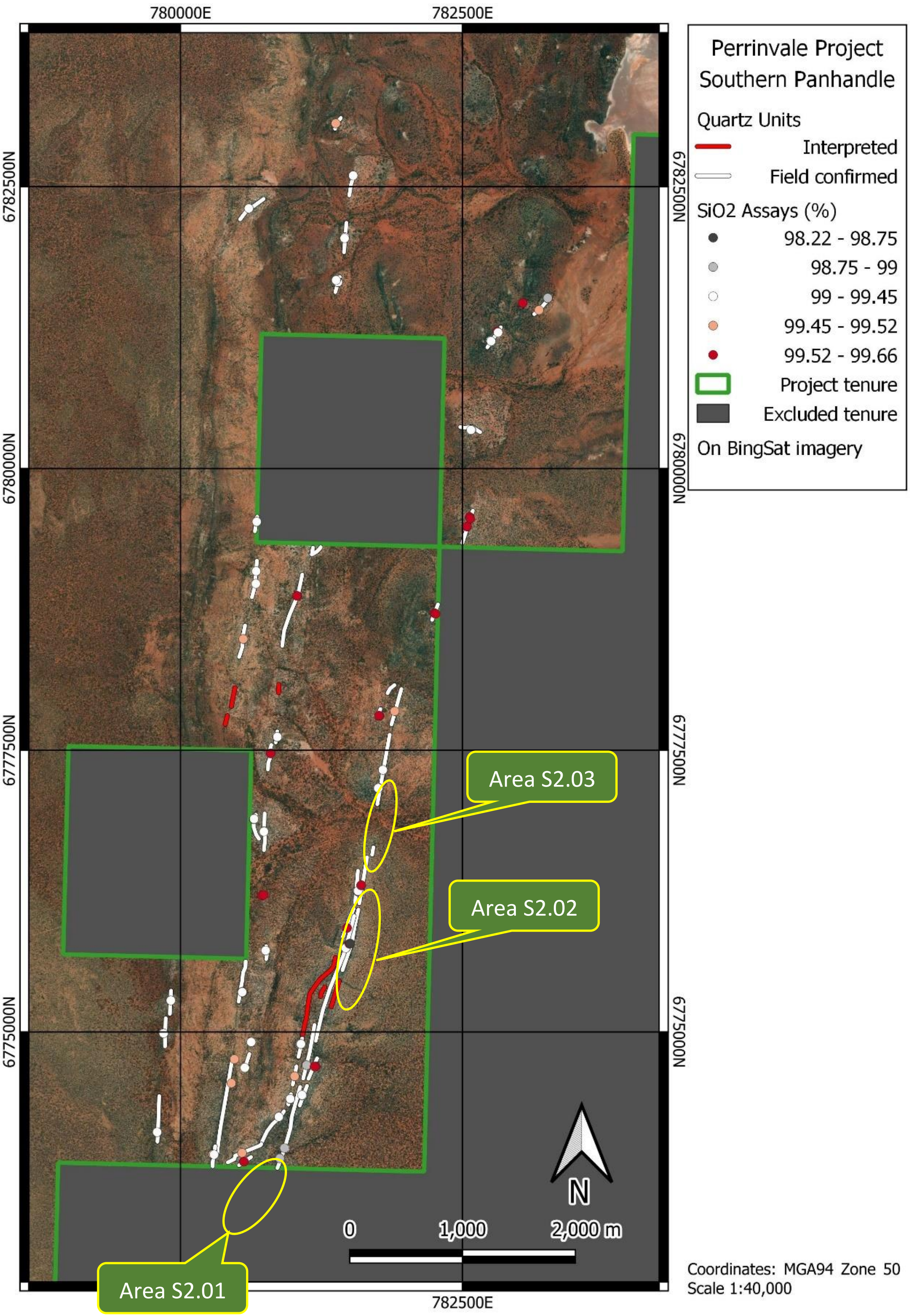

Figure 4: Quartz Unit outcrops, tenure boundaries, and stage 1 rock chip sample locations, with three stage 2 fieldwork areas outlined.

Photo: Example of one Quartz unit outcrop at the Perrinvale Project

Background on High Purity Quartz

Quartz has long been a commercially mined product with uses in the construction sector and glass manufacturing as well as being a source of silicon used in high end electronics. As technology develops and the world is moving towards carbon reduction and electrification, silicon has been recognised as critical. The following is extracted from a research paper published in August 2024 titled "A review of high-purity quartz for silicon production in Australia"[2] :

> *High-purity quartz (HPQ) is the only naturally occurring and economically viable source for the production of silicon. Silicon is a critical mineral, and a key component in modern technologies such as semiconductors and photovoltaic cells. Critical minerals support the move towards a greater reliance on electrification, renewable energy sources and economic security. The global transition to net zero carbon emissions means there is a growing need for new discoveries of HPQ to supply the silicon production chain. HPQ deposits are identified in a multitude of geological settings, including pegmatites, hydrothermal veins, sedimentary accumulations and quartzite; however, deposits of sufficient volume and quality are rare.*

The in-situ quartz deposits require specific beneficiation processes to remove contaminating elements and upgrade the silica (SiO_2%) content. As silica content increases so does the value of the refined silica product, as shown in Table 8 . The ability to refine a particular deposit is dependent on the type and location of contaminants within the quartz and other physical properties meaning each potential HPQ ore needs to be tested to determine ideal process pathway and the achievable purity of the end product. Refining processes are often tailored to specific ores.

Table 8: *Indicative Silicon Product Pricing.*

Relative Prices of Silicon Products as Purity Increases

Product	**Purity (Si %)**	**Price ($AUD/t)**
Silicon Metal	≥98.5	$ 405
Recharging Polysilicon	≥99.9999	$ 7,000
PV Polysilicon	≥99.9999999	$ 24,225
Electronic-grade Polycrystalline Silicon	>99.999999999	$ 41,220

Prices sourced 1/10/2024 from https://www.metal.com/price/New%20Energy/Solar .
Silicon Metal price sourced from maxtonco.com

[2] https://www.tandfonline.com/doi/full/10.1080/08120099.2024.2362296

Next steps:

The Company will now work to determine a preferred beneficiation regime for the production of high N value HPQ products and looks forward to receiving feedback from GK Silica.

This ASX release was authorised on behalf of the Cobre Board by: Adam Wooldridge, Chief Executive Officer.

For more information about this announcement, please contact:

Adam Wooldridge

Chief Executive Officer

wooldridge@cobre.com.au

Competent Persons Statement

The information in this report that relates to mineral exploration results and metallurgical results review is based on work compiled under the supervision of Mr Todd Axford, a Competent Person and member of the AIG. Mr Axford is the Principal Geologist for GEKO-Co Pty Ltd and contracted to the Company as Exploration Manager and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the '*Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves*'. Mr Axford consents to the inclusion in this report of the information in the form and context in which it appears.

Table 4: JORC Code Reporting Criteria

Section 1 Sampling Techniques and Data – Surface Rock Sampling

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.	For the TSI/CI and TIMA SEM quartz chip samples. A field geologist collected samples of outcrop using a crack hammer and geologist pick. Material was broken off in-situ outcrops generally within a radius of 10m of the pre-defined sample traverse. At all sample locations two samples were collected: a coarse 20-250mm and a fine 20-30mm particle size. Samples were placed in numbered sample bags and the sample location recorded with handheld GPS and georeferenced photo.
	Include reference to measures taken to ensure sample representativity and the appropriate calibration of any measurement tools or systems used.	Being semi-qualitatively selected, rock samples are not expected to be representative of any more than the area sampled. However, when the sample set is taken as a whole, low levels of variability provides some indication of consistency within the sampled units. The sub samples selected for TIMA SEM analysis consisted of a mix of visually 'cleaner' and 'dirtier' quartz as discussed in the report
	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	The quartz units sampled are considered analogous to a bulk commodity where the primary mineral/metal of interest displays relatively low variability. In these cases, it is often contaminant minerals that may impact the ultimate quality of the target deposit. In the HPQ space various forms of beneficiation are applied to remove contaminants. For the Southern Panhandle samples this report includes results of the first pass of industry standard beneficiation work.

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).	Not applicable
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Not applicable
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Not applicable
	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.	Not applicable
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.	Rock samples were photographed and areas sampled geologically described in the field.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Geological logging of chips/core/rock samples is qualitative by nature.
	The total length and percentage of the relevant intersections logged.	Not applicable
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	Not applicable
	If non-core, whether riffled, tube	Samples were collected dry.

Criteria	JORC Code explanation	Commentary
	sampled, rotary split, etc and whether sampled wet or dry.	For the beneficiation end product samples, the remaining material was screened and then split to generate a sub sample for TIMA SEM analysis and to retain material for ICP analysis. For the TIMA SEM quartz chip samples, an individual chip was selected by the geologist from each ~2kg sample. The chips were selected based on being visually representative of the broader sample, while also ensuring some representation of the 'dirtiest' material. For the TSI/CI samples, which consisted of composites of individual samples for each of the three field areas of interest, the full field sample was crushed to p100 26.5mm and then dry screened at 25mm and 20mm. The retained material in the 20 to 25mm size range was rotary split so that the combined composite sample for each of the three areas was just over 2kg.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The beneficiation end product samples were prepared in set dimension resin mounts as required by the instrument. The quartz chip samples were resin mounted and ground flat, to create a suitable surface for analysis. These processes were guided by the mineralogist/operator of the TIMA SEM machine and are considered appropriate to generate reliable results. For the TSI/CI samples the screening and compositing process are considered appropriate.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	No quality control procedures aimed at maximising representivity were applied to the sub-sampling process for all samples. The industry standard particle size reduction prior to sub-sampling is highlighted in sample theory as being the most appropriate way to ensure representivity. By crushing the entire beneficiation sample to -3mm prior to

Criteria	JORC Code explanation	Commentary
		splitting with a commercial splitter designed to deliver representative splits the Company is confident the process is suitable considering the stage of exploration.
	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.	Due to the nature of rock chip samples being chunks of rock broken off outcrop, with typical particle sizes from 30 to 150mm and the limited size of the samples (typically 1-8 kg), representative field duplication was not considered possible. Rather than collecting from a precise point, Samples were collected as multiple chunks of quartz taken from a radius at the sample location with the intention of creating samples that were more representative of the local quartz unit.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are considered suitable for the quartz sampled and analyses processes applied.
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.	The beneficiated end product and quartz chip samples were analysed via TIMA SEM. The process provides a quantitative determination of the mineral make up of the mounted sample. It is considered a total analysis (to the extent of the 0.001% detection limit). For TSI and CI the test is also quantitative and total. XRF determinations discussed in detail in ASX announcement dated 7 October 2024.
	For geophysical tools, spectrometers, handheld XRF instruments (fpXRF), etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	SEM model: TESCAN TIMA G4 Detector model: EDAX Element 30 Beam energy: 25kV Absorbed current: 9.7 Beam current: 9.87 Spot size: 106.42nm Working distance: 15mm TIMA software: 2.11.1

Criteria	JORC Code explanation	Commentary
		Measurement type: Bright Phase Search (Sections) Acquisition mode: Dot mapping X-ray events per pixel: 1000 Field width: 800µm Pixel spacing: 1µm Dot spacing: 3µm
	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.	Being early stage metallurgical and specialist mineral analysis techniques internal laboratory quality control processes were relied upon. No issues have been identified.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Not applicable
	The use of twinned holes.	Not applicable
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Data was recorded in field notebooks and handheld electronic devices and later compiled with the sample assays. Data is stored on local computers and Company Cloud server.
	Discuss any adjustment to assay data.	No adjustments have been made.
Location of data points	Accuracy & quality of surveys used to locate drill holes (collar & downhole) or surface samples. Specification of the grid system used.	Handheld GPS co-ordinates expected accuracy 3-5m, which is suitable for the current purpose. WGS84 Latitude and Longitude
	Quality and adequacy of topographic control.	Handheld GPS, which is suitable for the stage of exploration.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	For rock chip data spacing was controlled by available outcrop and observations of the field geologist.
	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	Not applicable

Criteria	JORC Code explanation	Commentary
	applied.	
	Whether sample compositing has been applied.	No sample compositing completed for the purpose of reporting results. Samples supplied for TSI/CI were composited prior to analysis as discussed above.
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.	The nature of the tabular quartz units sampled suggests biased sampling is unlikely. It was noted that where the quartz units are cut by structures the brittle nature of the quartz results in a higher density of fractures, and at the surface at least, the fractures are coated with iron oxides and potentially other contaminants. These areas were considered to represent 'dirtier' quartz and were specifically sampled along with 'cleaner' areas of quartz.
	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.	Not applicable
Sample security	The measures taken to ensure sample security.	Samples double bagged in the field and delivered directly to the site office by company personnel. Here sample numbering was checked and polywaeve bags sealed with cable ties prior to transport by Company personnel directly to the laboratory. Samples were then stored at the laboratory facility. With respect to the TSI/CI composites, once prepared by Nagrom they were bagged and then sealed in to a bucket and couriered to the testwork facility.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews completed.

Section 2 Reporting of Exploration Results

Criteria	JORC Code 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.	Reported results all from 100% Toucan Gold Pty Ltd tenements at Perrinvale WA, which may include E29/929, E29/938, E29/946, E29/986, E29/987, E29/989, E29/990 & E29/1017. Toucan Gold Pty Ltd is a subsidiary (100% owned) of Cobre Ltd. FMG Resources Pty Ltd retains a 2% net smelter royalty on any future metal production from three tenements E29/929, 938 and 946. All samples were taken on Crown Land covered by a Pastoral Lease. No native title exists. The land is used primarily for cattle grazing.
	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 tenements are in good standing, and all work has been conducted under specific approvals from Department of Energy, Mines, Industry Regulation & Safety where required.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No results are relied on from other parties in this report.
Geology	Deposit type, geological setting and style of mineralisation.	The Perrinvale Project area includes parts of the Illaara and Panhandle Greenstone Belts (GB) located in the northern Southern Cross Domain of the Youanmi Terrane, in the Central part of Western Australia's Yilgarn Craton. The lower units in the stratigraphy are a series of quartzites and quartz-mica schists. In some places where these units are proximal to later intruded granites the quartzites are interpreted to have been further metamorphosed resulting in development of pegmatitic and amorphous textures with no visible accessory minerals. These units are the focus of the High Purity Quartz exploration.

Criteria	JORC Code explanation	Commentary
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 - 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 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.	Not applicable
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. These relationships are particularly important in the reporting of Exploration	Not applicable

Criteria	JORC Code explanation	Commentary
	Results.	
Relationship between mineralisation widths and intercept lengths	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').	Not applicable
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Included within the report (or as appendices)
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.	All assay results are included on the plans and/or cross-sections and tables in this report (or the 7 October 2024 ASX announcement)including reference to location.
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.	Exploration of significance completed prior to December 2019 is detailed in the Cobre Ltd Prospectus that can be accessed via the Company website http://www.cobre.com.au/ Similarly exploration completed from January 2020 has been reported and is available from the same company website.
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,	Further work is discussed in the document.

Criteria	JORC Code explanation	Commentary
	including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	