ASX Announcement | ASX: CPM

30 June 2022

Multiple VTEM conductors identified at Mt Isa East Cu-Au Project

Highlights

- **Large detailed VTEM survey now completed at Mt Isa East**
- **First ever detailed airborne electromagnetic survey over the Company's tenure in the prospective Mary Kathleen Domain**
- **VTEM survey doubles the length of the Python conductor to around 700m long and identifies a new subparallel conductor 250m to the northeast**
- **Python conductor coincident with north-westerly trending regional fault, possibly important in focusing copper-gold mineralisation**
- **Multiple high-priority VTEM conductors identified, with several conductors coincident with significant structures and favourable lithologies for hosting iron-sulphide-copper-gold (ISCG) mineralisation**
- **Ground truthing of the VTEM conductors is already underway to determine the possible source of the anomaly and prioritise follow-up ground geophysics ahead of potential drill testing**

Plate 1: VTEM Survey in progress May 2022

Cooper Metals Managing Director Ian Warland, commented:

"The VTEM Max survey has identified multiple anomalies at the Mt Isa East Project worthy of follow up. We are particularly excited about the VTEM response over the Python conductor that doubles the length of the original FLEM anomaly and has identified a new subparallel conductor to the northeast of around 500m in length. This is the first detailed airborne electromagnetic survey over this tenure and this new dataset is a significant step forward for continuing to build a pipeline of copper-gold targets at the Mt Isa East Project. Ground truthing of the conductors has commenced and we will provide updates to the market as results come to hand."

Cooper Metals Limited (ASX: CPM) ("CPM" or "the Company") is pleased to announce the preliminary results of the Versatile Time-Domain Electromagnetic (VTEM) survey over a significant portion of the Mt Isa East Project in northwestern Queensland (**Figure 1**).

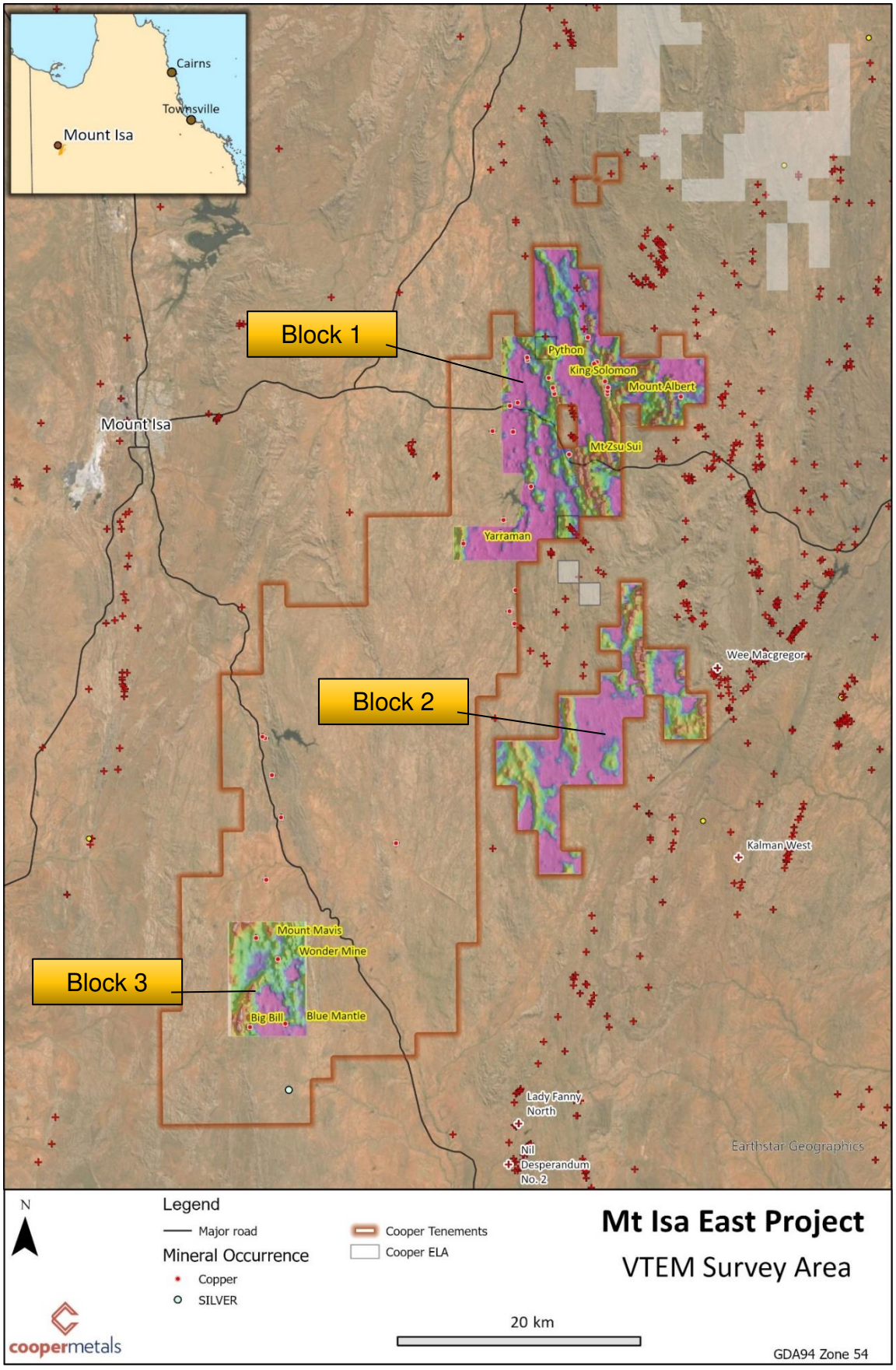

Figure 1: Overview of the VTEM Survey (Channel 15)

Geophysical Program Rationale and Details

As part of the Company's strategy to rapidly screen the area for new copper-gold targets, a VTEM survey was completed in June this year covering over 240sqkm and 1,460-line kilometers focusing on the prospective Mary Kathleen Domain that hosts Carnaby's (ASX: CNB) Nil Desperandum and Lady Fanny Deposits. (**Figure 1**). The VTEM survey also covers an area in the southwest of Cooper's tenure that hosts several historical Cu-Au prospects including Big Bill, Wonder mine and Blue Mantle mine. The detailed heliborne survey was flown by UTS Geophysics at 300m line spacing in an east–west orientation and an average sensor height of approximately 45m. Survey specifications are outlined in Appendix 1.

VTEM Survey Results

The VTEM survey has identified several potential bedrock conductors that may be prospective for copper-sulphide mineralisation. While VTEM is a powerful first-pass tool for the identification of potential copper-gold mineralisation, it is most effective on iron-sulphide dominated copper-gold deposits (ISCG), which are more likely to conduct an electromagnetic current compared to iron-oxide copper gold (IOCG) mineralisation. Other geological factors such as the presence of black shale, pyrrhotite and graphitic rocks can produce VTEM anomalies.

The survey was completed in three separate blocks (**Figure 1**), with multiple anomalies identified by Cooper's consultant geophysicist in Blocks 1 and 2. Desktop ranking and prioritizing the anomalies for ground truthing has now been completed. Ground truthing has commenced to further rank targets for follow up geochemistry and/or ground geophysics ahead of potential drill testing.

Block 1 VTEM survey results

In 2016, the Qld Government commissioned a VTEM survey at a broad 2km line spacing. Reprocessing of the government data by Cooper's consultant geophysicist led to the identification of a VTEM anomaly near the Python Cu-Au prospect which was subsequently confirmed by a fixed-loop electromagnetic survey (FLEM) in March this year[1]. ***Significantly the new VTEM survey has extended the Python conductor to the northwest, doubling the original length of the conductor to approximately 700m and an additional parallel VTEM anomaly of approximately 500m long has been identified just 250m to the northeast (*****Figure 2*****)***.

There are several more subtle VTEM responses identified throughout Block 1, some of which are within favorable lithologies and structural positions for the formation of ISCG mineralisation. In contrast, the VTEM survey did not define any bedrock anomalies over the King Solomon prospect, which based on recent drilling is consistent with the IOCG style mineralisation discovered there. Cooper's recent RC drilling intersected significant shallow copper mineralisation including **17m @ 2.2% Cu from 84m including 8m @ 4.3%(22MERC016)**[2] at King Solomon. The copper-gold mineralisation is hosted in a quartz-carbonate rich rock with peripheral "red rock" alteration typical of IOCG mineralisation.

Block 2 VTEM survey results

Block 2 covers Cooper's eastern tenement, which has very little previous exploration (**Figure 3**). There are several VTEM anomalies of interest, with many coincident with regional structures that may have been important for hosting Cu-Au mineralisation. A strong conductor in the northern portion of the block is approximately 600m long and located at the confluence of two significant faults hosted within Argylla Formation rocks. This formation also hosts Carnaby Resources Ltd (ASX: CNB) Lady Fanny and Nil Desperandum Cu-Au deposits located some 30km to the south of the Block 2 survey area (**Figure 1**). Several other conductors also hosted in the Argylla Formation and Leichardt Volcanics were identified in the southwestern portion of Block 2 adjacent to a major northwesterly trending fault.

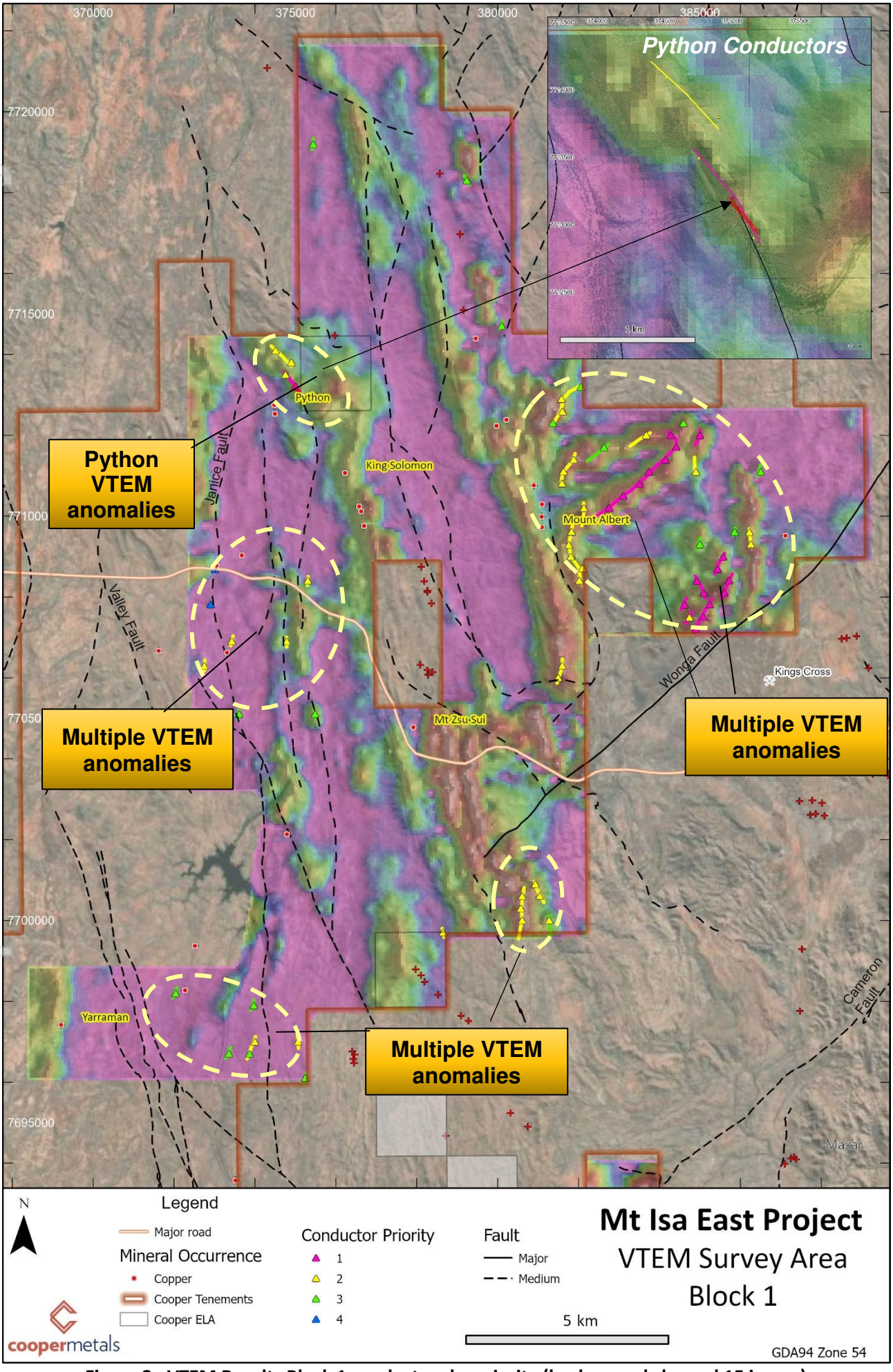

Figure 2: VTEM Results Block 1 conductors by priority (background channel 15 image)

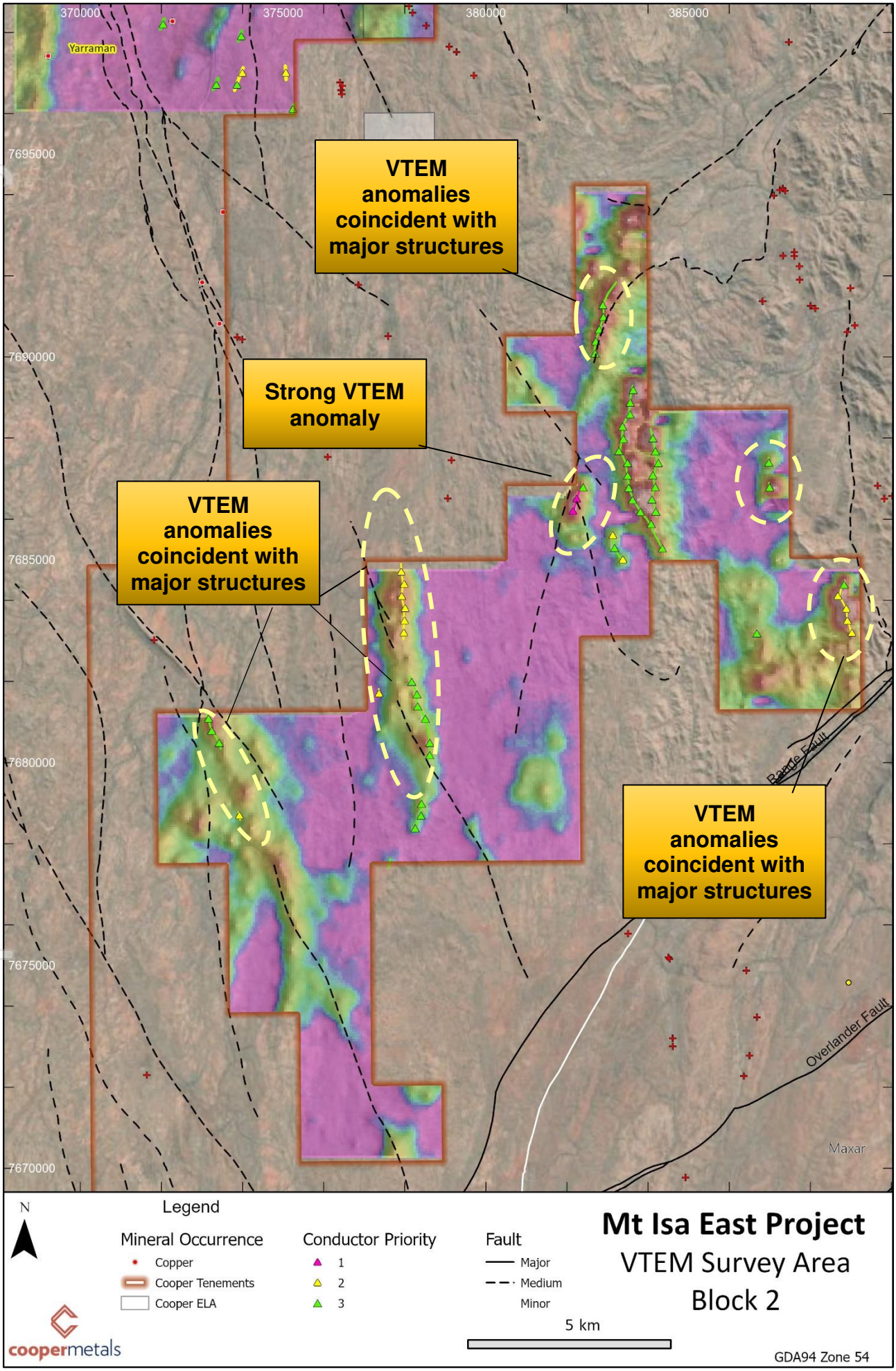

Figure 3: VTEM Results Block 2 conductors by priority (background channel 15 image)

Next Steps

- Ground truth newly identified VTEM conductors, rank and prioritize follow-up ground geochemistry and geophysics ahead of drill testing.

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 Australasian Institute of Mining and Metallurgy. 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: 2 March 2022: High powered ground geophysics identifies robust conductors at Mt Isa East Cu-Au Project
2. ASX CPM: 23 June 2022: Significant shallow copper mineralisation discovered at King Solomon

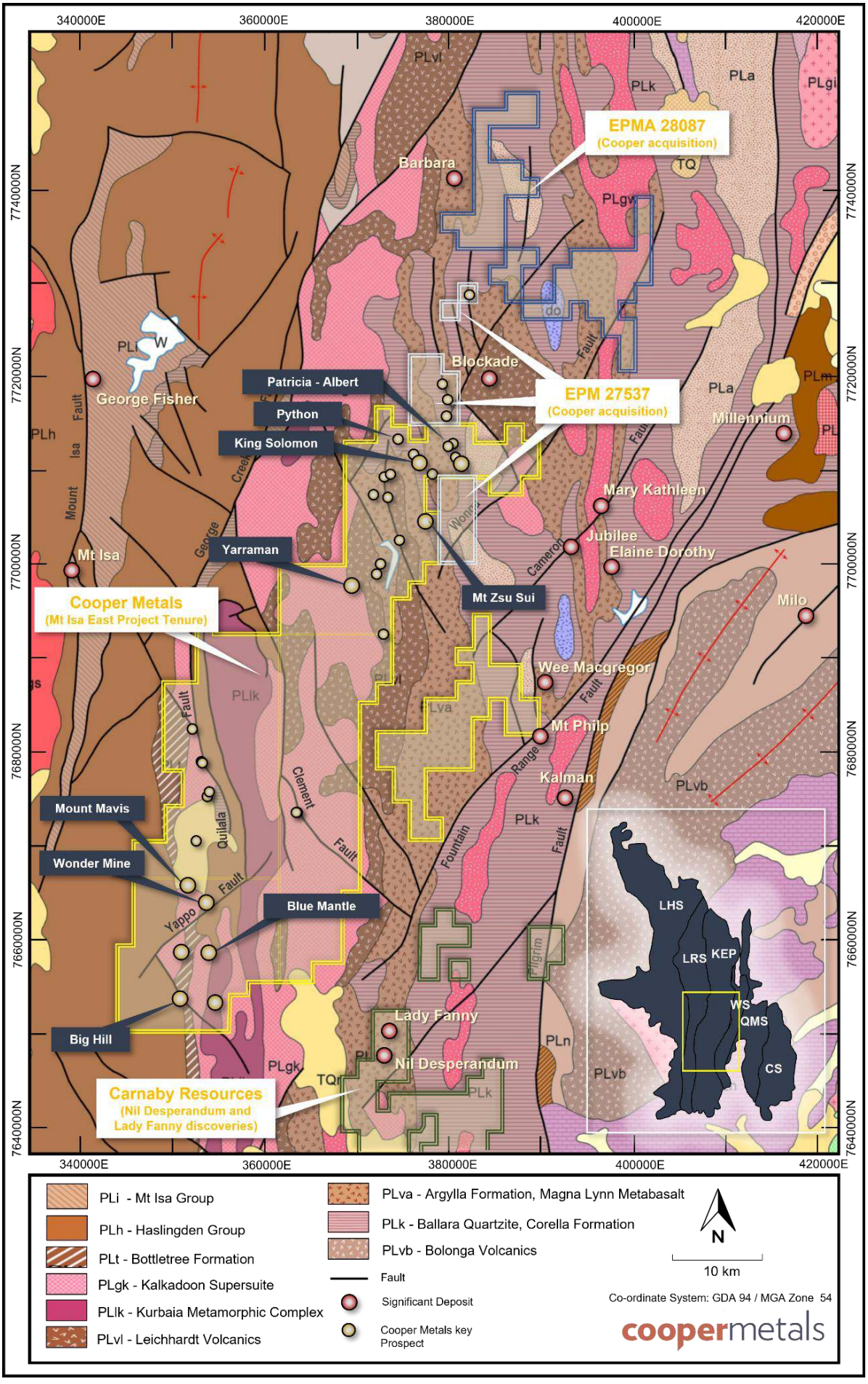

Figure 4: Mt Isa East Location Map

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 ~1300 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.

Yamarna Gold Project (WA)
The Yamarna Gold Project located along strike from Gold Roads 6.16 Moz world class Gruyere Gold Deposit (ASX: GOR) has an extensive length of untested Dorothy Hills Shear Zone that was important in the formation of Gruyere gold deposit located ~10 km to the southeast of Cooper's tenements.

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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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**

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.	• No new drilling or surface sampling in this release. • CPM is reporting the results of a Versatile Time Domain electromagnetic survey conducted by GEOTECH in May 2022 • The survey was flown in May 2022 by Geotech Ltd. The geophysical survey consisted of helicopter borne EM using the versatile time-domain electromagnetic (VTEM™MAX) full receiver-waveform streamed data recording system with Z and X component measurements and a caesium magnetometer. • Survey specifications ○ East-west flight lines ○ Spaced 300m apart Flight height average 87m, with EM senor height 45m, magnetic sensor 77m
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.	• No logging reported in this release
	• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	• No logging reported in this release
	• The total length and percentage of the relevant intersections logged.	• No drilling reported in this release

Criteria	JORC Code explanation	Commentary
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.	• No logging reported in this release
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.	VTEM Max system specifications Transmitter • Transmitter loop diameter: 34.6 m Receiver • Effective Transmitter loop area: 3761 m2 • Number of turns: 4 • Transmitter base frequency: 25 Hz • Peak current: 185.4 A • Pulse width: 7.17 ms • Wave form shape: trapezoid • Peak dipole moment: 697,324 nIA • Average transmitter-receiver loop terrain clearance: 45 metres Receiver • X Coil diameter: 0.32 m ○ Number of turns: 245 ○ Effective coil area: 19.69 m2 • Y Coil diameter: 0.32 m ○ Number of turns: 245 ○ Effective coil area: 19.69 m2 • Z-Coil diameter: 1.2 m ○ Number of turns: 100 ○ Effective coil area: 113.04 m2 The magnetic sensor utilized for the survey was Geometrics optically pumped caesium vapour magnetic field sensor mounted 10 metres below the helicopter, as shown in this release. The sensitivity of the magnetic sensor is 0.02 nanotesla (nT) at a sampling interval of 0.1 seconds.
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel.	• VTEM data is preliminary supplied by UTS Geophysics Pty Ltd and data reviewed by Kelvin Blundell and VTEM anomalies selected as high, medium and low priority based on strength of conductor and reviewed against possible cultural affects.
	• The use of twinned holes.	• No drilling reported in this release
	• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	• All data is digitally recorded
	• Discuss any adjustment to assay data.	• No adjustments to the data.

Criteria	JORC Code explanation	Commentary
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.	• No drilling reported in this release • VTEM - The navigation system used was a Geotech PC104 based navigation system utilizing a NovAtel's WAAS (Wide Area Augmentation System) enabled GPS receiver. • GDA94 Zone 54.
Data spacing and distribution	• Data spacing for reporting of Exploration Results.	• VTEM – lines spaced 300m apart and orientated east-west
	• 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.	• VTEM – line spacing is appropriate for the size of the deposits targeted and orientated at high angle to regional faults that may host mineralisation.
	• 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.	• VTEM lines are orientated east-west roughly perpendicular to the main strike of rock units in the Mt Isa Inlier
Sample security	• The measures taken to ensure sample security.	• No sampling reported
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• No audits or reviews undertaken.

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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". • Nine RC holes were completed at the Mt Zsu Sui prospect and details of this drilling can be found within the CPM Prospectus September 2021. • Chinalco historical rock chip samples were collected from Chinalco historical tenement EPM14019. • Syndicated Metals historical rock chips in this ASX are from historical tenement EPM15816.
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 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	• No drill results reported

Criteria	JORC Code explanation	Commentary
	• The assumptions used for any reporting of metal equivalent values should be clearly stated.	• No drill results reported
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 drill results reported
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	• See the 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.	• VTEM data is presented is for the whole survey area.
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 modelling of the VTEM data is in progress and ground truthing of anomalies will be ongoing to assess their prospectivity.
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.
	• 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 the figures in this report.