ASX Announcement 21st August 2025

Oonagalabi VTEM Survey Uncovers Multiple High Priority Sulphide Targets – Drilling September

Key highlights

- Preliminary VTEM survey data defines five conductor clusters at the Oonagalabi project.
- Fourteen Priority 1 targets interpreted with possible sulphide source.
- Conductor clusters 1, 2 and 3 are broadly located at the same stratigraphic horizon that hosts Oonagalabi mineralisation, folded within the Oonagalabi Anticline.
- Conductor cluster 3 flanks the southern Bomb Diggity magnetic anomaly within a prominent structural position less than 500m from outcropping mineralised Oonagalabi Formation.
- Drill pad / track earthworks in early September; drilling to begin mid-September, starting at "Bomb Diggity", then stepping into potential gold-rich zones at Oonagalabi and select VTEM conductors (subject to clearances and station coordination).

Litchfield Identifies 14 Priority 1 Conductors at Oonagalabi – Strong Sulphide Potential Emerging

Litchfield Minerals (ASX: LMS) ("Litchfield" or "the Company") is pleased to report a highly encouraging set of preliminary conductor anomaly picks from the recently completed VTEM survey at its flagship **Oonagalabi Project**, located 125km northeast of Alice Springs. The survey was co-funded by the Northern Territory Government's **Geophysics and Drilling Collaborations (GDC) Grant**, demonstrating growing regional support for LMS exploration efforts.

The initial interpretation based on preliminary data, completed by renowned geophysicist Kate Hine of Mitre Geophysics, has highlighted **fourteen (14) Priority 1 conductors** with strong indications of a **sulphide source (Figure 1)**. This is a significant development and reinforces our belief that Oonagalabi has the **potential to be a major mineralised system**.

Importantly:

- **Five conductive clusters** have been delineated across the project area.
- **Three of these clusters** sit directly within the interpreted **mineralised horizon** that hosts the existing Oonagalabi copper-zinc system.
- A **fourth cluster** is located deeper within the nose of the Oonagalabi Anticline, potentially representing new, **structurally-controlled mineralisation**.
- A **fifth cluster**, located in the foothills of the Harts Range within the **Irindina Province**, opens up an exciting **regional discovery opportunity**.

Additionally, **weaker conductors** coinciding with zones of **strong IP chargeability** were identified directly at the known Oonagalabi prospect, providing a potential link between near-surface disseminated mineralisation and deeper sulphide-rich zones.

Managing Director Matt Pustahya said:

"These VTEM results have significantly advanced our understanding of the scale and potential of the Oonagalabi system. Identifying five distinct clusters of conductors — including several with clear sulphide signatures in the same horizon as known mineralisation — is a major leap forward.

The emergence of the Bomb Diggity structural corridor as a potential heat and metal source, combined with a suite of high-priority targets along strike from historical intercepts, gives us a strong runway heading into drilling.

With field validation underway next week and drill pads being prepared in early September, we're moving rapidly toward a high-impact drill campaign targeting both copper-zinc and gold systems. We believe this could be a transformative quarter for Litchfield and our shareholders."

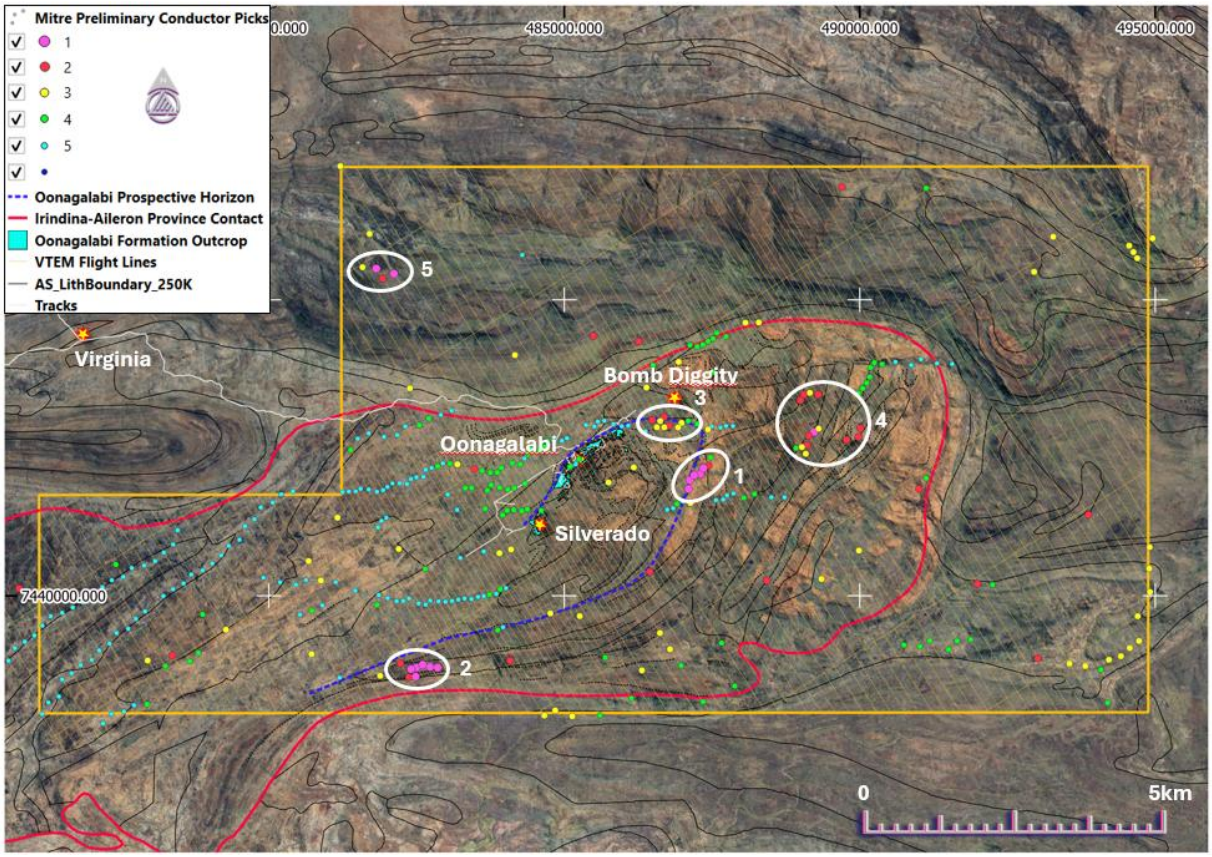


Figure 1. *Google satellite image of the Oonagalabi project showing the preliminary VTEM conductive anomaly picks, the five main conductor clusters and the folded prospective horizon within the broader Oonagalabi Anticline.*

Conductive Cluster 1

This linear cluster of strong, late-time conductors is a likely candidate for a **semi-massive to massive sulphide source** (**Figure 1**). Modelling suggests a **conductor of 400m strike** with moderate conductance (100S) and around 150m depth (**Figure 2**). The conductors are located on the inner eastern limb of the Oonagalabi Anticline and are interpreted to be located within a similar stratigraphic horizon as mineralisation at Oonagalabi and Silverado. Oonagalabi mineralisation is potentially of sedimentary exhalative origin (SEDEX) and so it is particularly **encouraging to see such a strong conductive** response at this position.

Conductive Cluster 2

This cluster of late-time anomalies is located 6km along strike to the southwest from Cluster 1 and is interpreted to be hosted within the same prospective horizon as Oonagalabi. Modelling indicates a strike estimate of 600m, shallow depth (50 – 100m) with high conductance (200S) and of likely sulphide source (**Figure 3**). Suspected parallax complicated modelling into separate sulphide sources but will be corrected upon receipt of final data and will most likely resolve into one or two discrete conductors.

The anomaly is located 1.2km east of a zone mapped by the NTGS as serpentinite[1] (metamorphosed ultramafic), however, field inspections in early August identified rocks remarkably similar to some calc-silicates observed within the mineralised Oonagalabi Formation. Further field mapping is required to determine if this outcrop zone is related to the conductive cluster 1.2km to the west. The ultramafic association will be investigated further given the potential for magmatic Nickel-Sulphide systems within the broader Irindina Province.

Conductive Cluster 3

This series of moderate conductors is located immediately north of a prominent east-trending structure in the south of the Bomb Diggity prospect where the prospective Oonagalabi Formation is interpreted to be located at depth below mafic granulite and felsic gneiss mapped at surface. The conductor is immediately adjacent to the upper parts of the Bomb Diggity magnetic anomaly. This magnetic anomaly is most likely a magmatic intrusion that may have contributed heat and/or metal-bearing fluids directly into the broader Oonagalabi system.

Conductive Clusters 4 and 5

Modelling of Conductive cluster 4 shows a clear single peak, early to late-time response that is coincident with a magnetic anomaly. The anomaly is small (100 x 50m), shallow (50m depth), with a highly conductive source (300S), most likely from sulphides. The area is located stratigraphically above the Oonagalabi formation, deeper into the nose of the Oonagalabi Anticline. Conductive cluster 5 is located within the Mt Riddock Amphibolite in the foot hills of the Harts Range in the Irindina Province. It is a weak, narrow, single peak response extended from early to late time. Modelling suggests that this source is small (55 x 15m) and highly conductive (300S) plate and is most likely related to Virginia-type structurally-controlled copper mineralisation.

[1] Shaw et al., 1984. Arltunga - Harts Range Region, Northern Territory : 100,000 explanatory notes

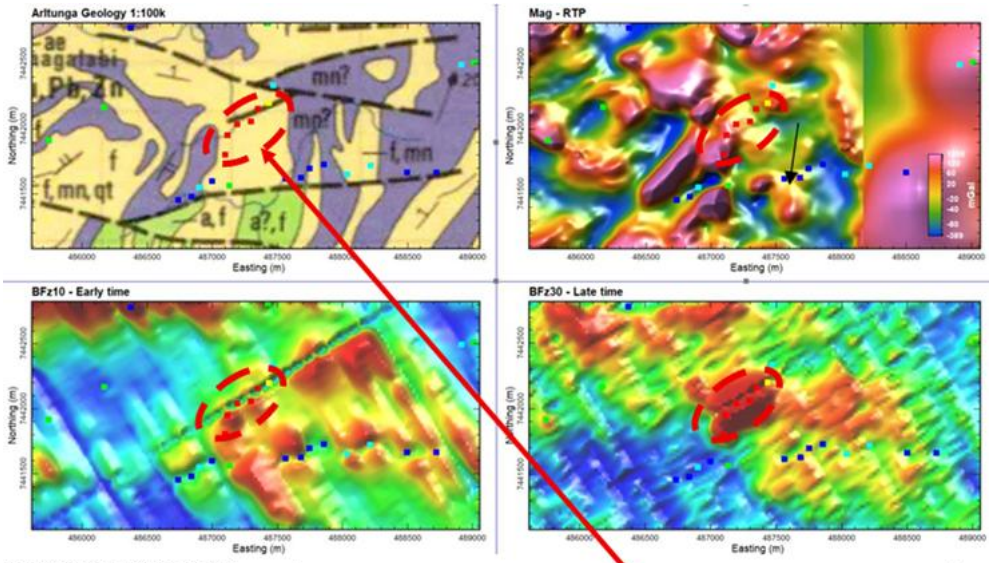
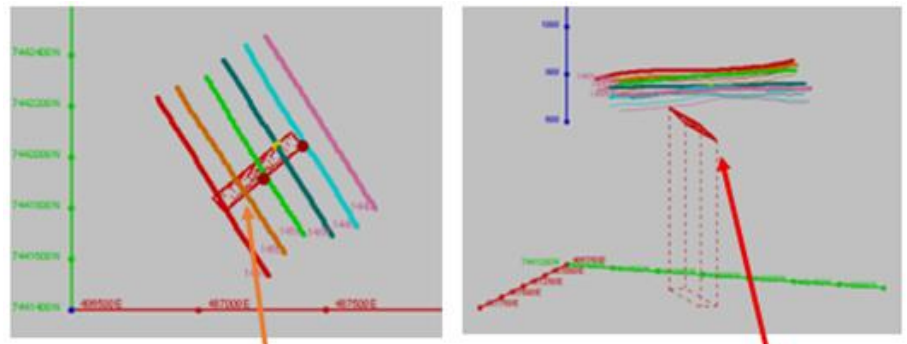
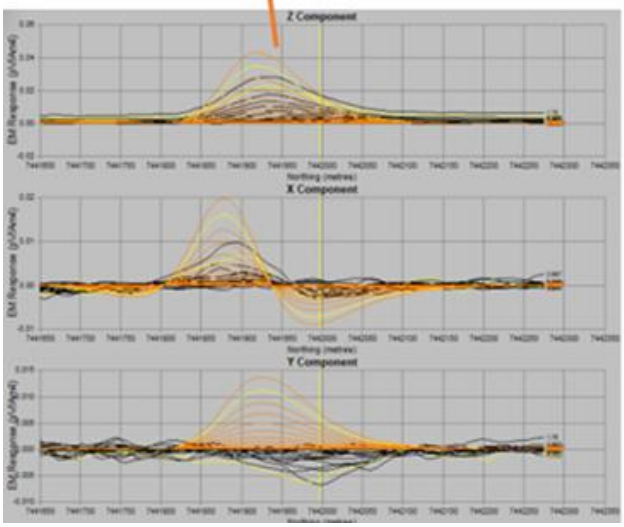


Figure 4: VT02_A summary plots.

Strong EM responses along the same trend
→ **Recommend doing drilling once final EM data interpreted**

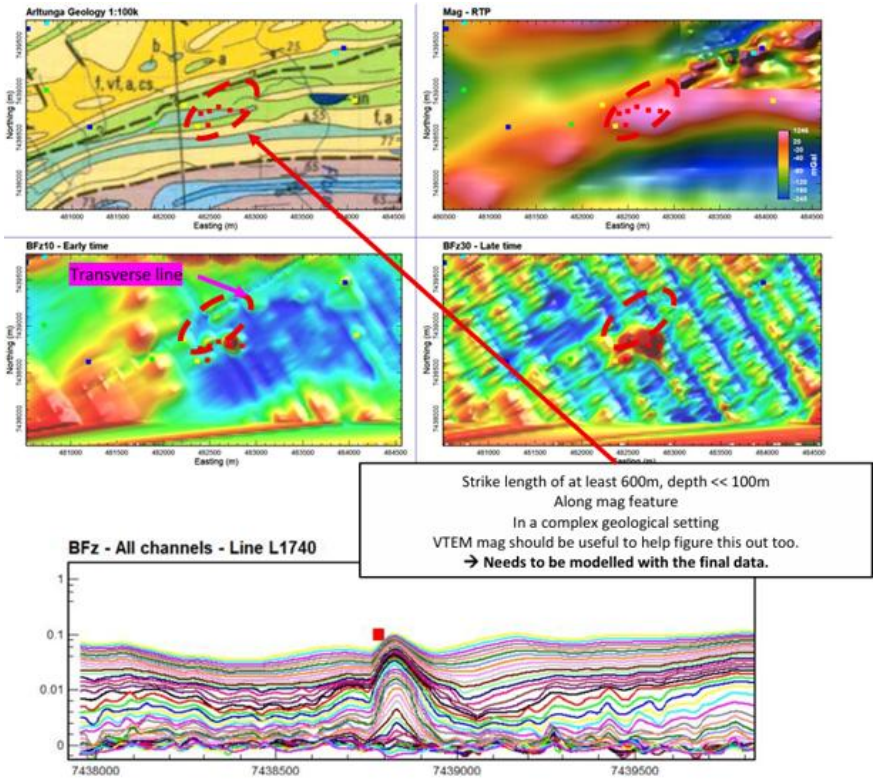




Long strike (400m)
Moderate conductance (100S)
Moderate depth (150m deep)

Good target –
Probably sulphides

Figure 2. *Conductive Cluster 1 VTEM plate model Also shown is VTEM data for lines L1460 and its modelled response (orange profiles), showing a good fit to the data in the Z and X components (Y polarity reversed).*



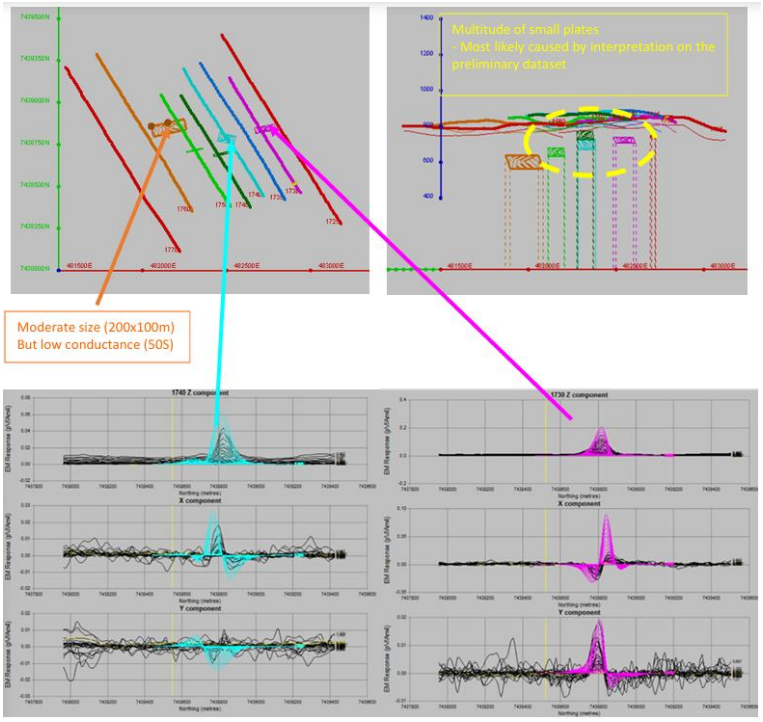


Figure 3. *Conductive Cluster 2 VTEM models Strike length of at least 600m, depth << 100m*

Along mag feature In a complex geological setting data.

Planned drilling – mid-September start

The Company plans to commence drilling in mid-September. Earthmoving contractors are scheduled for 5–6 September to prepare a small number of pads and short spur access as required. The program will:

- Kick off at "Bomb Diggity" (intrusion-related target);
- Test selected Priority 1 VTEM conductors; and
- Additional exploration holes to test interpreted gold-rich targets at Oonagalabi, including Bomb Diggity.

Next steps

1. Ground-truthing conductors from the 25th of August, access checks and collar planning across the priority conductors.
2. Finalise drill plan on receipt of final VTEM products.
3. Mobilise earthmoving (5–6 Sept) and commence targeted drilling campaign mid-September.
4. Ongoing market updates as targets are cleared and drilled.

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.

The announcement has been approved by the Board of Directors.

For further information please contact:

Matthew Pustahya
Matthew@litchfieldminerals.com.au

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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 Mr Russell Dow (MSc, BSc Hons 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 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). Mr Dow 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.

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*	The instruments and parameters used for the VTEM survey are as follow: • The VTEM survey was flown by UTS Geophysics Pty. Ltd. • Heliborne electromagnetic data was acquired with VTEM™ Max transmitter frequency of 25Hz, loop diameter 35m and mean terrain clearance height of 35m. • Line spacing was 200m across the full survey area with the central 40% of the survey also flown at 100m. • Three-dimensional plate modelling of VTEM preliminary data was Kate Hine at Mitre Geophysics. • VTEM anomalies were modelled with industry standard Maxwell EM software – utilizing thin conductor plate scenarios for various, most relevant EM channel windows. VTEM final data was imported into Maxwell EM software using Geosoft/oasis database files. Resultant model scenarios for each of the five areas were exported to both

Criteria	JORC Code explanation	Commentary
	there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	3D DFX and GIS plan view formats to aid follow-up ground EM optimization and consideration.
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).*	• No new 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.*	• No new drilling is reported
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	• No new drilling is reported

Criteria	JORC Code explanation	Commentary
	• *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.*	• No new 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*	• Transmitter loop diameter: 35m • Peak dipole moment – 700,000 NIA • Transmitter Pulse Width – 7ms • VTEM Max Receiver – Z, X coils (Y optional)

Criteria	JORC Code explanation	Commentary
	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.*	
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 Mitre Geophysics.
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.*	• The navigation system used was a UTS PC104 based navigation system utilizing a NovAtel WAAS (Wide Area Augmentation System) enabled GPS receiver, UTS navigate software, a full screen display with controls in front of the pilot to direct the flight and a NovAtel GPS antenna mounted on the helicopter tail. As many as 11 GPS and two WAAS satellites may be monitored at any one time. The positional accuracy or circular error probability (CEP) is 1.8m, with WAAS active, it is 1.0m. The co-ordinates of the

Criteria	JORC Code explanation	Commentary
		block were set-up prior to the survey and the information was fed into the airborne navigation system. • Altitude control used the FreeFlight Systems TRA-3000 radar altimeter with altitude range (40 to 2500ft), altitude accuracy (40 to 100 ft. ±5 ft., 100 to 500 ft. ±5%, 500 to 2500 ft. ±7%) and sample rate of 10Hz. • Co-ordinates are in GDA94 datum, Zone 53.
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.*	• The full EL 32279 was flown at 200m line-spacing with a central 40% of the survey flown at 100m infill line-spacing.
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.*	• Flight lines were orientated northwest - southeast to run perpendicular to most of the structures and geology of the area.

Criteria	JORC Code explanation	Commentary
Sample security	• *The measures taken to ensure sample security.*	• All data was collected under strict security measure by UTS 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 Mitre Geophysics.

JORC Code, 2012 Edition – Table 1 report

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.*	• Tenement includes Oonagalabi (EL32279) for a total of 145.3km^2 and 46 sub-blocks. • EL32279 is owned by Kalk Exploration Pty. Ltd., a 100% owned entity of Litchfield Minerals Limited. The tenement is located approximately 125km northeast of Alice Springs on pastoral leases. • The tenement is in good standing and there are no known impediments.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• A summary of previous EL32279 exploration and mining is presented below: • Oonagalabi was discovered in the 1930's. • In 1970, Russgar Minerals completed regional mag-rad survey, VLF_EM survey, ground magnetic survey, single line resistivity traverse and 14 drillholes. • In 1971, Geopeko completed limited IP.

Criteria	JORC Code explanation	Commentary
		• 1979, Amoco completed photo-interpretation, rock chip sampling and drilling (8 holes). • 1981 D'Dor Mining NL completed limited dipole-dipole IP. • Between 1990 – 1996 on EL 6940 Clarence River Finance Group explored for garnet in the Florence and Maud Creeks, collecting 15 samples that averaged 4.4% garnet • Between 1997 – 2000 on EL 9420 Clarence River Finance Group completed garnet exploration north of Oonagalabi EL32279. In 2007, ML 22624 was applied for to cover the central Oonagalabi deposit and surrounding proximal alluvial systems (outside 2025 bulk sampling area). No work was completed and the ML was relinquished in 2019. • Silex 2009 completed pole-dipole IP 1 x diamond hole.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Oonagalabi-type mineralisation is considered to be either skarn-related, sediment-hosted or carbonate replacement with potential for high-grade remobilised breccia zones similar to the Jervois deposit. EL32279 falls within one of Geoscience Australia's IOCG high potential zones.

Criteria	JORC Code explanation	Commentary
		• The project lies within the Harts Range that represents a package of multiply deformed and metamorphosed sedimentary and igneous intrusive rock.

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 new drilling reported

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations*	• No aggregation methods were used during bulk sampling

Criteria	JORC Code explanation	Commentary
	(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.*	
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• No drilling results reported. The bulk samples were collected parallel to the flow direction of the Clarence River.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• See figures within the main body of the announcement.

Criteria	JORC Code explanation	Commentary
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.*	• All available relevant information is presented.
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.*	• See the main body of this report for all pertinent observations and interpretations.
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: • Field validation of Priority 1 conductors • Earthworks for drillhole pads and tracks • RC drilling of priority conductors, gold targets and the Bomb Diggity magnetic anomaly.