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27 January 2023

## Quarterly Activities Report 31 December 2022

### Highlights

- Lycaon entered into binding Heads of Agreement to acquire Stansmore Carbonatite Project in West Arunta region prospective for Niobium and Rare Earths (REE)
- The Stansmore carbonatite target confirmed as a prominent 700m long magnetic feature analogous to WA1's discoveries and Encounter's Worsley prospect
- Multiple new targets prospective for Niobium-REE mineralisation identified from Southern Geoscience Consultants (SGC) review of re-processed magnetic data
- West Arunta quickly emerging as a significant rare earths and copper province, with the recent Niobium-REE mineralised carbonatite discovery by WA1 Resources<sup>1</sup> and Encounter Resources Worsley IOCG – REE discovery<sup>2</sup>
- Exploration work programs being planned for 2023 to include ground gravity, airborne geophysical surveys and drilling
- Ground-based EM survey covering approximately 8.4km<sup>2</sup> of the prospective Bow River intrusion completed
- New Resolution Geophysics (NRG) completed helicopter electromagnetic survey (HEM) over Gnewing Bore Project
- Southern Geoscience Consultants (SGC) to review both Bow River and Gnewing Bore EM surveys and model data in Q1, 2023
- Drilling programs to test high priority targets planned at Gnewing Bore and Bow River following review of geophysical surveys

**Lycaon Resources Limited** (ASX: LYN) ("the **Company** or **Lycaon**") is pleased to report on the December 2022 quarterly activities.

## Projects Summary

### **Stansmore Project** (*Nb/ REE ±PGE*)

During the quarter the Company announced that via its wholly owned subsidiary, West Arunta Resources Pty Ltd (WAR), it entered into a conditional binding Heads of Agreement to acquire the Stansmore REE carbonatite project, exploration licence E80/5723 in the West Arunta region of Western Australia (Figure 1).

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 (Figures 2 and 3). Alkaline systems are key drivers in the formation of IOCG and carbonatite-hosted REE deposits, with the region seeing a renewed exploration focus these deposit types.

During the quarter Southern Geoscience Consultants (SGC) completed re-processing and review of historical publicly available magnetic data at the Stansmore REE carbonatite project. The review supported the Stansmore Prospect as a regionally significant magnetic anomaly and highlighted several other magnetic anomalies which may be prospective for rare earth/niobium and IOCG type mineralisation, Figure 2. Exploration programs once land access has been approved will include drilling, ground based gravity, passive seismic surveys and geochemical sampling. Results will produce valuable datasets to inform planning of follow up drilling across the Stansmore Project in 2023.

In addition to entering into the binding Heads of Agreement to acquire the Stansmore Project (E80/5723), WAR has made two new Exploration Licence applications in proximity to the Company's Stansmore Project, comprising EL(A) 80/5852, and EL(A) 80/5853. The two applications are located north and east of the Stansmore Project tenement. While the Company is not currently aware of any reason why these applications will not be granted, there is no guarantee that the applications will be granted or that applications will not be withdrawn, in which instance the Company would not acquire any interest in the area subject of the relevant application(s).

The identification of a mineralised carbonatite intrusion is a significant finding for the West Arunta region and given the presence of other intrusive bodies within the region enhances the potential for further discoveries with future exploration efforts.

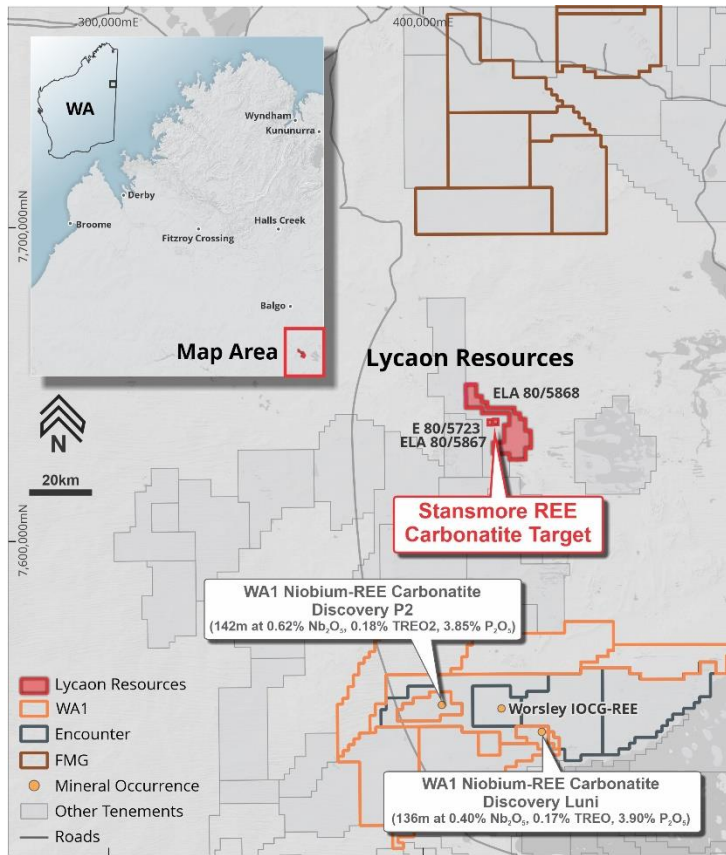


Figure 1. Stansmore Nb-REE Carbonatite ± IOCG Project Location Map

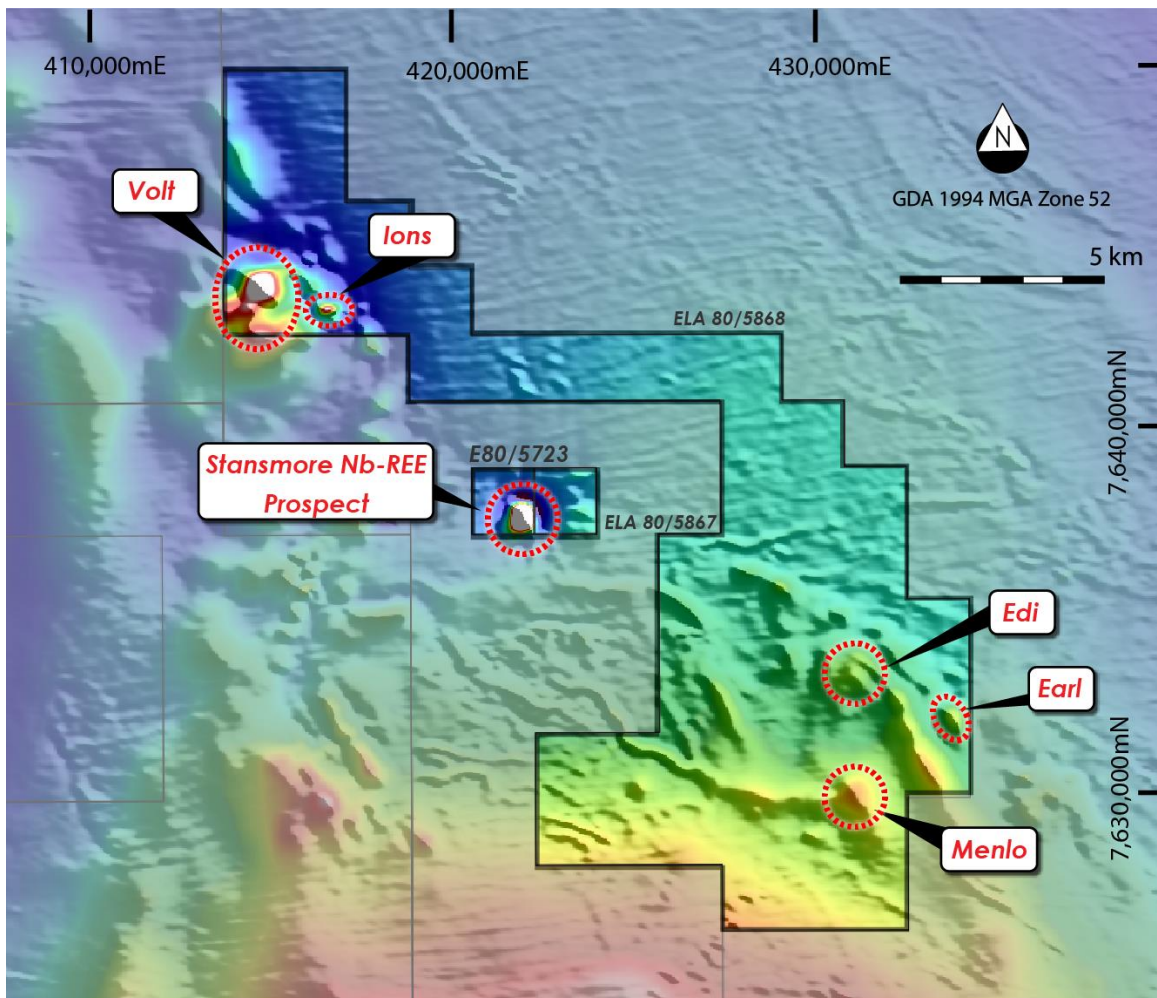


Figure 2. Reduced to Pole Magnetics (TMI grid) highlighting the prominent magnetic anomaly at Stansmore Prospect and other magnetic targets.

## **Bow River Prospect** (Ni/Cu/Co±PGE)

The Bow River Project is located within the Halls Creek Mobile Zone in the East Kimberley region of Western Australia (Figure 3).

The Project area covers two known nickel-copper-cobalt sulphide prospects mapped as the Salt Lick Creek intrusion and the Bow River intrusion. Both intrusives are sulphide-bearing and similar in style and setting to Panoramic Resources' Savannah mine, located approximately 60 kilometres further south. The relatively recent discovery (2014) of the Savannah North resource at depth adjoining the existing mine (effectively quadrupling the Ni-Cu-Co resource) has highlighted the prospectivity of E80/4955 given its analogous geological setting. Previous drilling is limited to a very small area of the Bow River mafic intrusive, Figure 4, 5.

During the quarter the Company was pleased to complete an extensive ground moving loop electromagnetic (MLEM) survey over ~8.4km<sup>2</sup> of the Bow River intrusion, host to the Bow River nickel copper prospect. The MLEM survey will be critical in delineating conductors and identifying drill targets beneath the depth of historical investigation. The EM survey completed utilised optimal parameters, low base frequency and high power/current levels which can provide >500m depth of investigation where the target is a high conductance body and of significant size. SGC is expected to complete the review of the EM survey in Q1, 2023.

Following review of the EM survey, and subject to approvals, drilling is planned to target beneath the current extent of historical drilling, targeting the deeper more primitive part of the intrusion. A stratigraphic hole proposed to 800m hole depth has been designed to intersect the highest amplitude of the gravity anomaly. This drillhole will provide critical stratigraphic, geological and geochemical information that can help determine whether the gravity anomaly could be related to a fertile Ni-Cu magmatic sulphide system. The drillhole will also provide a platform to complete high-powered DHEM surveying to detect deep seated strong conductors.

The proposed drill program at Bow River will be critical in demonstrating the potential for a major Ni-Cu-Co resource in the Kimberley analogous to Panoramic's Savannah nickel mine 60km south. The recent discovery of the Savannah North orebody in 2014 highlights the exploration potential that remains in the Kimberley, Figure 6.

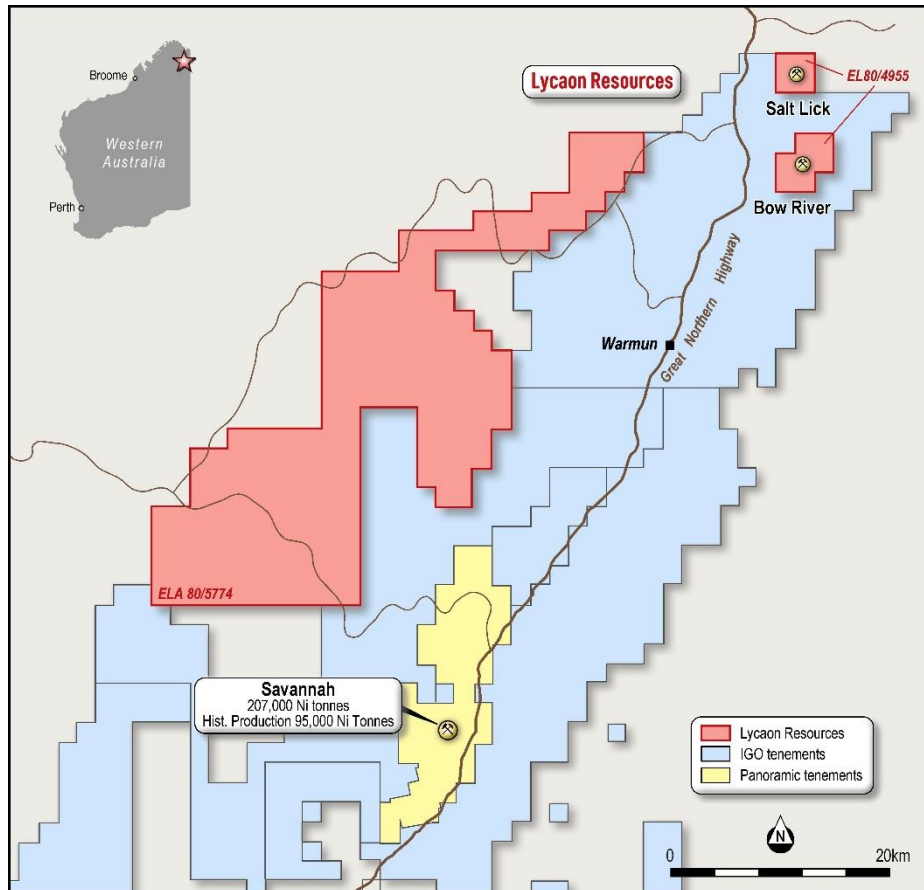


Figure 3. Location of Bow River and Salt Lick nickel copper sulphide projects and new tenement application ELA80/5774

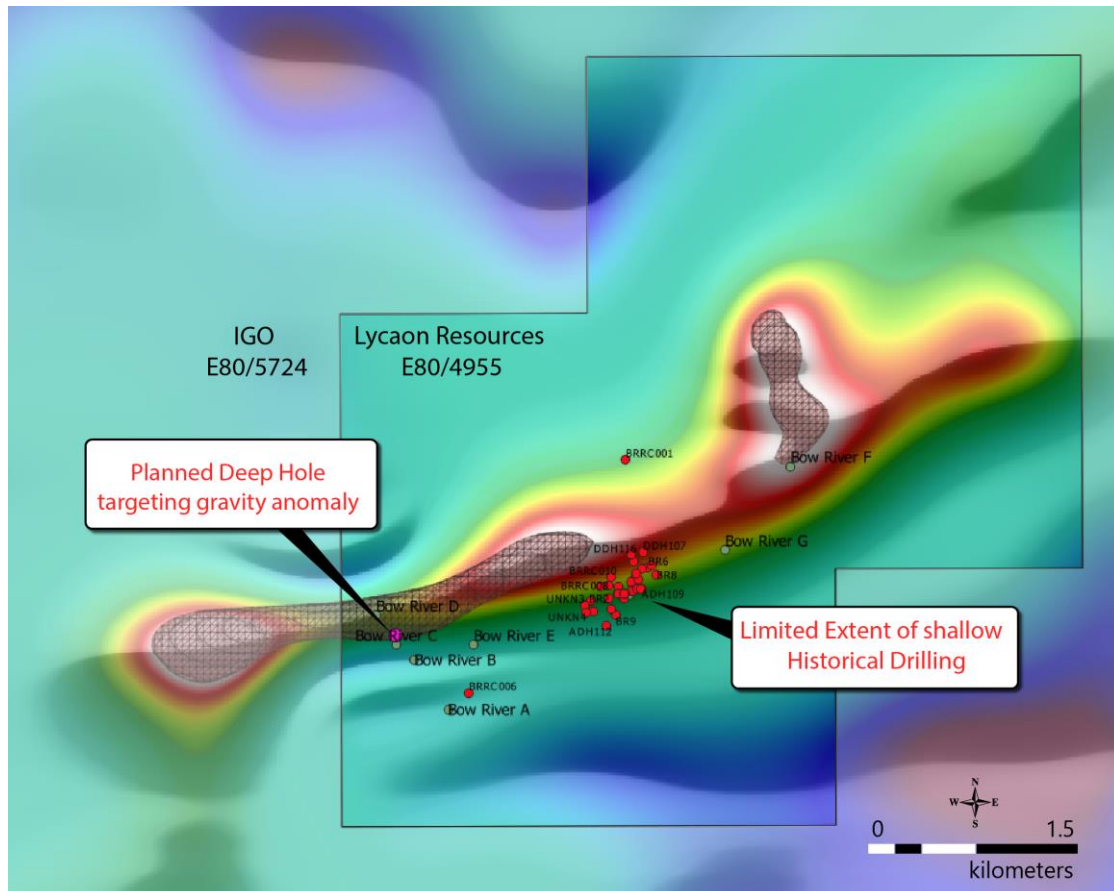


Figure 4. Location of historical drilling at Bow River nickel copper sulphide project, in relation to the large underlying Gravity anomaly inferred to be the Bow River Intrusive



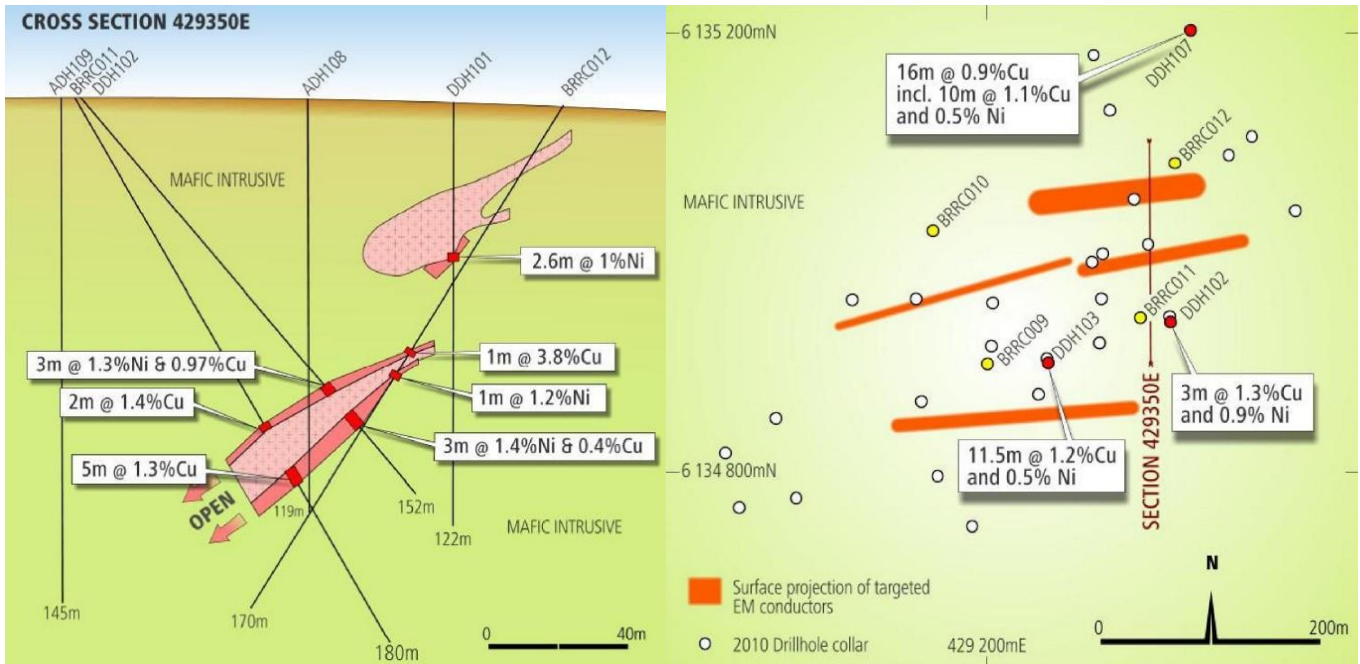


Figure 5. Location of historical drilling at Bow River nickel copper sulphide project.

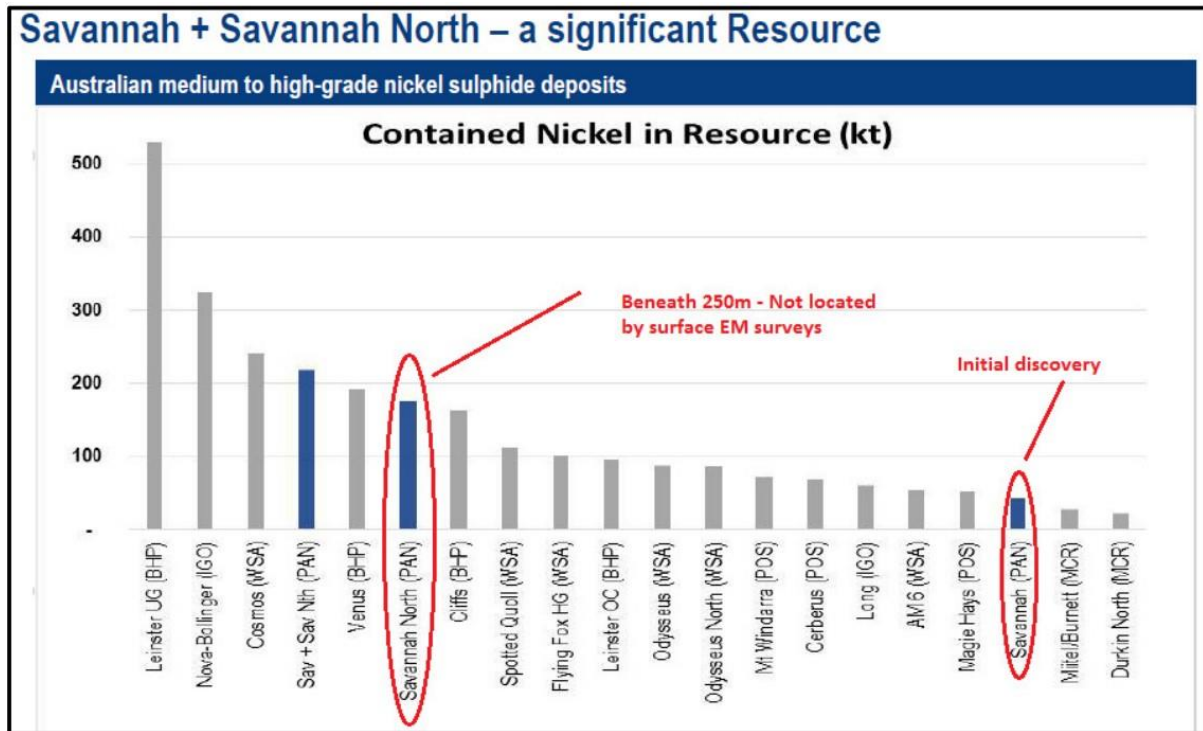


Figure 6. Graph highlighting significant addition of contained nickel resource due to the discovery of Savannah North, a much larger deposit than Savannah.

### 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 7. 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.

During the quarter, a high-resolution electromagnetic survey (HEM) geophysical survey was completed by New Resolution Geophysics (NRG), flying their Xcite™ HEM system at a minimum 200m line spacing.

Gnewing Bore remains prospective for further mineralisation at the historical high-grade copper-gold gossan and other high priority targets that may be prospective for Ni-Cu±PGE mineralisation. Gnewing Bore and the multiple regional targets and have had very limited to no historical exploration work carried out.

A Gradient Array Induced Polarisation (GAIP) is proposed for H1, 2023 pending access approvals and permits, which will greatly assist with planning the maiden drilling program. Both the HEM and GAIP surveys will assist with planning of drilling programs, which subject to approvals, are targeted for H1 2023.

The Gnewing Bore Project has experienced limited exploration to date, with work focusing on the area surrounding a prominent north-northwest-trending, 50m long, significant gossanous outcrop consisting of brecciated quartz material and iron oxides after sulphides, Figure 8, 9. Historical rock chip samples have returned up to 5.10 g/t Au and 105g/t Ag. A small historical drilling program returned a best result of 8m @ 0.52g/t Au from 12m from a hole drilled beneath the gossan, indicating a wide mineralisation system could be present. There remains significant potential down dip and along strike to test for high-grade mineralisation in fresh rock, which warrants further drilling.

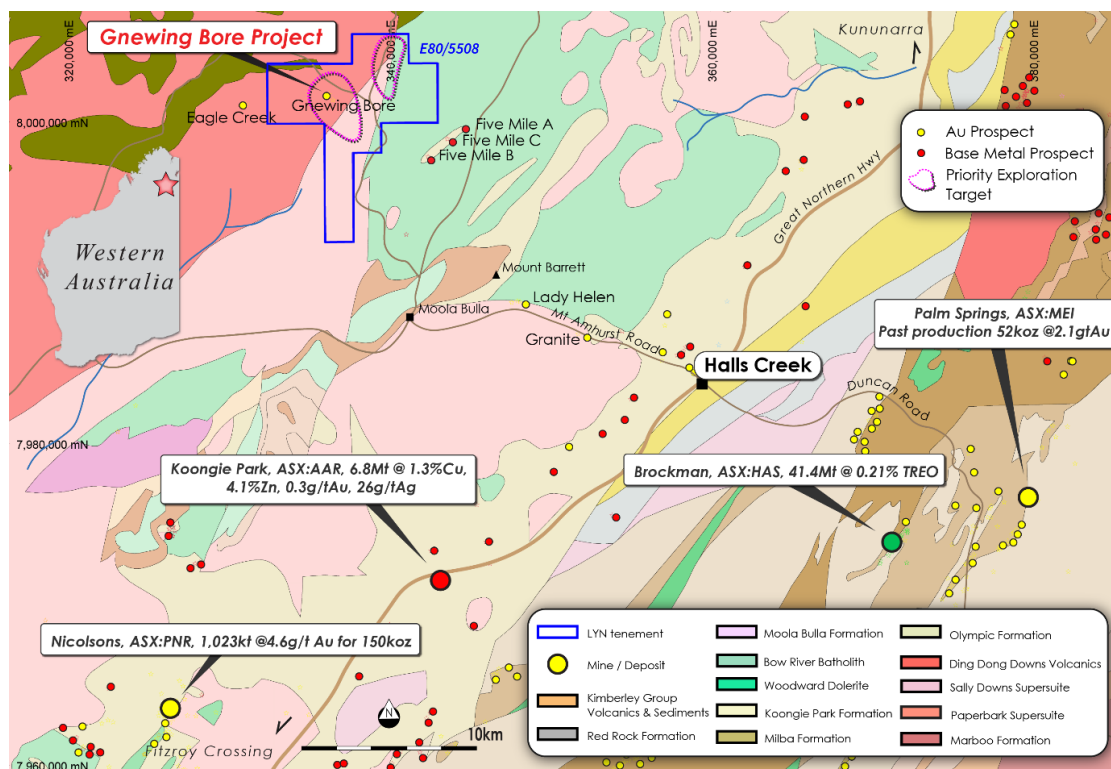


Figure 7. Gnewing Bore Project Location and Geology



Figure 8. View of the main quartz sulphide outcrops, looking northeast (from WAMEX Report A036766)

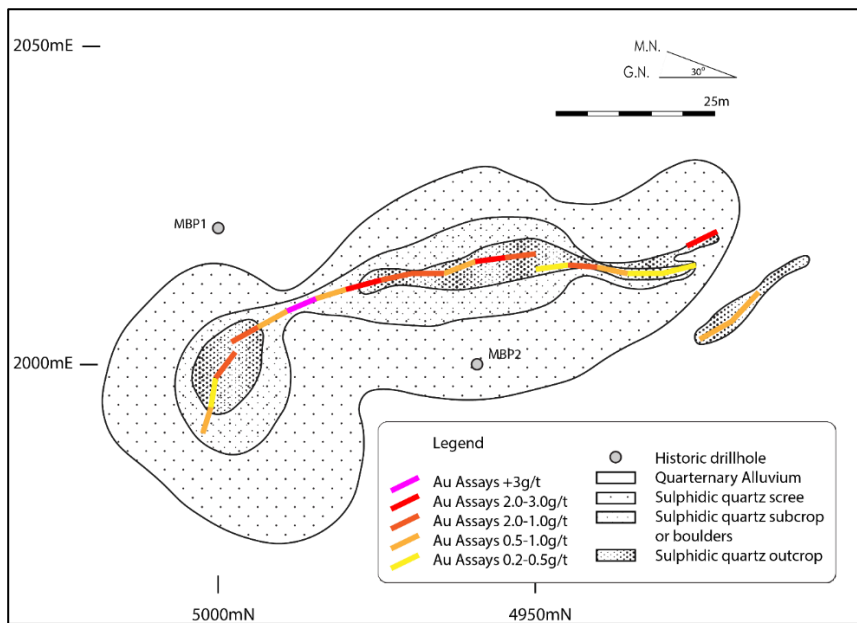


Figure 9. Gold results from semi-continuous rock chip sampling completed by Anglo Australian



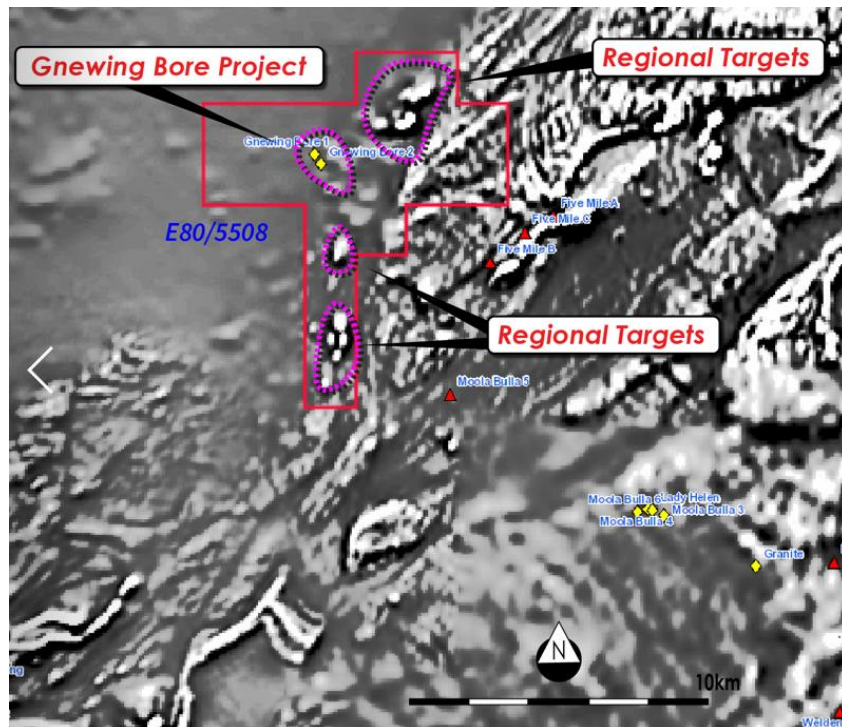


Figure 10. Gnewing Bore Project and priority Regional Targets (greyscale 1VD magnetics overlay)

### Rocky Dam Project (Gold)

During the quarter, exploration licence E27/634 was granted, resulting in the Rocky Dam Project now comprising of ten (10) granted Exploration Licences covering approximately 162.8km<sup>2</sup>, a significant landholding in the highly prospective Norseman - Wiluna Greenstone Belt around the Yindarlgooda Dome within the Eastern Goldfields. The Project is centred 60km northeast of Kalgoorlie via sealed and well-maintained gravel roads. The Project is close to significant mining infrastructure and surrounds gold producer Northern Star Limited's recent Kurnalpi Project acquisition and active explorers Riversgold Limited (ASX:RGL) and Black Cat Syndicate Limited (ASX:BC8).

The significant low order gold mineralisation recorded in historical drilling suggests a mineralised system is present at CRA-North, warranting further drill testing. Upcoming exploration work programs will consist of RC and diamond drilling planned to delineate the strike extent of the oxide mineralisation and to test for primary mineralisation at depth. Geochemical sampling, geophysics and aircore drilling are intended to be completed at regional targets in H1, 2023.

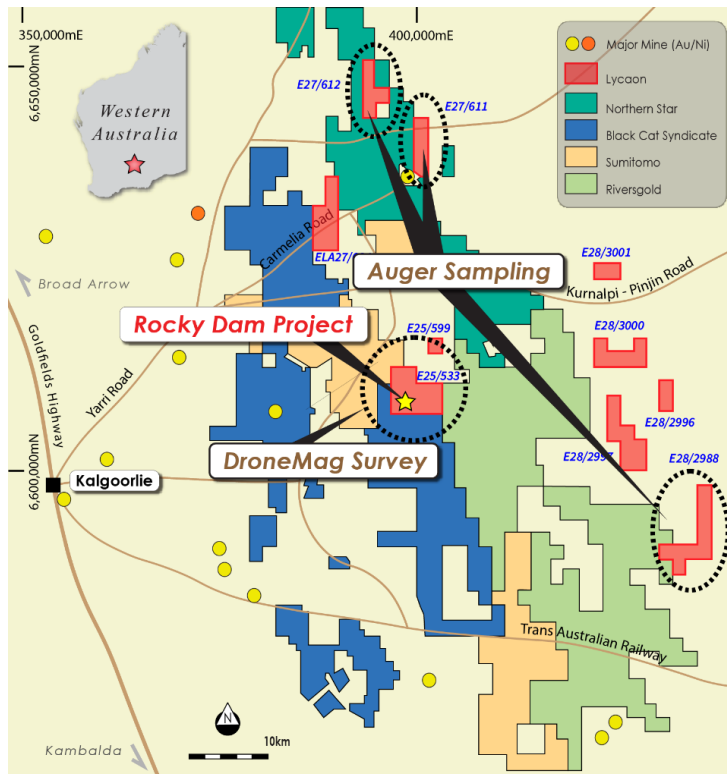


Figure 11. Rocky Dam Project Location and work program areas

### Julimar Project (Nickel-Copper-PGE)

The Julimar Project comprises two (2) granted Exploration Licences, located 40km northeast and 85km east-northeast of Perth. The project licences cover an area of approximately 15km<sup>2</sup>. Lycaon's Julimar Project lies 20km south (E70/5415) and 45km east (E70/5416) of the Julimar Nickel-Copper-PGE discovery.

The company is prioritising landowner access agreements to allow for site access for future drill programs H2, 2023.

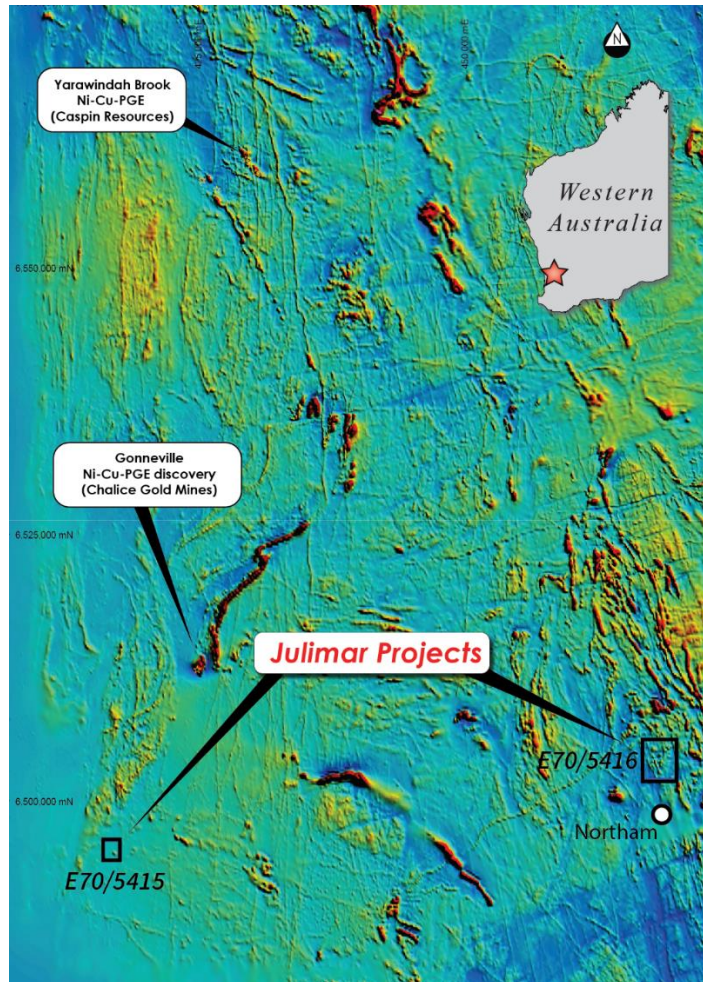


Figure 12. Regional magnetics - Julimar Project

## Corporate

### Stansmore Project Acquisition Terms

During the quarter Lycaon and WAR executed a Heads of Agreement to acquire 100% of exploration licence E80/5723, held by Thomas Langley in consideration for the issue 1,000,000 fully paid ordinary shares in the capital of Lycaon (**Shares**) at a deemed issue price of \$0.25 per Share (**Consideration Shares**).

The Acquisition is conditional upon Ministerial Approval to transfer E80/5723.

Thomas Langley is a Director of the Company. Lycaon shall seek approval for the issue of the Consideration Shares to Thomas Langley pursuant to Listing Rule 10.11.

In addition, a facilitation fee of 150,000 Shares will be issued to Inyati Capital Pty Ltd at a deemed issue price of \$0.25 per share.

### 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 \$278,178. 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 \$69,038. The Company advises that this relates to director's fees and accounting and company secretarial related services.

As per ASX Listing Rule 5.3.4 the following expenditures have occurred:

Item	Current Quarter (\$)	Since Listing (\$)	As per IPO Prospectus dated 29 September 2021* (\$)
Exploration – Rocky Dam	62k	517k	1.07m
Exploration – Gnewing Bore	103k	139k	1.21m
Exploration – Julimar	6k	148k	540k
Exploration – Bow River / Salt Lick	99k	341k	-
Exploration - Other	8k	8k	-
Expenses of the offer	-	733k	500k
Corporate and administration costs	186k	613k	500k
Working capital	-	4k	1.5m

\* Costs per the prospectus are over the first two years following admission of the Company to the official List of ASX

The differences in the above are as follows:

### Expenses of the offer

These costs include legal costs, accounting and tax advice costs, and other support services. Delays in the anticipated listing of the Company increased costs of the offer, predominately legal costs.

This announcement has been approved for release by the Board of Lycaon.

**ENDS**

### **For further information:**

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## Tenement Register

Project	Tenement	Location	Interest at 1/10/2022	Acquired/Disposed	Interest at 31/12/2022
Gnewing Bore (MatMetals Pty Ltd)	E 80/5508	WA	100%	-	100%
Julimar	E 70/5415	WA	100%	-	100%
Julimar	E 70/5416	WA	100%	-	100%
Rocky Dam	E 25/533	WA	100%	-	100%
Rocky Dam	E 27/611	WA	100%	-	100%
Rocky Dam	E 27/612	WA	100%	-	100%
Rocky Dam	E 25/599	WA	100%	-	100%
Rocky Dam	E 27/634	WA	100%	-	100%
Rocky Dam	E 28/2988	WA	100%	-	100%
Rocky Dam	E 28/2996	WA	100%	-	100%
Rocky Dam	E 28/2997	WA	100%	-	100%
Rocky Dam	E 28/3000	WA	100%	-	100%
Rocky Dam	E 28/3001	WA	100%	-	100%
Bow River and Salt Lick (East Kimberley Resources Pty Ltd)	E80/4955	WA	100%	-	100%
Castlereagh	ELA 80/5774	WA	100%	-	100%
Stansmore*	E 80/5723	WA	-	-	-
Stansmore*	ELA 80/5867	WA	-	-	-
Stansmore*	ELA 80/5868	WA	-	-	-

\*Refer to Page 2 and 11 within this report, outlining the terms of the acquisition.

There are no Farm-in or Farm-out Arrangements held by Lycaon Resources Limited

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

### 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 contained 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.