ASX Announcement | ASX: CPM

17 January 2024

New rock chip assays expand search area at Brumby Ridge

Highlights

Cooper Metals Limited (ASX: CPM) ("CPM" or "the Company") is pleased to provide an exploration update on the Brumby Ridge Cu-Au Prospect within the Mt Isa East Cu-Au Project.

- **New rock chip sampling at Brumby Ridge significantly increases the geochemical footprint, as rock chip sample MER409 returned 4.8% Cu and 0.08g/t Au, located approximately 135m to the NNW of the current RC drilling (23MERC030)**
- **Rock chip sample MER423 returned 2.95% Cu and 0.06g/t Au, located approximately 100m SE of drill hole 23MERC025**
- **Detailed UAV magnetic survey has defined an important lithological contact between interpreted magnetic low response lithology (possibly Argylla Formation) in the west and a relatively strong magnetic response lithology (possible Leichardt Volcanics) in the east. The Cu-Au mineralisation defined by the recent RC drilling appears to be focused along this lithological contact defined in the magnetic data**
- **The Company is planning around 1,000m of diamond drilling and up to 2,000m of RC drilling at Brumby Ridge to help ascertain the size and grade potential of the mineralisation**
- **Drilling is expected to commence in late February 2024. In preparation for the drilling program, the Company is working through the necessary logistical and approval processes**
- **An induced polarisation survey is planned for late January/February at Brumby Ridge to optimize the drill planning**

Cooper Metals Managing Director, Ian Warland commented:

"The detailed UAV supported aeromagnetic survey has been extremely useful to map the lithological contact at Brumby Ridge, which we believe is important for focussing the Cu-Au mineralisation. This contact appears to continue along strike from the current drilling and along with new rock chip samples, has expanded our exploration search area at Brumby Ridge. Preparations are underway to commence drilling after the wet season and we are also planning an induced polarisation survey shortly to help optimise the next drill program. Brumby Ridge represents an important near-term exploration opportunity for Cooper Metals and we look forward to providing updates as we make progress on this prospect and others that make up the Mt Isa East Cu-Au Project."

Brumby Ridge Cu-Au Prospect

In November last year, Cooper announced significant RC drill results up to **71m @ 2.80% Cu and 0.05 g/t Au from 115m, including 24m @ 5.37% Cu & 0.10g/t Au from 115m (23MERC028)**[1] at Brumby Ridge**.** Significantly, drill hole 23MERC028 finished in Cu-Au mineralisation, with the last 3m to the end of hole (186m) averaging **1.88% Cu and 0.04g/t Au (Figure 3)**.

Subsequent to the announcement on 30th of November 2023, Cooper has completed a down-hole electromagnetic survey (DHEM), a detailed unmanned aerial vehicle (UAV) magnetic survey and rock chip sampling at Brumby Ridge.

The UAV magnetic survey was acquired on 25m spaced east-west lines, four times more data than the current 100m spaced lines at Brumby Ridge. The new magnetic data has defined an important lithological contact between interpreted magnetic low response lithology (possibly Argylla Formation) in the west and a relatively strong magnetic response lithology (possible Leichardt Volcanics) in the east (**Figure 2**). The Cu-Au mineralisation defined by the recent RC drilling, appears to be focused along this lithological contact defined in the magnetics. The contact can be clearly identified by the magnetics along strike from the drilling. This new magnetic data will aid exploration drilling along strike.

Assay results for eleven new rock chip samples collected from the Brumby Ridge Prospect area in late 2023, have now been received (**Appendix 1**). The new rock chip sampling results have significantly expanded the geochemical footprint at Brumby Ridge, with high grade copper collected in rock chips approximately 135m to the NNW and 100m SE of the current drilling.

Rock chip sample MER409 returned 4.8% Cu and 0.08g/t Au, located approximately 135m to the NNW of the RC drilling (23MERC030) and rock chip sample MER408 returned 4.65% Cu and 0.11g/t Au just 45m along strike to the NNW from hole 23MERC030. Hole 23MERC030 intersected a large lower grade intersection of 115m @ 0.37% Cu from 86m with several elevated zones greater than 1% Cu. New rock chips have also been sampled along strike to the SE of the nearest drilling, with sample MER423 returning 2.95% Cu and 0.06g/t Au approximately 100m SE of hole 23MERC025 (**Figure 3**).

A down hole electromagnetic (DHEM) survey was completed on the open portion of drill holes 23MERC028 and 23MERC029, with no significant electromagnetic response detected in either hole. The DHEM survey was not possible through the mineralised zone of drill hole 23MERC028 due to the drill hole collapsing at 114m and the mineralisation starting at 115m. Two lines of surface fixed loop electromagnetic data (FLEM) north and south of the drilling did not detect any significant EM responses. The lack of EM response at Brumby Ridge was not unexpected as it may be due to the absence of pyrrhotite associated with the mineralisation and the brecciated nature of the sulphides. The Company is planning an induced polarisation survey at Brumby Ridge in January/February.

Overview Brumby Ridge

Brumby Ridge is located approximately 30km to the east of Mt Isa (**Figure 4**). Five RC holes have been drilled into Brumby Ridge to date (***Figure 1***). The mineralisation is associated with extensive magnetite, hematite, and albite alteration typical of iron oxide copper-gold (IOCG) systems in the area. Based on the drilling to date, the orientation of the mineralisation is thought to be striking NW, however, the dip of the mineralisation is unknown as holes 23MERC024, 23MERC028 and 23MERC030 have all ended in mineralisation, hence the true width of the mineralisation is unknown at this early stage of exploration.

Next Steps Brumby Ridge

The Company is planning around 1,000m of diamond drilling and up to 2,000m of RC drilling at Brumby Ridge to help ascertain the size and grade potential of the mineralisation. Drilling is expected to commence in late February 2024 at the end of the wet season. In preparation for the drilling program, the Company is working through the necessary logistical and approval processes. Next steps at Brumby Ridge include an IP survey followed by the diamond and RC drilling. Updates will be provided on Raven DHEM survey once results have been finalised.

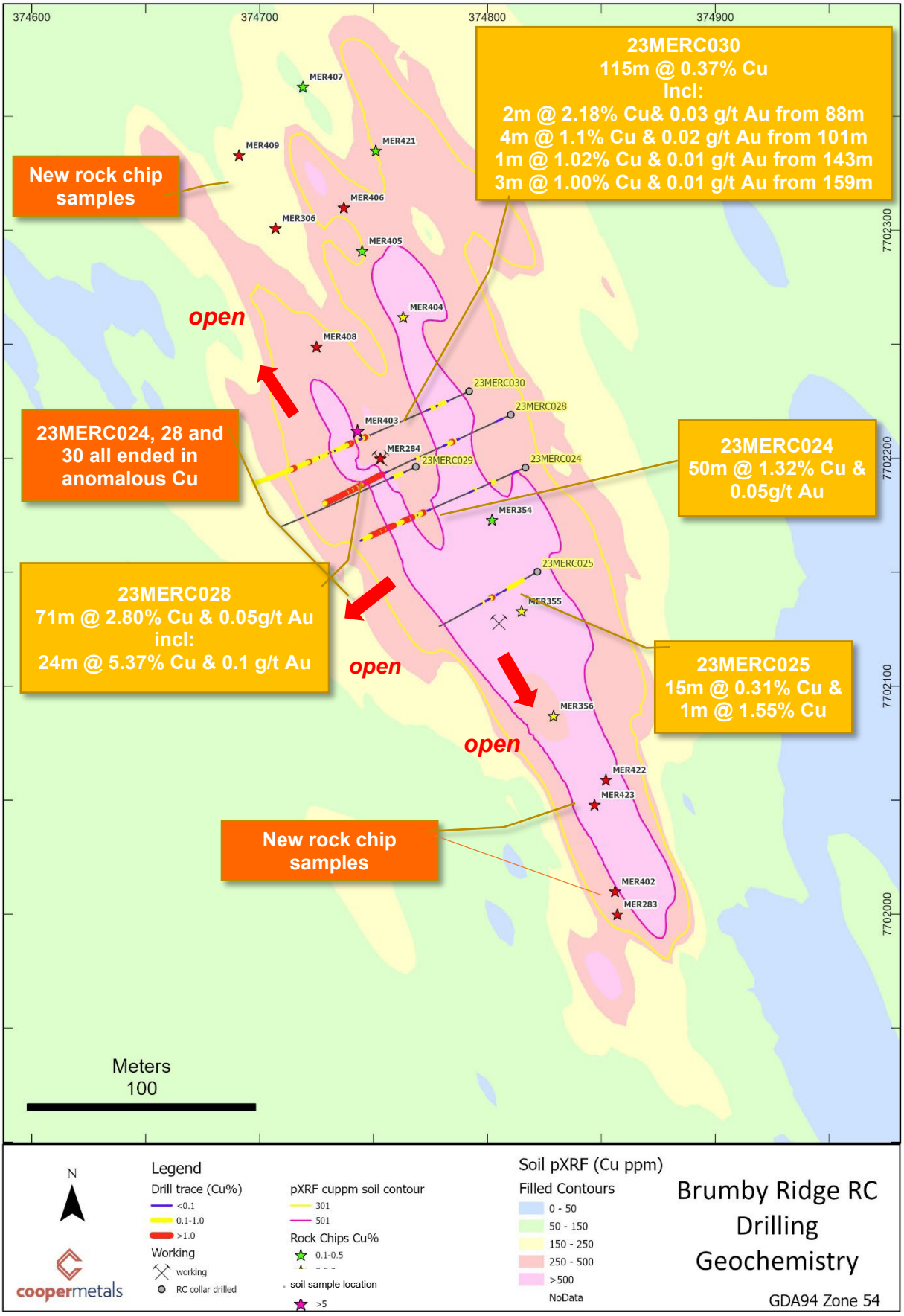

Figure 1: Brumby Ridge Prospect RC drilling over gridded pXRF soil samples and rock chip locations

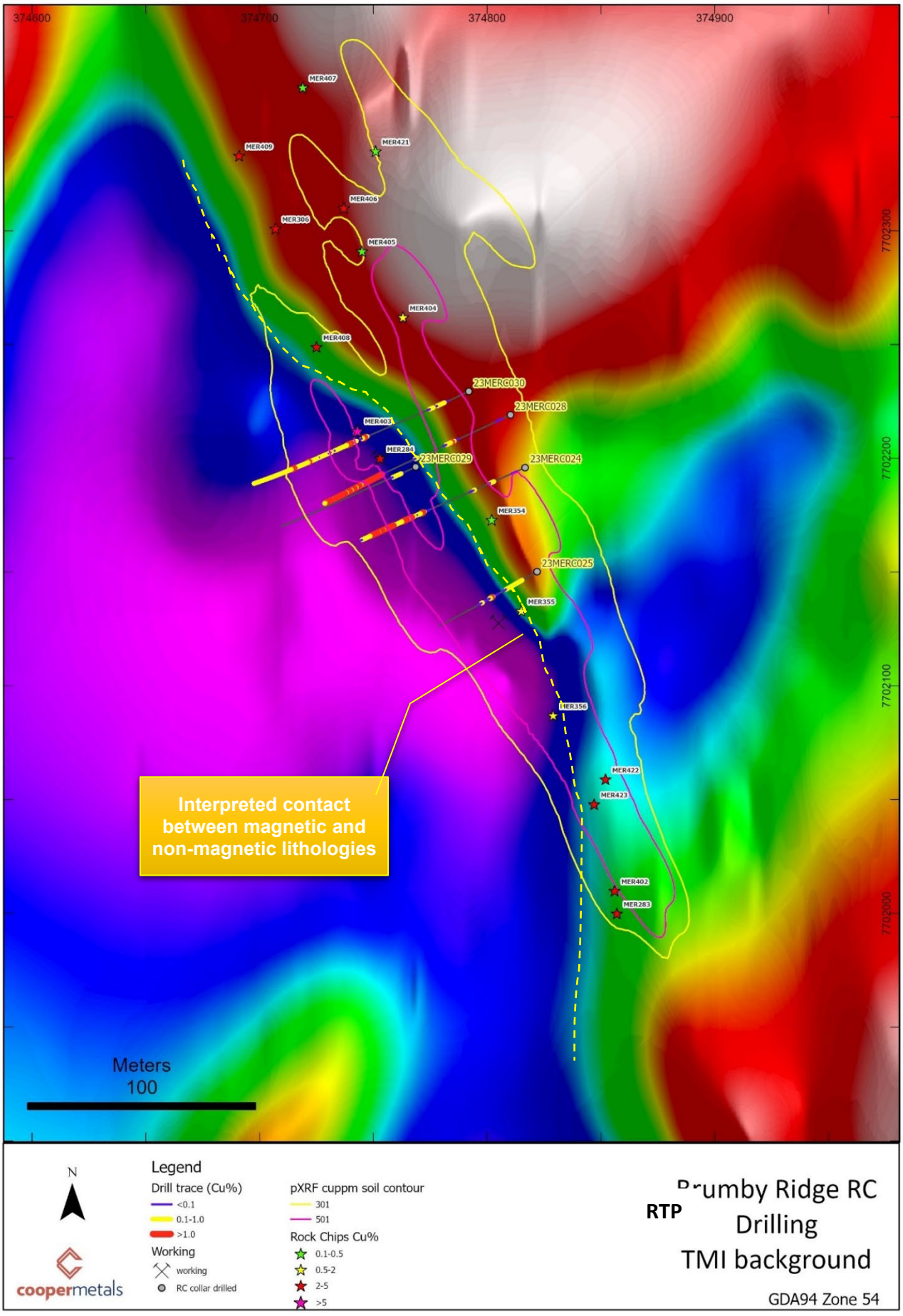

Figure 2: Brumby Ridge RC drilling, geochemistry on RTP magnetics background

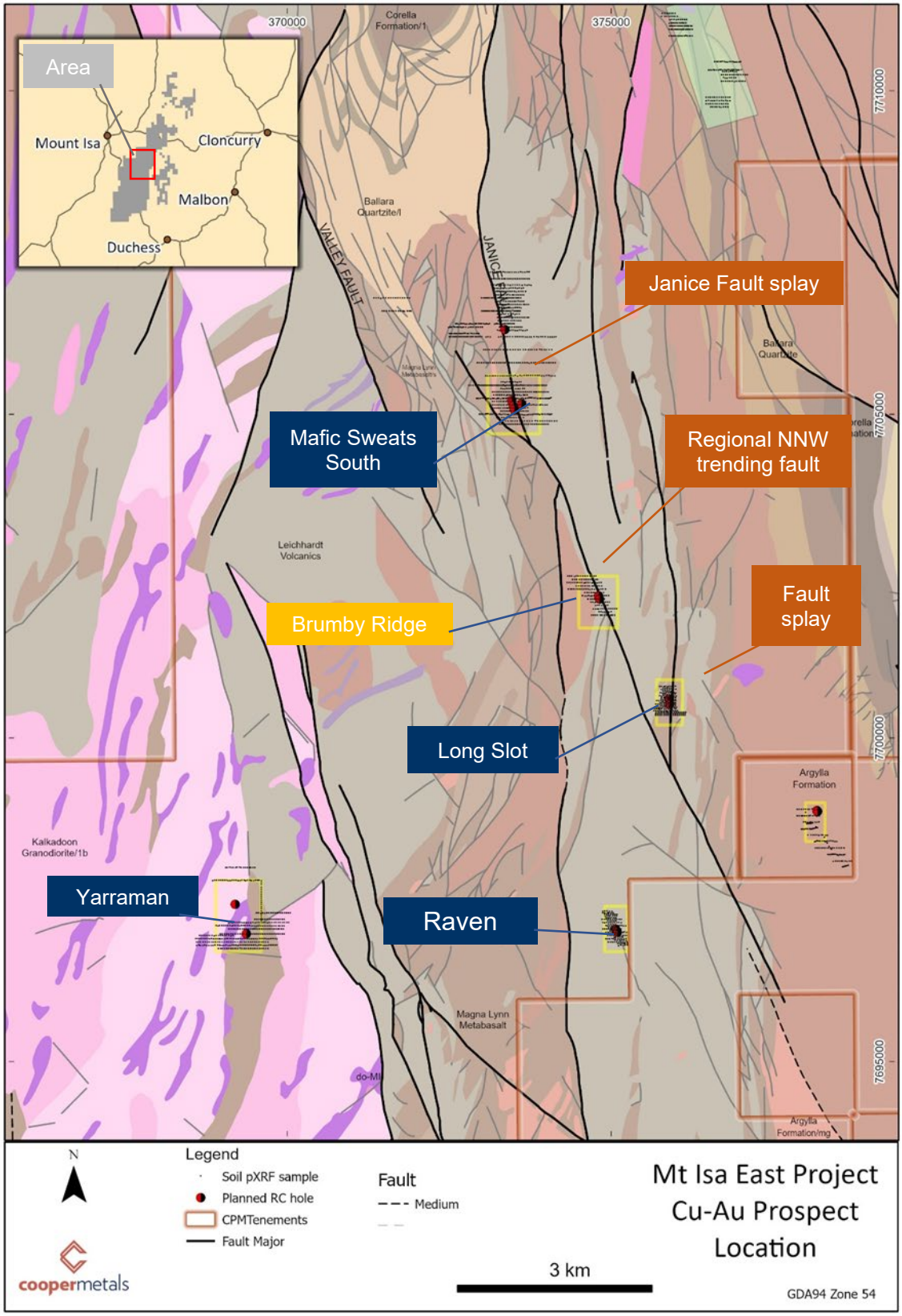

Figure 3: Prospect Location Map Mt Isa East Project

The Board of Cooper Metals Limited has approved this announcement and authorised its release on the ASX.

For further information:

Ian Warland
Managing Director
ian@coopermetals.com.au
M: 0410 504 272

COMPETENT PERSON'S STATEMENT:

The information in this report that relates to Geological Interpretation and Exploration Results is based on information compiled by Ian Warland, a Competent Person who is a Member of The Australian Institute of Geoscientists. Mr Warland is employed by Cooper Metals Limited. Mr Warland has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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 Warland consents to the inclusion in the report of the matters based on his information and the form and context in which it appears.

Reference

1. ASX: CPM 30 November 2023: Brumby Ridge Copper Discovery confirmed with 71m @ 2.8% Copper including 24m @ 5.4% Copper
2. ASX: CPM 14 November 2023: 50m @ 1.32% Cu intercept at Brumby Ridge Cu-Au Prospect, Mt Isa East Cu-Au Project
3. ASX: CPM 2 November 2023: First holes into two previously untested prospects hit significant Cu-Au mineralisation
4. ASX: CPM 5 October 2023: RC Drilling commences to test five Cu-Au prospects at Mt Isa East

About Cooper Metals Limited

Cooper Metals Ltd (ASX: CPM) is an ASX-listed explorer with a focus on copper and gold exploration. CPM aims to build shareholder wealth through discovery of mineral deposits. The Company has three projects all in proven mineralised terrains with access to infrastructure. The Projects are detailed briefly below:

Mt Isa East Project (Qld)
Cooper Metal's flag ship Mt Isa East Cu-Au Project covers ~1600 sq.km of tenure with numerous historical Cu-Au workings and prospects already identified for immediate follow up exploration. The Mt Isa Inlier is highly prospective for iron oxide copper gold (IOCG), iron sulphide copper gold (ISCG) and shear hosted Cu +/- Au deposits.

Gooroo Project (WA)
Lastly the Gooroo Cu and or Au Project covers newly identified greenstone belt ~20 km from Silver Lakes (ASX: SLR) Deflector mine. The 26 km expanse of covered greenstone belt has had almost no exploration and was only added to government geology maps in 2020 after reinterpretation of geophysical data.

www.coopermetals.com.au

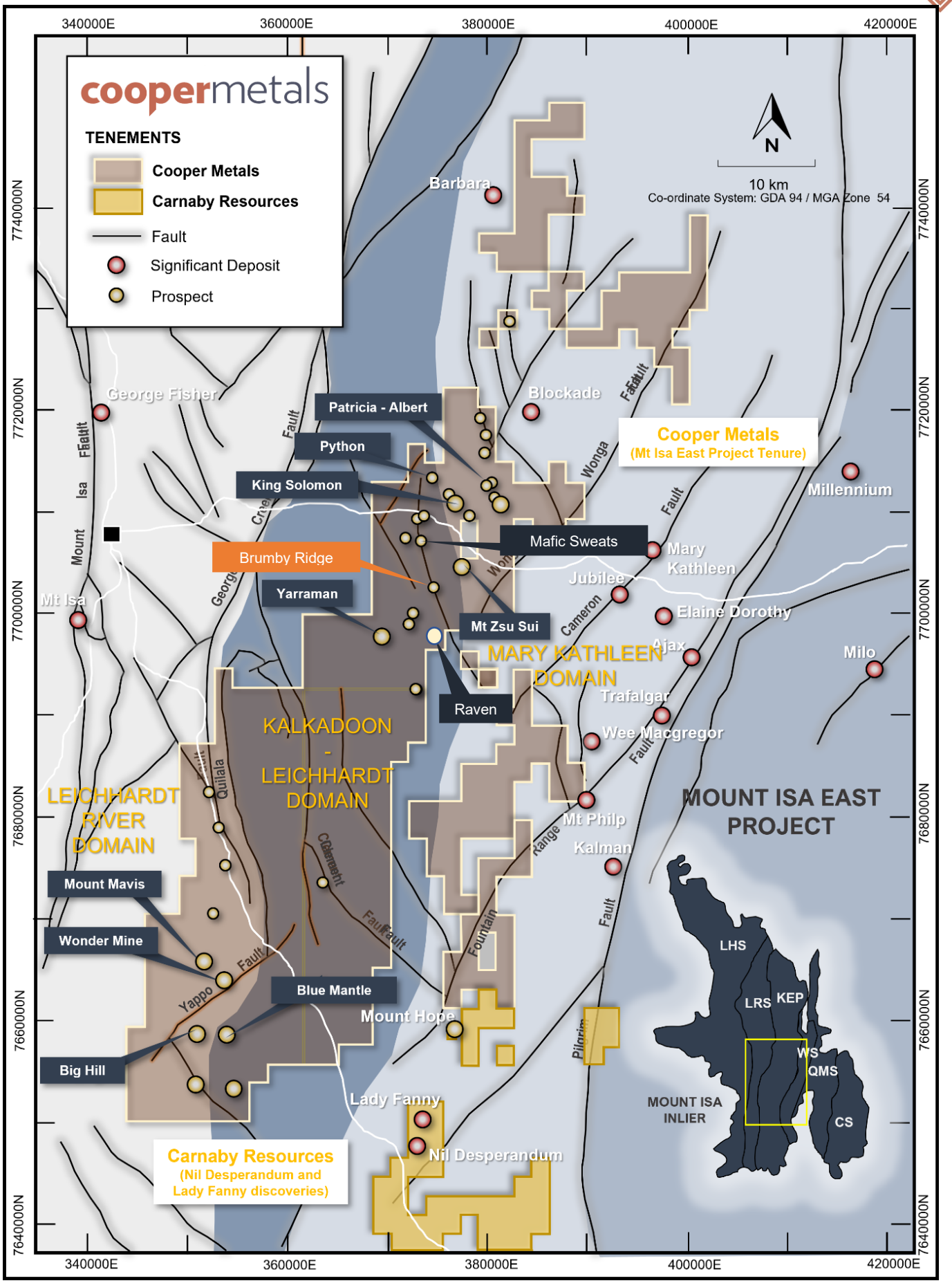

Figure 4: Mt Isa East Project Location over regional geology and main prospects

Appendix 1: Rock chip samples Brumby Ridge Prospect

Prospect	Sample Id	Cu %	Au g/t	East	North
Brumby Ridge	MER121	5.82	0.020	374805	7702126
Brumby Ridge	MER283	2.31	0.043	374857	7702000
Brumby Ridge	MER284	4.47	0.038	374753	7702200
Brumby Ridge	MER306	2.83	0.036	374707	7702301
Brumby Ridge	MER354	0.46	0.004	374802	7702173
Brumby Ridge	MER355	0.85	0.004	374815	7702133
Brumby Ridge	MER356	1.00	0.007	374829	7702087
Brumby Ridge	MER402	2.48	0.070	374856	7702010
Brumby Ridge	MER403	6.96	0.100	374743	7702212
Brumby Ridge	MER404	1.35	0.040	374763	7702262
Brumby Ridge	MER405	0.30	0.010	374745	7702291
Brumby Ridge	MER406	2.70	0.020	374737	7702310
Brumby Ridge	MER407	0.17	0.000	374719	7702363
Brumby Ridge	MER408	4.65	0.110	374725	7702249
Brumby Ridge	MER409	4.80	0.080	374691	7702333
Brumby Ridge	MER421	0.31	0.230	374751	7702335
Brumby Ridge	MER422	2.15	0.060	374852	7702059
Brumby Ridge	MER423	2.95	0.060	374847	7702048

Note: new samples reported are from MER402 to 423

APPENDIX 2: The following tables are provided to ensure compliance with JORC Code (2012) requirements for exploration results for the Mt Isa East Project in Qld.

1.1. **Section 1 Sampling Techniques and Data to update**

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• Nature and quality of sampling (eg 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.	• Cooper Metals Ltd (ASX: CPM) is reporting a new geochemistry survey completed at the Company's Mt Isa East Project. • CPM Rock chip samples were collected predominantly on selective outcrop where there were signs of mineralisation or alteration of interest. • All samples were submitted to ALS Laboratory in Mount Isa for sample preparation and then forwarded to ALS Laboratory in Brisbane for analysis. • Rock samples preparation completed by ALS using method CRU-21 crush of 70% passing 6mm, then PUL-23 pulverise to nominal 85% passing 75 microns. • Samples were analysed using method ME-ICP61 for 33 element four acid ICP-AES. Au was analysed by 50g charge ICP-AES finish code a-Au-ICP22. • Ore Grade Elements were assayed using four acid digest and MEOG62. Ore Grade Cu was assayed using Cu-OG62 • Soil sampling consisted of taking ~200 grams of -2mm sieve fraction taken from below the organic layer. Samples were taken at a 50m sample spacing on 150m spaced lines. Sample spacing was closed up to 25m sample spacing and 100m line spacing closer to the mineralised trend interpreted position. • Soil Sampling Analysis -samples were analysed by Niton XL5 portable XRF machine for a suite of elements with Cu response reported to the market. • Cooper Metals is also reporting the results of downhole electromagnetic survey (DHEM) • DHEM and surface FLEM was completed by Australian Geophysical Services on the Brumby Ridge Prospect between November 22nd, 2023, and December 2nd 2023 The FLEM & DHEM surveys used the same Tx loop. Two lines of FLEM north & south of the drilling were read on 25m station intervals. • Two drill holes 23MERC029 and 23MERC030 were surveyed with DHEM at 5 & 10m intervals • UAV magnetic survey over Brumby Ridge Prospect was acquired by Diverse Surveyors Pty Ltd on the 8th of December 2023

Criteria	JORC Code explanation	Commentary
Drilling techniques	• Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).	• No new drilling is reported in this release
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.	• No new drilling is reported in this release
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.	• CPM rocks have been described in detail and photographed.
	• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	• All field descriptions are qualitative in nature.
	• The total length and percentage of the relevant intersections logged.	• No drilling reported in this release
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.	• CPM rocks - sample preparation was appropriate for the level of reporting. No duplicates were submitted. • CPM rock chips were taken by geologist to be representative of the subcrop or outcrop sampled. • CPM rock samples of ~1kg are appropriate for style of mineralisation and regional exploration.
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	• CPM Rock chips - No duplicates, standards or blanks were submitted with rock chip samples. The laboratory has its own QAQC system for standards, repeats and duplicates. • The DHEM data was acquired using a EMIT DigiAtlantis 3 component borehole fluxgate magnetometer probe connected to a SMARTem24 Receiver. • The FLEM data was acquired using a EMIT SMART Fluxgate (3 component B field sensor) connected to a SMARTem24 Receiver • DHEM (Tx) loop configurations were as follows: ○ Transmitter=GeoResults DRTX 4 ○ One loop 300m by 200m oriented 155/335° (UTM) positioned via handheld GPS ○ Tx loop currents were 120 Amps ○ Base Frequency = 2.083 Hz ○ 64-128 stacks

Criteria	JORC Code explanation	Commentary
		• FLEM Rxs: ○ Two lines ○ Line Az = 065° (UTM) ○ 450m long ○ 3175E – 3625E (local grid) ○ 25m stn spacing ○ 3 component fluxgate (B field EM) ○ 3 repeat readings per stn ○ 128 stacks per reading UAV magnetic Survey parameters 67-line kilometres on 25m spaced east-west lines • Magnetometer – GEM Systems GSMP-35UC • Absolute accuracy <0.1nT • Data acquisition 20Hz • Flight speed 10m/s • Sensor height 30m
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel.	• Due to the early stage of exploration no verification of significant results has been completed at this time. • DHEM and FLEM data has been reviewed and modelled by GeoDiscovery Pty Ltd in Brisbane • UAV magnetic data has been reviewed and modelled by GeoDiscovery Pty Ltd in Brisbane
	• The use of twinned holes.	• No twinned holes encountered.
	• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	• All data is digitally recorded in exploration report to Qld government.
	• Discuss any adjustment to assay data.	• No adjustments to the 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.	• CPM rock chips and soil samples - Location of samples by handheld Garmin GPS to +/- 5m accuracy, GDA94 Zone 50.. • DHEM data locations are calculated using drill hole survey information and distance down hole • FLEM data locations hand held GPS
Data spacing and distribution	• Data spacing for reporting of Exploration Results.	• The competent person considers the level of accuracy associated with the borehole collar survey methods and the historical borehole spacing to be appropriate for the reporting of exploration results and as an indication of mineralization prospectivity for the mineral tenements. • CPM rock chips - Rock Chips samples were collected based on variable rock distribution. • DHEM Configuration = Loop size 300m by 200m * 1 • Long axes of Tx loops orientated 65 degrees (UTM grid) • DHEM station spacing 10m downhole with 2.5-5m infill across anomalous EM zones • FLEM • TX loop 300mby 200m long axis orientated 65 degrees • RX Two lines, orientated 65 degrees -

Criteria	JORC Code explanation	Commentary
		station spacing 25m UAV magnetic data – was acquired on 25m spaced east-west lines at 20Hz or ~ 1 reading every 0.5m
	• 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.	• No mineral resources or reserves have been estimated, the competent person considers the results of further exploration, drilling, sampling and laboratory analysis, trenching for bulk samples, etc., would be required to establish the geological, grade continuity and an understanding of the metallurgical properties for each of the project areas.
	• Whether sample compositing has been applied.	• No sample compositing applied.
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.	• CPM - Rock chips were taken from selected outcrops and may not be representative of the whole outcrop. The sample selection was based on outcrop distributions, and the link with geological structures has not been defined at this time. • No new drilling reported • Long axes of the DHEM Tx loops were orientated 65 degrees (UTM grid) • The 3 component DHEM data are located in XYZ UTM coordinates using drill hole survey data and distance down hole • UAV magnetic data was acquired on east-west lines. • Mineralisation at Brumby Ridge and Raven is thought to be striking approximately 330 degrees
Sample security	• The measures taken to ensure sample security.	• Sample security, due care and chain of custody are expected to have followed leading practice at the time of each drilling campaign, in the review of the available historical open-source information the competent person has encountered no reason to have questioned this assumption. • CPM rock chips are collected in individually numbered calico bags and loaded into polyweave bags and cable tied. • Samples were collected and stored at a secure location and transported to the Mt Isa laboratory by CPM personnel along with appropriate identification and paperwork
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• No audits or reviews undertaken.

.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

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.	• The tenements (specifically EPM 27700, referred to in this release are held by Revolution Minerals Pty Ltd, Cooper Minerals Ltd acquired 85% of the tenements and the tenements are in the process of being transferred to Cooper Minerals Ltd name.
	• The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	• The tenements are secure under Qld legislation.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• The historical tenure reports indicated that several companies have explored the project area over the last 50 years. Exploration has mainly consisted of geochemical sampling of rock and soil. Geological mapping and acquisition of airborne magnetics. Limited historical drilling is recorded within the Qld Government database "GeoResGlobe". • Cooper has completed RC drilling at several prospects including Brumby Ridge and Raven 2023. • Cooper has also completed portable XRF soil sampling and rock chip sampling on several prospects in the tenement including Brumby Ridge and Raven • Cooper completed a VTEM survey over portions of EPM27700 in 2022
Geology	• Deposit type, geological setting and style of mineralisation.	• The Mt Isa East Project is in the Mount Isa Inlier, which is prospective for IOCG, ISCG and shear hosted Cu-Au deposits. See body of this release for more information.
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 ➢ 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.	• No new drilling reported in this release
Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. • 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	• Unless stated otherwise in the announcement all grades were reported as certified by the laboratory for the sample length as taken in the field. • Soil sample response for Cu ppm is presented as a gridded background image calculated using inverse distance weighting in ARCGIS Pro software.

Criteria	JORC Code explanation	Commentary
	• The assumptions used for any reporting of metal equivalent values should be clearly stated.	• No metal equivalents used.
Relationship between mineralisation 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').	• No new drilling reported in this release,
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	• See main body of this release.
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 avoiding misleading reporting of Exploration Results.	• Rock chip samples are reconnaissance in nature from selected sites to demonstrate the prospectivity of the area. The reporting is considered balanced
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.	• Considerable historical work was completed with mapping sampling and geophysics This work needs further review.
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).	• Early-stage exploration and follow-up of identified Cu and Au anomalies including additional interpretation of geophysical data, reviews and assessments of regional targets and infill geochemical sampling of ranked anomalies in preparation for future drill testing. • Cooper is planning follow up geophysical, geochemical and drilling programs in EPM27700
	• Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• Refer to figures in this report.