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17 April 2024

## Quarterly Activities Report 31 March 2024

### Highlights

- **West Arunta Stansmore Project land access progressing with drilling expected to commence once heritage surveys are completed**
- **Southern Geoscience Consultants (SGC) evaluated geophysical targets ahead of drilling program at the West Arunta Stansmore Niobium-REE Project**
- **WA1 Resources continues to deliver exceptional Niobium results<sup>1</sup> ~90km south of Stansmore Project, including 30m at 4.7% Nb<sub>2</sub>O<sub>5</sub>, demonstrating the world class discovery potential of the West Arunta region**

**Lycaon Resources Limited** (ASX: LYN) ("the **Company**" or "**Lycaon**") is pleased to report on the March 2024 quarterly activities.

### Projects Summary

#### **Stansmore – West Arunta Project** (*Nb/REE±PGE*)

The Company is currently working through the approvals processes required to enable heritage surveys and drilling to be undertaken as soon as possible. During September 2023 the Company executed the land access agreement with the Parna Ngururra traditional owners at our West Arunta Stansmore Niobium-REE Project at an on-country meeting held in Balgo, Western Australia. The Company is aiming to complete heritage surveys and a diamond drilling program in 2024 as soon as practical, subject to the approvals processes being finalised.

Subsequent to the end of the quarter, the Company received a mining entry permit granted by the Minister for Aboriginal Affairs over portions of the Ngaanyatjarra Central Australia Reserve in relation to E80/5723, E80/5867 and E80/5868 at the Stansmore Project, permitting access to the Reserve for the purpose of carrying out exploration activities in accordance with the terms and conditions of the tenements.

The Stansmore carbonatite target consists of a regionally prominent 700m long magnetic feature analogous to WA1's discoveries and Encounter's Worsley prospect.

Recent discoveries by WA1 Resources and Encounter Resources have demonstrated the potential for the West Arunta region to host significant REE and IOCG type mineralisation systems, Figure 1. Previous shallow aircore drilling by BHP Minerals in 1982 recorded shallow cover of approximately ~5-10m depth. Southern Geoscience Consultants (SGC) re-processed magnetic data over the Stansmore Carbonatite Project which highlighted multiple new targets identified prospective for Niobium-REE mineralisation, Figure 2.

Alkaline systems are key drivers in the formation of IOCG and carbonatite-hosted REE deposits, with the region seeing a renewed exploration focus for these deposit types. Carbonatite deposits are an important source of REE and niobium production. This includes the world's largest REE mine, Bayan Obo in Inner Mongolia, Lynas Rare Earths' Mt Weld deposit and the world's three major operating niobium mines. Niobium is one of a suite of commodities identified by the Australian Government as critical minerals, being minerals (or elements) considered vital for the well-being of the world's economies, yet whose supply may be at risk of disruption.

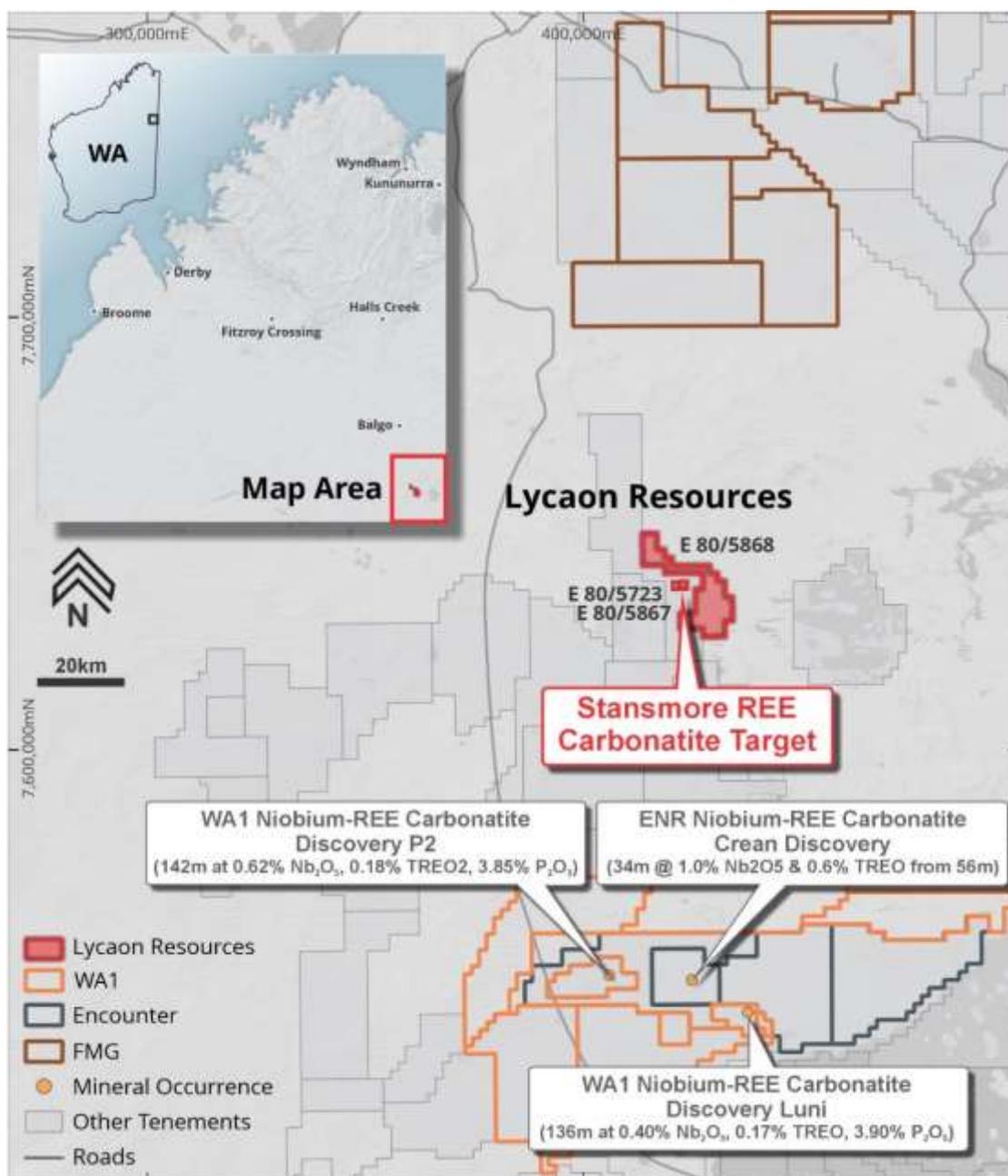


Figure 1. Stansmore Nb-REE Carbonatite ± IOCG Project Location Map.

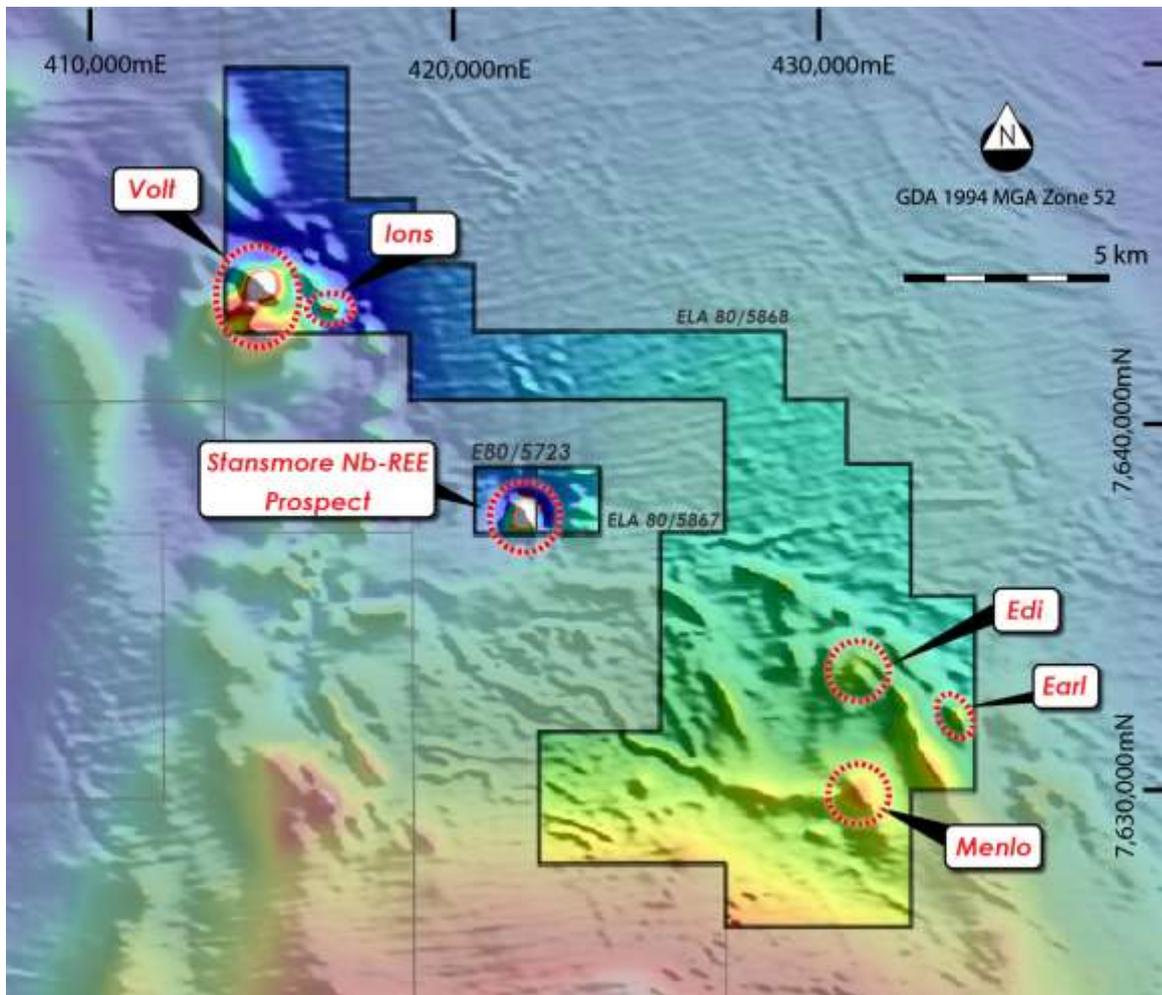


Figure 2. Reduced to Pole Magnetics (TMI grid) highlighting the prominent magnetic anomaly at Stansmore Prospect and other agnetic targets.

### Bow River Prospect (Ni/Cu/Co±PGE)

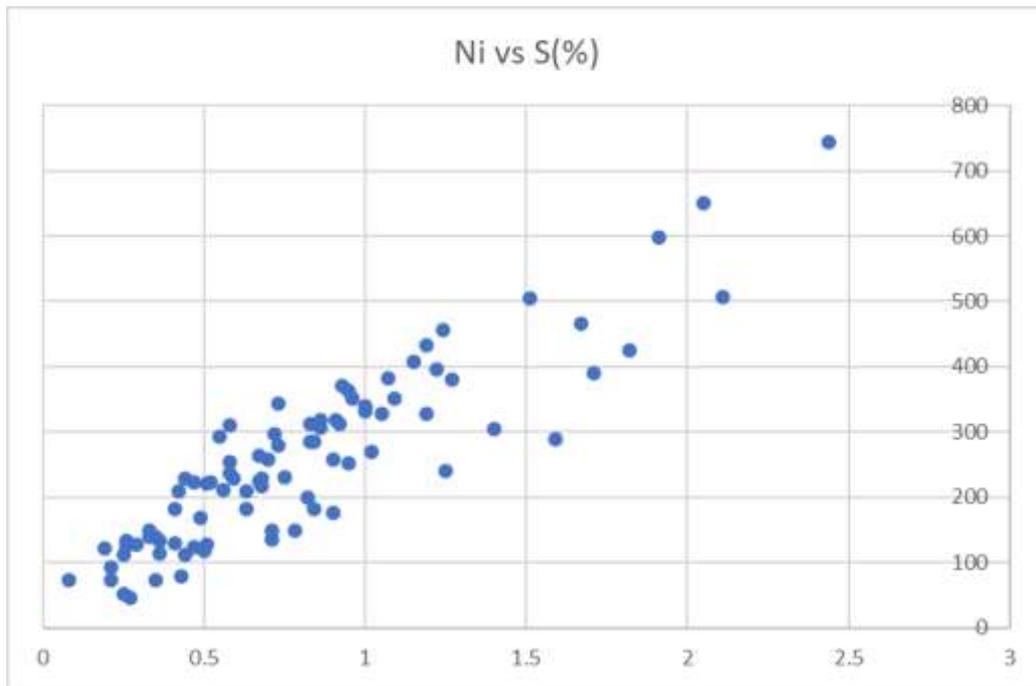
A diamond drilling program was completed at the Bow River Project in the East Kimberley region of Western Australia during Q3 of 2023. The drill program consisted of two diamond drillholes to a depth of 800m and 786m each, with both drillholes intersecting visual Ni-Cu sulphides, Table 1, 2.

Sulphide mineralisation intersected in both drillholes shows a strong correlation to the upper limit of the modelled gravity anomaly between approximately 330-360m depth, with the remainder of the gravity anomaly untested over the >1km strike extent, Figure 5. Downhole electromagnetic (DHEM) surveys were completed on both diamond drillholes to a depth of 690m (BRDD001) and 760m (BRDD002) during Q4 of 2023. The DHEM survey results identified weak off-hole anomalies within close proximity of the drillholes. Drill samples were sent to ALS in Perth for priority assay with results showing a clear correlation between nickel and sulphides as well as nickel and copper, supporting nickel copper sulphides are present, Figure 3,4.

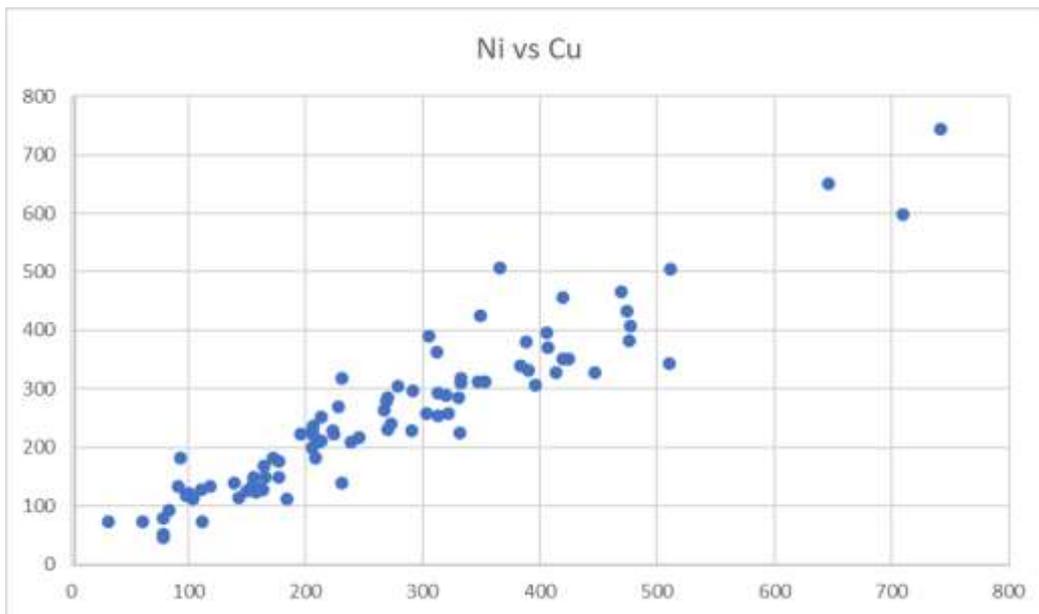
Approximately one third of the samples show nickel enrichment above background levels of 300ppm, up to a peak of 742ppm Ni however, overall there were no results recording any significant nickel or copper mineralisation >1% Ni or Cu.

Drilling was planned to target the deeper more primitive part of the intrusion thought to be related to the highest density gravity anomaly. The recent drilling stepped out from the historical drilling centred on the nickel-copper gossan, to the west by 1.2km and drilled to a depth of 800m, far exceeding the deepest historical drillhole of 180m, Figure 6, 7.

DHEM surveys were completed to investigate potential conductors and, together with the assay data results, to assist in building greater geological confidence in the mineralisation model ahead of further drilling.



**Figure 3. Nickel ppm (y axis) showing strong correlation to Sulphide % (x axis).**



**Figure 4. Nickel ppm (y axis) showing strong correlation to Copper % (x axis).**



**Figure 5. Photos showing examples disseminated and blebby sulphides in hole BRDD002.**  
**(Left) Nickel-Copper sulphides at 348m, (Right) Disseminated sulphides 338 – 342m**  
 Note core is NQ2 being 2 inches or 50mm in diameter

**Table 1: Significant Sulphide Intervals – Visual Estimates**

Hole ID	From (m)	To (m)	Interval (m)	Mineralisation Style	Sulphide Type	Sulphide %	Prospect
BRDD001	364.7	377.5	12.8	Disseminated/Blebby	Pyrrhotite, Pentlandite, Chalcopyrite	1 -5	Bow River
BRDD001	394.1	402.2	8.1	Disseminated/Blebby	Pyrrhotite, Pentlandite, Chalcopyrite	1 -5	Bow River
BRDD002	330.1	375.3	45.2	Disseminated/Blebby	Pyrrhotite, Pentlandite, Chalcopyrite	1 -5	Bow River

**Table 2: Drillhole Collar Data (GDA94 MGAz52)**

Hole ID	Easting	Northing	RL	Dip	Azimuth	EOH	Type	Prospect
BRDD001	427597	8134664	170	-70	0	800	Diamond	Bow River
BRDD002	427839	8134722	170	-75	120	786.3	Diamond	Bow River

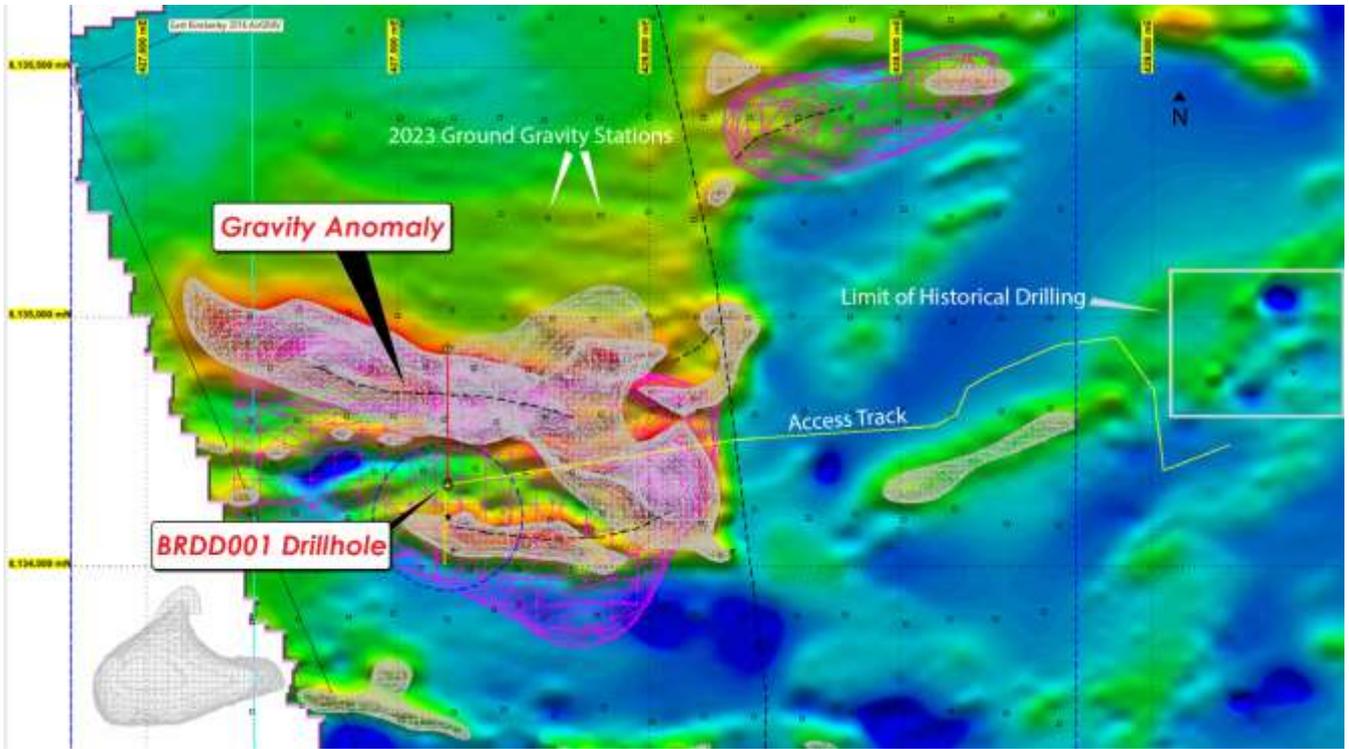


Figure 6. Drillhole BRDD001 (Azimuth 0 degrees) planned to intersect the gravity anomaly, between upper contact at 350m and 750m basal contact.

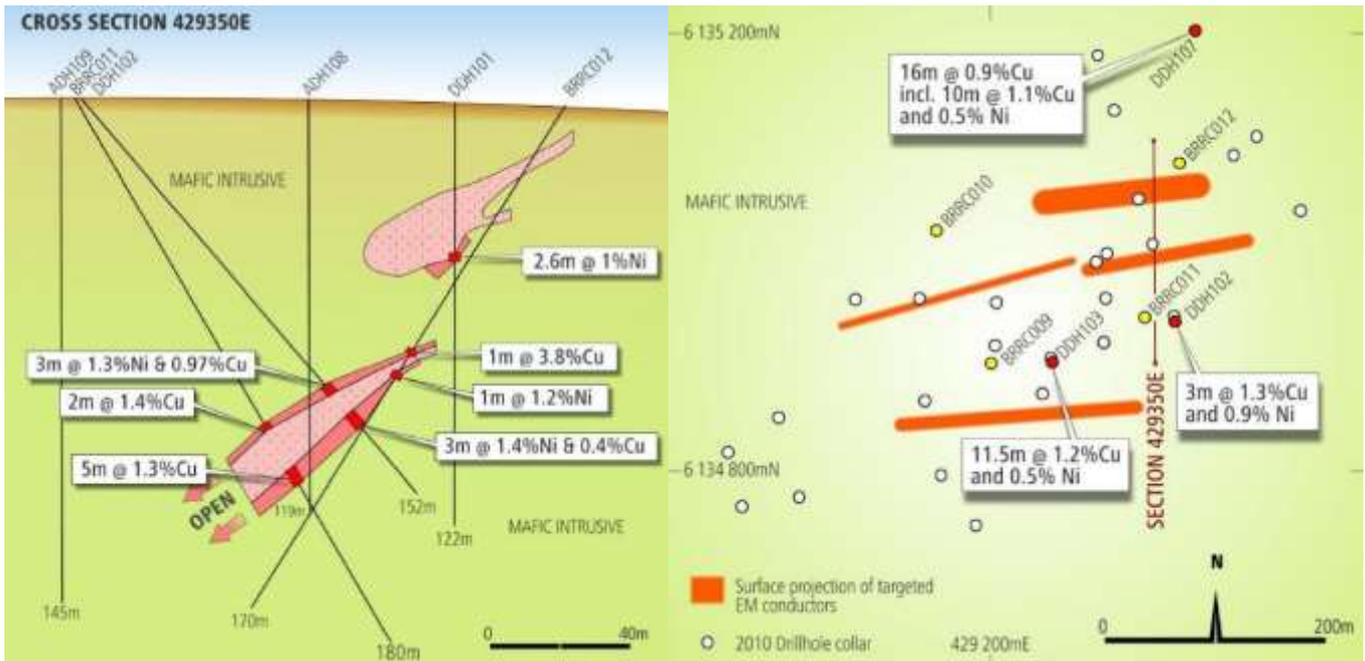


Figure 7. Location of historical drilling at Bow River nickel copper sulphide project.

### Gnewing Bore Project (Gold, Silver, Copper)

The Gnewing Bore Project is approximately 28km to the northwest of the Halls Creek townsite, within the Kimberley Region of Western Australia, Figure 8. Halls Creek is situated 350km south of Kununurra and is readily accessible via the sealed Great Northern Highway. The Project has generally good outcrop and easy access via stations tracks on the Moola Bulla pastoral lease.

An RC drilling program has been designed to test the 50m long, gossanous outcrop consisting of brecciated quartz material and iron oxides after sulphides. The Gnewing Bore Project represents a hydrothermal/epithermal gold-silver target, containing some low-level copper anomalism which appears primarily shear controlled. Historic work highlights high-tenor gold grades plus supporting silver and copper grades in the rock chip samples, with a lack of decent exploration work to sufficiently test the target's potential.

The Company has had positive communication with the Kimberley Land Council regarding potential planning of necessary heritage approvals in 2024 to allow it to carry out its proposed drilling program.

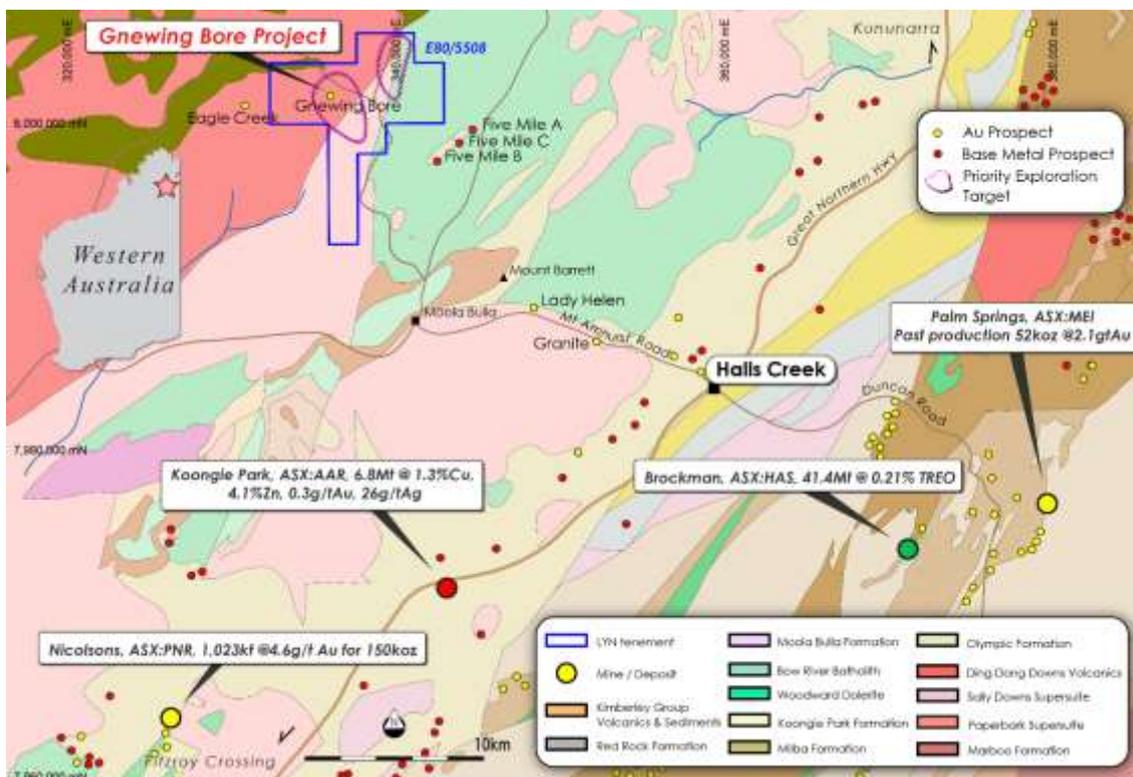


Figure 8. Gnewing Bore Project Location and Geology.

## Corporate

### Assessment of Additional Project Opportunities

As part of its ongoing business development model, Lycaon continues to assess project opportunities across a broad range of commodities and geographies with a view to identifying attractive, suitably priced assets that will add shareholder value.

### ASX Additional Information

As per ASX Listing Rule 5.3.1: Exploration and Evaluation Expenditure during the Quarter was \$76,076. Full details of exploration activity during the Quarter are set out in this report.

As per ASX Listing Rule 5.3.2: There were no substantive mining production and development activities during the Quarter.

As per ASX Listing Rule 5.3.5: Payments to related parties of the Company and their associates during the Quarter was \$78,776. The Company advises that this relates to directors' fees and accounting and company secretarial related services.

**ENDS**

**For further information:**

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**Tenement Register**

Project	Tenement	Holder(s) <sup>1</sup>	Location	Interest at 1/1/2024	Acquired / Disposed	Interest at 31/3/2024
Gnewing Bore	E 80/5508	Matmetals WA Pty Ltd	WA	100%	-	100%
Bow River and Salt Lick	E80/4955	East Kimberley Resources Pty Ltd	WA	100%	-	100%
Stansmore	E 80/5723	West Arunta Resources Pty Ltd	WA	100%	-	100%
Stansmore	E 80/5867	West Arunta Resources Pty Ltd	WA	100%	-	100%
Stansmore	E 80/5868	West Arunta Resources Pty Ltd	WA	100%	-	100%
North Star <sup>2</sup>	E45/6808	Lycaon Resources Limited	WA	-	-	-
North Star <sup>2</sup>	E45/6809	Lycaon Resources Limited	WA	-	-	-

<sup>1</sup>Matmetals WA Pty Ltd, East Kimberley Resources Pty Ltd and West Arunta Resources Pty Ltd are 100% owned subsidiaries of Lycaon Resources Limited. There are no Farm-in or Farm-out Arrangements held by Lycaon Resources Limited.

<sup>2</sup> Lycaon Resources Limited has applied for two tenements E45/6808 and E45/6809 which will go to ballot, with a date for ballot still to be determined.

For additional information please visit our website at [www.lycaonresources.com](http://www.lycaonresources.com)

<sup>1</sup> ASX:WA1, WEST ARUNTA PROJECT HIGH-GRADE INFILL AT LUNI, 8 November 2023

**Forward-Looking Statements**

This announcement contains "forward-looking statements." All statements other than those of historical facts included in this announcement are forward-looking statements. Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and based upon information currently available to the company and believed to have a reasonable basis. Although the Company believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and no assurance can be given that these expectations will prove to be correct as actual results or developments may differ materially from those projected in the forward-looking statements.

Forward-looking statements are subject to risks, uncertainties and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements. Such risks include, but are not limited to, copper, gold, and other metals price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as political and operational risks and governmental regulation and judicial outcomes. Readers are cautioned not to place undue reliance on forward-looking statements due to the inherent uncertainty thereof. The forward-looking statements contain in this press release are made as of the date of this press release and except as may otherwise be required pursuant to applicable laws, the Company does not undertake any obligation to release publicly any revisions to any "forward-looking statement".

### **Competent Persons Statement**

The information in this document that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr. Thomas Langley who is a member of the Australian Institute of Geoscientists (MAIG) and a member of the Australasian Institute of Mining and Metallurgy (MAusIMM). Mr. Thomas Langley is a full-time employee of Lycaon Resources Limited, and is a shareholder, however Mr. Thomas Langley believes this shareholding does not create a conflict of interest, and Mr. Langley has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Langley consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.