

ASX Announcement | **ASX: CPM**

23 January 2024

Raven Cu-Au Prospect potential improved by recent geochemistry and geophysics surveys

Highlights

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

- Analysis of the down hole electromagnetic survey (DHEM) of drill hole 23MERC033 at Raven, identifies a modeled conductive plate extending for approximately 100m along strike to the SSE of the current drilling
- The DHEM response in drillhole 23MERC033 is potentially significant for two reasons:
 - 1. Cu-Au mineralisation at Raven contains pyrrhotite (iron sulphide) that is conductive and responds to EM surveys
 - 2. 23MERC023 drilled last year has two zones of mineralisation including;
 - 8m @ 1.0% Cu & 0.08g/t Au from 85m including 1m @ 1.79% & 0.25g/t Au from 85m and 2m @ 2.96% & 0.16g/t Au from 91m (23MER033) and
 - 12m @ 0.81% Cu & 0.09g/t Au from 113m, including 8m @ 1.0% Cu & 0.11g/t Au from 113m, and 3m @ 1.68% & 0.21g/t Au (23MERC033)
- New rock chip sampling at Raven identifies 3.96% Cu (MER396) from a narrow gossan approximately 165m SSE along strike from the nearest drill hole and along strike from the DHEM conductive plate model
- Follow up drilling at Raven of four holes for 600m planned after Brumby Ridge drilling

Cooper Metals Managing Director, Ian Warland commented:

"Raven Cu-Au mineralisation contains pyrrhotite that responds well to electromagnetic surveys, hence the recent DHEM survey indicates a modelled conductor extending for at least 100m along strike from the nearest drill hole. The presence of the DHEM conductor combined with new strong geochemical sampling results along the same SSE trend, provides robust drill targeting for our next program. Raven is one of several exciting prospects that Cooper is planning to follow-up during the 2024 field season and is only 3km south of the Brumby Ridge Cu-Au Prospect.





Background

New geophysical and geochemical results have now been received for Raven Cu-Au Prospect (**Figure 1**).

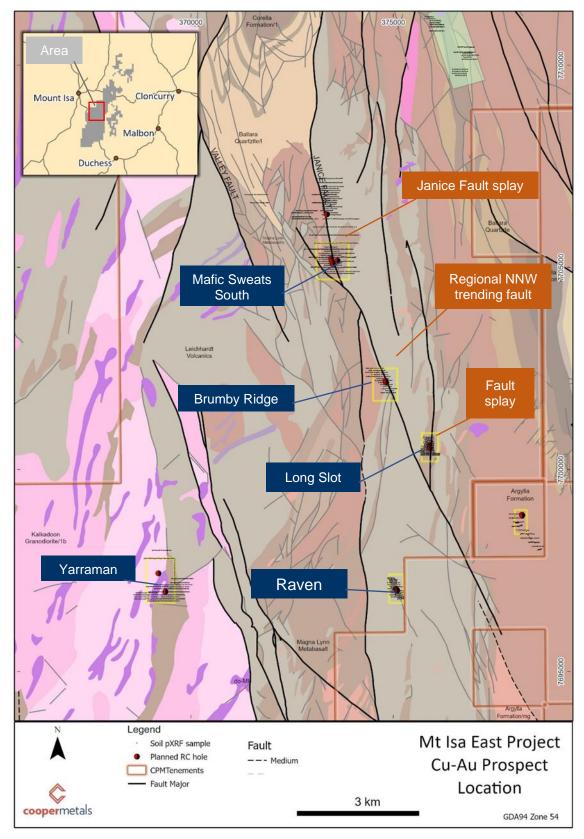


Figure 1: Prospect Location Map Mt Isa East Project



Raven Cu-Au Prospect

This ASX announcement provides an update on the down hole electromagnetic survey (DHEM) and geochemistry sampling at Raven Cu-Au Prospect.

The Raven Cu-Au Prospect is located just 3km to the south of Brumby Ridge, where Cooper recently announced drilling results including **71m** @ **2.8% Cu** and **0.05g/t Au¹** (**Figure 1**). At Raven, seven RC holes for 942m averaging around 135m in depth were completed in the October and November 2023 drilling programs. The mineralisation strikes for at least 100m in a NNW direction along a fault structure hosted within the Leichardt Volcanics. Initial interpretation of the drilling indicates a moderately SSE plunging shoot from surface, dipping steeply towards the west. The most southern of the drill holes 23MERC033 has two zones of mineralisation including:

- 8m @ 1.0% Cu & 0.08g/t Au from 85m including 1m @ 1.79% & 0.25g/t Au from 85m and 2m @ 2.96% & 0.16g/t Au from 91m (23MER033) and
- 12m @ 0.81% Cu & 0.09g/t Au from 113m, including 8m @ 1.0% Cu & 0.11g/t Au from 113m, and 3m @ 1.68% & 0.21g/t Au (23MERC033)

The Cu-Au mineralisation at Raven also contains some pyrrhotite (iron sulphide) which contributes to the Versatile Time Domain (VTEM) conductive response that led to Raven's discovery. In December, a DHEM survey was completed in four of the RC drill holes (23MERC030 to 034) to look at the potential for extensions to the mineralisation identified in RC drilling.

DHEM data has now been processed by a consultant geophysicist who highlighted a good correlation between the position of the logged pyrrhotite and DHEM conductive responses. The strongest conductive response was in drillhole 23MERC033 at the southern end of the Raven Prospect. The consultant has modelled several EM conductive plates, with plate C indicating a conductor continuing as a plunging shoot for approximately 100m along strike (Figure 2 & 3).

New rock chip sampling at Raven has also found mineralised copper gossan at surface. Samples up to 3.96% Cu (MER396) were returned from a narrow gossan approximately 165m SSE along strike from the nearest drill hole and along strike from the DHEM conductive plate model C. There also remains undrilled geochemical anomalies along strike to the NNW where rock chip sample MER296 assayed 7.44% Cu and 2.37g/t Au from narrow gossanous veins. See Table 1 for a list of rock chip samples at Raven.

Next Steps

The Company has planned up to four holes for approximately 600m of RC drilling to be conducted in follow-up at the Raven Prospect targeting the extensions to the known mineralisation as evidenced by recent geophysical and geochemical surveys.



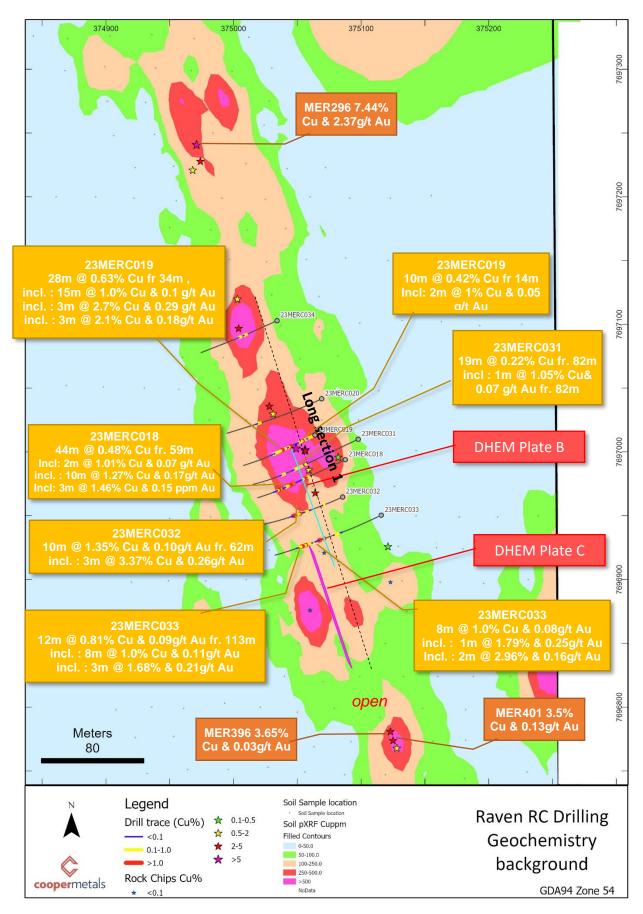


Figure 2: Raven Prospect RC drilling on pXRF soil grid (Cu ppm), rock chip locations



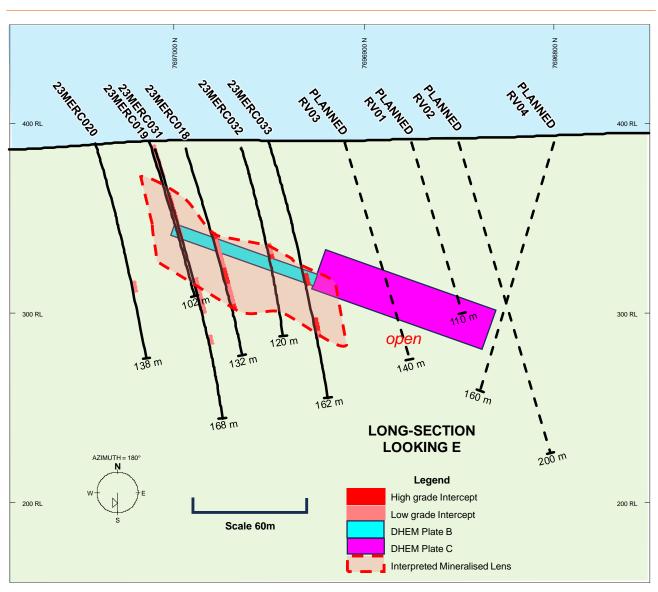


Figure 3: Long Section Raven Cu-Au Prospect from DHEM modelled plates



Table 1: Significant rock chip assay results from Raven Cu-Au Prospect

Sample Id	Cu %	Au g/t	East	North	Comment
MER273	26.70	2.49	375056	7697002	
MER274	3.22	0.047	375056	7697001	
MER275	5.85	0.292	375049	7697003	
MER297	1.70	0.097	374968	7697221	
MER298	7.44	2.37	374971	7697241	
MER299	4.08	0.045	374974	7697228	
MER300	3.60	0.058	375004	7697097	
MER301	1.68	0.059	375003	7697120	
MER302	2.79	0.055	375028	7697036	
MER303	0.76	0.006	375031	7697030	
MER304	0.53	0.007	375059	7696986	
MER305	3.22	0.835	375064	7696968	grab sample
MER333	0.36	0.007	375082	7696996	
MER334	0.28	0.005	375121	7696926	
MER335	0.05	0.005	375123	7696898	
MER394	0.00	0.001	375060	7696876	grab sample
MER395	0.02	0.001	375071	7696921	
MER396	3.65	0.03	375123	7696781	
MER397	0.03	0.001	375105	7697452	
MER398	0.03	0.001	375083	7697430	
MER399	5.40	0.04	374819	7697449	
MER400	0.93	0.01	375128	7696768	
MER401	3.50	0.13	375125	7696774	

Note: coordinates GDA 94, Zone 54



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

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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 12 December 2023: Raven Cu-Au prospect extended by recent RC drilling
- 2. ASX: CPM 30 November 2023: Brumby Ridge Copper Discovery confirmed with 71m @ 2.8% Copper including 24m @ 5.4% Copper
- 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
- 5. ASX: CPM 8 November 2023: Follow up RC Drilling commences at Raven and Brumby Ridge 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.

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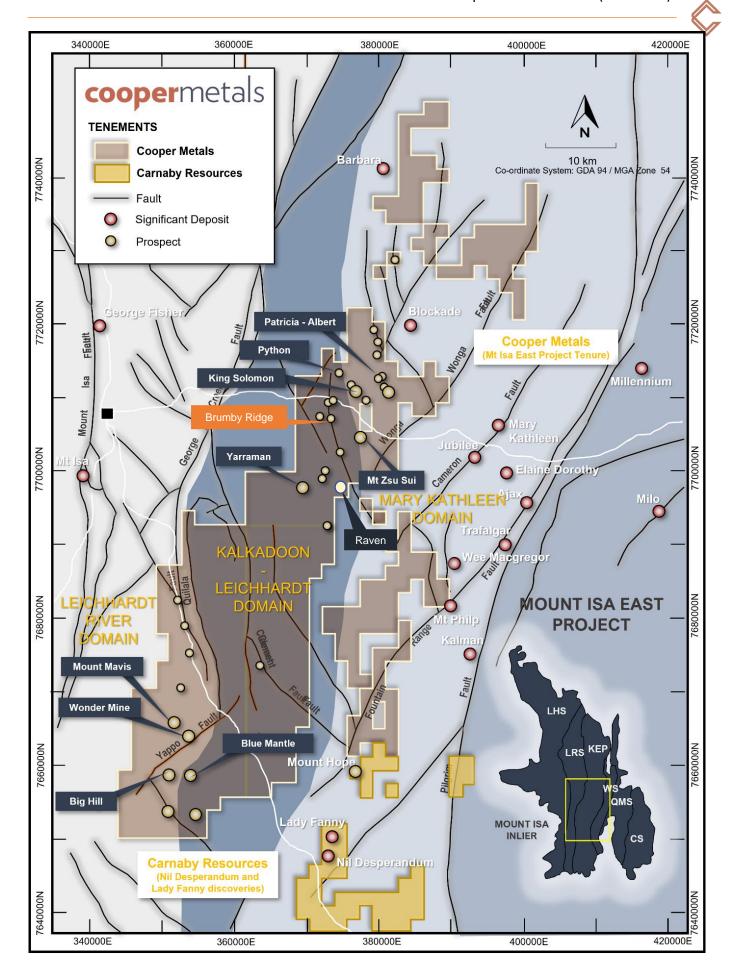


Figure 4: Mt Isa East Project Location over regional geology and main prospects



APPENDIX 1: 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 MEICP61 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 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 Raven 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. Four drill holes 23MERC032 and 23MERC031, 23MERC033, 23MERC034, 23MERC032 and 23MERC033 were surveyed with DHEM at 5 & 10m intervals Four drill holes 23MERC032 and 23MERC033 were surveyed with DHEM at 5 & 10m intervals
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	No new drilling is reported in this release



Criteria	JORC Code explanation	Commentary
	oriented and if so, by what method, etc).	
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. Whether logging is qualitative or quantitative in	CPM rocks have been described in detail and photographed. All field descriptions are qualitative in
	nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant	nature. • No drilling reported in this release
	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 subsampling 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 FLEM Rxs: Two lines Line Az = 065° (UTM) 450m long



Criteria	JORC Code explanation	Commentary
		 3175E – 3625E (local grid) 25m stn spacing 3 component fluxgate (B field EM) 3 repeat readings per stn 128 stacks per reading
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
	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.
Loostion of	Discuss any adjustment to assay data. Accuracy and quality of curveys used to least.	No adjustments to the data. CPM reak phins and sail samples.
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 - station spacing 25m
	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.



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. 	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 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:	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.