ASX Announcement | 11th November, 2024

New Ground MLEM and IP Data Fuel Confidence for November Drill Testing at, Patmungula, and Mount Irene & Dumunzi.

Highlights

- Litchfield Minerals is excited to launch our second drilling campaign this year, with plans to drill up to 2,000 metres across three high-impact target areas.
- A recent MLEM (Moving Loop Electromagnetic) survey has revealed a strong late-time conductor at our Patmungula Pb site.
- Additional IP (Induced Polarisation) data has further validated the significant chargeability anomaly at Mount Irene, located 500m west of the known outcrop.
- Our upcoming drilling program includes testing Dumunzi's compelling magnetic and gravity targets, along with Patmungula Pb Late time EM conductor and Mount Irene's IP anomaly.
- Due to the weather, earth-moving equipment will be deployed in approximately 10 days to build access tracks and drill pads.
- Drilling to commence as soon as preparations are complete.

Litchfield Minerals Limited (**"Litchfield"** or the **"Company"**) **(ASX:LMS)**, a company with a strategic emphasis on critical minerals, is pleased to announce the completion of Ground EM and Pole-Dipole IP surveys at the Mt Doreen project.

Managing Director and CEO, Matthew Pustahya, commented:

We are entering an exciting phase at Litchfield Minerals as we kick off our second major drilling campaign this year. The results from recent ground MLEM and IP surveys have illuminated some truly compelling targets at Patmungula Pb, Mount Irene, and Dumunzi, positioning us well to uncover the mineral potential in these areas.

With up to 2,000 metres planned across some promising targets, this campaign underscores our commitment to ambitious, data-driven exploration in Northern Territory's mineral-rich terrain. As we approach year-end, we look forward to delivering results that could redefine the scope and value of our projects.

Drill targets & plan

Patmungula MLEM target

The Patmungala Pb conductor is the second strongest anomaly identified from the VTEM survey (after Silver King). Three lines of moving loop EM (MLEM) surveys have been completed to confirm the basement source for the conductor and to inform modelling its geometry to aid drillhole planning (**Figure 1**). The anomaly sits in a prominent structural position where the strike changes from northwest to easterly trend. The MLEM survey has detected a strong, late-time conductor and modelling has defined a series of 400m long conductor plates with a gentle westerly plunge starting from about 70m below surface. The top cluster of plates dip moderately to the south and the bottom series of plates dip gently to the north. Two RC drillholes have been planned to test the basement conductor for base metal sulphide mineralisation.

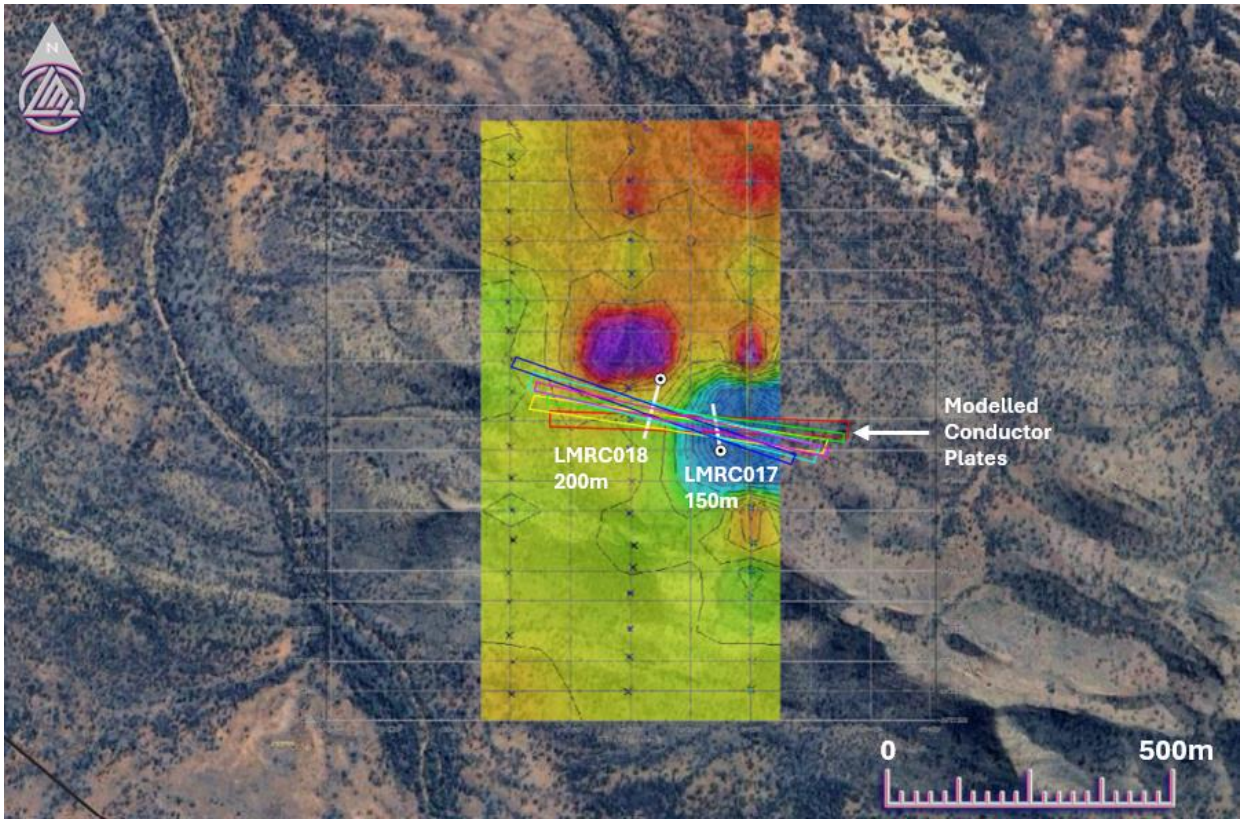


Figure 1. *Patmungala Pb Google satellite image with 20z Ground EM conductivity image, modelled basement conductor plates and planned RC drillholes.*

Mount Irene PDIP target

Three lines of Pole-Dipole IP (PDIP) surveys have been completed at the Mt Irene prospect to follow-up a strong chargeability anomaly defined in the March 2024 PDIP survey. The surveys have confirmed the presence of a steeply-dipping, moderately strong chargeability anomaly (15mV/V) on the central line (7562375N) with a depth to top of 150m (**Figure 2**). The anomaly extends 200m to the southwest onto line 7562175N where it forms a broader, 10mV/V anomaly and decreases to a shallow, low-level conductor on the line 200m north (7562575N). A single 250m RC hole has been planned to test the main chargeability anomaly on Line 7562375N.

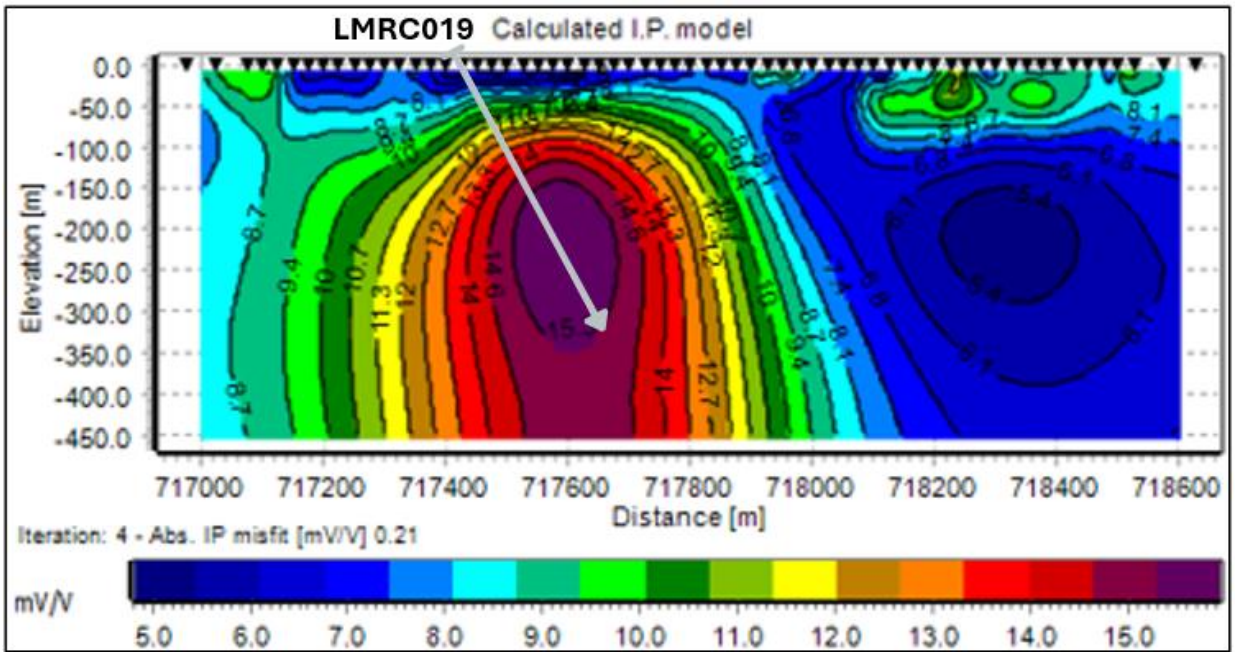


***Figure 2**. Dumunzi 2024 ground gravity survey (BA267_Res500m_H_NEsun) over 2024 airborne magnetics (RTP_SunN_Lin) showing the location of the proposed holes relative to the main gravity anomaly and positive magnetic highs.*

Dumunzi Gravity + Mag targets

The Dumunzi target comprises a series of gravity and magnetic anomalies aligned within an east-northeast trending gravity corridor (**Figure 3**). Magnetic modelling indicates the presence of both high magnetic and reversely magnetised bodies that are spatially offset from gravity anomalies within this corridor. The 3D modelling indicates vertical pipe-like geometries for gravity and magnetic anomalies. Dumunzi potentially hosts a multi-phase carbonatite intrusive complex and four RC drillholes have been planned to test for possible associated REE mineralisation.

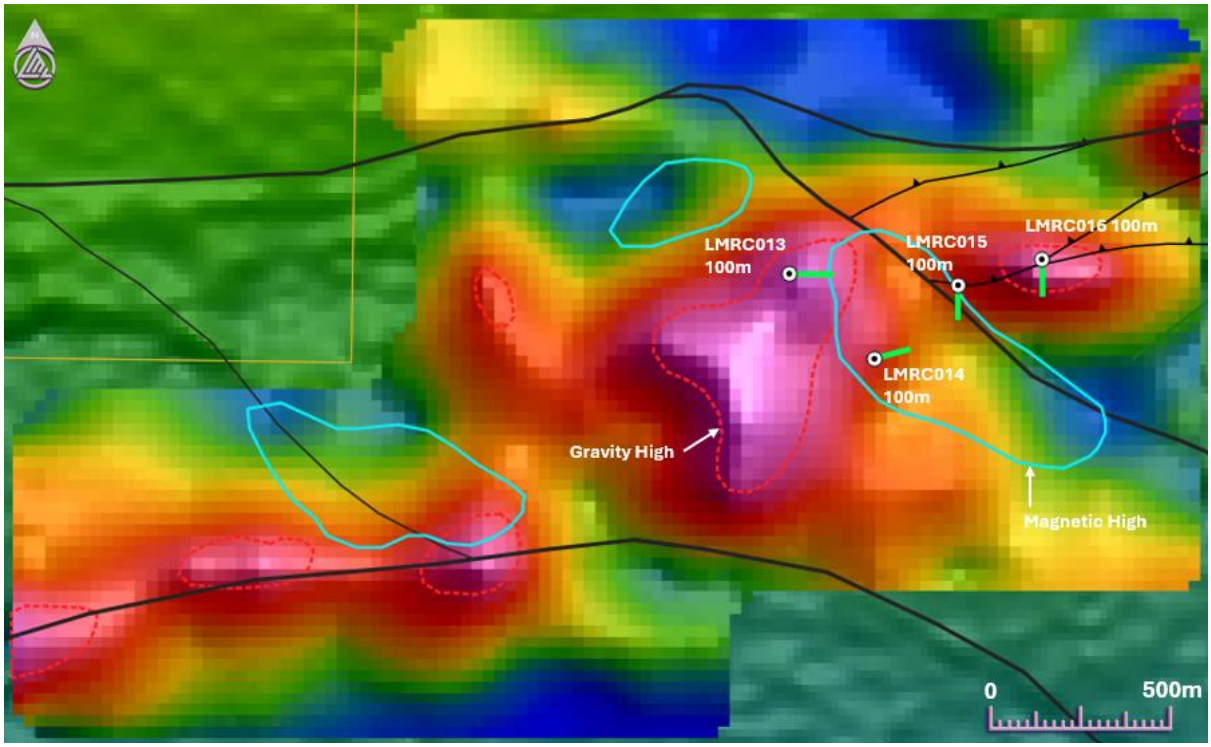


***Figure 3**. Dumunzi 2024 ground gravity survey (BA267_Res500m_H_NEsun) over 2024 airborne magnetics (RTP_SunN_Lin) showing the location of the proposed holes relative to the main gravity anomaly and positive magnetic highs.*

Cautionary Statement

Conductive VTEM targets presented in this announcement have been interpreted to represent basement conductors relating to semi-massive or massive sulphides, however, it is unclear if base metal sulphides are present. Ground EM is required to confirm the basement source and conductor geometry ahead of RC drilling.

Forward looking statement

This announcement may include forward-looking statements, which are subject to risks and uncertainties. Actual results could differ significantly due to factors beyond LMS's control, including market conditions and industry-specific risks. These forward-looking statements are based on the Company's expectations and beliefs concerning future events. No warranty is given regarding the completeness of the information provided. Please avoid placing undue

reliance on forward-looking statements, as they reflect views only as of the announcement date.

About Litchfield Minerals

Litchfield Minerals is a critical mineral explorer, primarily searching for base metals and uranium out of the Northern Territory of Australia. Our mission is to be a pioneering copper exploration company committed to delivering cost-effective, innovative and sustainable exploration solutions. We aim to unlock the full potential of copper and other mineral resources while minimising environmental impact, ensuring the longevity and affordability of this essential metal for future generations. We are dedicated to involving cutting-edge technology, responsible practices and stakeholder collaboration drives us to continuously redefine the industry standards and deliver value to our investors, communities and the world.

The announcement has been approved by the Board of Directors.

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Competent Person's Statement

The information in this Presentation that relates to Exploration Results is based on, and fairly represents, information and supporting documentation compiled by Mr Russell Dow (MSc, BScHons Geology), a Competent Person who is a Member of the Australian Institute of Mining and Metallurgy (AUSIMM) and is a full-time employee of Litchfield Minerals Limited. Mr Dow has sufficient experience that is relevant to the style of mineralisation and types of deposits 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" (JORC Code). Mr Dow consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. With regard to the Company's ASX Announcements referenced in the above Announcement, the Company is not aware of any new information or data that materially affects the information included in the Announcements.

JORC Code, 2012 Edition – Table 1 report

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	The instruments and parameters used for the VTEM survey are as follow: **HAITEM MLEM (Ground EM)** • Data was collected by Planetary Geophysics Pty. Ltd. In Oct/Nov 2024 • Survey type: Moving Loop EM • Configuration: Outerloop/Slingram • Loop Size: 100m • Coil Offset: 100m • Along line station spacing: 50m • Tx Loop Conductor: 10mm² • Current in Tx Loop: 25A - 80A • Timing: 20/80ms • Transmitter: Technical Images HAITEM Tx HPX 100A

Criteria	JORC Code explanation	Commentary
		• Receiver: Technical Images HAITEM Rx Gen 4 • Coil: Technical Images HAITEM 3 Component Coil • Data was processed with TI Ground EM Viewer Maxwell **Pole-Dipole IP Survey** • Pole-dipole IP/Resistivity time series data was acquired with V-Full Waver IP/Resistivity Receivers in a distributed pole-dipole array read in both senses C>P & C<P and with the I-Full Waver Current Recorder recording full wave form transmission data. • All Receivers and the full wave form Current Recorder are manufactured by Iris Instruments of Orleans, France (www.iris-instruments.com). • Pole-dipole current in injection was via one (1x) GDD TX4 5000W/20A transmitter manufactured by GDD instrumentation of Quebec Canada (www.gddintrumentation.com). • Transmitters were powered by one (1x) Kubota 9000W Diesel Generator.

Criteria	JORC Code explanation	Commentary
		Pole-Dipole Data Acquisition • Tx Electrode Type: Aluminium foil lined pit (Remote CA) & 10mm welded mesh (Forward CB) • Rx Electrode Type: CuSO4 Non-polarising porous pot • Tx wire Type: 2.5mm Cu conductor • Rx wire Type: 1.5mm Cu conductor • Rx Line spacing: 100m • Rx Dipole spacing: 50m. • Time Base: 2s ON/2s OFF • Windows: 20 • Timing Windows (ms): 20/20/20/20/40/40/40/40/80/80/80/80/ 120/120/120/120/180/180/180/180 • mDelay (ms): 70 **Intrument technical specifications** • Tx Receivers: • Iris V-Fullwaver Receiver • Channels: 2 • Input voltage: Max. input voltage: 15 V, Protection: up to 1000V

Criteria	JORC Code explanation	Commentary
		• Voltage measurement: Accuracy: 0.2 %, typical Resolution: 1 µV, Minimum value: 1 µV • **Input impedance:** 100 MΩ • **Signal waveform:** All IP measurements were made in the time-domain using a two second half-duty cycle (2s ON/2s OFF). An integration window of 0.5 to 1.1 seconds has been used for the final chargeability calculation. • GPS input for coordinates and synchronisation • Computation of apparent resistivity, average chargeability, and standard deviation • **Noise reduction:** Read duration manually selected in relation to apparent injection point current (mA) and power line rejection, SP linear drift correction. • Iris I-Fullwaver Current Recorder • Input current: +/- 25000mA (optional 6, 15 or 50A) • Resolution / Accuracy: 0.1mA / 0.1% • GPS: GPS input for coordinates and time synchronisation. Time stamps record within an absolute accuracy of 250us. • Readings: Current value • Typically three (3x), 300 second (~75x cycle stacks) reads at each injection point. • GDD TX IV 5000 Transmitter

Criteria	JORC Code explanation	Commentary
		• Output Power: 0 to 5000 W • Input voltage: Standard 240V 50hz • Output Voltage Range: 150V to 2400V • Output Current: 30mA to 20000mA • Transmission Cycle: ON+, OFF, ON-, OFF: • Timing: 1s, 2s, 4s, or 8s • Data processed by FW Viewer Prosys III TQIP WinDisp Res2D
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 as no drilling is reported.
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.*	• Not applicable as no drilling is reported.
Logging	• *Whether core and chip samples have been geologically and*	• Not applicable as no drilling is reported.

Criteria	JORC Code explanation	Commentary
	geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	
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.*	• Not applicable as no drilling is reported.
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*	Geophysical details • See loop configuration and system specifications above.

Criteria	JORC Code explanation	Commentary
	instrument make and model, reading times, calibrations factors applied and their derivation, etc. • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Data detailed in this report has been reviewed and processed by Russell Mortimer at Southern Geoscience Consultants.
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.*	• Lines were gridded by Planetary Geophysics using a Garmin Map 65 series GPS. • Waypoints were recorded at every station using GDA94/UTM.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Ground EM was done at 200m line-spacing on north-south oriented lines. • PDIP was done on three, 200m spaced east-west lines.

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.*	• Survey lines were oriented perpendicular to known structure and stratigraphic controls.
Sample security	• *The measures taken to ensure sample security.*	• All data was collected under strict data security measures by Planetary Geophysics Pty Ltd.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Data checks and processing reviews were undertaken daily and at the completion of the program by the contractor. • Review of the data was undertaken by an independent consultant Russell Mortimer at Southern Geoscience Consultants.

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.*	• Refer to Section 4 in Independent Geologists Report (IGR) by Ross *et al.*, 2023 for further detail. In summary, the Mount Doreen project is secured by EL 31305 for total of approximately 388.35 square kilometres.

Criteria	JORC Code explanation	Commentary
	• *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.*	• All tenements within the Mt Doreen are 100% owned by Litchfield Minerals Ltd. • The Mt Doreen Project is located 325km northwest of Alice Springs pastoral lease. The tenements are in good standing and there are no known impediments.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Refer to Section 6 and 7 in Independent Geologists Report (IGR) by Ross *et al,*, 2023 for further detail. A summary of previous exploration and mining is presented below: • 1930- 1956: Minor amounts of copper and tungsten extracted from Silver King, Clark, Mount Irene and Wolfram Hill. • 1969: NT Mines & Water Resources diamond drilling at Clark workings. • 1987 – 2006: White Industries/Mareeba Mining, Bruce and Mules, MIM Exploration/Roebuck Resources, Track Minerals, Poseidon Gold/Yuendumu Mining, BHP, Homestake Gold, Rio Tinto Exploration and Tanami Gold completed geological mapping, geochemical sampling, airborne and ground geophysical surveys, and drilling programs.

Criteria	JORC Code explanation	Commentary
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Refer to Section 5 in Independent Geologists Report (IGR) by Ross *et al.*, 2023 for further detail. In summary: • Mount Doreen is located in the southern portion of the Paleoproterozoic Aileron Province of the Arunta Region. • The oldest rocks at Mount Doreen are the multiply deformed and metamorphosed siliciclastic sediments of the Lander Rock Formation. The younger volcano sedimentary Patmungala Beds lie in the south of the tenement, and both are intruded by the Yarunganyi Granite. Numerous major faults strike close to east-west and often contain veins or vein swarms of quartz, forming ridges. Neoproterozoic to Palaeozoic sedimentary rocks of the Ngalia Basin overlie the Aileron basement in the southwest of the tenement and along the southern boundary. • Mineralisation is considered to be epigenetic intrusion-related breccia and vein mineralisation with polymetallic copper-lead-zinc-silver-molybdenite and tungsten. Mineralisation is interpreted to be from varied sources and associations as evidenced from mineralisation dating. • The most prominent mineralisation is supergene copper at Silver King with varying lead-zinc-silver in quartz veins and shear zones.

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* ○ *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 or assaying is reported in this report.
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.*	• No drilling or assaying is reported in this report.
Relationship between	• *These relationships are particularly important in the reporting of Exploration Results.*	• No drilling or assaying is reported in this report.

Criteria	JORC Code explanation	Commentary
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').*	
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.*	• Project location map and plan map of the drill hole locations with respect to each other and with respect to other available data are included in the text. • Drill hole locations have been determined with hand-held GPS drill hole collar location (Garmin GPS 78s) +/- 5m in X/Y/Z dimensions. • Refer to Section 6 and 7 of the Independent Geologists Report (IGR) by Ross *et al.*, 2023.
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.*	• Individual gravity readings have not been reported, plans within this report provide an adequate overview of the ground gravity data.
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*	• See the main body of this report for all pertinent observations and interpretations.

Criteria	JORC Code explanation	Commentary
	substances.	
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Future planned exploration includes: • Final fully processed VTEM and interpretation • Ground-based moving loop EM (“MLEM”) • Geological mapping and geochemical surveys/ sampling • RAB/RC/DD drill testing.