ASX Announcement | 13th January, 2025

Major Mineral System Potential Confirmed, Litchfield Advances Oonagalabi Exploration

Highlights

- LMS has an exploration plan in place to actively explore Oonagalabi, starting in early 2025.
- 3D inversion modelling of 2008 IP data confirms presence of a large pipe-like structure that warrants priority assessment.
- Detailed drone magnetics completed over central Oonagalabi has significantly improved the quality of existing data.
- Sentinel-2 hyperspectral data processing has identified key vectors to mineralisation and soil sampling confirms extension of mineralised strike to +3km.Reconnaissance mapping confirms accuracy and high quality of historic detailed mapping to assist LMS's exploration plan.
- Ground exploration has confirmed a 3km mineralised strike at Oonagalabi, highlighting the extensive potential of the system

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Litchfield Minerals Limited (**"Litchfield"** or the **"Company"**) **(ASX:LMS)**, a company with a strategic emphasis on critical minerals, is pleased to announce the completion of soil and rock chip sampling, airborne drone magnetics and reprocessing of 2008 IP data and Sentinel-2 data at the Oonagalabi project. This has aided the preparation of an exploration plan for Oonagalabi that will be initiated early in 2025.

Managing Director and CEO, Matthew Pustahya, commented:

We are proud of the significant progress achieved in a short period at Oonagalabi since the acquisition was completed in Q4 2024. By integrating cutting-edge geophysical, geochemical and remote sensing techniques, we have rapidly advanced our understanding of this promising project. Our efforts have already uncovered substantial historical data, which was reassessed in the field in Q4 2024, reaffirming Oonagalabi's potential to host a major mineral discovery.

The results of our initial work are exceptionally encouraging. We have identified a large, steeply plunging pipe-like structure, and new soil sampling has extended the mineralised strike to over 3km, suggesting a system of remarkable scale. Ground traverses and magnetic surveys, while highlighting the deposit's geological complexity, also point to a potential large intrusive unit to the northeast, which will require further investigation.

These early findings strongly suggest that Oonagalabi possesses all the essential components typically found in world-class mineral systems. With refined exploration strategies supported by advanced 3D inversion modelling and high-resolution drone magnetics, Litchfield Minerals is positioned to unlock substantial value for shareholders. Our ambitious 2025 program, including ground gravity surveys, Pole-Dipole IP and targeted diamond drilling underscores our commitment to aggressive exploration to identify deposits for resource definition.

We believe Oonagalabi's unique geology and extensive mineralisation position it among the most exciting opportunities left in Australia. As we move into the next phase of exploration, we remain confident in our ability to deliver transformative growth and value for our shareholders. This is a pivotal moment for Litchfield Minerals, and we are excited to build on this momentum.

Induced Polarization Data Reprocessing

The Silex 2008 Pole-Dipole IP chargeability data was remodelled to produce a new 3D inversion model (**Figure 1**). The model shows a +400m long, chargeability zone surrounded by lower chargeability shells) that indicate a steep east-plunging, pipe-like structure to at least 500m below surface. These chargeabilities are significant given the dominance of generally non-chargeable sphalerite within the mineralisation assemblage. The shape of the pipe-like structure appears to cross-cut folded stratigraphy, potentially hinting at the presence of a syn- to post-metamorphic breccia structure similar to those observed within the nearby and comparable Jervois system.

Review of the new model indicates that none of the historical drill holes have successfully tested the highest-chargeability parts of the model. Additionally, historic holes that did intersect the outer chargeability shells of the model generally recorded the best mineralised intersections and many of the holes, which fall outside of the model, continue to be mineralised (**Table 1**). The new model is broadly consistent with Silex's 2008 inversion model and confirms that Silex's SLX001 (500.7m) hole was drilled parallel to, however, importantly, appeared to complete miss the extent of the entire chargeability model.

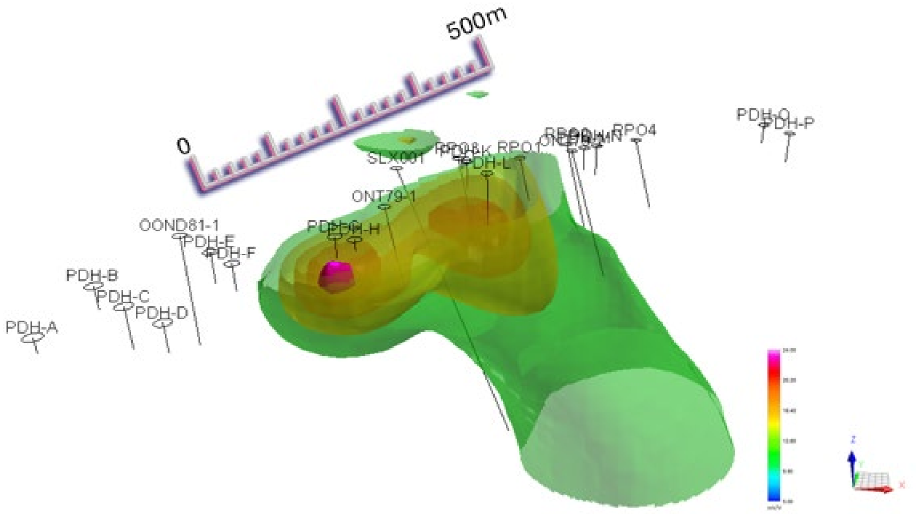

Figure 1*. 3D inversion model (looking north) of the Silex 2008 Pole-Dipole IP chargeability data showing a large pipe-like structure, plunging steeply to the east.*

Hole_ID	East	North	RL	From m	To m	Interval	Cu %	Zn %	Pb ppm	Au ppm	Ag ppm	Cu %m	Zn %m	Pb %m	Au ppm m	Ag ppm m
PDH-L	485384	7442435	837	1.5	38	36.5	1	1.7	1372	No Assays	No Assays	36.5	62.1	5		
ONT79-1	485228	7442368	802	68	95	27	0.76	1.95	1620	0.159	5.6	20.5	52.7	4.4	4.3	151.2
RPO2	485514	7442697	809	138	162	24	0.63	1.52	367	No Assays	4.66	15.1	36.5	0.9		111.8
PDH-K	485340	7442530	825	18.3	29	10.7	0.6	0.56	310	No Assays	No Assays	6.4	6	0.3		
PDH-F	485081	7442121	815	36.6	47.2	10.6	0.49	0.59	1036	No Assays	No Assays	5.2	6.3	1.1		
PDH-P	485949	7442760	820	12.2	24.4	12.2	0.42	0.41	967	No Assays	No Assays	5.1	5	1.2		
ONT79-2	485523	7442652	811	200	220	20	0.24	1.71	1806	0.02	5.5	4.8	34.2	3.6	0.4	110
RPO1	485428	7442617	806	16	32	16	0.25	0.14	139	No Assays	1.56	4	2.2	0.2		25
RPO3	485319	7442577	816	118	130	12	0.19	0.23	273	No Assays	1.37	2.3	2.8	0.3		16.4
PDH-A	484963	7441891	835	0	7.6	7.6	0.27	0.53	546	No Assays	No Assays	2.1	4	0.4		
PDH-B	484956	7442019	830	4.6	16.8	12.2	0.16	2.19	527	No Assays	No Assays	2	26.7	0.6		
PDH-G	485190	7442218	814	3	10.7	7.7	0.25	0.88	1772	No Assays	No Assays	1.9	6.8	1.4		
PDH-E	485039	7442154	815	9.1	10.7	1.6	0.9	0.1	490	No Assays	No Assays	1.4	0.2	0.1		
SLX001	485214	7442540	808	73	75	2	0.52	1.39	354	0.048	3.45	1	2.8	0.1	0.1	6.9
PDH-C	485015	7441975	828	3	4.6	1.6	0.31	0.54	585	No Assays	No Assays	0.5	0.9	0.1		
PDH-D	485066	7441958	818	9.1	16.8	7.7	0.05	0.94	548	No Assays	No Assays	0.4	7.2	0.4		

Table 1*. Historic Oonagalabi drillhole intersections showing original intersections and then ranked by contained Cu percent metre. Intersections calculated using a minimum 1000ppm Cu, 1000ppm Zn cut-off with maximum 2m internal dilution.*

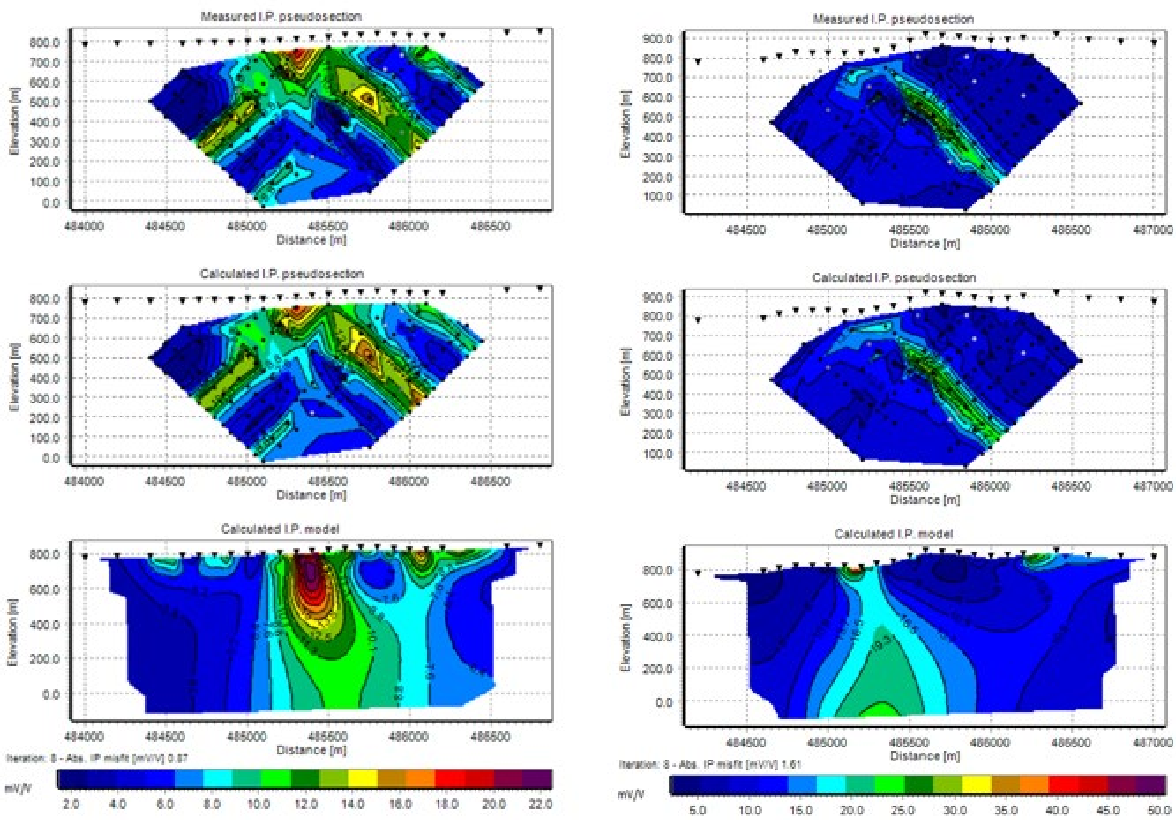

***Figure 2**. 2D IP chargeability inversion section 7442500 & 7442100N going through the central northern part of the main pipe-like structure. These sections show moderate chargeabilities persisting to at least 400m below surface.*

Drone Magnetics

Airborne drone magnetics has been completed (mid-December) over the central part of EL32279 and has significantly improved the quality over the existing 400m data (**Figure 2**). The 613 line-km survey was flown at 50m line-spacing and a mean flight height of 35m and produced a high quality dataset. The new data has identified a magnetic anomaly coincident with the central Oonagalabi mineralisation, confirming the presence of west-northwest structures that appear to control the limits of mineralisation and clearly defines the folded nature of the Oonagalabi Anticline.

The magnetic survey was developed into a 3D model (**Figure 3**), revealing through inversion analysis a potentially large intrusive body situated to the northeast along the structural trend of the known mineralisation. Our team will conduct further investigations into this anomaly, which we believe holds significant potential for mineralisation.

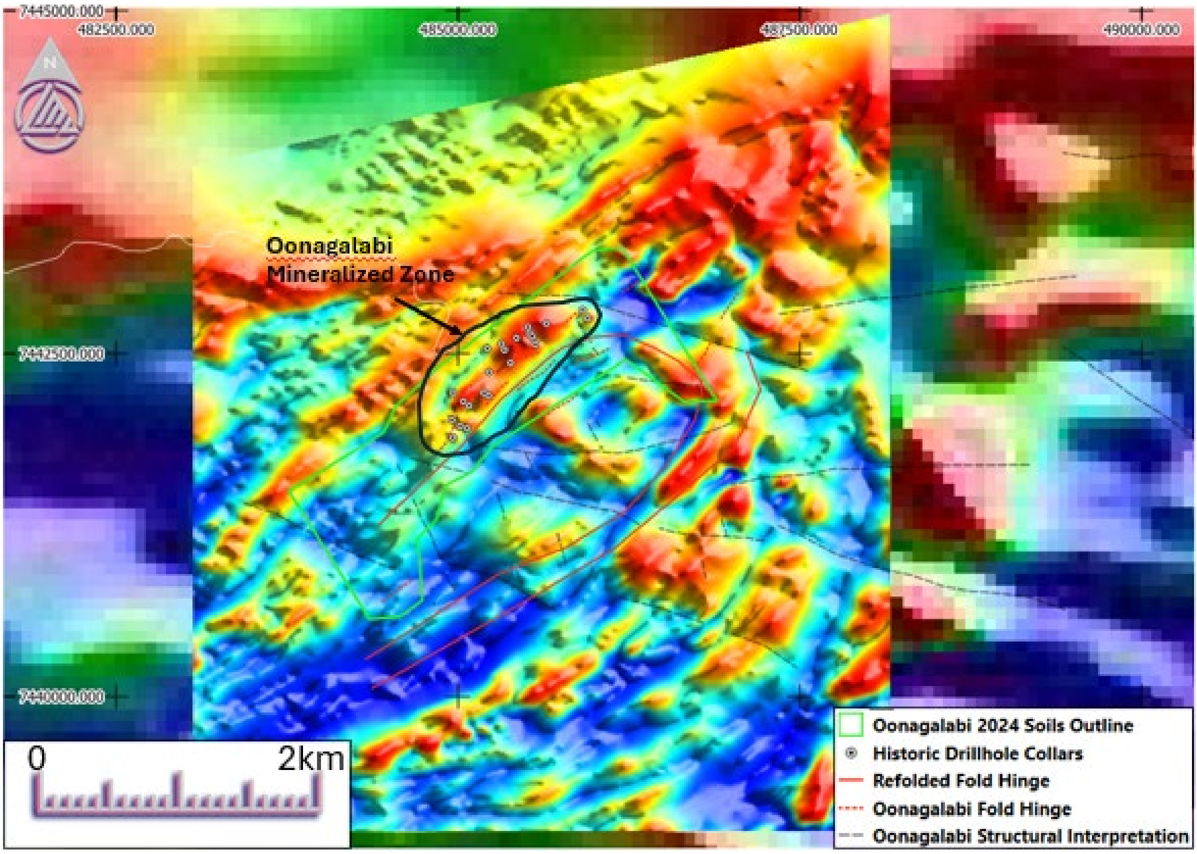

***Figure 3**. TMI RTP magnetic image of the central Oonagalabi prospect overlain by historic 400m-spaced data. Combined gas targets identified from spectral analysis of Sentinel-2 data, showing multiple targets to the northeast and southeast of the Oonagalabi*

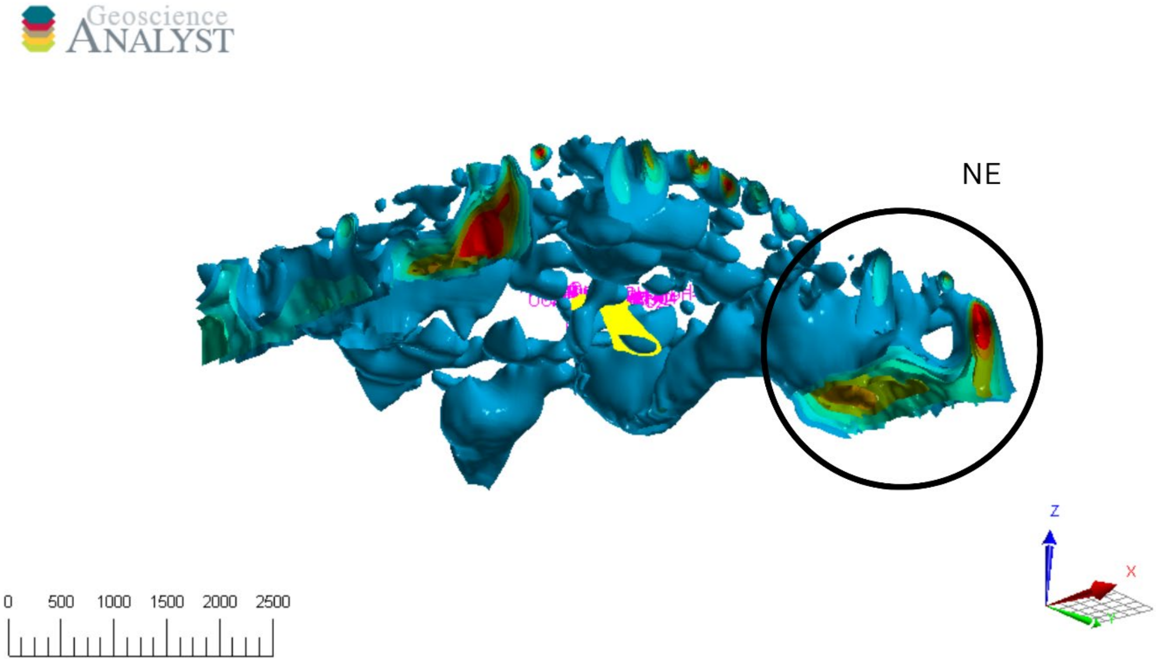

***Figure 4**. TMI RTP 3D magnetic model of the Oonagalabi prospect circle indicates the modelled Intrusive unit NE of the main Oonagalabi outcrop. The image also shows the IP pipe highlighted in Yellow.*

Sentinel-2 Hyperspectral Data Analysis

A Sentinel-2 data was processed by Neil Pendock from Dirt Exploration who applied proprietary algorithms to spectral features within the Very Near Infrared (VNIR) and Shortwave Infrared (SWIR) spectrums to estimate gas concentrations (H_2, O_2, CO_2, CH_4 and Rn). This analysis demonstrated that zones of outcropping mineralised Oonagalabi Formation have coincident oxygen, carbon dioxide and methane gas anomalies. A multivariate statistical classifier, trained on copper anomalous soil geochemistry, was then used to identify potential hyperspectral targets within the broader Oonagalabi Anticline (**Figure 5**). These findings underline the potential for leveraging gas anomalies, in combination with multivariate spectral and geochemical analyses, to identify high-priority exploration targets. This approach enhances the understanding of subsurface mineralisation processes and refines target delineation for follow-up exploration activities.

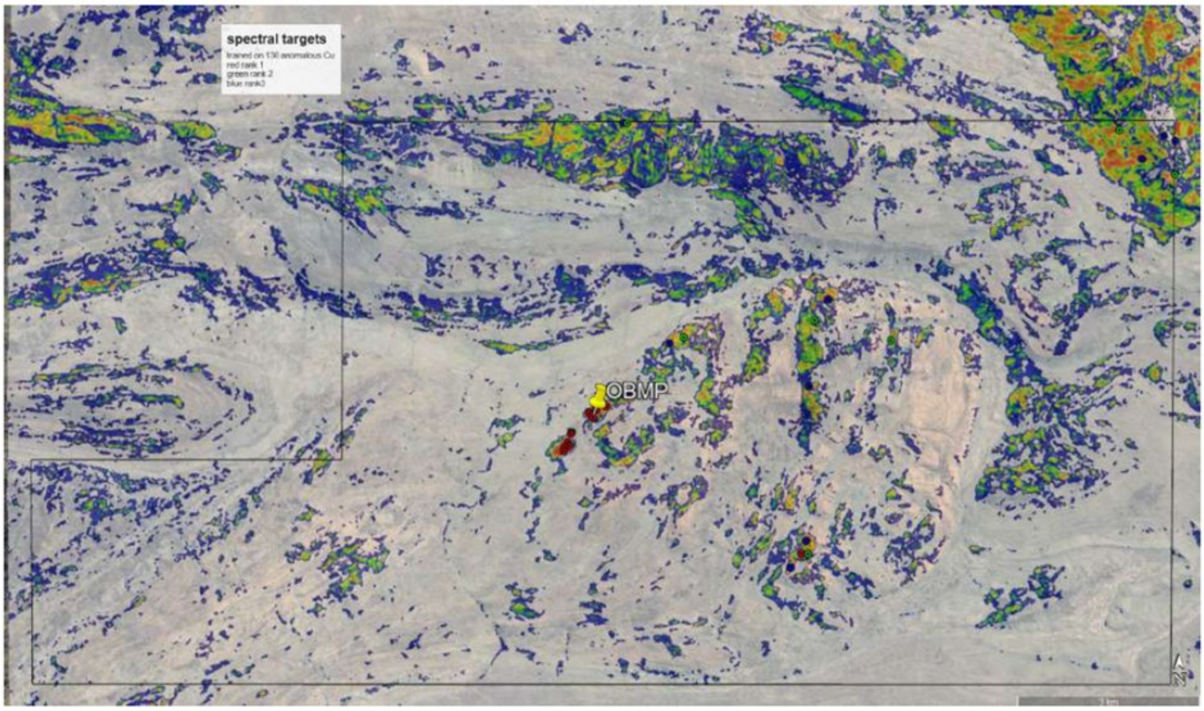

***Figure 5**. Combined gas targets identified from spectral analysis of Sentinel-2 data, showing multiple targets to the northeast and southeast of the Oonagalabi Prospect (OBMP = Oonagalabi).*

Soil and Rock Chip Sampling

Surface geochemical sampling (161 soils, 13 rocks) and reconnaissance mapping was completed over the central mineralised Oonagalabi system in early December (**Figure 6**, **Appendices 1, 2**). Soil sampling was completed at 200m x 100m, covering the original 1970's grid (1500m strike) and then extending a further 1500m to cover the limits of exposed alteration and mineralisation (3km strike). Samples have been submitted to Bureau Veritas in Adelaide for full multi-element analysis with assays expected in early January 2025. The new multi-element data will be a dramatic improvement on the 1970's data (Cu, Pb, Zn, Ag only) and will be used to develop metal zonation models, vectors to mineralisation and potentially define new anomalies beyond the original soil grid.

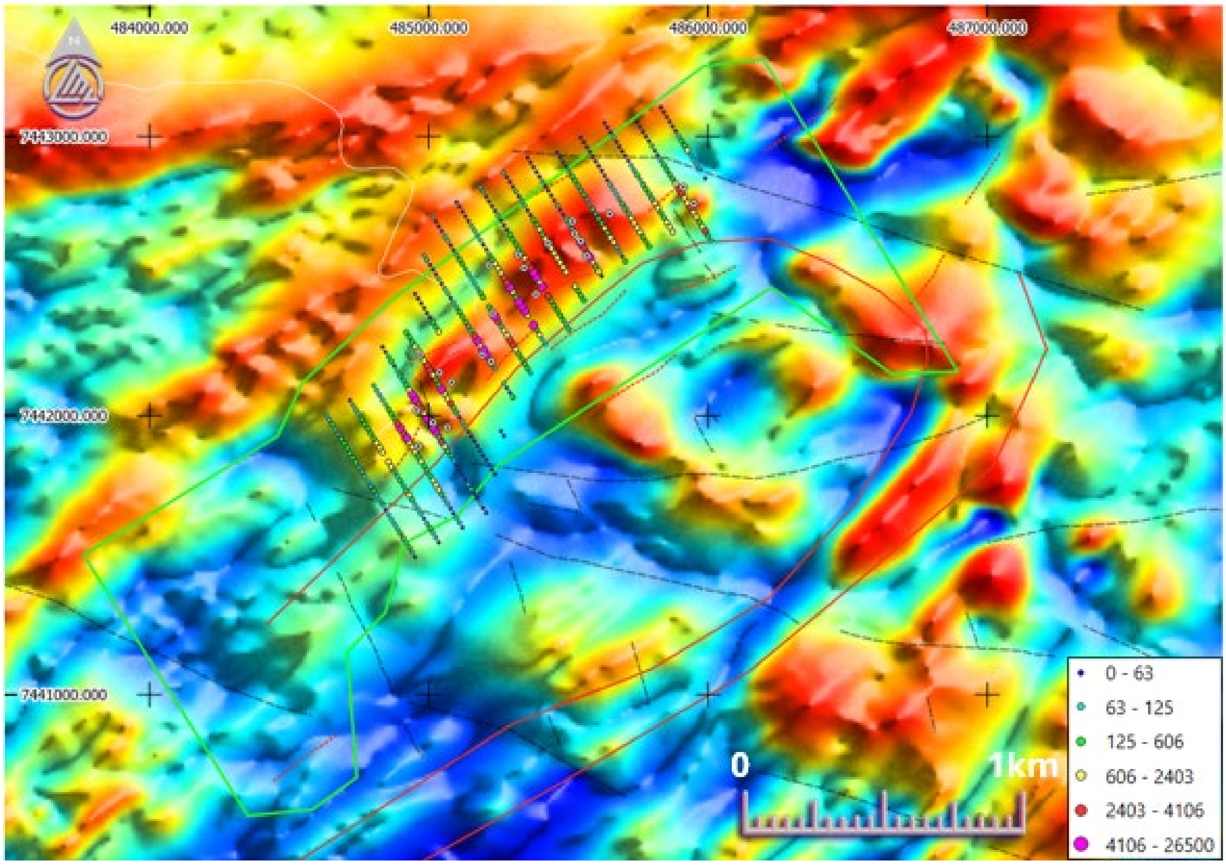

***Figure 6**. TMI RTP drone magnetic image showing historic Oonagalabi copper soil geochemistry (100m x 20m), the outline of the new 2024 soil grid (200m x 100m) and a preliminary structural interpretation.*

Reconnaissance mapping was completed in conjunction with soil sampling to confirm the accuracy and quality of previous detailed mapping. The Kinex 1979, 1:2,500 scale fact map was used as a base for reconnaissance mapping and was proven to be remarkably detailed and accurate. Mapping confirmed an extensive thickness of granulite-facies schists and gneisses, intruded by numerous mafic granulites (amphibolites) to form the broader Oonagalabi Anticline. Original mapping by Russgar (1970) interpreted the Oonagalabi Anitcline to form a dome-like structure (two separate folding events) and can be seen in the new magnetic dataset (**Figure 3**). Reconnaissance mapping confirmed the 2008 Kinex interpretation of an Upper and Lower Unit within the Oonagalabi Anticline with the Lower Unit containing more biotite-rich schists and a distinctive coarse-grained feldspar porphyroblasts texture that is absent from the Upper Unit. The mineralised Oonagalabi Formation sits stratigraphically at the boundary between the Upper and Lower Units. The Oonagalabi formation comprises a coarse-grained amphibole unit (dominantly anthophyllite), marble with variable olivine content and garnet-rich quartzite. Mineralisation was observed dominantly in the more extensive amphibole unit and within marble.

2025 Exploration Plan

Litchfield Minerals intends to aggressively explore the Oonagalabi prospect during the 2025 field season, starting with grading and improving the access track from Mt Riddoch Station to the prospect (thereby reducing the current 2 hours' journey to site). Planetary Geophysics has been contracted to complete (late January / early February) a 3.5 x 2km ground gravity survey (100m x 50m grid) over the broader Oonagalabi mineralised trend and up to five line kilometres of Pole-Dipole IP over the central IP chargeability anomaly to confirm the interpreted pipe structure and improve drillhole targeting. Litchfield Minerals will then complete a focused diamond drilling campaign to test any significant IP chargeability, density, magnetic and resistivity anomalies. Additional drilling may be completed depending on the success of the Phase 1 drilling.

Cautionary Statement

The exploration results and interpretations presented in this announcement, including the identification of chargeability anomalies, magnetic structures, and mineralised zones, are based on preliminary data and geological models. While these results suggest potential for significant mineralisation at the Oonagalabi project, they remain subject to further validation through detailed ground-based geophysical surveys and targeted drilling programs.

There is no guarantee that future exploration will confirm the presence of economic mineralisation or lead to the definition of a mineral resource. Factors such as geological complexity, data accuracy, and exploration limitations may impact these findings. Investors should be aware of these uncertainties and should not rely solely on the forward-looking interpretations provided in this announcement.

Forward looking statement

This announcement may include forward-looking statements, which are subject to risks and uncertainties. Actual results could differ significantly due to factors beyond our control, including market conditions and industry-specific risks. These forward-looking statements are based on the

Company's expectations and beliefs concerning future events. No warranty is given regarding the completeness of the information provided. Please avoid placing undue reliance on forward-looking statements, as they reflect views only as of the announcement date.

About Litchfield Minerals

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

The announcement has been approved by the Board of Directors.

For further information please contact:

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Competent Person's Statement

The information in this Presentation that relates to Exploration Results is based on, and fairly represents, information and supporting documentation compiled by Mr Russell Dow (MSc, BScHons Geology), a Competent Person who is a Member of the Australian Institute of Mining and Metallurgy (AUSIMM) and is a full-time employee of Litchfield Minerals Limited. Mr Dow has sufficient experience that is relevant to the style of mineralisation and types of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC Code). Mr Dow consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. With regard to the Company's ASX Announcements referenced in the above Announcement, the Company is not aware of any new information or data that materially affects the information included in the Announcements.

Appendix 1. Location of new soil samples

Sample_#	East	North	RL	Sample_#	East	North	RL	Sample_#	East	North	RL	Sample_#	East	North	RL
SS00140	485981	7443254	813	SS00180	484594	7441307	830	SS00220	483984	7441155	776	SS00261	485289	7442454	829
SS00141	486028	7443158	809	SS00181	484539	7441404	823	SS00221	483930	7441239	781	SS00262	485340	7442368	833
SS00142	486080	7443072	818	SS00182	484500	7441474	806	SS00222	483871	7441330	765	SS00263	485392	7442293	821
SS00143	486125	7442991	828	SS00183	484440	7441565	802	SS00223	483820	7441406	761	SS00264	485249	7442186	836
SS00144	486184	7442908	825	SS00184	484385	7441646	798	SS00224	483766	7441495	762	SS00265	485187	7442258	817
SS00145	486229	7442831	811	SS00185	484342	7441727	793	SS00226	485453	7442572	835	SS00266	485130	7442347	817
SS00146	486293	7442745	824	SS00186	484283	7441804	777	SS00227	485505	7442482	852	SS00267	485438	7442204	835
SS00147	486339	7442669	857	SS00187	484101	7441703	776	SS00228	485570	7442413	834	SS00268	485497	7442113	885
SS00148	486391	7442580	881	SS00188	484154	7441625	789	SS00229	485617	7442324	840	SS00269	485546	7442042	908
SS00149	486444	7442496	860	SS00189	484213	7441532	787	SS00230	485678	7442232	866	SS00270	485386	7441927	843
SS00151	486510	7442414	881	SS00190	484268	7441460	777	SS00231	485727	7442153	877	SS00271	485341	7442012	849
SS00152	486540	7442331	901	SS00191	484314	7441368	784	SS00232	485891	7442250	847	SS00272	485274	7442094	833
SS00153	486607	7442244	920	SS00192	484363	7441292	808	SS00233	485846	7442326	854	SS00273	485249	7441814	827
SS00154	486662	7442151	915	SS00193	484425	7441219	828	SS00234	485786	7442423	846	SS00274	485157	7441909	822
SS00155	486891	7442162	886	SS00194	484505	7441098	848	SS00235	485734	7442503	840	SS00276	485115	7441992	821
SS00156	486845	7442252	899	SS00195	484538	7441048	857	SS00236	485681	7442589	837	SS00277	485060	7442073	820
SS00157	486789	7442329	916	SS00196	484590	7440949	840	SS00237	485626	7442671	818	SS00278	485008	7442154	833
SS00158	486730	7442423	909	SS00197	484641	7440870	840	SS00238	485580	7442762	811	SS00279	484952	7442239	808
SS00159	486695	7442514	864	SS00198	484691	7440782	849	SS00239	485515	7442828	808	SS00280	484908	7442315	800
SS00160	486629	7442599	843	SS00199	484739	7440701	860	SS00240	485398	7442651	810	SS00281	484860	7442406	795
SS00161	486590	7442681	828	SS00201	484574	7440597	857	SS00241	485349	7442740	807	SS00282	485011	7442512	805
SS00162	486517	7442757	821	SS00202	484525	7440673	839	SS00242	485187	7442608	803	SS00283	485072	7442439	808
SS00163	486454	7442842	831	SS00203	484464	7440735	806	SS00243	485229	7442549	811	SS00284	484729	7442223	804
SS00164	486391	7442912	840	SS00204	484417	7440844	817	SS00244	485686	7442960	817	SS00285	484550	7442113	795
SS00165	486353	7443017	823	SS00205	484365	7440926	793	SS00245	485738	7442869	812	SS00286	484778	7442125	803
SS00166	486294	7443119	828	SS00206	483939	7441590	767	SS00246	485791	7442783	823	SS00287	484828	7442059	823
SS00167	486244	7443187	825	SS00207	483988	7441520	783	SS00247	485840	7442703	826	SS00288	484893	7441958	857
SS00168	486192	7443274	810	SS00208	484037	7441434	778	SS00248	485893	7442617	830	SS00289	484937	7441906	849
SS00169	484445	7441924	777	SS00209	484097	7441348	779	SS00249	485954	7442534	829	SS00290	484988	7441813	826
SS00170	484512	7441825	779	SS00210	484151	7441266	780	SS00251	485997	7442438	839	SS00291	485035	7441707	824
SS00171	484546	7441755	791	SS00211	484201	7441184	797	SS00252	486061	7442362	845	SS00292	485098	7441638	823
SS00172	484602	7441668	798	SS00212	484253	7441098	798	SS00253	486231	7442455	848	SS00293	484915	7441544	847
SS00173	484651	7441590	797	SS00213	484350	7440574	810	SS00254	486184	7442545	830	SS00294	484883	7441593	835
SS00174	484713	7441499	809	SS00214	484298	7440648	797	SS00255	486111	7442634	827	SS00295	484823	7441692	828
SS00175	484755	7441420	837	SS00215	484249	7440733	776	SS00256	486072	7442717	827	SS00296	484782	7441780	868
SS00176	484815	7441335	857	SS00216	484201	7440813	773	SS00257	486012	7442802	819	SS00297	484725	7441855	834
SS00177	484839	7441297	869	SS00217	484145	7440904	778	SS00258	485964	7442889	820	SS00298	484670	7441928	806
SS00178	484706	7441147	833	SS00218	484095	7440984	774	SS00259	485907	7442962	823	SS00299	484617	7442008	791
SS00179	484644	7441221	844	SS00219	484036	7441073	774	SS00260	485852	7443062	828				

Appendix 2. Location of new rock chip samples

Sample_#	East	North	RL
RK0052	484736	7441442	824
RK0053	484535	7441396	826
RK0054	484411	7441239	825
RK0055	484534	7441051	858
RK0056	484530	7441047	857
RK0057	484572	7440600	857
RK0058	483763	7441439	756
RK0059	485734	7442180	875
RK0060	485747	7442135	874
RK0061	485747	7442135	874
RK0062	485505	7442100	896
RK0063	485318	7442017	845
RK0064	485023	7441703	825

JORC Code, 2012 Edition – Table 1 report

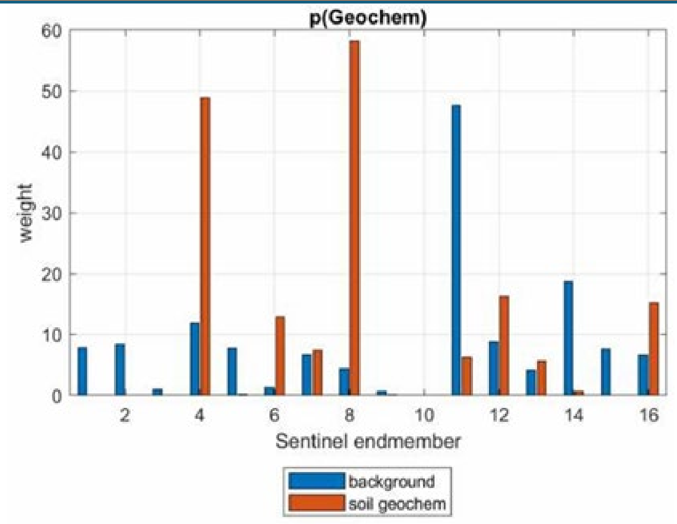
Section 1 Sampling Techniques and Data

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

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Sampling techniques</td><td>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.
Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.
Aspects of the determination of mineralisation that are Material to the Public Report.
In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</td><td>The instruments and parameters used for the VTEM survey are as follow:

Drone Magnetics
Data was collected by Pegasus Airborne Systems between 10th and 13th December, 2024.
<table><tr><th>Grid Name</th><th>Line Spacing</th><th>Line Direction</th><th>Tie-Line Spacing</th><th>Tie-Line Direction</th><th>Sensor Height</th><th>Total Line km</th></tr><tr><td>Oongalabi</td><td>50m</td><td>000-180</td><td>500m</td><td>090-270</td><td>35m</td><td>613km</td></tr></table>
Data collected with an unmanned rotary wing helicopter (PAS-H100) w/ autonomous flight control and terrain following system.
Drone speed (15m/s), maximum vertical and horizontal deviation (5m), drone height (55m AGL), survey sensor height (35m AGL).
Magnetic sensor (Scintrex CS-VL Cesium Vapour magnetometer), sensitivity (0.0006nT sq rt RMS), noise envelope (0.0002nT peak to peak), heading error (±0.25Nt).
Magnetometer counter sample frequency (260MHz), counter resolution (0.1pT).</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
		• GNSS Receiver (uBlox GNSS receiver w/ multiple constellation tracking, 10Hz output (20Hz capable), operating in autonomous mode at sub-metre accuracy. • Laser Altimeter (100m range, 1cm resolution, 10cm accuracy, 360 readings per second). • Diurnal Magnetometer (GEM Systems GSM19-F Overhauser Magnetometer), GNSS time-stamped, 0.01nT resolution, 0.1nT accuracy, 1Hz sample rate. **Sentinel-2 data** • Sentinel-2 scene captured on 21st October 2024. • Spectral features in the VNIR and SWIR and proprietary algorithms were used to estimate gasses (H2, O2, CO2, CH4 and Rn). • Gas estimates may be related to surface reflections by correlating them to a spectral unmixing of the image data cube. 16 unknown endmembers were assumed which were interpreted by correlation with a USGS spectral library of minerals measured in a laboratory. • A multivariate statistical classifier was trained on the anomalous Cu locations. Classification weights are:

Criteria	JORC Code explanation	Commentary
		 • Copiapite/chalcopyrite is the largest weight followed by arsenopyrite, galena, calcite, chert, rhodochrosite and muscovite. **Soil Sampling** • Samples were collected on a 200m x 100m grid over the existing soil grid and the extended northeast and southwest of the original grid to cover known outcropping alteration and mineralization.

Criteria	JORC Code explanation	Commentary
		• Soil samples were collected from the B-Horizon using a -80 Mesh sieve. Approximately 500g of material was collected in the field per sample. • QAQC samples were inserted every 25 samples as per standard Litchfield sampling protocols. **Silex 2008 Pole-Dipole IP Survey** • Refer to Litchfield ASX Announcement dated 10th October, 2024 'Litchfield secures strategic copper gold base metals portfolio in NT Update'.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Not applicable as no drilling is reported.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Not applicable as no drilling is reported.
Logging	• *Whether core and chip samples have been geologically and 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*	• Not applicable as no drilling is reported.

Criteria	JORC Code explanation	Commentary
	costean, channel, etc) photography. • *The total length and percentage of the relevant intersections logged.*	
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Not applicable as no drilling is reported.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including 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.*	**Drone magnetics data processing** • Raw data was downloaded from the acquisition system to the data processor at the end of each flight.. • Initial data quality control procedures were implemented to ensure navigation specifications were met. • The diurnal base station data was checked to ensure survey flight coverage and for magnetic storm activity and cultural noise. • Any out of specification sections of data were flagged and marked for re-flight. • Data was then exported to a cumulative master processing database for further processing.

Criteria	JORC Code explanation	Commentary
		• No editing or filtering of the recorded raw TMI data was carried out due to the inherent clean data. • Base station diurnal data were suitably filtered to remove any high frequency content and then subtracted from survey data using common GNSS derived UTC time. • After diurnal subtraction, the regional magnetic gradient was removed using the IGRF. • A digital terrain model (DTM) was calculated by subtracting the laser altimeter height from the GNSS recorded height. **3D IP Inversion modelling** • The data was imported into a database, gridded and unconstrained 3D inversion modelling was completed on chargeability and resistivity data. • The 3D inversion process is unconstrained, so there are no controls on the chargeability / resistivity that can be allocated by the inversion to each cell. • The results of the IP inversion have been compiled in a Geoscience Analyst 3D project. This includes the 3D model in UBC voxel format and also iso-shells. Separately, depth slice images through the model are provided for display in 2D GIS.

Criteria	JORC Code explanation	Commentary
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.*	• Magnetic data detailed in this report has been reviewed by Russell Mortimer at Southern Geoscience Consultants.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• See above for drone magnetics system precision and accuracy. • Magnetic data were recorded using GDA94/UTM, 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.*	• Survey was flown at 50m line-spacing with 500m tie lines. • Survey lines flown north-south, lie lines flown east-west.
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.*	• Magnetic survey lines were oriented roughly perpendicular to known structure and stratigraphic controls.
Sample security	• *The measures taken to ensure sample security.*	• All magnetic data was collected under strict data security measures by Pegasus Airborne Systems.

Criteria	JORC Code explanation	Commentary
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Magnetic data checks and processing reviews were undertaken daily and at the completion of the program by the contractor. • Review of the magnetic and IP data was undertaken by an independent consultant Russell Mortimer at Southern Geoscience Consultants.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *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) and Silver Valley (EL32241). 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. Oonagalabi is located 125km northeast of Alice Springs on pastoral lease. • The tenements are in good standing and there are no known impediments.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Refer to Section 6 and 7 in Independent Geologists Report (IGR) by Ross *et al*,, 2023 for further detail. A summary of previous exploration and mining is presented below: • 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.

Criteria	JORC Code explanation	Commentary
		• In 1971, Geopeko completed limited IP. • 1979, Amoco completed photo-interpretation, rock chip sampling and drilling (8 holes). • 1981 D'Dor Mining NL completed limited dipole-dipole IP. • 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 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. • The project lies within the Harts Range that represents a package of multiply deformed and metamorphosed sedimentary and igneous intrusive rocks.

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*
		• No drilling or assaying is reported in this report.

Criteria	JORC Code explanation	Commentary
	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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No drilling or assaying is reported in this report.
Relationship between 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 or assaying is reported in this report.
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 1 – 4 above. • Refer to Section 6 and 7 of the Independent Geologists Report (IGR) by Ross *et al.*, 2023.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• Individual magnetic readings have not been reported, plans within this report provide an adequate overview of the drone magnetic data.

Criteria	JORC Code explanation	Commentary
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: • Detailed ground gravity (100m x 50m) • Pole-Dipole IP over chargeability pipe • Diamond drill testing of key magnetic, gravity, chargeability, resistivity and geochemical anomalies.