ASX Announcement
10 February 2025

SIGNIFICANT NEAR-TERM STEP-OUT COPPER DRILL TARGET DEFINED AT BASIN CREEK, NSW

HIGHLIGHTS

- **Step out Induced Polarisation (IP) geophysics completed north of Lachlan Star's recent drilling at Basin Creek has revealed an extensive chargeable anomaly, reinforcing the potential of the project to host a significant copper system.**
- **The recently reported copper intercepts correlate closely with the chargeable response, where drilled. This bodes well for the newly identified untested chargeable anomaly to the north and provides a compelling drill target for 2025.**
- **The IP survey was completed following the Company's recent drilling which returned:**
  - **79.2m at 0.5% Cu from 12m, including 0.8m at 11.8% Cu in BCD003;**
  - **21m at 1.2% Cu from 138m, including 4.5m at 3.0% Cu in BCD004; and**
  - **9.1m at 2.7% Cu from 191m, including 3.5m at 6.6% Cu in BCD005**
- **The Company is now preparing a step-out drill program to systematically test high-priority targets across the chargeable IP and copper-in-soil anomaly (Figure 1).**

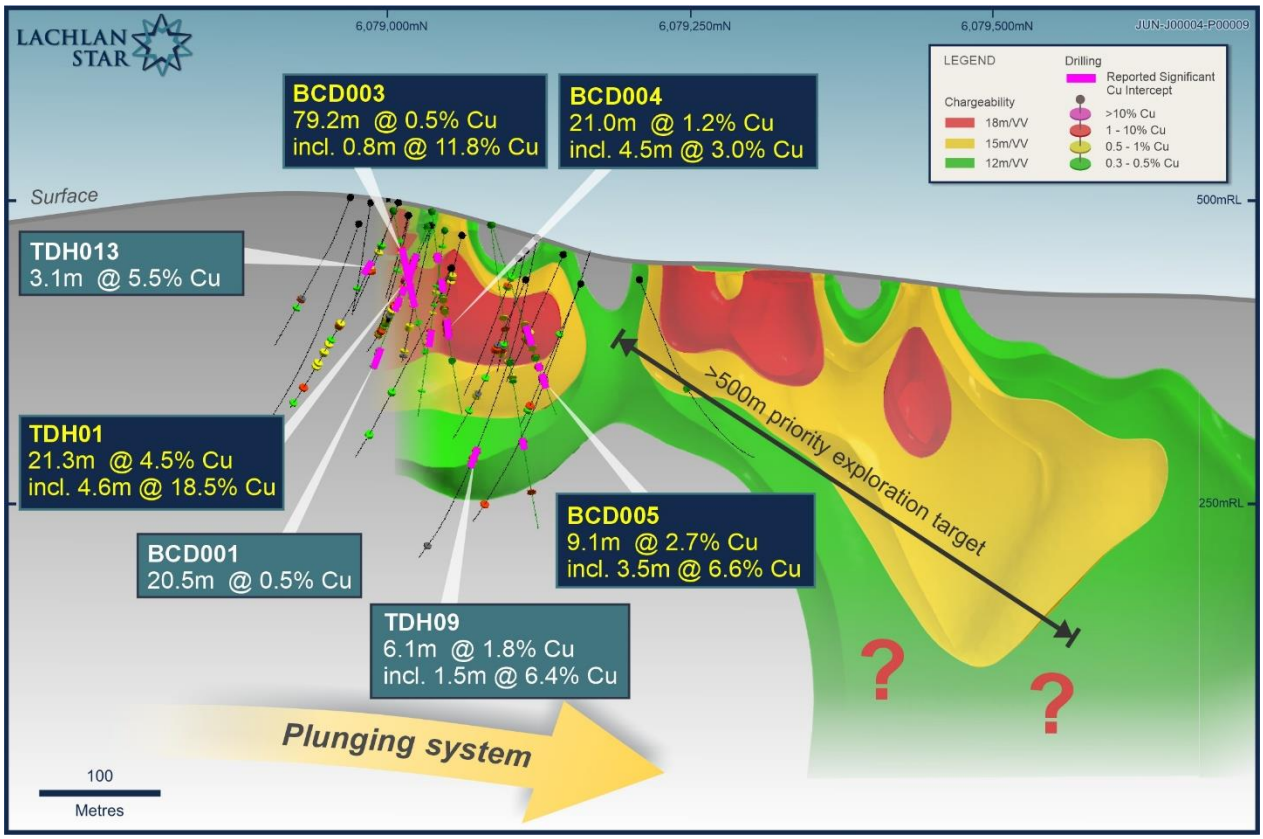

Figure 1: *Long section (looking west) showing 3D inversion modelled chargeability at 610260mE highlighting the strong chargeability anomaly over the area of recent drilling, with reported significant copper intercepts.*

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Lachlan Star Limited (ASX: LSA, **Lachlan Star** or the **Company**) is pleased to advise that it has identified a priority near-term drilling target immediately north of recent copper intercepts at the Basin Creek prospect, within its 100%-owned southern Junee Project in the Lachlan Fold Belt of New South Wales.

The new target area has emerged following receipt of exciting results from a recently completed Pole-Dipole Induced Polarisation (IP) geophysical survey, which forms a key component of the Company's strategy to unlock the full potential of the Basin Creek copper system – building on the recent successful maiden drilling campaign.

The Company has now received and processed all geophysical data, with advanced 3D inversion modelling revealing an **exceptional, large-scale chargeable anomaly** extending across the Basin Creek prospect. This anomaly is interpreted to correspond with a potentially significant copper sulphide system, which appears to plunge to the north and at depth.

The northern extension of the IP anomaly, which extends an additional 500 metres beyond previously drilled areas and plunges to depths exceeding 250 metres, represents a high-priority exploration target. Importantly, this northward plunge orientation was also confirmed in the recently completed diamond drilling[1].

Down hole IP geophysics were also undertaken to measure the relationship between an in-hole chargeable response and the copper sulphide intercepts reported. The results demonstrated a strong correlation between chargeability and copper sulphide mineralisation, reinforcing the Company's confidence in the system's potential.

Further underlining the significance of this exciting target, the chargeable anomaly aligns closely with previous copper-in-soil results[2], including a well-defined 250ppm copper footprint, providing a clear vector for follow up exploration.

These compelling results set the stage for the next phase of discovery, with Basin Creek emerging as a highly prospective copper system.

MANAGEMENT COMMENT

Lachlan Star CEO Andrew Tyrrell said: *"The results of this survey are exciting and highlight a very compelling drill target, immediately north of our most recent drilling. We have confidence that the chargeable response is a result of the copper sulphide system, which we were able to verify through down hole geophysics and geological observations."*

"Preparations have already commenced for a step-out drill program at Basin Creek, targeting key positions across the full prospective corridor. We look forward to providing our shareholders with updates as we move to the next stage of step-out drill testing."

[1] Refer to ASX announcement dated 16 January 2025
[2] Refer to ASX announcement dated 15 August 2024

POLE-DIPOLE INDUCED POLARISATION GEOPHYSICS

In January 2025, the Company completed an extensive 13-line kilometre Pole-Dipole IP geophysical survey at Basin Creek, with data acquired over 13 lines on an east-west orientation, each approximately 1 km long and on a 100m north-south line spacing.

The IP survey is designed to unlock the full potential of the Basin Creek copper system through the identification of chargeable responses associated with copper sulphide mineralisation, which occurs as disseminated to fracture- and vein-fill zones, as well as localised semi-massive lenses[3].

IP is a commonly used and proven exploration method for identifying mineralisation as it detects chargeability and resistivity contrasts in the sub-surface, particularly those related to copper sulphide minerals, which typically exhibit a highly chargeable response.

Initially focused on the southern portion of the Basin Creek Prospect, where drilling had confirmed copper sulphide mineralisation[4], the IP data reveals a robust correlation between IP chargeability and observed mineralisation across all six drill holes.

This established IP as a powerful tool for the Company's exploration efforts at Basin Creek and, as a result, the program was subsequently extended to the north based on:

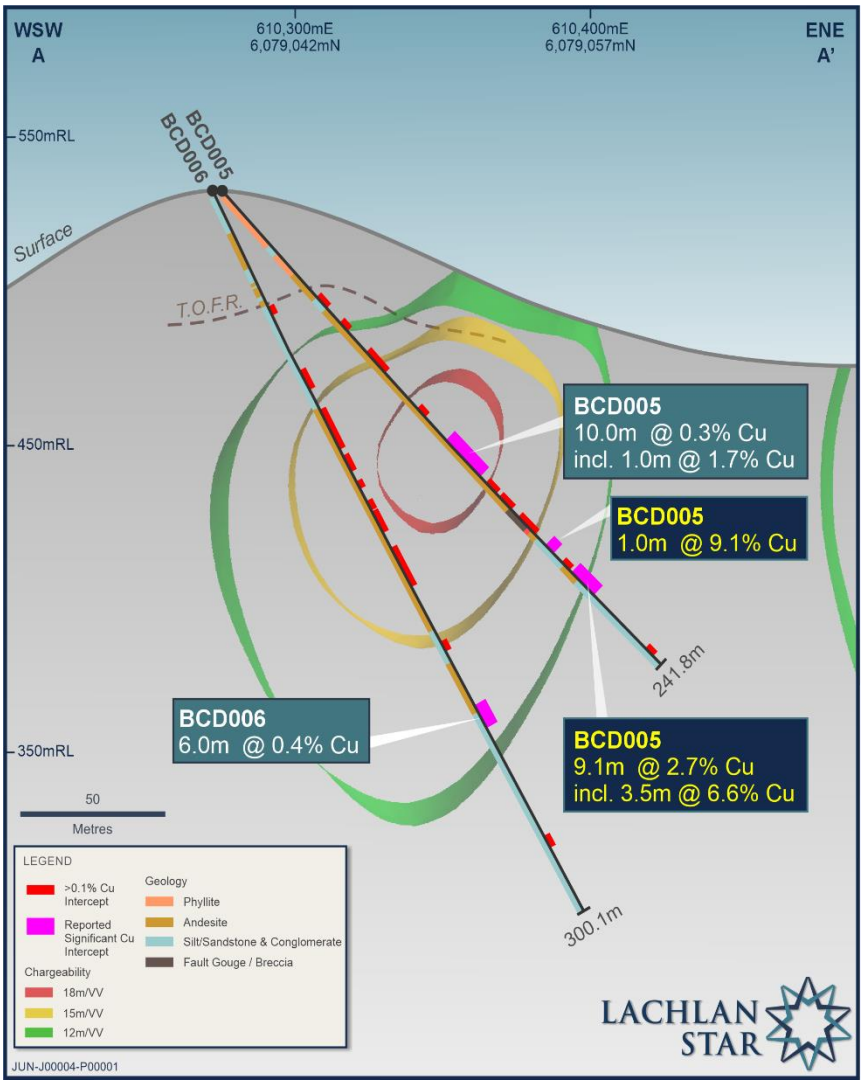

Figure 2: *Schematic cross section showing modelled 3D inversion chargeability over BCD005 and BCD006 drill traces and reported copper intercepts at the Basin Creek prospect.*

1) The **strong correlation between chargeability and sulphide mineralisation** in drilling;

[3] Refer to ASX announcement dated 27 November 2024
[4] Refer to ASX announcement dated 27 November 2024, 12 December 2024 and 16 January 2025

2) **Improving copper grades and continuity in drilling**, with an interpreted northerly plunge; and
3) The coincidence of the new chargeability response and an undrilled, **broad copper-in-soil anomaly spanning over 1.4km** in strike length.

Encouragingly, results from the survey have provided excellent validation of the scale of the mineralisation model and effectively extends the search space, ahead of follow-up exploration drilling planned later in the March Quarter.

3D Inversion Modelling

Advanced 3D inversion modelling of the IP data has revealed a compelling and extensive chargeable and resistive anomaly (*refer to Appendix A*) associated with known copper sulphide mineralisation to the south and which continues to the north and plunges to depth through the central part of the prospect area.

The strong chargeable and resistive responses are interpreted to reflect the disseminated nature of the copper sulphide mineralisation and the associated alteration processes. These geophysical responses are further supported by additional down hole geophysics, geological observations, and assay results from our six-hole diamond drilling program.

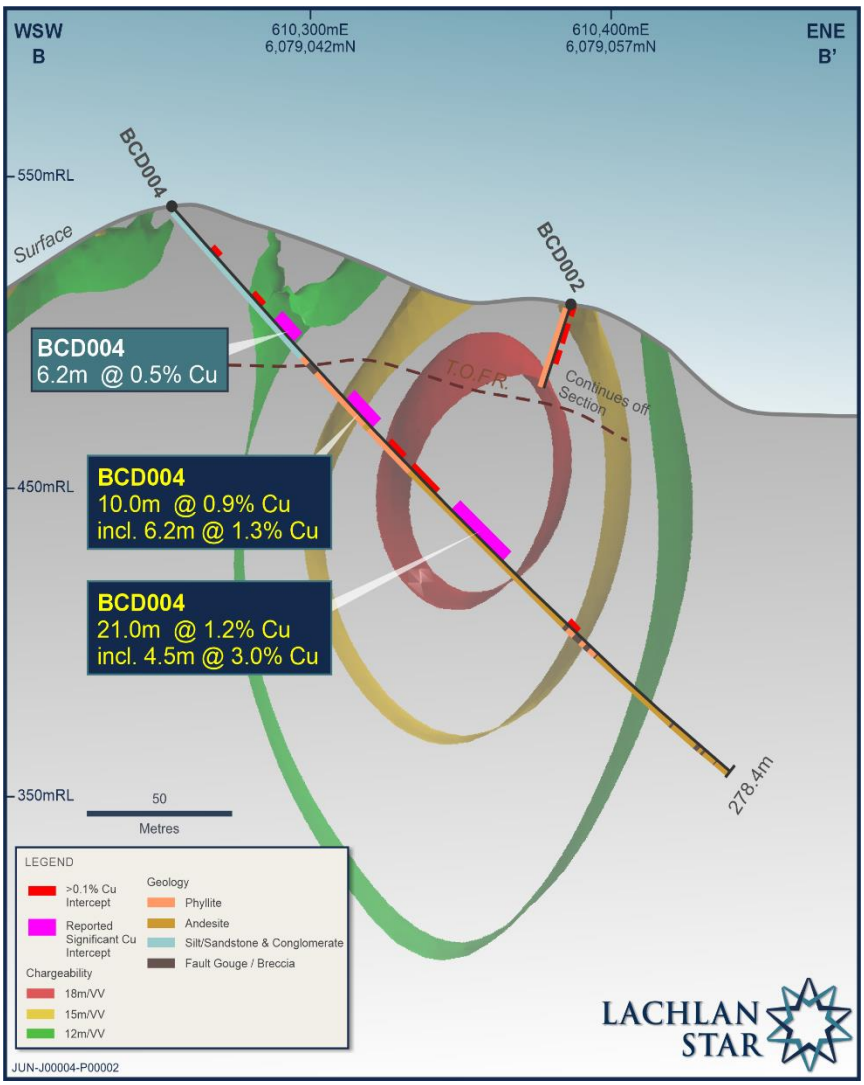

Figure 3: *Schematic cross section showing modelled 3D inversion chargeability over BCD004 drill trace and reported copper intercepts at the Basin Creek prospect.*

Down Hole IP and Additional Geophysical Studies

In addition to the surface IP survey, the Company conducted down hole IP measurements to verify that the copper sulphide mineralisation encountered during drilling was associated with a measurable chargeable response.

Additional down hole measurements, including conductivity and magnetic susceptibility, were also undertaken to better understand the mineralogy and geological characteristics of the Basin Creek system.

Geological Observations

Geological observations from the drilling and surface mapping have confirmed the geological sequence at Basin Creek is comprised of intermediate volcaniclastics, andesitic volcanics, felsic tuffs, feldspathic sandstone, fine grained siliciclastics and polymictic conglomerates[5].

Importantly, no black shales or lithologies capable of generating false IP anomalies were identified in drilling.

Mineralisation is associated with a primary alteration assemblage of chlorite as veins and intense pervasive alteration, plus lesser magnetite. Secondary alteration is a strong-to-pervasive patchwork of epidote and hematite alteration.

While magnetite may influence an IP chargeability response, magnetic susceptibility readings collected by the Company demonstrates it is not in high enough quantities to have influenced the chargeable response seen in the IP data.

Next Steps – Step-Out Drill Testing of High Priority Target

The integration of the Company's IP survey data, 3D inversion modelling, drill results and surface geochemical analysis has generated multiple drill target positions across the Basin Creek Prospect.

The northern extension of the IP anomaly, which extends beyond the drilled areas, is a particularly encouraging exploration target. The Company believes that this chargeable anomaly represents the northerly extensions to a significant copper mineralised system and extends for over 500 metres and to a depth greater than 250 metres.

Lachlan Star has commenced advanced preparations for the next phase of step-out drill testing at Basin Creek, including submissions for the necessary drilling permits in anticipation of drilling in the coming months.

[5] Refer to ASX announcement dated 27 November 2024

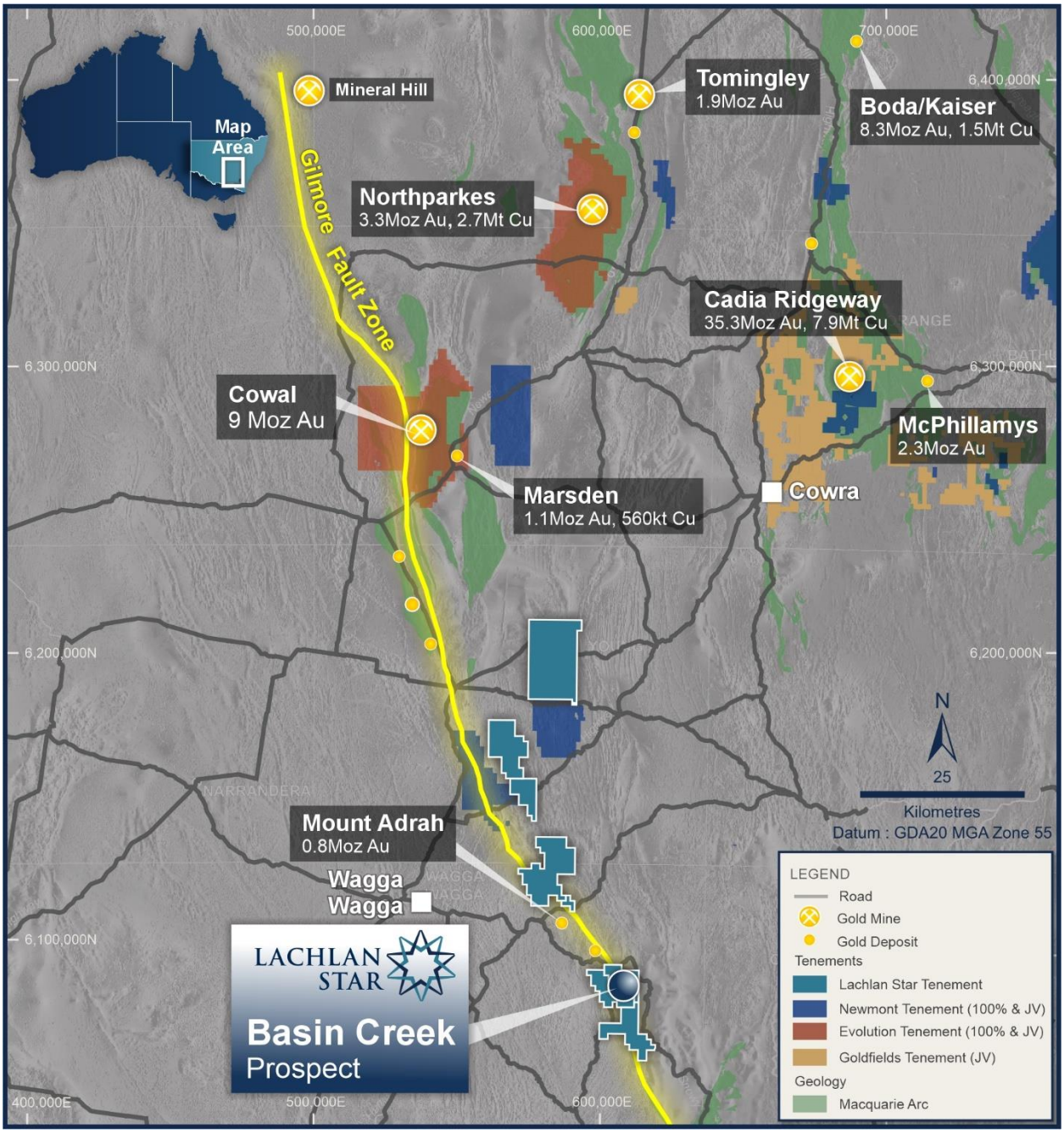

Figure 4: *Location map of the Basin Creek prospect, within the Macquarie Arc of the Lachlan Fold Belt, New South Wales. Mineral Resources sourced from the relevant Company public domain reports*

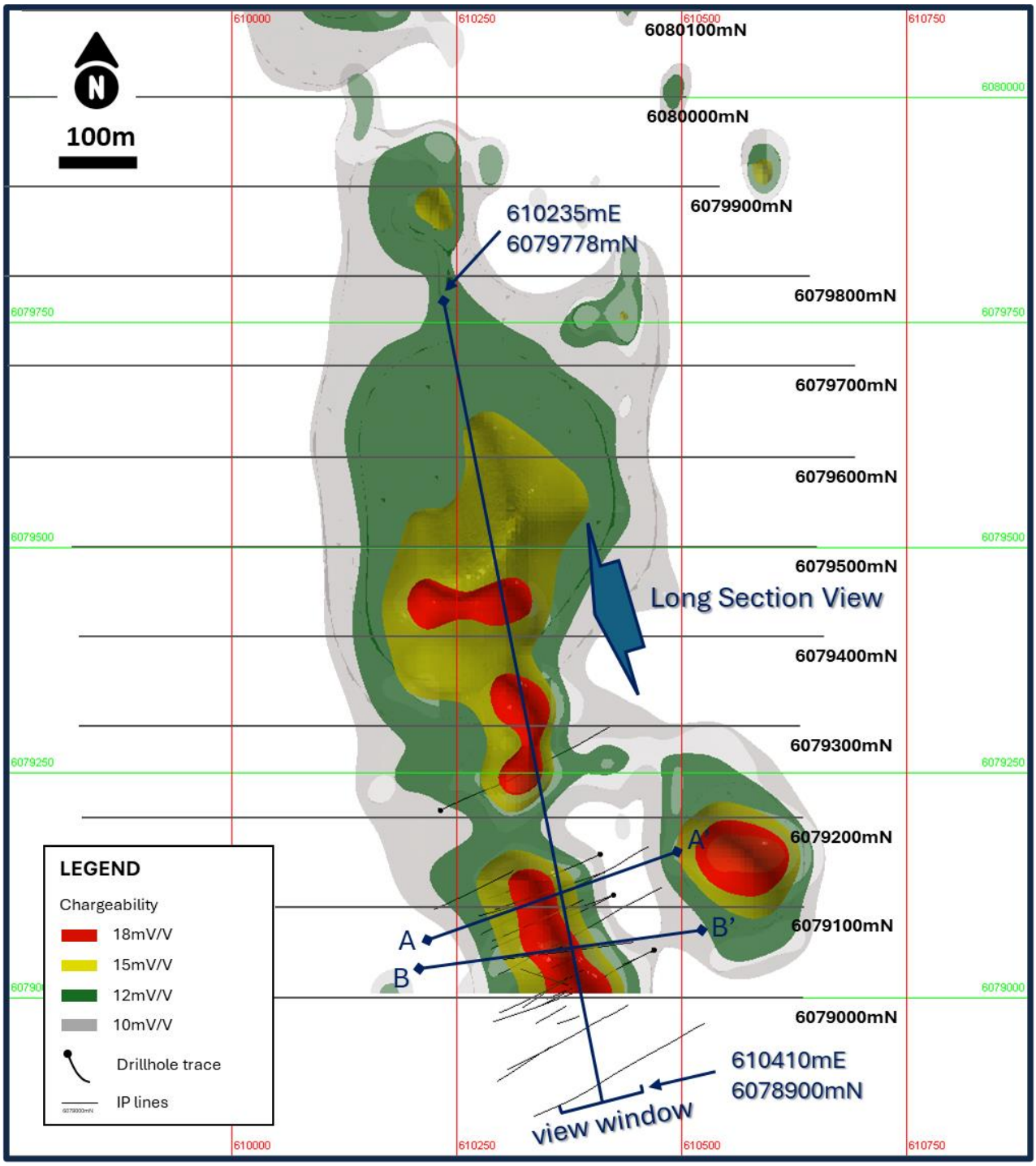

Figure 5: *Plan view map showing positions of cross sections and long sectional view over 3D inversion chargeability at the 490mRL (GDA94 MGA zone 55).*

This ASX announcement has been authorised for release by the Board of Lachlan Star Limited.

ASX Announcement

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Competent Person's Statement

The Information in this report that relates to Exploration Results is based on and fairly represents information and supporting documentation prepared by Mr Alan Hawkins, who is a Competent Person, Member (3869) and Registered Professional Geoscientist (10186) of the Australian Institute of Geoscientists. Mr Hawkins is the Exploration Manager, a shareholder and a full-time employee of the Company and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activities 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 Hawkins consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The Information in this Release that relates to previous Exploration Results for the Basin Creek project is extracted from: "*Further Wide High-Grade Copper Intercepts at Basin Creek*" dated 16 January 2025, "*High-grade copper drill targets defined at Basin Creek – Junee Project, NSW*" dated 15 August 2024, *"Drilling Intersects Semi-Massive Copper Sulphides at Basin Creek, NSW"* dated 27 November 2024 and *"High-Grade Copper Intersected Within Broad Mineralised Zones at Basin Creek, NSW"* dated 12 December 2024, which are available at www.lachlanstar.com.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the above original market announcements and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

Forward Looking Statements

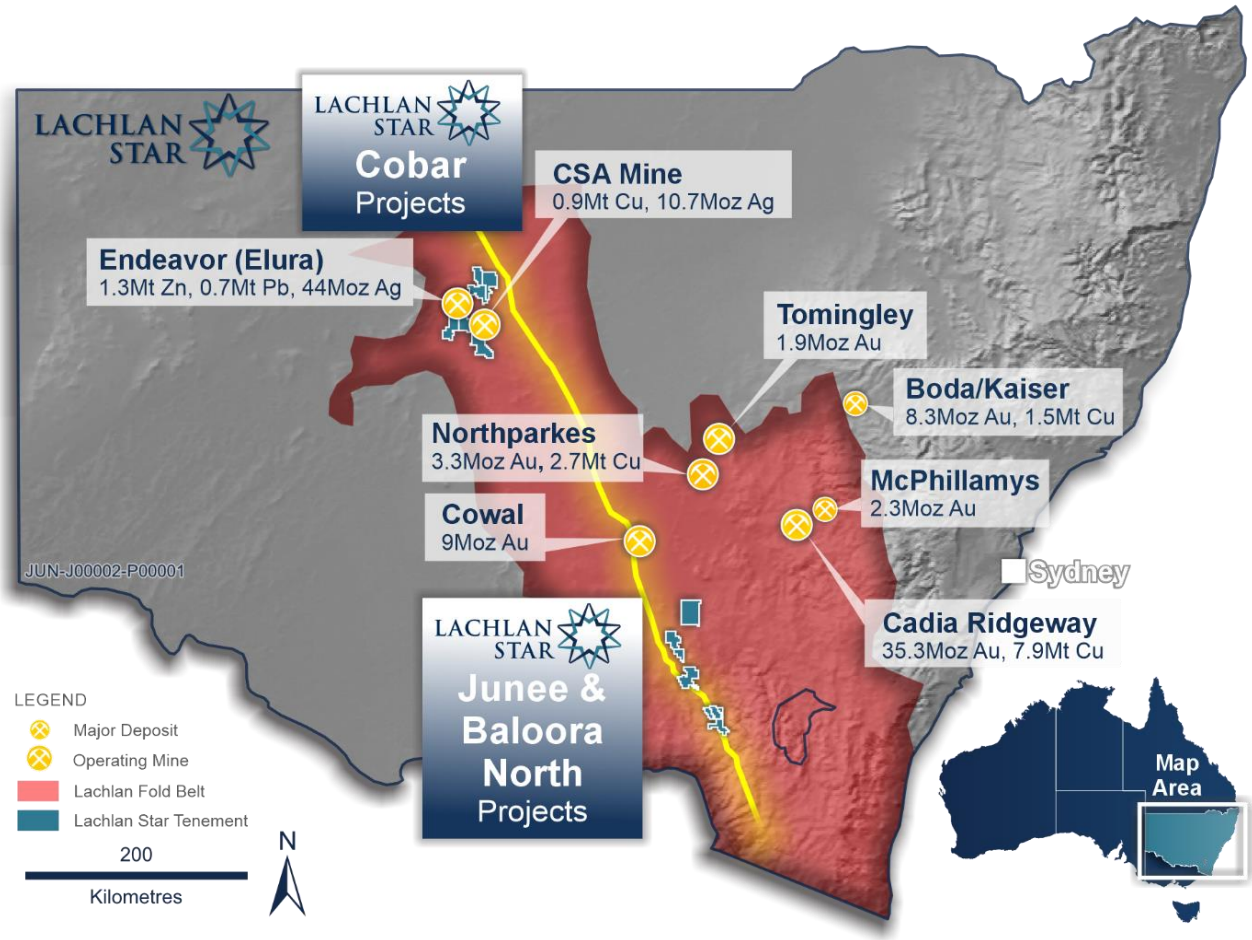
This report contains forward-looking statements which involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectation, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions provide incorrect, actual results may vary from the expectations, intentions and strategies described in this report. No obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.

ASX Announcement

10 February 2025

About Lachlan Star Limited

Lachlan Star Limited (ASX: LSA) is focused on the discovery of gold and copper resources across a portfolio of early-stage high-potential exploration projects located in central New South Wales. The Company has three priority projects situated within the highly endowed mineral Lachlan Fold Belt province of New South Wales and includes North Cobar, Bauloora North and Junee.



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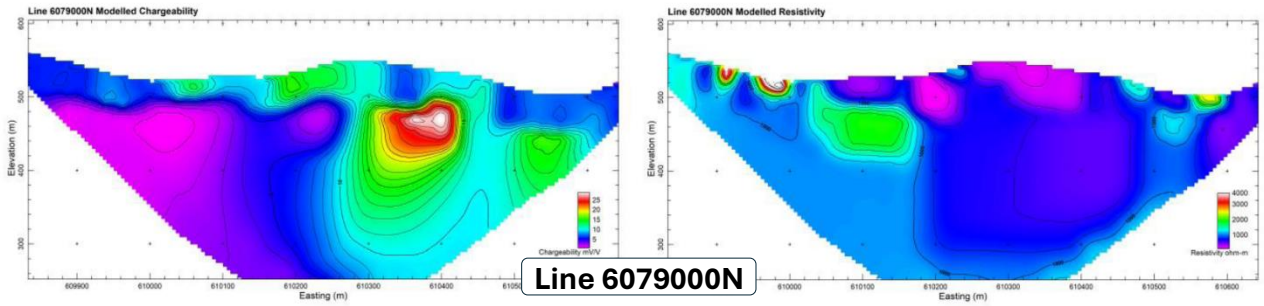
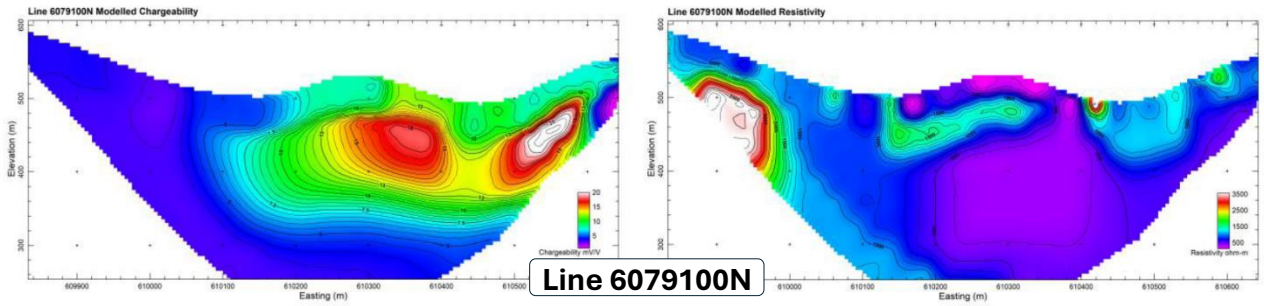
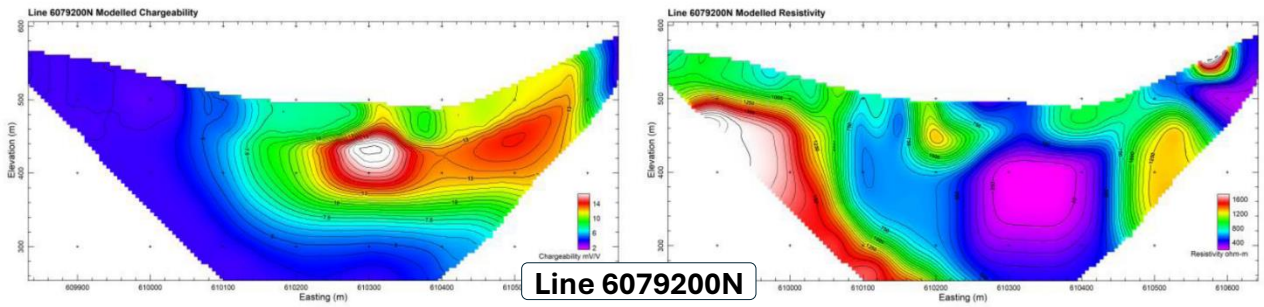
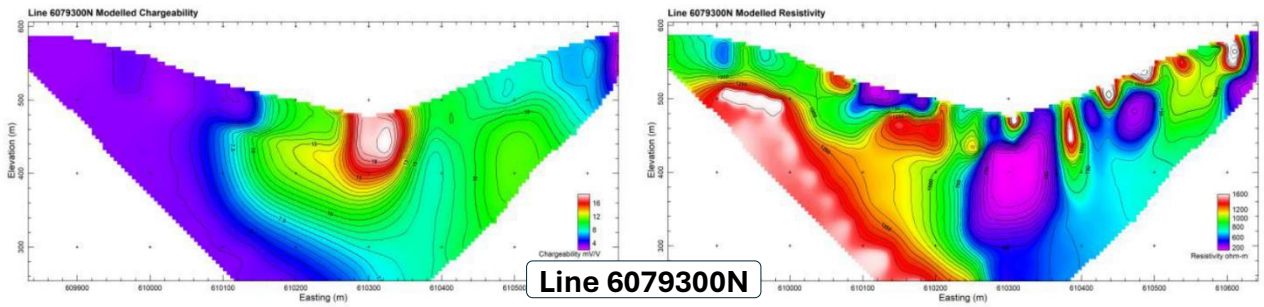
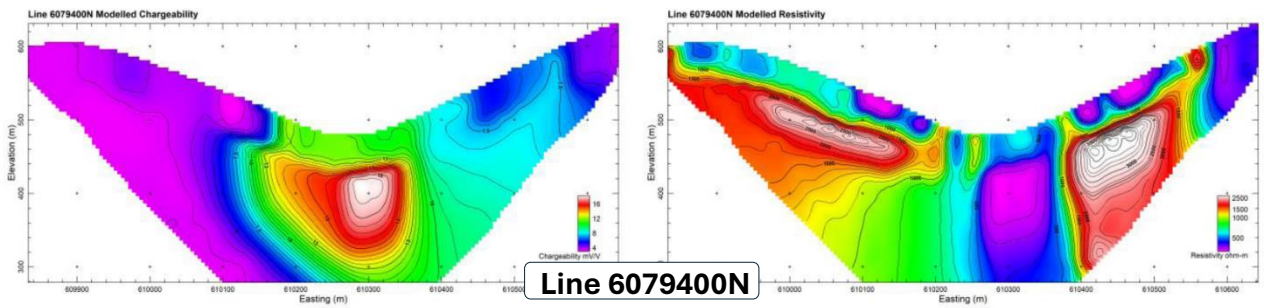
Appendix A: 2D IP Inversion Sections - Modelled Chargeability (left) and Resistivity (right)

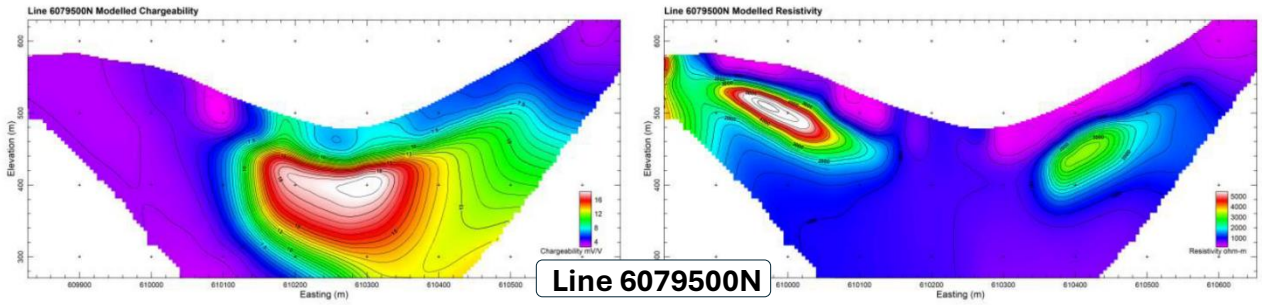




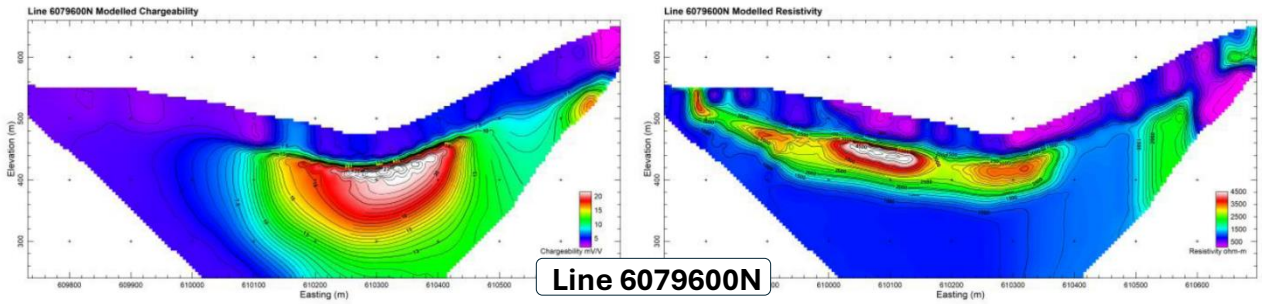




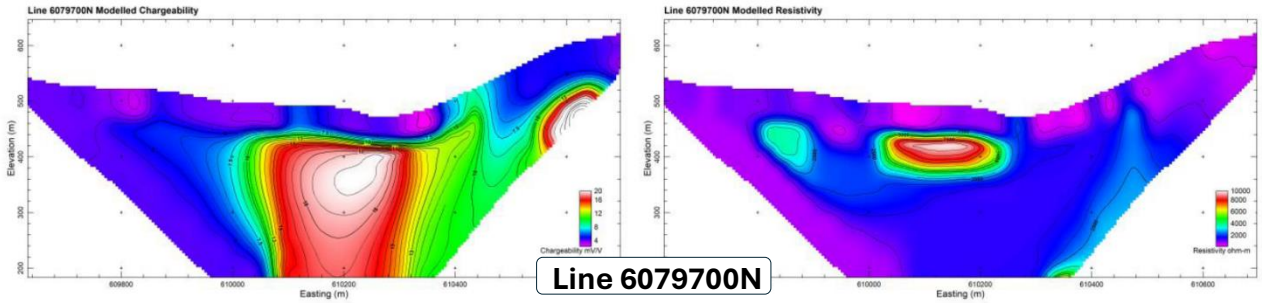




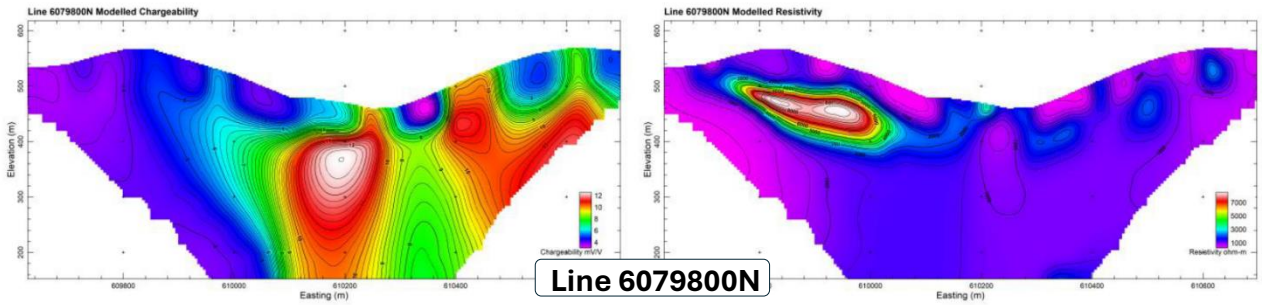
Line 6079500N



Line 6079600N



Line 6079700N



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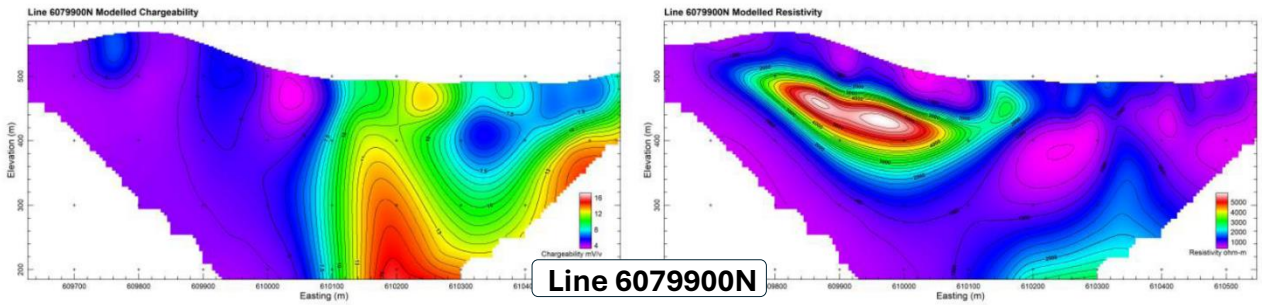

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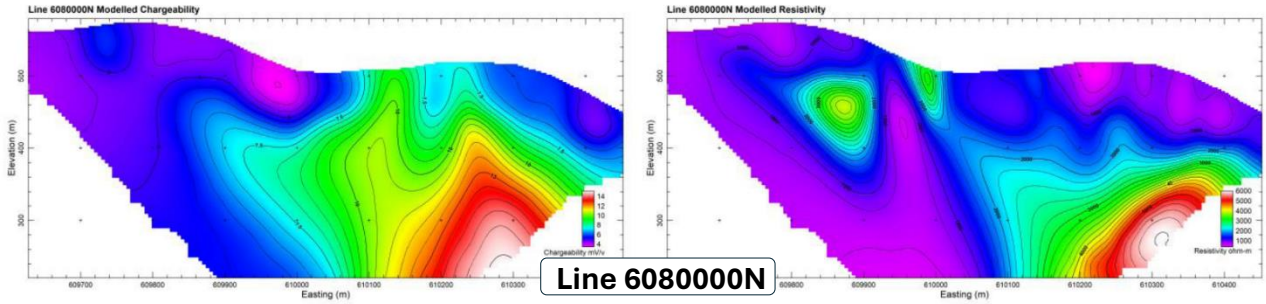

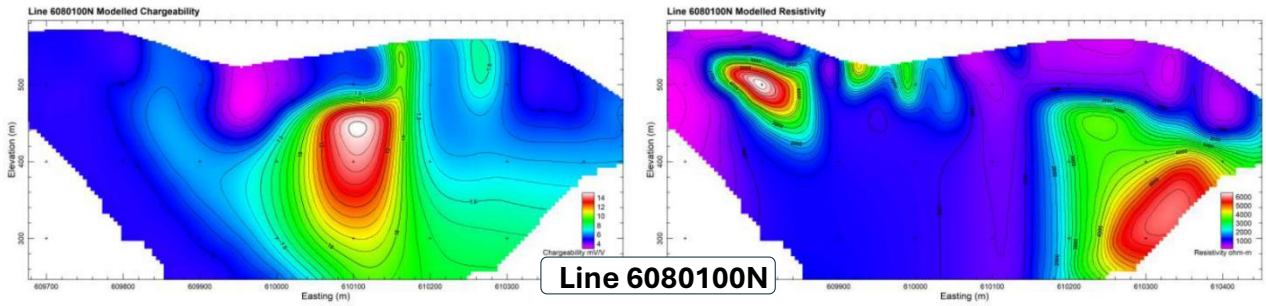

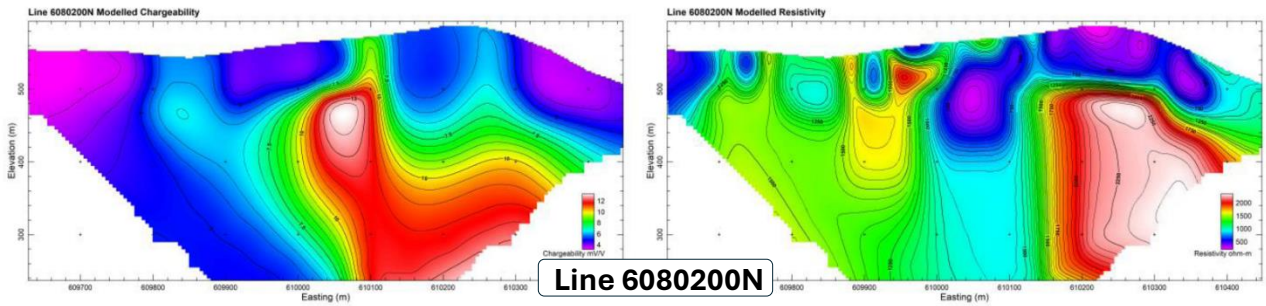

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Appendix B: JORC Code, 2012 Edition Table 1

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 sounds, 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.*	• A Pole-Dipole Induced Polarisation survey was carried out with stations positioned at 50m intervals along east-west lines ranging between 900m to 1,100m, on a 100m north-south line spacing from 6,079,000N to 6,080,200N. • Industry respected geophysical consultants, Fender Geophysics, were contracted to carried out the survey with acquisition parameters and equipment detailed in the '*Quality of assay data and laboratory tests'* section below. • Calibration was undertaken in the field during survey acquisition. Constant QAQC is undertaken and threshold levels are monitored, including solar wind electromagnetic disturbance activity.
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 / sampling conducted. Induced Polarisation survey only, with no physical sampling completed.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Method of recording and assessing core and chip sample recoveries and results assessed.* • *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 / sampling conducted. Induced Polarisation survey only, with no physical sampling completed.

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 nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	• Not applicable as no drilling / sampling conducted. Induced Polarisation survey only, with no physical sampling completed.
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.*	• Not applicable as no drilling / sampling conducted. Induced Polarisation survey only, with no physical sampling completed.
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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• Not applicable as no drilling / sampling conducted. Induced Polarisation survey only, with no physical sampling completed. • Fender Geophysics, were contracted to carried out the survey with the following acquisition parameters and equipment: Array: Pole-Dipole Receiver Dipole Length: 50m Transmitter Pole Move: 50m N levels: Up to n=16 signal dependent. Domain and Cycle: Time domain – 2 seconds or 0.125 Hz Acquisition Standards: Minimum 3 readings per station Tx current > 1 Amp Measured primary voltages > 1mv at n=12 If these standards could not be met, 5 readings were required at the station.

		Receivers: GDD RX-32 - 16 Channel Receiver Transmitter: Instrumentation GDD TxII Power Supply: Kubota 9kva generator Receiver Electrodes: Non-Polarising Porous Pots Receiver Cable: Multi Core Roll-along Data Cable Transmitter electrodes: Aluminium Plates GPS: Garmin GPS62
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.*	• Not applicable as no drilling / sampling conducted. Induced Polarisation survey only, with no physical sampling completed.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Survey data points / stations were located using a Garmin GPS62 by Fender Geophysics. • Co-ordinate grid system is GDA94 MGA Z55. • Gray Surveyors of Tumut, NSW were employed to conduct a collar pick up of the historic 1970's Australian Oil & Gas Minerals Pty Ltd drill holes prior to Lachlan Star's October-November drill program. A 3D digital elevation model using SRTM is used for topographical control.
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.*	• Survey stations were positioned at 50m intervals along east-west lines ranging between 900m to 1,100m, on a 100m north-south spacing from 6,079,000N to 6,080,200N. • The data spacing is adequate for the specific style of Induced Polarisation survey however the data will not be used in a Mineral Resource. • Not applicable as no drilling / sampling conducted. Induced Polarisation survey only, with no physical sampling completed.
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.*	• The survey lines were oriented east-west to cross the broadly north / northwest striking stratigraphy and the interpreted strike of mineralisation perpendicular to gain as unbiased a reading as possible. • Not applicable as no drilling / sampling conducted. Induced Polarisation survey only, with no physical sampling completed.
Sample security	• *The measures taken to ensure sample security.*	• Not applicable as no drilling / sampling conducted. Induced Polarisation survey only, with no physical sampling completed.

Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Data was uploaded to Fender Geophysics' system each night for QAQC and forwarded to geophysical consultant Jeremy Cook of West Coast Geophysics for further QAQC and subsequent data inversion.

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 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 activities relate to current tenement EL8939. • There are no registered heritage sites within the tenement. • All tenements are owned by TRK Resources Pty Ltd, a 100% owned subsidiary of Lachlan Star Limited and are in good standing with the New South Wales Titles Management System. The tenements lie within rural free-hold land requiring TRK Resources Pty Ltd to enter into formal land access agreements with individual landowners, prior to any field activity, as prescribed by New South Wales State Law including the Mining Act 1992. The Company has rural land access agreements in place over the work areas reported in this release.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Details of all historical exploration drilling and drilling results carried out by other parties can be seen in the same section of the JORC Table 1 within ASX Announcement, 'High-grade copper drill targets defined at Basin Creek – Junee Project, NSW', dated 13 August 2024.
Geology	• *Deposit type, geological setting and style of mineralisation.*	Details of the deposit type and geological setting (regional & project scale) can be seen in the JORC Table 1 of ASX Announcement, 'High-grade copper drill targets defined at Basin Creek – Junee Project, NSW', dated 13 August 2024. An updated description of the style of mineralisation can be seen in the JORC Table 1 of ASX Announcement, 'Further wide high-grade copper intercepts confirm potential at Basin Creek, NSW', dated 16 January 2025.
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*	• Not applicable as no drilling / sampling conducted. Induced Polarisation survey only, with no physical sampling completed.

	• *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.*	
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.*	• Not applicable as no drilling / sampling conducted. Induced Polarisation survey only, with no physical sampling completed.
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').*	• Not applicable as no drilling / sampling conducted. Induced Polarisation survey only, with no physical sampling completed.
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.*	• Refer to Figures in the 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 to avoid misleading reporting of Exploration Results.*	• Not applicable as no drilling / sampling conducted. Induced Polarisation survey only, with no physical sampling completed.
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,*	• DHEM was acquired on 4 of the 6 holes (BCD001-004) during November 2024 by Australian Geophysical Services and Groundsearch Australia with a 300m x 200m loop. Processing and interpretation was completed by Jeremy Cook of West Coast Geophysics. Data was acquired using an Emit DigiAtlantis DHEM system with 3 component b field probe, using a 4Hz transmitter

	geotechnical and rock characteristics; potential deleterious or contaminating substances.	waveform. The final data was received in .TEM format and imported into the Maxwell program for review and potential modelling. • Groundsearch Australia performed downhole magnetic susceptibility, gamma and conductivity on BCD001-006; and on historic hole TDH14. All other historical AOG holes attempted were blocked near surface. Downhole IP and optical + acoustic televiewer data were collected on BCD005 and BCD006.
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.*	Further exploration will be planned based on the results of recent geophysical surveys and geological assessment of prospectivity to the north of the known copper sulphide system, focussed on areas of coincident Cu in soil anomalies with strong chargeable responses from the recent IP survey (refer to Figure 1).