18 June 2026

"Harts Range: Defining a New Copper-Nickel Discovery District"

BHP Xplor-backed research has reframed Harts Range from a collection of copper and nickel deposits and prospects into a belt-scale copper-nickel mineral system with the potential to host significant discoveries.

HIGHLIGHTS

- **BHP Xplor-backed research assessment has reframed the Harts Range from a set of isolated copper and nickel-related deposits and prospects into a district-scale mineral system carrying the ingredients for a potential tier-one copper or nickel sulphide discovery.**
- **A strong deep conductor, C2, identified from a reprocessed line of magnetotelluric (MT) and seismic reflection data, sits directly beneath the Blackadder-Baldrick Ni-Cu-PGE prospects. Crucially, this conductor is not evident in broader 50km scale regional AusLAMP datasets and suggests that further significant conductors may remain hidden regionally, even in areas explored previously, where finer resolution MT surveys have not yet been completed.**
- **Integrated datasets of magnetotellurics (MT) and seismic reflection (by Vox Geophysics), gravity, magnetic, structural (PGN Geoscience) and isotopic data from Dr. Michael Green now map parts of the system end-to-end. The data indicate a fertile deep-source, long-lived mantle-tapping structures and known sulphide mineralisation located above major crustal pathways. This integration allows the information to be placed in a coherent mineral systems model to help generate drill-ready exploration targets.**
- **With the support of the Northern Territory Geological Survey,[1] LMS are undertaking two ~50km long MT and gravity lines with 1km MT and 500m gravity spaced stations to detect further C2-style conductors across the portfolio. The new survey will provide more detail and better resolution than the survey that revealed C2.**

Litchfield Minerals Limited (ASX: LMS or the Company) is pleased to update shareholders on the important technical work completed through the BHP Xplor Program across its Harts Range portfolio in the Northern Territory and the Company's next steps across our expanding leaseholds (**Figure 1**).

The work supported by the BHP Xplor Program has materially advanced the Company's understanding of mineralisation across Harts Range and strengthened its view that the belt carries the key ingredients for large copper and nickel sulphide deposits. Conceptual ideas have now been developed by integrating geophysical, structural and isotopic datasets, along with an evaluation of deep conductors and their associated linking structures and mineralisation. This integration allows the information to be placed in a coherent mineral systems model to assist in generating a pipeline of drill-ready exploration targets.

[1] The Northern Territory Geological Survey has awarded Litchfield Minerals Pty. Ltd. co-funding of AUD$100,000 towards the Oonagalabi magnetotelluric (MT) survey project under Round 19 of the GDC program.

Managing Director's comment

Litchfield Managing Director, Matt Pustahya, said:

"The input from BHP Xplor has fundamentally changed the way we see Harts Range. While Oonagalabi remains a key focus of our exploration efforts, our understanding of the region has evolved significantly. We are now viewing Oonagalabi within the context of a broader district-scale mineral system characterised by deep conductive architecture, long-lived mantle-tapping structures, repeated mafic and ultramafic magmatism with known sulphide mineralisation associated with major crustal pathways.

What excites us is that we now see how the ingredients for large-scale copper and nickel sulphide deposits fit together across the broader Harts Range belt. Our consultants have integrated MT, seismic reflection, gravity, magnetics, structural, isotopic and regional tectonics data into a coherent mineral systems model. Importantly, this work has elevated Harts Range from a collection of individual prospects into a coherent belt-scale mineral system with the potential to host significant copper and nickel discoveries.

The single most important lesson is C2: *a deep conductor tied to known nickel-copper-PGE mineralisation. C2 provides a compelling proof point for our exploration model, demonstrating a direct link between deep conductive architecture and known sulphide mineralisation.*

*C2 is evident in historical tightly spaced MT surveys but not evident in wider-scale regional MT survey data. If C2 is invisible at regional scale, there is potential to detect similar anomalies across our ground with more localised MT surveys. That is exactly why we are running two 50 km MT and gravity lines at tight, 1km (MT) and 500m (gravity) spacing, with additional off-profile stations in an irregular grid. We are looking to better understand the conductive units sitting below Oonagalabi and the western tenements. This next phase is not just about refining drilling around Oonagalabi, it is primarily about turning a belt-scale mineral system into a pipeline of drill-ready targets across our Harts Range portfolio (**Figure 1**)."*

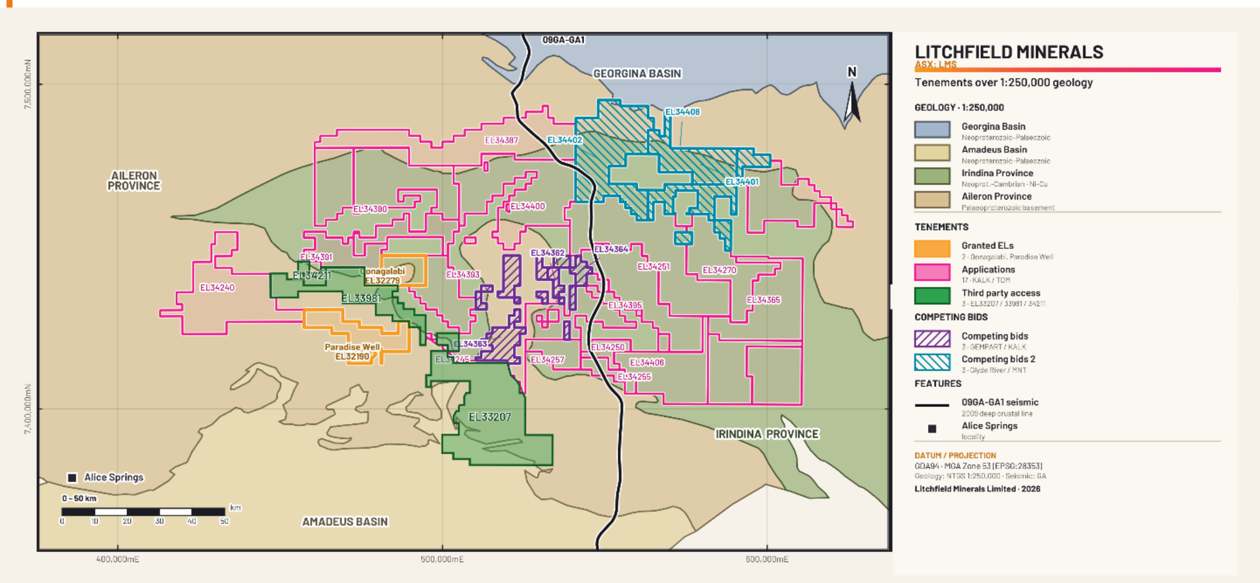

***Figure 1**: Harts Range tenure map showing Litchfield's granted and application tenements, together with adjacent third-party tenure (green) that provide potential future access to the broader belt.*

The BHP Xplor program and how it supports Litchfield Minerals

BHP Xplor has been transformative for Litchfield Minerals. Beyond the equity-free funding, the nine-month 'accelerator program' has provided access to BHP's global network of technical experts, mentors, leadership coaches, technologies and exploration methodologies that would otherwise be inaccessible to a company of our size.

The program has accelerated our understanding of the Harts Range mineral belt, challenged our geological thinking, and helped us apply a more structured, mineral systems-based approach to exploration. Through collaboration with BHP and the broader Xplor cohort, we have been able to integrate new datasets, advance our geophysical interpretations and use emerging technologies in our exploration workflow.

The BHP Xplor Program has also enabled us to think beyond individual prospects and towards belt-scale discovery opportunities. The program has accelerated both our technical capability and our strategic thinking, helping position Litchfield Minerals to pursue the large-scale critical and strategic mineral discoveries required for the future energy transition.

The mineral system approach and assessing the critical uncertainties

Working within the BHP Xplor framework, Litchfield has been systematically testing critical uncertainties that dictate whether a large mineral deposit can form:

- Is there a fertile, deep source for metal-bearing melts and fluids?
- Were there tectonic triggers to generate them?
- Are there mantle-tapping structures to move metal-rich melts or fluids to explorable depths?
- Is there evidence that metals and sulphides have concentrated?
- Can any deep features be tied to known mineralisation and surface structures?

The work to date answers all of these questions positively and gives the Company a far stronger foundation for more efficiently targeted drilling. The BHP Xplor research tests the full mineral systems pathway, from mantle source to mineral deposition, across four key gates:

1. Identifying a fertile source capable of generating metal-rich magmas and fluids;
2. Understanding the geodynamic processes that mobilised and transported those metals through the crust;
3. Mapping the structural and lithological pathways that focused mineralising fluids or melts; and
4. Determining where those metals were concentrated and preserved in economically significant quantities.

By integrating magnetotellurics, seismic reflection, gravity, geochemistry, chronology, petrology and structural geology data, the program has been designed to systematically reduce uncertainty at each stage of the mineral systems framework. Rather than simply targeting individual anomalies in isolation, the approach seeks to establish whether the Harts Range area may contain all the critical ingredients required to form large-scale deposits.

The mineral systems framework provides a repeatable exploration model that can be applied across Litchfield's extensive land position.

Source

Litchfield has now demonstrated through integrated Sm-Nd isotope studies, structural analysis and geophysical datasets that multiple episodes of mafic and ultramafic magmatism were emplaced across the Harts Range and broader Irindina and Aileron provinces. These magma events are important because they provide a fertile source of copper, nickel and other valuable metals mobilised from deep in the mantle towards the Earth's surface. Work completed by Dr Michael Green indicates that several of these magmatic events may have been sourced from, or significantly influenced by, enriched Sub-Continental Lithospheric Mantle (SCLM), highlighting repeated influxes of deep-sourced primitive melts into the region. SCLM-derived magmas are recognised globally as fertile sources for orthomagmatic copper-nickel-PGE mineral systems, while repeated mantle-derived magmatism can also generate the heat, fluids and metal sources required to generate large hydrothermal copper deposits.

Generation

As part of the BHP Xplor work, PGN Geoscience interpreted the Irindina Province as a failed rift system, characterised by mantle-tapping crustal-scale structures and accumulations of mafic-ultramafic rocks at the base of the basin. Importantly, repeated episodes of rifting, basin inversion and subsequent crustal thickening reactivated this deep architecture through time, triggering the generation of fertile mafic and ultramafic magmas that moved along these long-lived pathways (**Figure 2**).

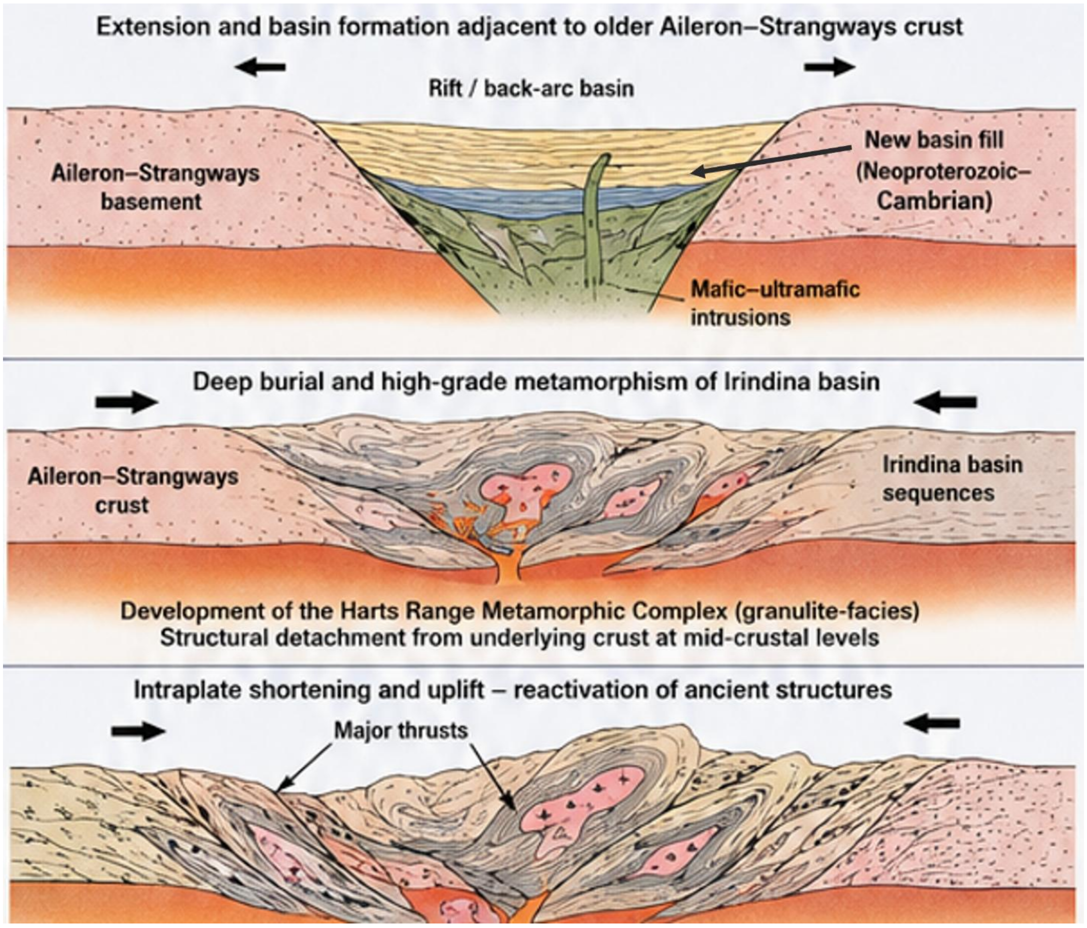

***Figure 2**: PGN interpretation of Irindina Basin development: mantle-tapping structures, mafic-ultramafic intrusion, inversion and later uplift.*

This setting is particularly important for nickel and copper exploration because many of the world's largest orthomagmatic Ni-Cu-PGE deposits are associated with fertile mantle-derived mafic and ultramafic magmas emplaced along deep crustal structures, with melt formation triggered by tectonic events. These magmas can generate and transport significant quantities of copper, nickel and platinum group elements from the mantle into the crust, where sulphide saturation and metal accumulation may occur.

Along with their potential to form orthomagmatic Ni-Cu-PGE deposits directly, these magmatic systems can also act as a significant heat and metal source for hydrothermal mineral systems. The combination of fertile mantle sources, long-lived crustal architecture, repeated magmatic recharge and favourable structural pathways represent a highly prospective geological environment to form hydrothermal copper deposits.

Migration

PGN Geoscience’s litho-structural interpretation completed as part of the BHP Xplor program has mapped numerous long-lived, crustal-scale structures across the belt. A network of major geological faults and structures have been identified that were active for hundreds of millions to billions of years. These structures, active through multiple tectonic events, were critical to Irindina basin formation, inversion, uplift and fluid flow (**Figure 3**). District-scale mineral systems need deep plumbing and long-lived pathways to focus melts and fluids over geological time to explorable depths within the Earth’s crust.

Large mineral deposits rarely form without these long-lived pathways. They are critical for transporting and concentrating metals into economic deposits over time. The Harts Range contains exactly this type of geological architecture, providing the plumbing system needed to support the formation of major copper and nickel mineral systems.

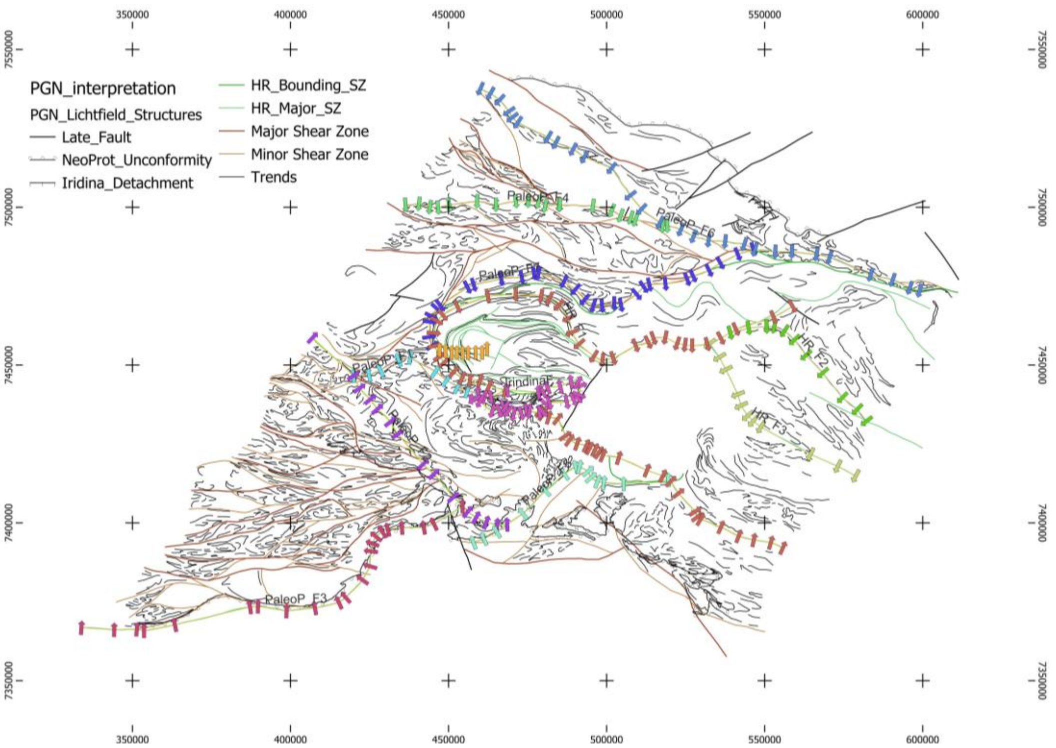

***Figure 3**: PGN structural interpretation showing mantle tapping major shear zones and Harts Range bounding structures.*

Concentration

Copper and nickel sulphides are already known in historical deposits and prospects within the Irindina Province which, while not on Litchfield tenements, the Company believes provide proof of concept. The Blackadder and Baldrick magmatic Ni-Cu-PGE prospects hosted in the Lloyd Gabbro, indicate that sulphur saturation and metal concentration have occurred. The best historical rock chip samples from Blackadder are 3.8% Ni, 9.6% Cu and 1.7g/t PGE and from Baldrick 2.3% Ni and 2.4% Cu[2]. Drilling at Baldrick also returned 9m at 0.48% and 0.37% Cu from 4m in hole BARC007 (Mithril Resources Ltd 2008)[2]. These prospects sit directly above the C2 conductor imaged in MT data (**Figure 4**). The nearby Hammer Hill area adds further encouragement, where anomalous nickel, chromium and cobalt rock chips are reported associated with several unnamed mafic and ultramafic intrusions (Whelan *et al.*, 2022)[4]. In the same area of Harts Range (not of Litchfield tenements), the Basil hydrothermal copper cobalt deposit (Inferred Mineral Resource Estimate of 26.5Mt at 0.57% Cu, 0.05% Co with a 0.3% Cu cut-off, Mithril Resources Ltd., 2012)[5] is hosted within a large shear zone in the Riddock Amphibolite, providing a second style of mineralisation for further exploration.

The next stage is to use the expanding geophysical, geological and geochemical datasets to identify the traps and pathways capable of concentrating economic accumulations of copper and nickel sulphides.

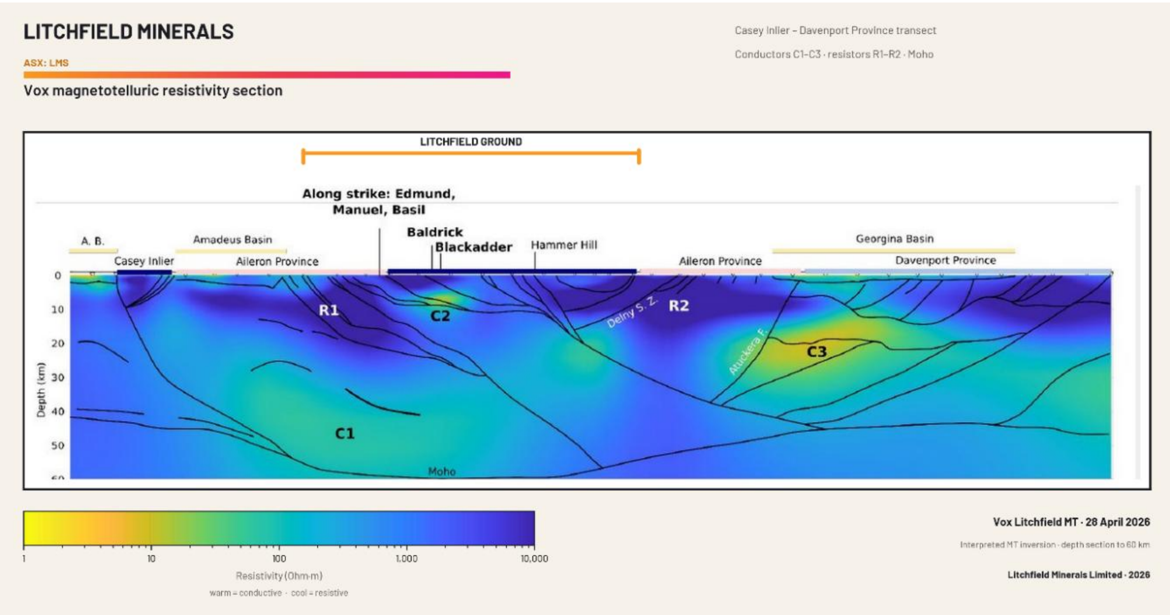

***Figure 4**: Reprocessed 09GA-GA1 MT section: conductor C2 and its relationship to known mineralisation – Orange line shows the span of tenure Litchfield own or have applications for. Conductive anomalies (warm yellow-red zones) indicate potential zones of interpreted sulphides beneath known mineralised occurrences and prospects Black lines are structures interpreted from seismic reflection data from the 09GA-GA1 line of Korsch et al 2011[3].*

Some of the exploration results reported in this announcement are historical in nature and not on Litchfield tenements. The information is limited to that available from historical records and has not been verified to current JORC Code standards. Accordingly, the historical exploration results should not be relied upon for the purposes of Mineral Resource estimation or economic evaluation.

[2] Drilling Update Huckitta Project, ASX Release, Mithril Resources Limited, 7th October 2009. [3]Korsch, R., Blewett, R., Close, D., Scrimgeour, I., Huston, D., Kositcin, N., Whelan, J., Carr, L., & Duan, J. (2011). Geological interpretation and geodynamic implications of the deep seismic reflection and magnetotelluric line 09GA-GA1: Georgina Basin–Arunta Region, Northern Territory. Northern Territory Geological Survey, 67–76. [4]Whelan JA, Hallett LJ, Beyer EE, Reno BL, 2022. Mafic igneous stratigraphy and potential for orthomagmatic Ni–Cu–PGE and VMS Cu–Co mineralisation in the Irindina Province, central Australia, AGES 2022 Proceedings, NT Geological Survey. [5]Inferred Mineral Resource Estimate for the Basil Copper-Cobalt Deposit, ASX Release, Mithril Resources Limited, 21 March 2012.

The C2 lesson, and why the next MT survey matters

The most important single finding of the BHP Xplor-supported research is conductor C2 on the re-processed 09GA-GA1 MT and Seismic Reflection Section. This strong conductor is located at ~10km depth on a basal fault of the Irindina Province, directly beneath the Blackadder and Baldrick Ni-Cu-PGE prospects and spatially associated with the sulphide-bearing Lloyd Gabbro. In other words, a deep conductor, potentially sulphide-bearing or marking a major fluid pathway, sits right beneath known nickel-copper-PGE mineralisation.

A deep conductor sitting beneath the Delny Shear Zone is also compelling as it connects, via a steep fault, directly up to the Hammer Hill area, providing a plausible pathway for metal-bearing melts and fluids to travel from depth toward explorable levels in the crust. The Hammer Hill area may represent further surface expression of an orthomagmatic nickel-copper-PGE system within the same belt.

Critically, C2 and these other conductors do not appear as discrete features in new Vox Geophysics models of the regional scale AusLAMP data, which is spaced at roughly 50km and far too coarse to resolve these features. **Figure 5** highlights the work of Kirkby and Duan (2019[6]) who integrated magnetotelluric (MT) and seismic datasets to interpret the presence of the deep conductive bodies C1a and C1b beneath the Irindina Province. These conductors were interpreted as potential accumulations of sulphides at depth, with major crustal-scale structures identified as possible pathways for transporting metal-bearing fluids and/or magmas towards the surface.

C1a and C1b correspond to the C2 conductor identified in Litchfield's and VOX reprocessed MT data under BHP Xplor, together with the currently unnamed deep conductor located beneath Hammer Hill. The coincidence of these deep conductive bodies with major crustal structures provides a framework for targeting areas where these systems may have been concentrated closer to surface and suggests potential for large-scale sulphide systems within the region.

Importantly, C2 is only evident on the more closely spaced 10km MT survey along the 09GA-GA1 line (**Figures 6 and 7**). This may suggest that further conductive bodies may exist within Litchfield's project area, however, they currently remain unresolved at regional survey resolution.

That is why Litchfield is planning two ~50km-long MT and gravity lines at 1km spaced MT and 500m spaced gravity (**Figure 8**), to provide better resolution than the 09GA-GA1 line and the AusLAMP survey. Both proposed lines cross the boundaries between the Aileron and Irindina provinces, covering the full structural architecture zone of interest. One line passes through Oonagalabi and the other passes about 20km to the east.

The MT survey aims to resolve further C2-style conductors over Oonagalabi and the Western tenement package at depths of up to 5km. The concordant gravity survey will test for dense bodies that may be associated with intrusions. Where any strong conductive targets coincide with a dense gravity high, the case for sulphide accumulation strengthens. These areas will become high-priority areas for follow-up.

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[6] *Kirkby, A., & Duan, J. (2019). Crustal structure of the eastern Arunta region, Central Australia, from magnetotelluric, seismic, and magnetic data. Journal of Geophysical Research: Solid Earth, 124, 9395–9414. https://doi.org/10.1029/2018JB016223*

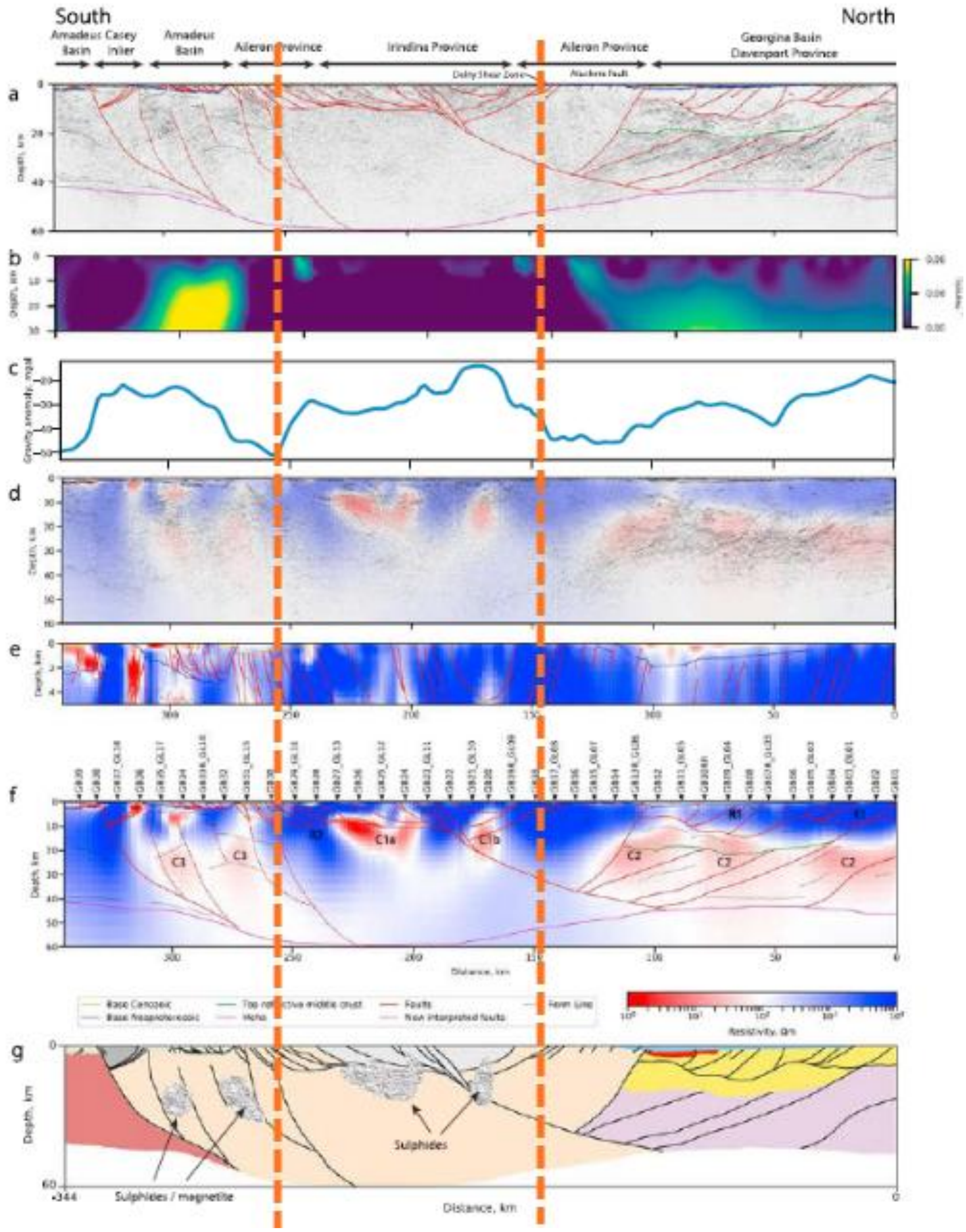

Figure 5. *Adapted from Kirkby and Duan (2019) Orange lines indicate the boundaries between the Aileron and Irindina provinces: (a) Seismic reflection amplitude data, depth converted using a velocity model derived from stacking velocities, overlain by our interpretation (modified after Korsch & Doublier, 2016). Extent of key provinces also shown. (b) Magnetic inversion result from Chopping et al. (2011). (c) Bouguer gravity anomaly data along the 09GA-GA1 profile, from the Geophysical Archive Data Delivery System database (Geoscience Australia, 2018). (d) Resistivity model extracted onto the profile and overlain, semitransparent, on the depth-converted seismic reflection data. (e) Seismic reflection interpretation and resistivity model for the top 5km with five times vertical exaggeration. (f) Seismic reflection interpretation and resistivity model down to 60km. (g) Interpretation of resistivity model, shown with same colors as Figure 2d. All models and data (with the exception of gravity data and shallow view of resistivity model) shown on an equal horizontal and vertical scale.*

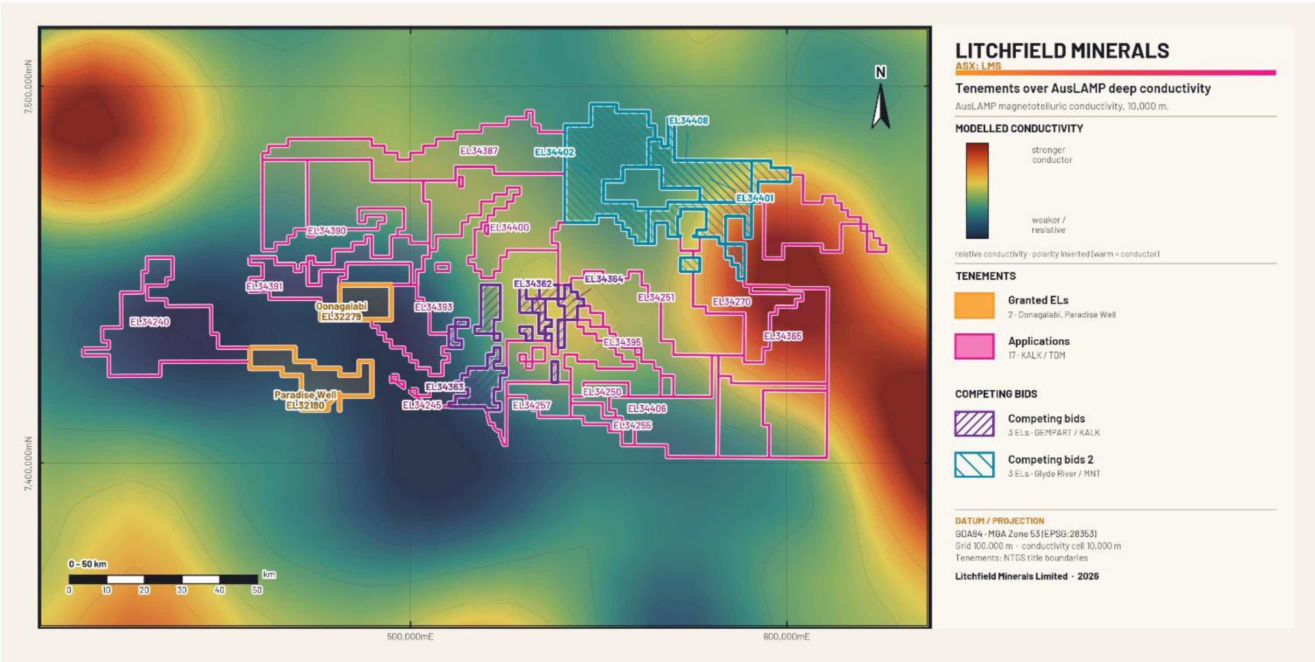

Figure 6. *10 km depth slice of the new Vox Geophysics 3D inversion of AUSLAMP magnetotelluric (MT) data acquired at approximately 50 km station spacing, illustrating that the Eastern Harts Range C2 conductor is not resolved at this regional scale.*

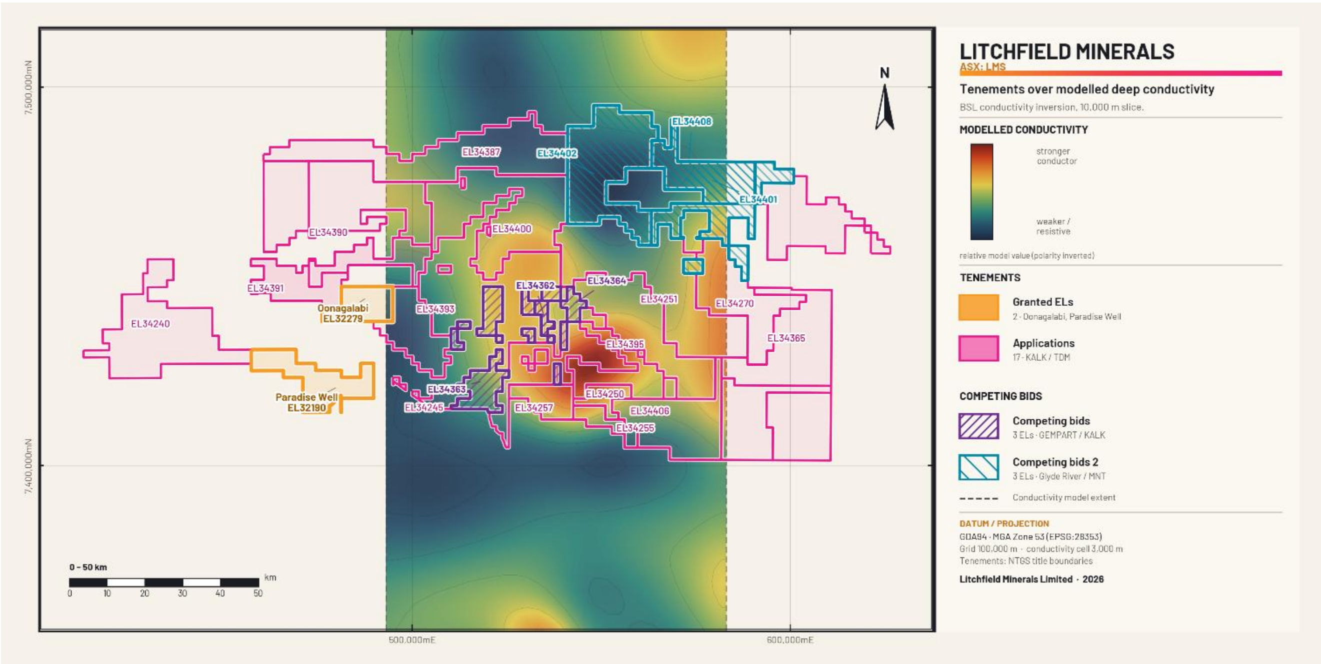

Figure 7: 10km depth slice of the Vox Geophysics 3D inversion of 2009 Geoscience Australia MT data acquired at approximately 10 km station spacing, showing the C2 conductive zone (red) beneath EL34250. Importantly, the conductor is not resolved in the regional 50km spaced AUSLAMP data (compare with Figure 6), but becomes clearly defined in the higher-resolution 10km MT data.

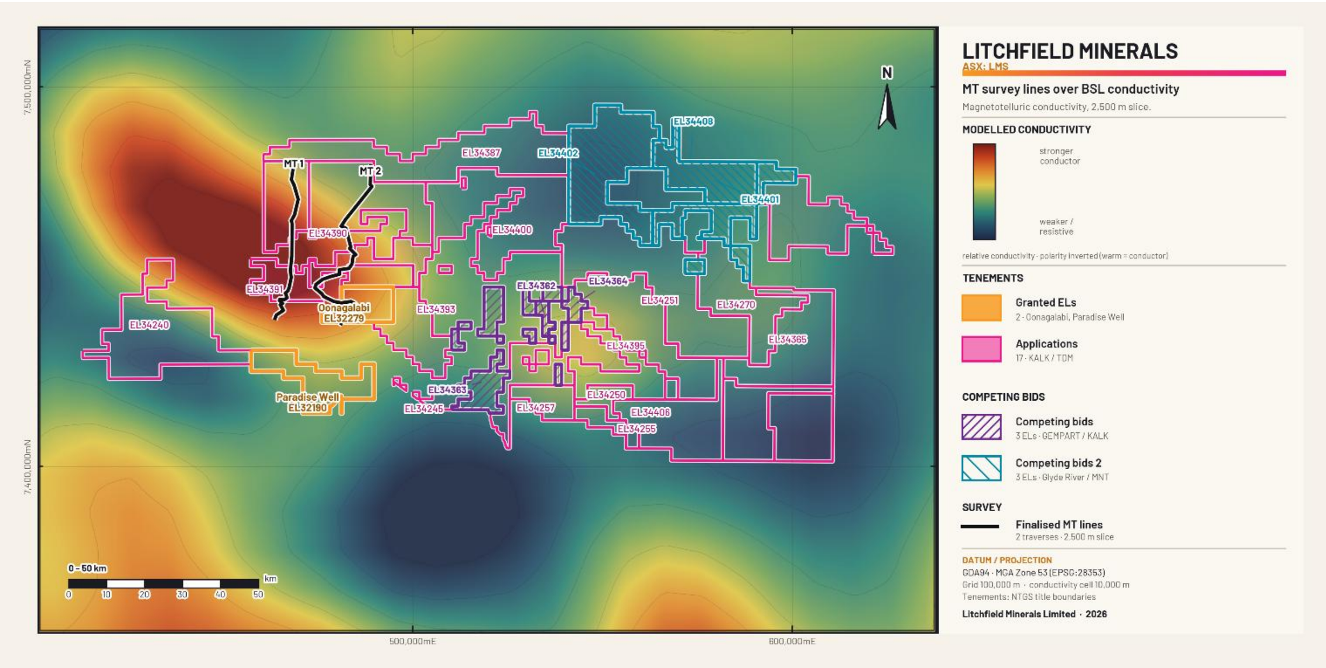

Figure 8: Proposed MT survey lines and gravity coverage over conductive zones at 2.5km depth, data from AUSLAMP 50km spaced MT survey within the Oonagalabi Project and Litchfield's western tenement package.

Key takeaways for investors

The work completed through the BHP Xplor Program has significantly improved our understanding of the Harts Range region and strengthened our belief that it has the potential to host major copper and nickel discoveries. Rather than viewing Harts Range as a collection of individual prospects, we now see it as a large, connected mineral system operating at a district scale. Key findings include:

- Evidence of multiple deep magma events capable of transporting copper, nickel and other metals from the mantle into the Earth's crust;
- Identification of major crustal-scale structures that acted as long-lived pathways for metal-rich fluids and magmas;
- Confirmation that copper and nickel sulphide mineralisation already exists within the district, demonstrating the system can concentrate metals;
- Recognition that known mineralisation is spatially associated with deep conductive features identified through historical and reprocessed MT and seismic reflection geophysical surveys; and
- Development of a coherent mineral systems model that can be applied across the broader Harts Range belt to generate new exploration targets.

Perhaps the most important outcome of this work is the identification of the C2 conductor beneath known nickel-copper mineralisation in reprocessed MT and seismic reflection survey data. This feature is not evident in broader 50km regional MT datasets and suggests that significant exploration targets may remain hidden regionally, even in areas explored previously, where detailed MT surveys have not yet been completed.

This is why we are excited about the upcoming two 50km long MT and gravity survey lines at 1km and 500m spacing, respectively. If C2 can remain concealed within regional scale datasets, there is potential for further C2-style conductors to exist elsewhere across the Harts Range belt. These surveys are specifically designed to look beneath shallow cover and identify suitable areas to host copper and nickel sulphide mineralisation.

Importantly, much of the historical exploration across Harts Range has focused on areas with outcrop and where mineralisation is exposed at surface. While these outcropping prospects remain highly prospective, we believe some of the most significant opportunities may lie beneath shallow cover, where targets may have remained undetected by previous explorers.

Our next phase of exploration is specifically designed to look beneath this cover using higher-resolution geophysical surveys. The objective is to identify suitable areas under cover that may host sulphide mineralisation and from this build a pipeline of drill-ready targets across the Harts Range district.

Next steps

- Acquire the two approximately 50km long 1km spaced MT and 500m spaced gravity lines;
- Integrate the next set of MT, gravity, magnetics, geochemistry and structural data into the targeting model;
- Rank conductive and dense areas across the Harts Range portfolio; and
- Advance high-priority targets towards drill-testing and follow-up geophysics.

Cautionary Statement

This announcement contains forward-looking statements that involve known and unknown risks, uncertainties, and other factors that may cause actual results, performance, or achievements to differ materially from those expressed or implied. Such statements include but are not limited to, interpretations of geophysical data, planned exploration activities, and potential mineralisation outcomes. Forward-looking statements are based on Litchfield Minerals Limited's current expectations, beliefs, and assumptions, which are subject to change in light of new information, future events, and market conditions. While the Company believes that such expectations and assumptions are reasonable, they are inherently subject to business, geological, regulatory, and operational risks. Further work, including drilling, is required to determine the economic significance of any anomalies identified. Investors should not place undue reliance on forward-looking statements. Litchfield Minerals Limited disclaims any obligation to update or revise any forward-looking statements to reflect events or circumstances after the date of this announcement, except as required by law.

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.

Competent Person's Statement

The information in this announcement relates to Exploration Results and is based on, and fairly represents, information and supporting documentation compiled by Dr Matthew McGloin (PhD, MGeol), 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. Dr McGloin has sufficient sampling 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). Dr McGloin consents to the inclusion in the Public Report of the matters based on their 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.

The announcement has been approved by the Board of Directors. For further information please contact:

Matthew Pustahya Managing Director

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JORC Code, 2012 Edition Table 1 report template

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 (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.*	• This announcement reports the results of 3D inversion modelling and interpretation of two pre-competitive, publicly available magnetotelluric (MT) datasets covering the Arunta Region of central Australia. No physical sampling, drilling, geochemical sampling or assaying was undertaken or reported by Litchfield Minerals in this announcement. • 'MT' is a passive (natural-source) electromagnetic method that measures naturally occurring electric and magnetic fields to derive the electrical resistivity structure of the subsurface with depth. • Two datasets were modelled: long-period AusLAMP MT data acquired by Geoscience Australia in 2019 (Exploration for the Future program) on an approximately 50km grid, and broadband MT data acquired by Geoscience Australia in 2009 at approximately 10km spacing along active seismic reflection profile 09GA–GA1. • The modelling and interpretation were completed by Dr Kate Selway of Vox Geophysics. Outputs comprise resistivity depth slices, cross-sections and structural interpretations, not grade or assay data.
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).*	• Not applicable. No drilling was undertaken. The announcement is the result of a reinterpretation of existing geophysical data.
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*	• Not applicable. No drilling or physical sample recovery was undertaken.

Criteria	JORC Code explanation	Commentary
	and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	
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. No core or chip logging was undertaken. The MT data were inverted to a resistivity model that was interpreted geologically against published mapping, geochronology, seismic reflection profiles and gravity data.
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. No physical samples were collected, sub-sampled or prepared.
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.*	• No assaying was undertaken. The quality control relevant to this work relates to MT data processing and 3D inversion. • The original time series were acquired and processed into MT and tipper impedances by Geoscience Australia. These processed impedances were used as the input data. • All inversions used the Modem code, employing a finite-difference forward solver and a non-linear conjugate gradient inverse. A four-step nested workflow was applied: an AusLAMP tipper model, a preferred AusLAMP MT model, a 09GA–GA1 phase tensor model and a preferred 09GA–GA1 MT model. • Data fit is measured by root mean square (rms) misfit, where a value of 1 indicates all data fit within error and a value below 2 is regarded

Criteria	JORC Code explanation	Commentary
		as a very good fit. The preferred models returned final rms misfits of 1.86 (AusLAMP MT) and 1.98 (09GA–GA1 MT); the intermediate tipper and phase tensor models returned 1.73 and 1.46 respectively. The target misfit was set to 1.25. • Error floors were 5% for off-diagonal (Zxy, Zyx) impedances, 10% for diagonal (Zxx, Zyy) impedances and 0.03 for tipper data. Default model covariance (smoothing) was 0.3 laterally and 0.2 vertically. • Resistivity is a non-unique property. A given resistivity value can result from more than one combination of lithology, fluid, temperature and mineralogy, so model features are interpretive and are not direct measurements of mineralisation.
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.*	• The input MT and tipper impedances are publicly available Geoscience Australia data that have been used in prior government reports (for example Korsch *et al*., 2011) and peer-reviewed publications (for example; Kirkby and Duan, 2019). • The 3D inversion and interpretation were completed independently by Vox Geophysics. Features that appear consistently across the independent tipper, phase tensor and MT inversions, and across the AusLAMP and nested 09GA–GA1 models, are considered more robust. • The interpretations are conceptual and have not been verified by drilling or other direct ground testing. Twinned holes and alternative-operator verification are not applicable because no drilling is involved.
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.*	• AusLAMP stations are on an approximately 50km grid and 09GA–GA1 stations are spaced at approximately 10km along the seismic line. Station locations were supplied within the Geoscience Australia datasets and are provided as a stations.csv file in the data package. • Model outputs (depth slices, cross-sections and 3D model files) are provided in UTM zone 53. Topography (to a maximum of 850m) and bathymetry were incorporated in the inversion mesh.

Criteria	JORC Code explanation	Commentary
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.*	• Station spacing is large relative to mineral-deposit scale. The approximately 50km AusLAMP grid resolves lithospheric to crustal-scale features but does not resolve the shallow upper crust (less than 10km) between stations. The approximately 10km 09GA–GA1 line provides better crustal-scale detail along that profile only. • The difference in resolution is material. Conductor C2, interpreted at approximately 10km depth along the basal fault of the Irindina Province, is clearly imaged in the denser 09GA–GA1 model but is not resolved in the regional AusLAMP model. The current spacing is insufficient to define drill targets and denser surveying would be required.
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.*	• MT is a sounding method that recovers resistivity with depth beneath each station, so it does not carry the orientation-bias considerations of oriented drilling. The 09GA–GA1 broadband stations follow the Geoscience Australia seismic reflection profile of the same name and are not aligned to any particular mineralised structure. • Phase tensor and induction arrow analysis was used to assess geoelectric dimensionality and strike. The survey area is geoelectrically complex (3D), supporting the 3D inversion approach. Out-of-quadrant phases on the 09GA–GA1 profile near the Casey Inlier and the southern margin of the Irindina Province indicate very strong, complex resistivity contrasts; these data were treated carefully and were mostly included in the final inversions.
Sample security	• *The measures taken to ensure sample security.*	• Not applicable in the physical sense. The input datasets are publicly available Geoscience Australia archives. Processed impedances, model files and figures are retained by Vox Geophysics and Litchfield Minerals.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• The underlying MT datasets have been used in prior Geoscience Australia and Northern Territory Geological Survey studies and in peer-reviewed journal articles. The inversion and interpretation reported here were completed independently by Vox Geophysics. No external audit of the inversion has been commissioned.

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.*	• Litchfield Minerals Ltd or its subsidiary Kalk Exploration Pty owns or operates 2 granted tenements (ELs 32279 and 32190) and 19 application tenements (ELs 34240, 34245, 34246, 34250, 34251, 34255, 34257, 34270, 34363, 34364, 34365, 34387, 34393, 34394, 34395, 34403, 34404, 34405 and 34406) within the Harts Range project area. These tenements are located from approximately 100 km northeast of Alice Springs. • The modelling covers a regional portion of the Arunta Region that includes and surrounds the Litchfield ground. Interpreted shallow conductor P1 lies proximal to the Litchfield tenement and toward the centre of the area of interest.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The MT datasets were acquired by Geoscience Australia: AusLAMP in 2019 under the Exploration for the Future program, and the 09GA–GA1 broadband line in 2009 along the active seismic reflection profile of the same name. • The same datasets have previously been modelled and interpreted by Geoscience Australia and others (for example Kirkby and Duan, 2019; Korsch *et al*., 2011). • Historical mineral exploration in the area includes work on the Blackadder and Baldrick Ni–Cu–PGE prospects and the Basil, Manuel and Polly Cu–Co prospects (Whelan *et al*., 2022). • Rock chip samples from Blackadder and Baldrick were completed by Mithril Resources Limited (Drilling Update Huckitta Project, ASX Release, Mithril Resources Limited, 7th October 2009) and Litchfield has reported the best of these results in the announcement to illustrate these maximum values. Drilling at Baldrick and Blackadder was completed historically by Mithril Resources Ltd and reported in the same reference above. An Inferred Resource for the Basil deposit was completed by Mithril Resources Limited (Inferred Mineral Resource Estimate for the Basil Copper-Cobalt Deposit, ASX Release, Mithril Resources Limited, 21 March 2012). Litchfield has

Criteria	JORC Code explanation	Commentary
		not reviewed or verified this data as reported by that Company. • The Company has not undertaken sufficient work to verify these historical exploration results in accordance with the JORC Code (2012 Edition). The Company is not aware of any new information or data that materially affects the historical exploration results.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The survey covers the Arunta Region of central Australia (Warumpi, Aileron and Irindina Provinces), overlain by the Neoproterozoic to Paleozoic Georgina, Ngalia and Amadeus Basins. • Two mineral system styles are of primary interest: orthomagmatic Ni–Cu–PGE sulphide mineralisation associated with mafic-ultramafic intrusions such as the Lloyd Gabbro (host to the Blackadder and Baldrick prospects, SHRIMP crystallisation age 411±5 Ma; Whelan *et al.*, 2022) and hydrothermal or fluid-sourced copper and Cu–Co mineralisation associated with the Irindina Province and Harts Range architecture and the Alice Springs Orogeny. • The MT models are interpreted in terms of this architecture: crustal-scale resistors (R1, R2) interpreted as felsic crystalline crust, and conductors (C1, C2, C3) interpreted variously as zones of lower-crustal fluid infiltration and metasomatism or, in the case of C2, as a possible sulphide-bearing mafic body.

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.*
		• Not applicable. No drilling has been undertaken and no drill hole results are reported.

Criteria	JORC Code explanation	Commentary
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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Not applicable. No assay intervals or grades are reported. Resistivity values quoted are model outputs from the 3D inversion; they are not aggregated, weighted or cut in the manner of assay data.
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 (eg 'down hole length, true width not known').*	• Not applicable. No mineralised intersections are reported. Depths and dimensions quoted for resistivity features are model-derived and describe geophysical features, not mineralisation.
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.*	• The accompanying report provides apparent resistivity and phase maps, phase tensor and induction arrow maps, resistivity depth slices (2.5 to 75km), cross-sections along interpreted structural transects and along seismic line 09GA–GA1, and comparisons with gravity and geochronology. Appropriate plan and section figures with scales should accompany any public 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.*	• The features reported (R1, R2, C1, C2, C3, P1, P2, P3) are geophysical resistivity anomalies, not mineralisation. No Mineral Resource and no mineralised intercepts are reported. • Electrical conductivity is non-unique. A conductor may be caused by metallic sulphides, graphite, saline fluids, certain hydrous minerals or other conductive phases. For conductor C2 specifically, the report states that joint inversion with gravity would be required to distinguish whether the low resistivity is caused by sulphides or graphite. • Spatial association between a conductor and a known prospect (for example C2 beneath the Blackadder and Baldrick prospects) does not confirm that the conductor is caused by mineralisation and does

Criteria	JORC Code explanation	Commentary
		not imply that economic mineralisation is present. • The interpretations are conceptual and exploratory. They require follow-up work, including more detailed geophysics and ultimately drilling, before any feature can be regarded as a mineralisation target. • The announcement reports peak historical values together with context on regional coverage. Results are exploratory in nature and do not imply economic mineralisation.
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.*	• The preferred models resolve two crustal-scale resistors (R1, R2) and three significant conductors (C1, C2, C3). • R1 is the dominant feature, trending east-west across the Aileron Province north of the Ngalia Basin and persisting to the base of the crust west of approximately 134°E. Paleoproterozoic Cu and Au mineralisation across the Arunta Region is spatially associated with R1 and R2, interpreted as felsic crystalline crust depleted in conductive minerals; R1 is described as a prospective fairway. • C2 (approximately 10Ωm, approximately 10km depth) lies along the basal fault of the Irindina Province directly beneath the Blackadder and Baldrick Ni–Cu–PGE prospects and is resolved only in the denser 09GA–GA1 model. • C1 and C3 are lower-crustal conductors in the East Arunta interpreted to mark fluid infiltration and metasomatism during Neoproterozoic to Paleozoic rifting and the Alice Springs Orogeny. • Three areas of interest are highlighted: P1 (shallow conductor in the western Irindina Province, proximal to the Litchfield tenement), P2 (spatially extensive conductor in the eastern Irindina Province, most conductive at 10–1 km depth) and P3 (a vertically persistent anomaly from upper crust to shallow mantle that may represent a prospective lithospheric discontinuity). • Supporting datasets used in interpretation include Bouguer gravity (gravity low L1 correlates spatially with resistor R1), regional U–Pb geochronology and active seismic reflection profiles.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	• Acquisition of additional, more closely-spaced MT data across the Irindina Province (denser than the current approximately 10km

Criteria	JORC Code explanation	Commentary
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	09GA–GA1 spacing) to resolve upper-crustal features such as C2 at lease scale. • Joint inversion of MT with gravity data, particularly over C2, to help discriminate between sulphide and graphite as the conductivity source. • Integration of MT with existing geological, geochemical and other geophysical datasets to mature priority areas P1, P2 and P3 toward drill targets, progressing the most advanced targets toward drill testing.