

THE NEXT WEST ARUNTA Nb-REE CARBONATITE EXPLORER

# STANSMORE CARBONATITE Nb-REE PROJECT

WEST ARUNTA PROVINCE

NOVEMBER 2022

ASX:LYN



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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.

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Certain information contained in this presentation may contain “forward-looking statements”. Forward-looking statements may include, but is not limited to, information with respect to the future financial and operating performance of Lycaon, its subsidiaries and affiliates, the estimation of Mineral Reserves and Mineral Resources, realization of Mineral Reserve and Mineral Resource estimates, costs and timing of development of Lycaon’s projects, costs and timing of future exploration, timing and receipt of approvals, consents and permits under applicable legislation, results of future exploration and drilling and adequacy of financial resources. Forward-looking statements are often characterized by words such as “plan”, “expect”, “budget”, “target”, “project”, “intend”, “believe”, “anticipate”, “estimate” and other similar words or statements that certain events or conditions “may” or “will” occur.

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# CORPORATE OVERVIEW

- Pat Burke** Non-Executive Chairperson
  - Extensive legal and corporate advisory experience
  - Currently Non-Executive Chairman of Meteoric Resources NL, Province Resources Limited and Torque Metals Limited; and Non Executive Director of Triton Minerals Limited and Western Gold Limited
- Thomas Langley** Technical Director
  - Highly experienced geologist in project generation
  - Lanthanein Resources - led the discovery of high grade REE's at the Gascoyne Lyons project
  - BSc (UWA) and MSc Econ Geol (CODES)
- Ranko Matic** Non-Executive Director
  - Chartered Accountant with over 30 years in the areas of financial and executive management, accounting, and corporate advisory
- Melanie Ross** Company Secretary
  - 20 years experience in financial accounting and analysis, audit, business and corporate advisory services in public practice, commerce and state government

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Capital Structure	
(17 November 2022)	
	
<b>ASX Ticker</b>	<b>LYN</b>
Ordinary Shares	36,906,251
Unlisted Options (ex. \$0.30)	3.8M
Share Price (18/11/22)	\$0.50
<b>Market Capitalisation (\$0.50cps)</b>	<b>\$16.62M</b>
<b>Cash at Bank (as at 30 September)</b>	<b>~\$3.3M</b>
<b>Debt</b>	<b>Nil</b>
<b>Enterprise Value</b>	<b>\$13.32M</b>

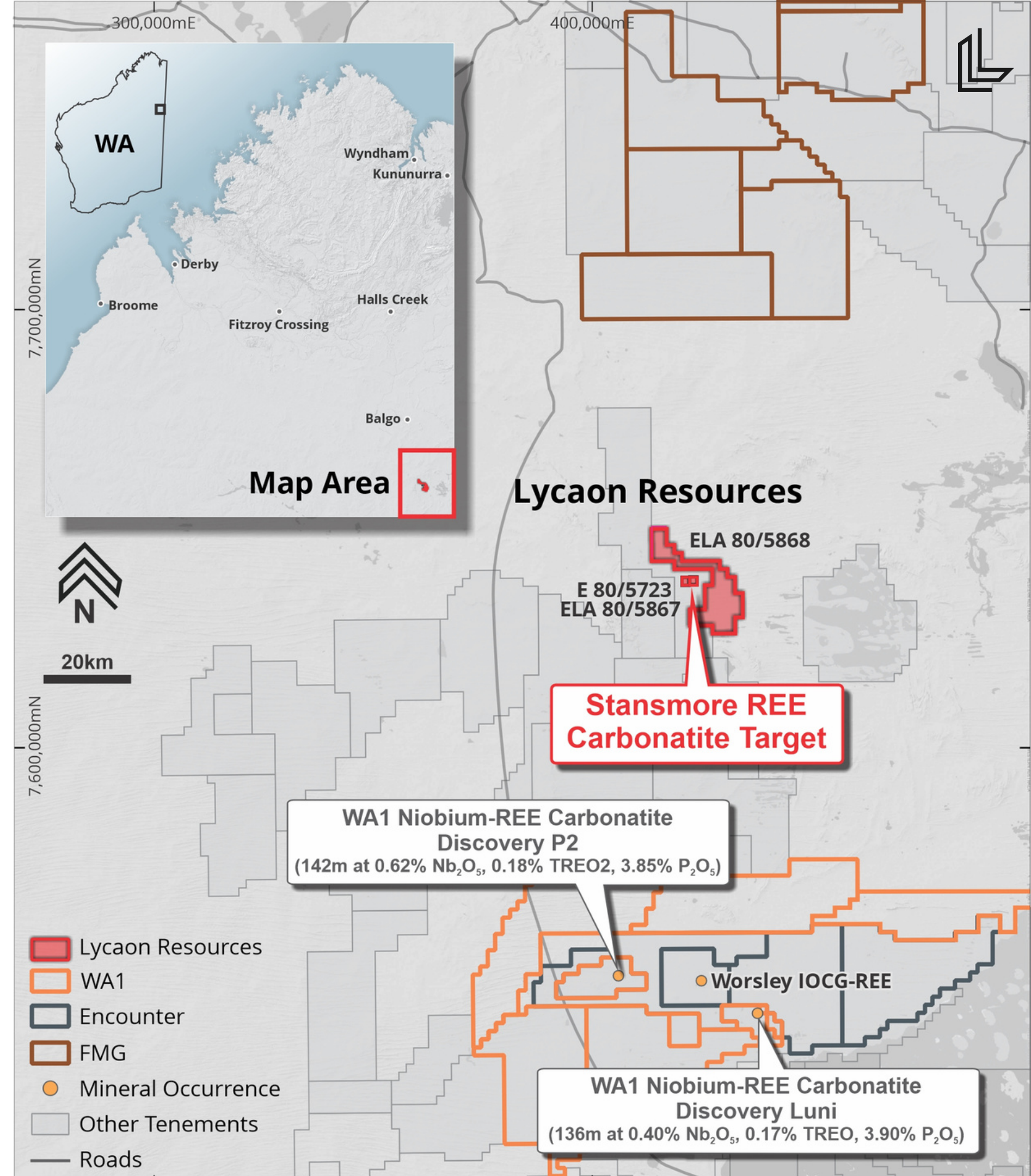
Shareholders	
<b>Substantial Shareholders</b>	
Inyati Fund	7%
Board & Management	6%



# COMPANY UPDATE

- ↳ Agreement to Acquire Granted Tenement at Highly Prospective West Arunta Niobium-REE Carbonatite Project
- ↳ Company focused towards exploring for future facing critical minerals essential for the clean energy transition - Niobium, REE, Ni, Cu
- ↳ Active on multiple exploration fronts, with near term news flow
  - Bow River (Ni-Cu) ground EM survey completed (Nov 22)
  - Gnewing Bore airborne HEM survey completed (Nov 22)
  - Maiden Drill Programs at Kimberley projects in Q2, 2023
  - Airborne & Ground geophysical surveys, and drilling Stansmore 2023

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# THE NEXT WEST ARUNTA REE CARBONATITE EXPLORER

Stansmore REE Project covers **172km<sup>2</sup>** including granted tenement E80/5723 and exploration licence applications ELA 80/5867 and ELA 80/5868

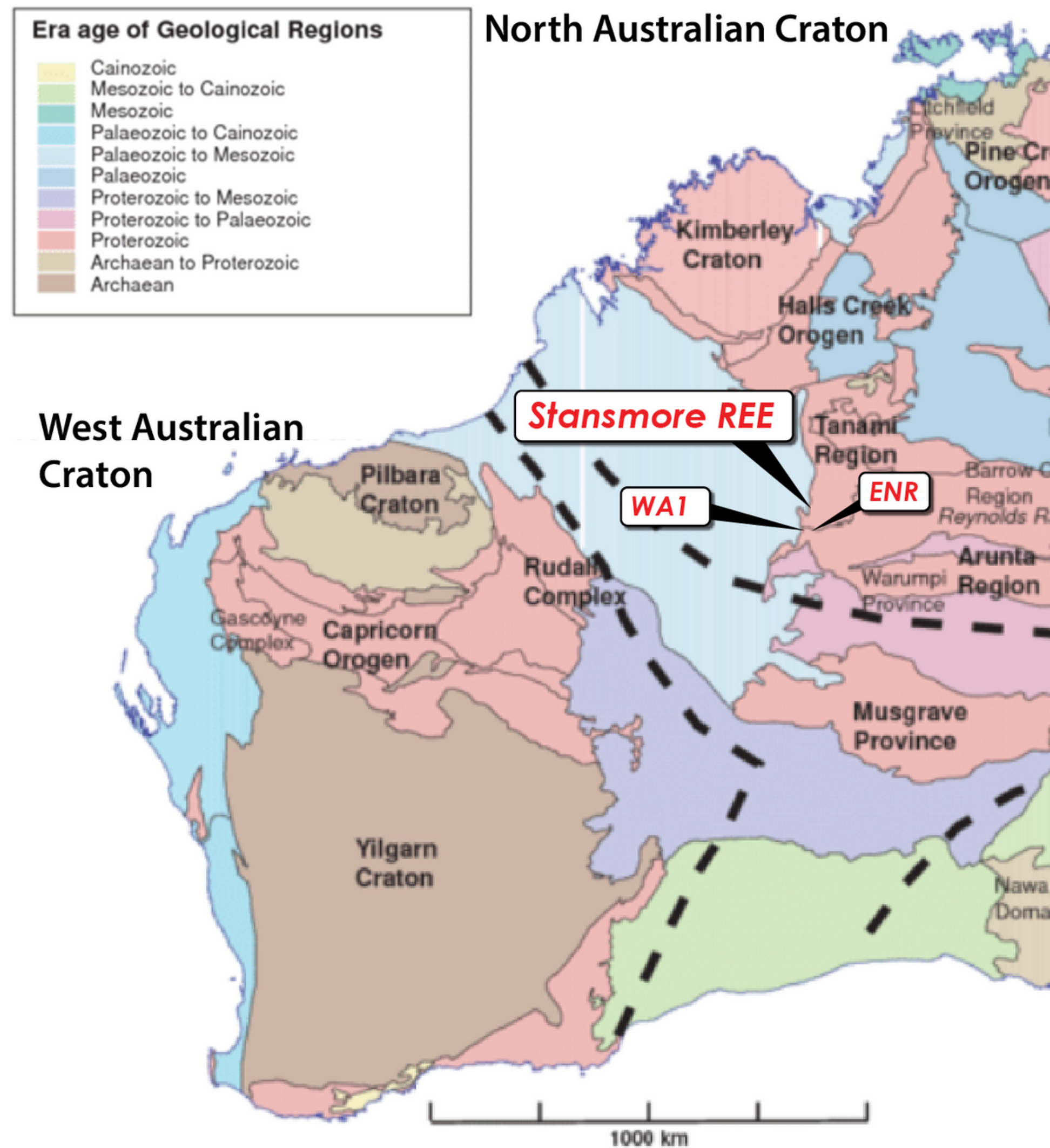
700m long magnetic feature with striking similarities to WA1 Niobium-REE Carbonatite discovery and ENR Worsley IOCG-REE discovery

**First mover advantage** pegged in November 2021 prior to recent discoveries

Located at **juncture of two major regional faults** and offset from major North Australia Craton Boundary

Long been recognised as a **regionally significant magnetic feature** of interest, with historic exploration targeting diamondiferous kimberlites by BHP in 1982 - **never explored for critical minerals Niobium and REE's**

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# THE NEXT WEST ARUNTA REE CARBONATITE EXPLORER



The identification of **WA1's niobium-REE mineralised carbonatite** and **ENR's Worsley REE Project** provides strong support that a **large magmatic hydrothermal system has been active in the region.**

**Alkaline systems are key drivers in the formation of IOCG and carbonatite-hosted REE deposits**

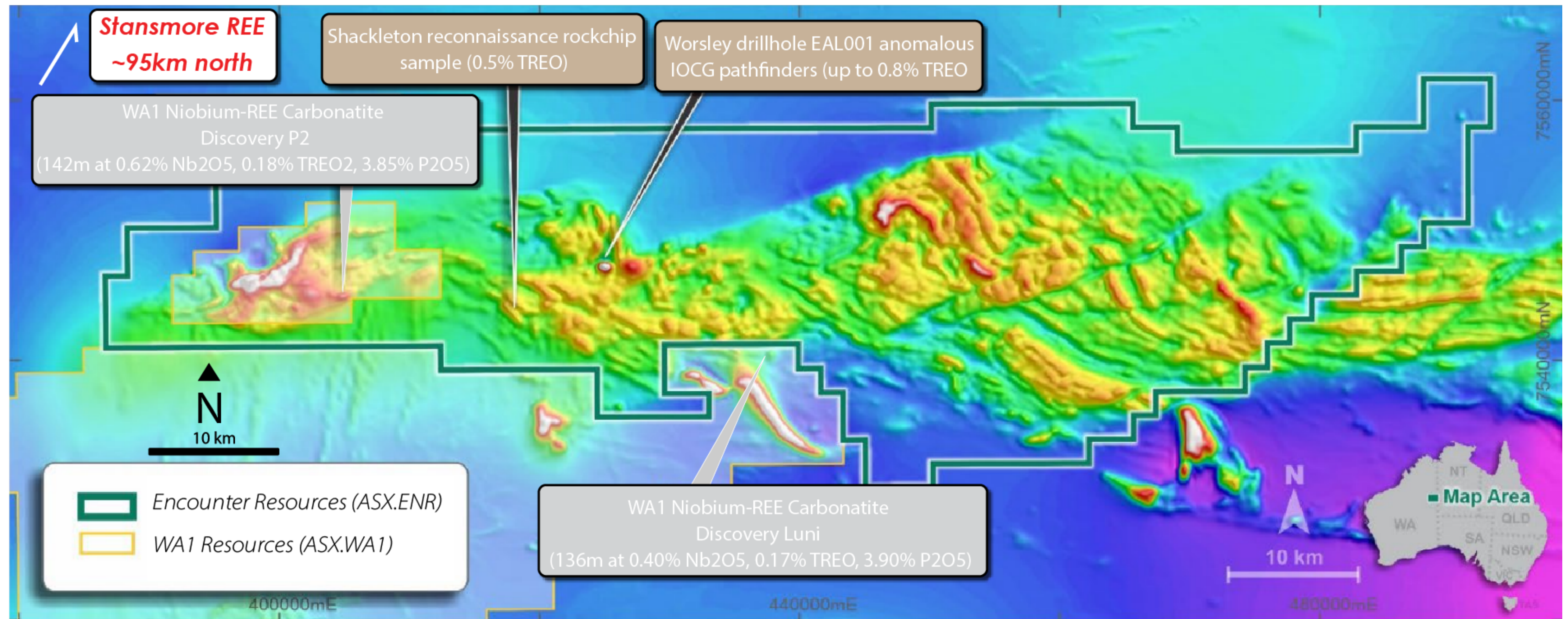


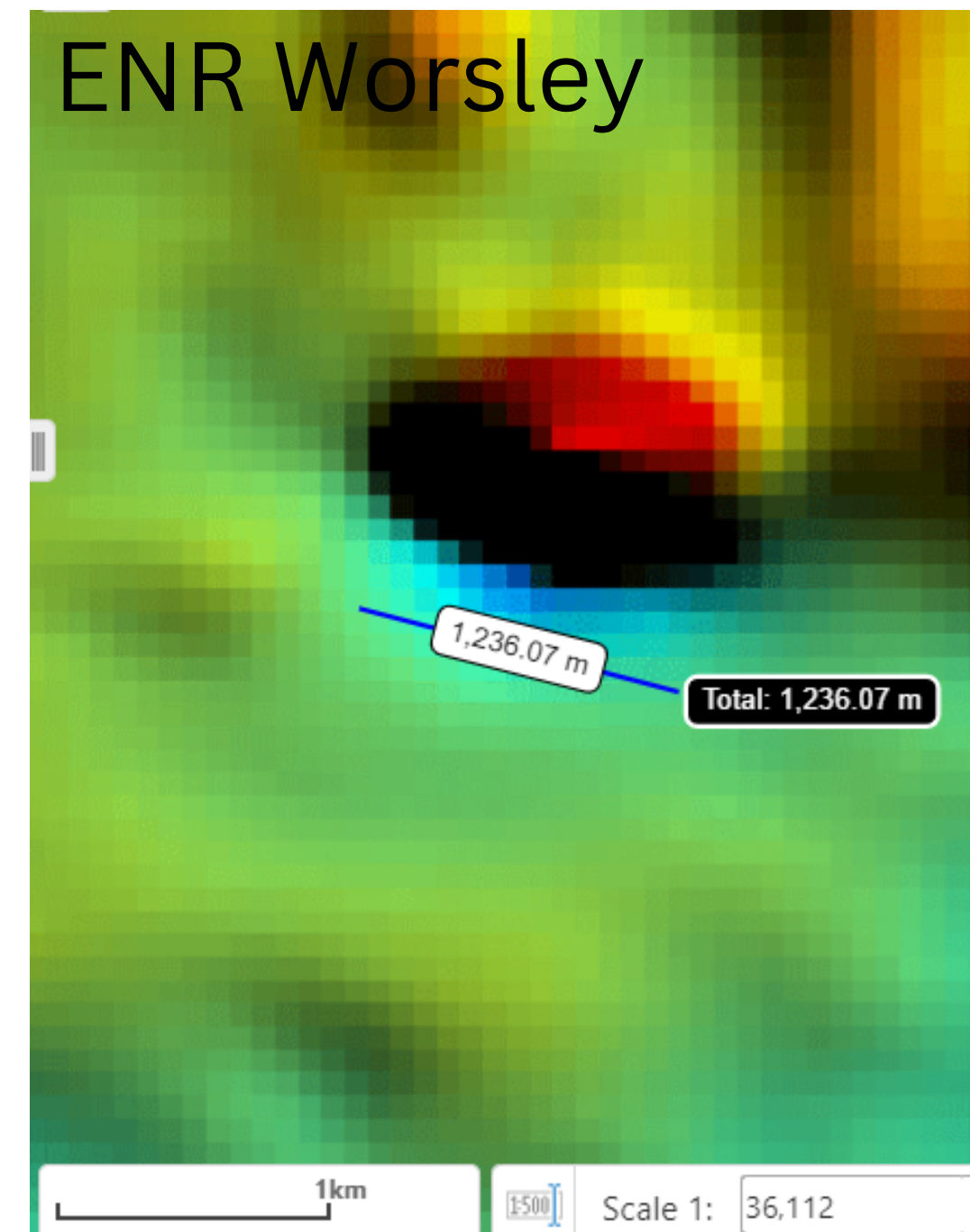
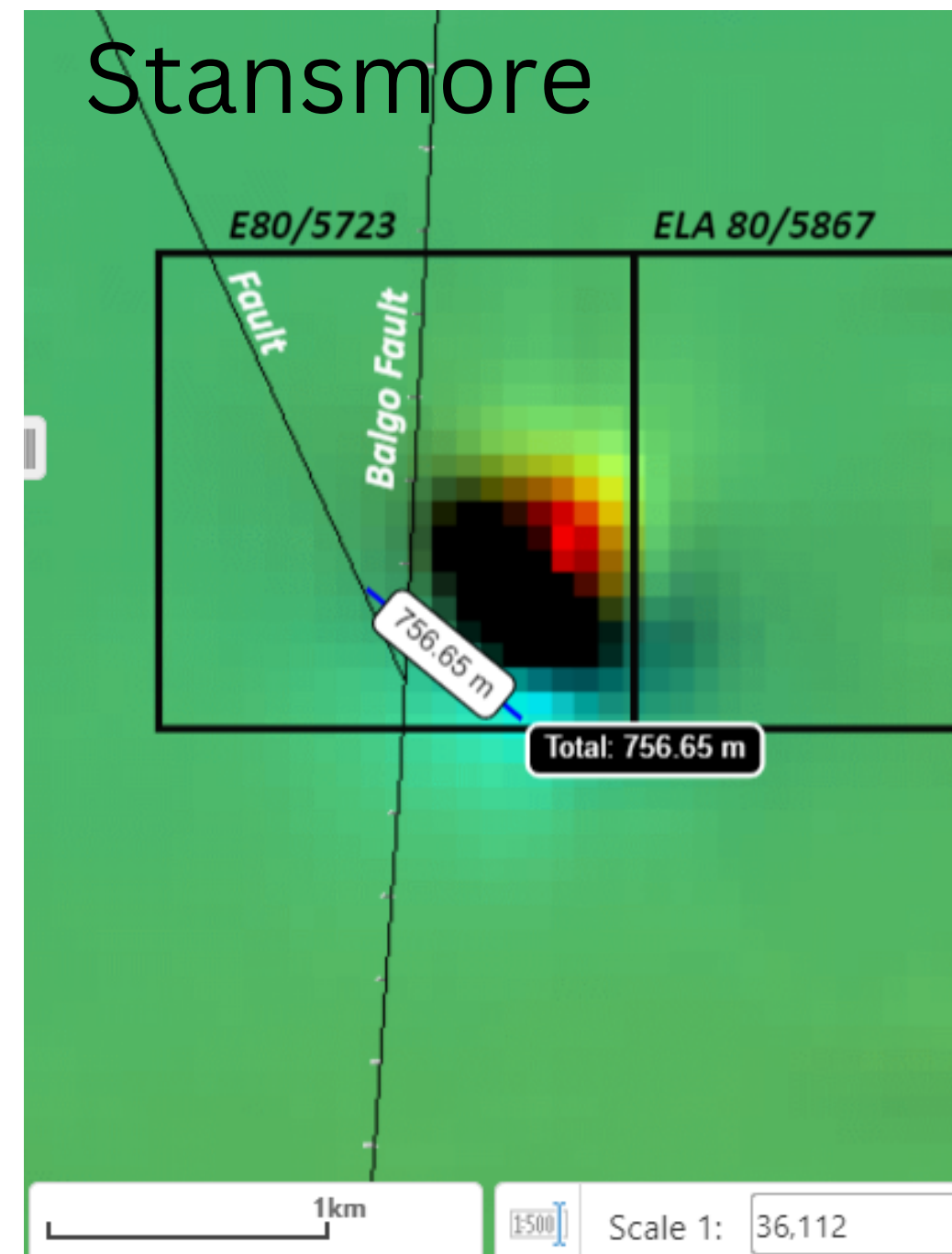
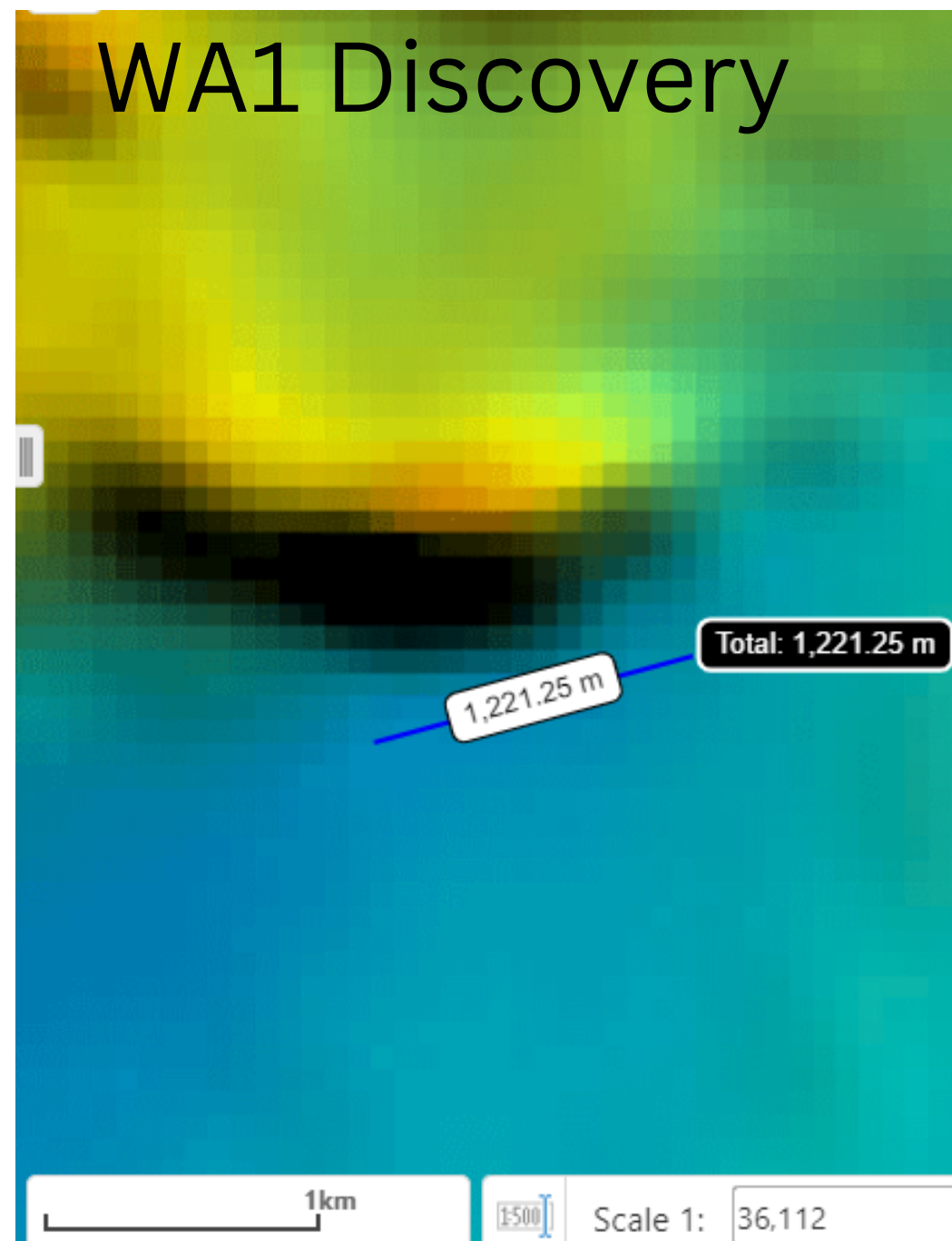
Figure 1 – Aileron Cu-REE project – Magnetics (TMI) (refer ENR ASX releases 28 January 2021 & 14 February 2022 and WA1 ASX release 26 October 2022 & 16 November 2022)



# THE NEXT WEST ARUNTA REE CARBONATITE EXPLORER



Both WA1 and ENR are targeting discrete, coincident gravity-magnetic anomalies with ~1km strike  
West Arunta Province is one of the most prospective regions for IOCG deposits in Australia + REE's  
Comparable aged host sequence and hydrothermal event to the major IOCG deposits of South Australia like Olympic Dam

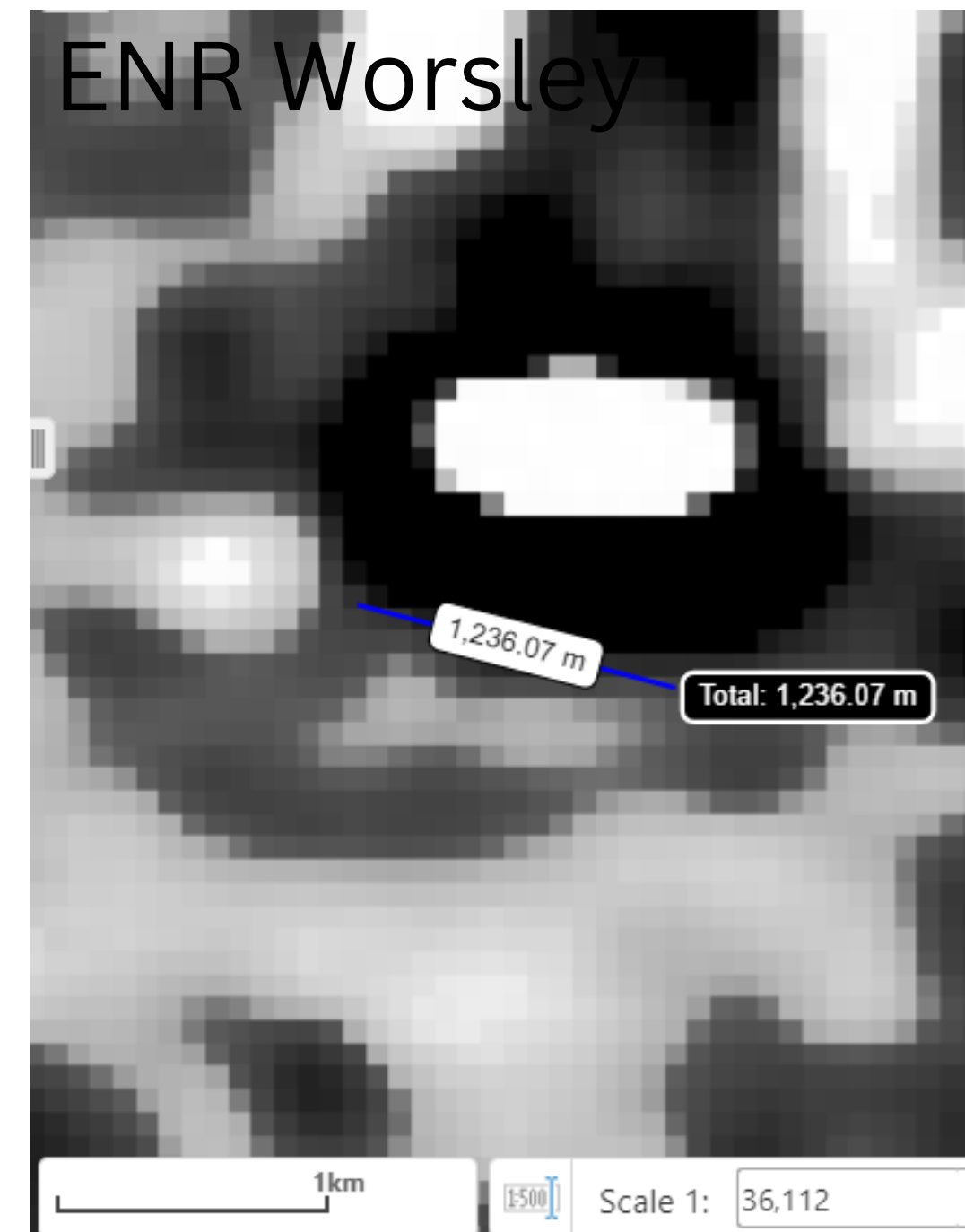
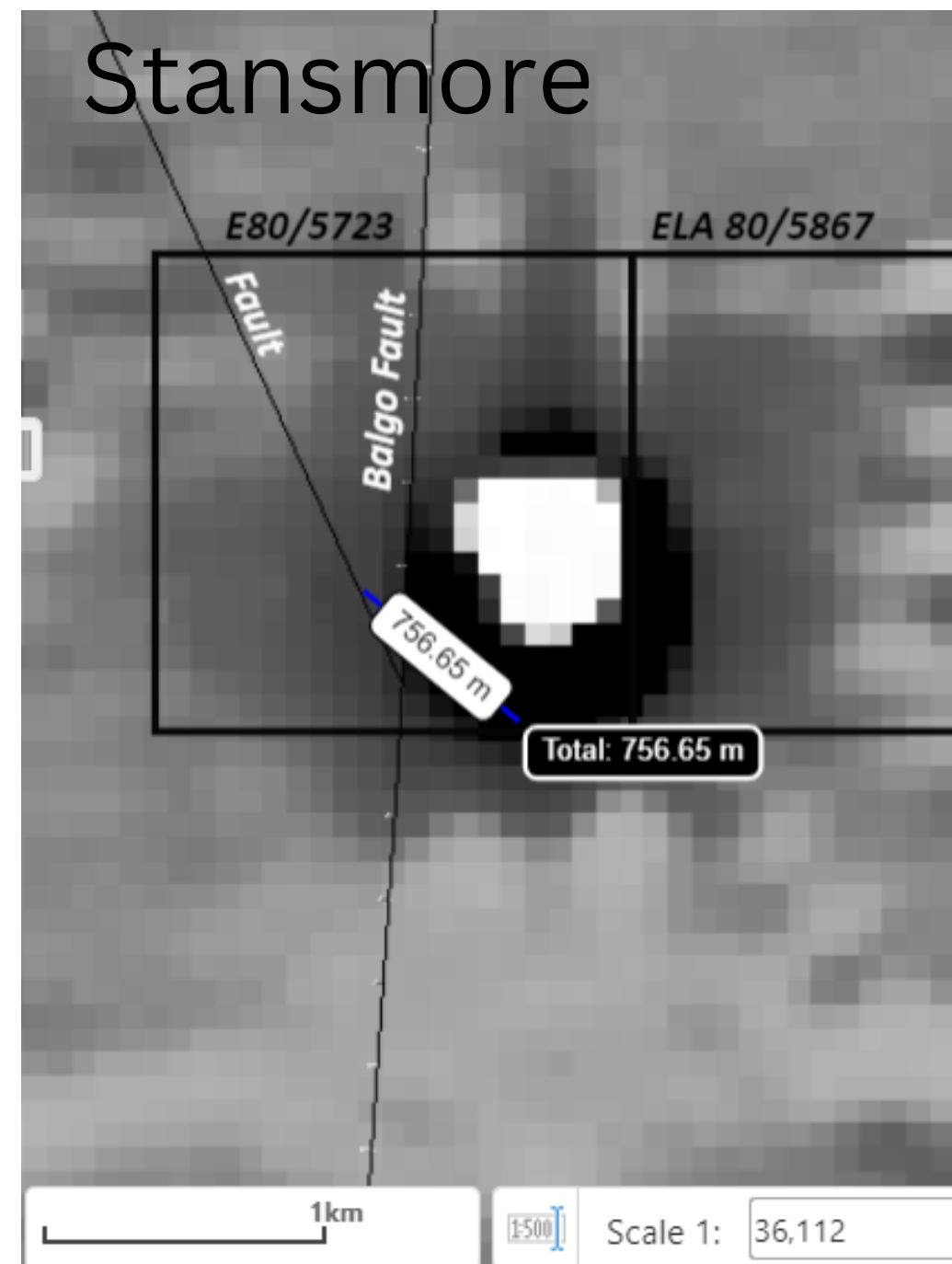
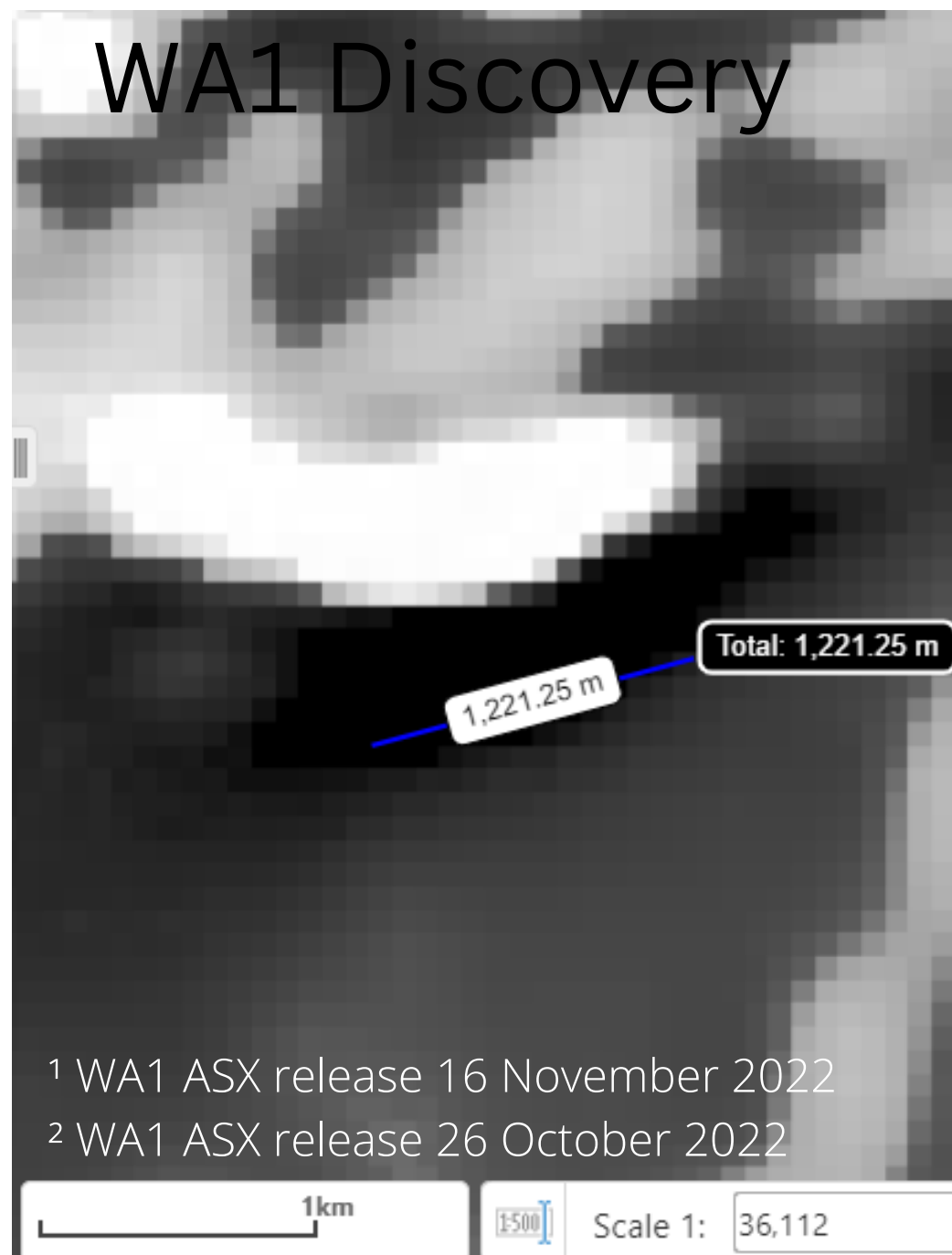


# THE NEXT WEST ARUNTA REE CARBONATITE EXPLORER



WA1's discovery drill results include;

- **136m at 0.40% Nb<sub>2</sub>O<sub>5</sub>, 0.17% TREO**, 3.90% P<sub>2</sub>O<sub>5</sub> from 28m (**Luni target** - LURC002)<sup>1</sup>
- **142m at 0.31% Nb<sub>2</sub>O<sub>5</sub>, 0.17% TREO**, 3.94% P<sub>2</sub>O<sub>5</sub> from 74m to 216m (EOH) (**P2 target** - PARC003)<sup>2</sup>
- **24m at 0.82% Nb<sub>2</sub>O<sub>5</sub>, 0.21% TREO**, 6.44% P<sub>2</sub>O<sub>5</sub> from 157m (**Luni target** - LURC001)<sup>1</sup>





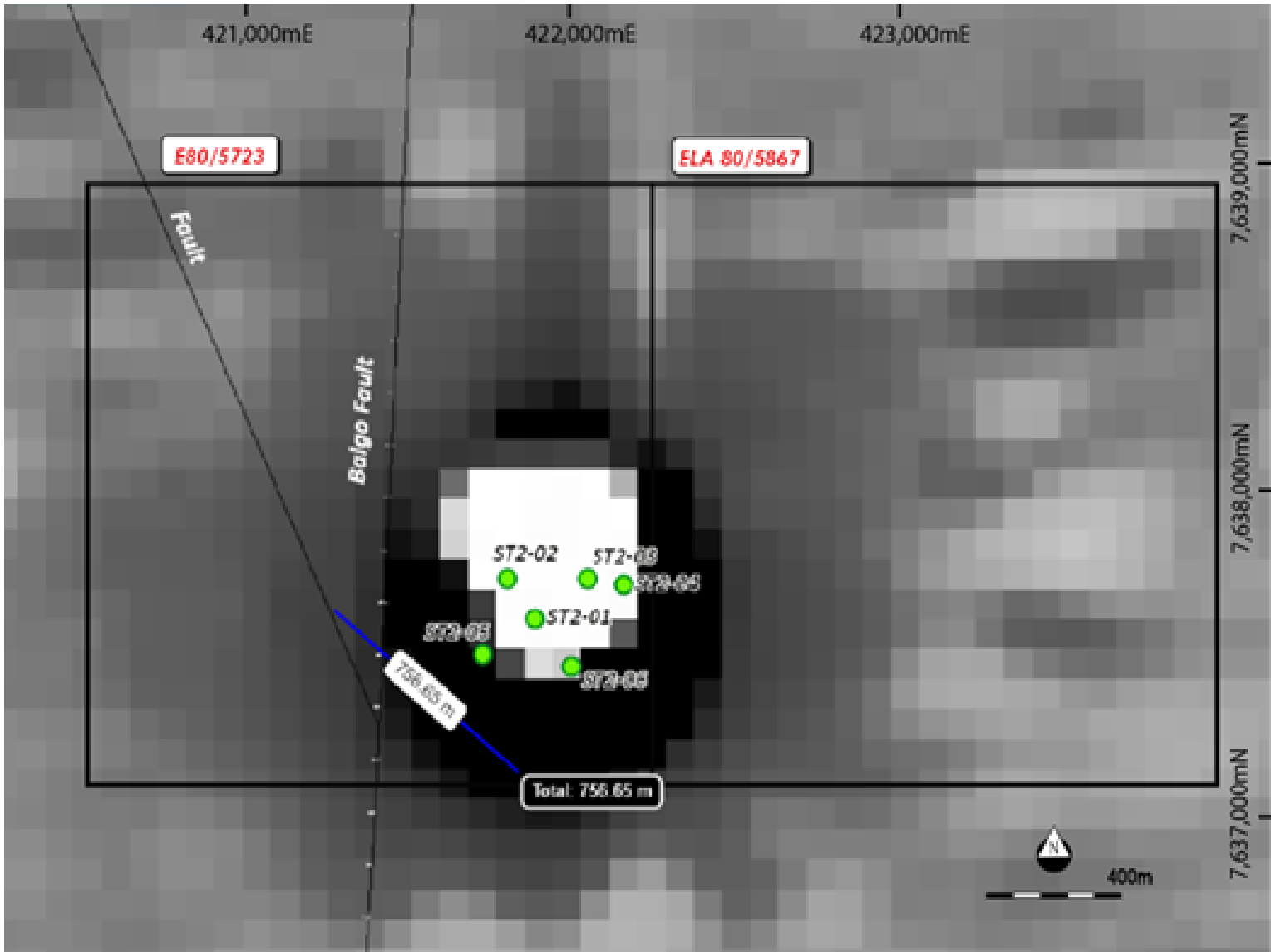
# STANSMORE CARBONATITE TARGET

In 1982, BHP drilled 6 shallow RAB holes to max depth of 12m, intersected intrusive + carbonate alteration

Drilling proved the **depth of cover is very shallow, ~ 5 - 10m** which further enhances discovery potential

BHP were exploring for diamonds and walked away with **no further exploration work completed since 1982, significant opportunity to explore for REE's with further drilling**

In light of recent discoveries by WA1 and ENR, the **Stansmore magnetic target represents a remarkable opportunity in the emerging West Arunta Province for carbonatites, REE's and IOCG mineralisation**



Rock Type - Composition	Fabric	Minor Minerals	Comments
Hematite Metaquartzite. Mainly micro-crystalline interlocking quartz, with many small hematite crystals and random phlogopite flakes.	All minerals fine-grained. Faint relict ?bedding, otherwise structureless.	Conspicuous dendritic patches of cloudy leucoxenic rutile.	Could be termed metajaspilite and is a mildly metamorphosed ferruginous chert. Phlogopite, leucoxene are probably younger or late-stage metamorphic.
Altered Diorite. Stout prismatic crystals of fresh andesine, with interstitial altered amphibole and uraltised pyroxene, leucoxenised magnetite.	Coarsely-crystalline random igneous fabric, verging on medium-grained.	Primary biotite, secondary epidote. Tourmaline.	Intermediate intrusive with selective alteration of ferro-magnesian minerals and conspicuous magnetite.
Altered Microdiorite. Random laths of fresh andesine, interstitial fibrous uraltitic amphibole and conspicuous leucoxenised magnetite.	Medium, verging on coarse-grained random igneous fabric.	Secondary replacive epidote. Carbonate impregnation. Tourmaline.	Clearly related to 4352. Depending on nature of ferromagnesian minerals, rock may have been an andesine microgabbro.

*\*Final Report, Exploration Licence 80/3 Stansmore, Western Australia, BHP, WAMEX A12302*



# WEST ARUNTA EMERGING REE PROVINCE



In August 2022, geochronology completed by the GSWA at ENR's Worsley prospect classified the host sequence and mineralisation events at Aileron are a **similar age to the events at Olympic Dam**

Importantly, the prospective geology is under **shallow cover (5m of cover in EAL001)** in contrast to +500m of cover in much of the Gawler Craton in South Australia

*"We believe that the West Arunta is on the verge of becoming the next major copper and rare earths exploration focus in WA."*

Encounter Resources Managing Director Will Robinson



**EAL001 - Hematite altered and fractured, coarse grained granitic rock with narrow mafic intrusive (88.5 - 91.7m)**



# WEST ARUNTA EMERGING REE PROVINCE



Rare earths are important potential pathfinders to IOCG deposits and important in their own right

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**

Carbonatites often **occur as plugs within alkali intrusive complexes, or as dykes, sills, breccias or veins**. They are generally **associated with major crustal scale features** in rift-related tectonic settings

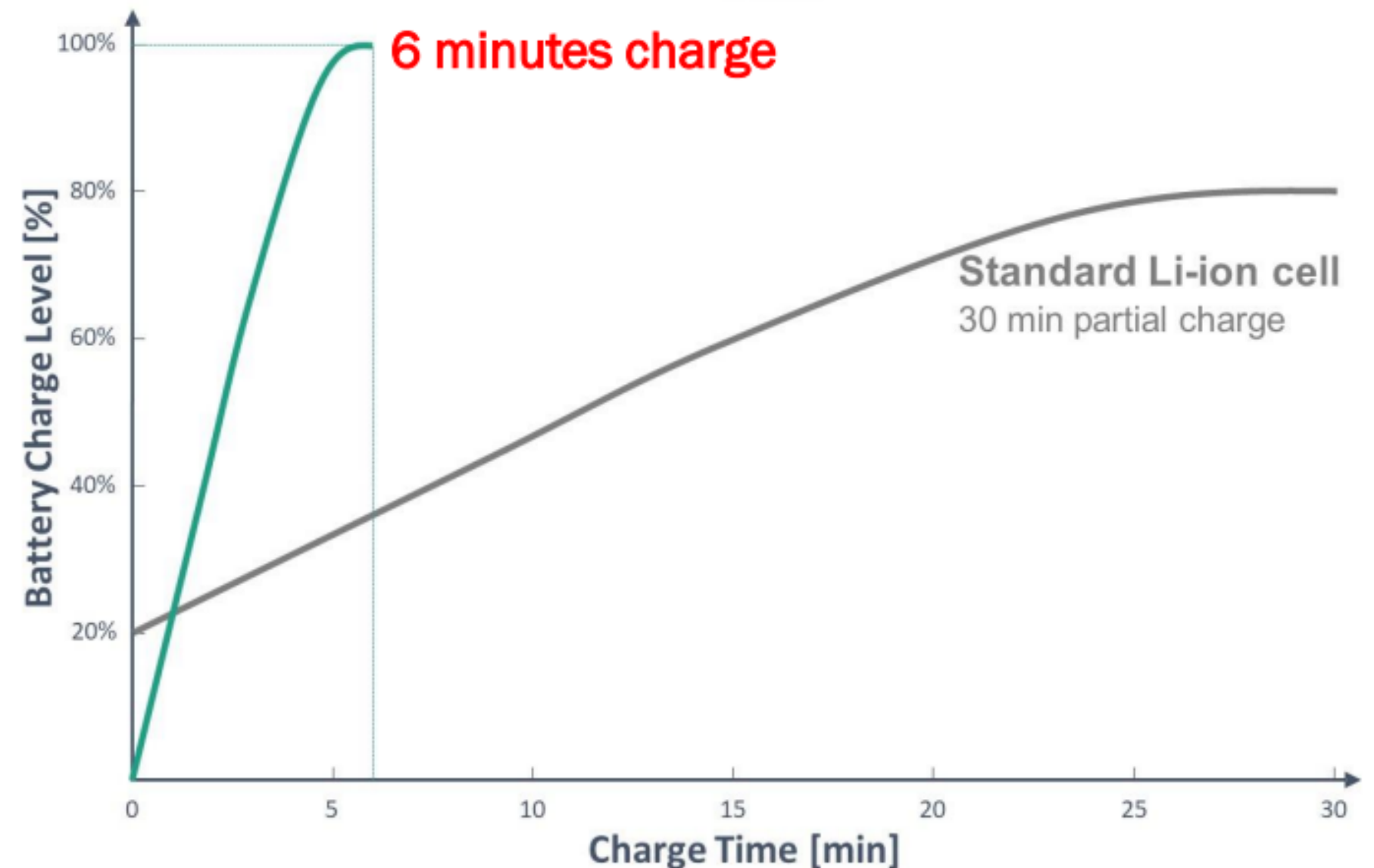
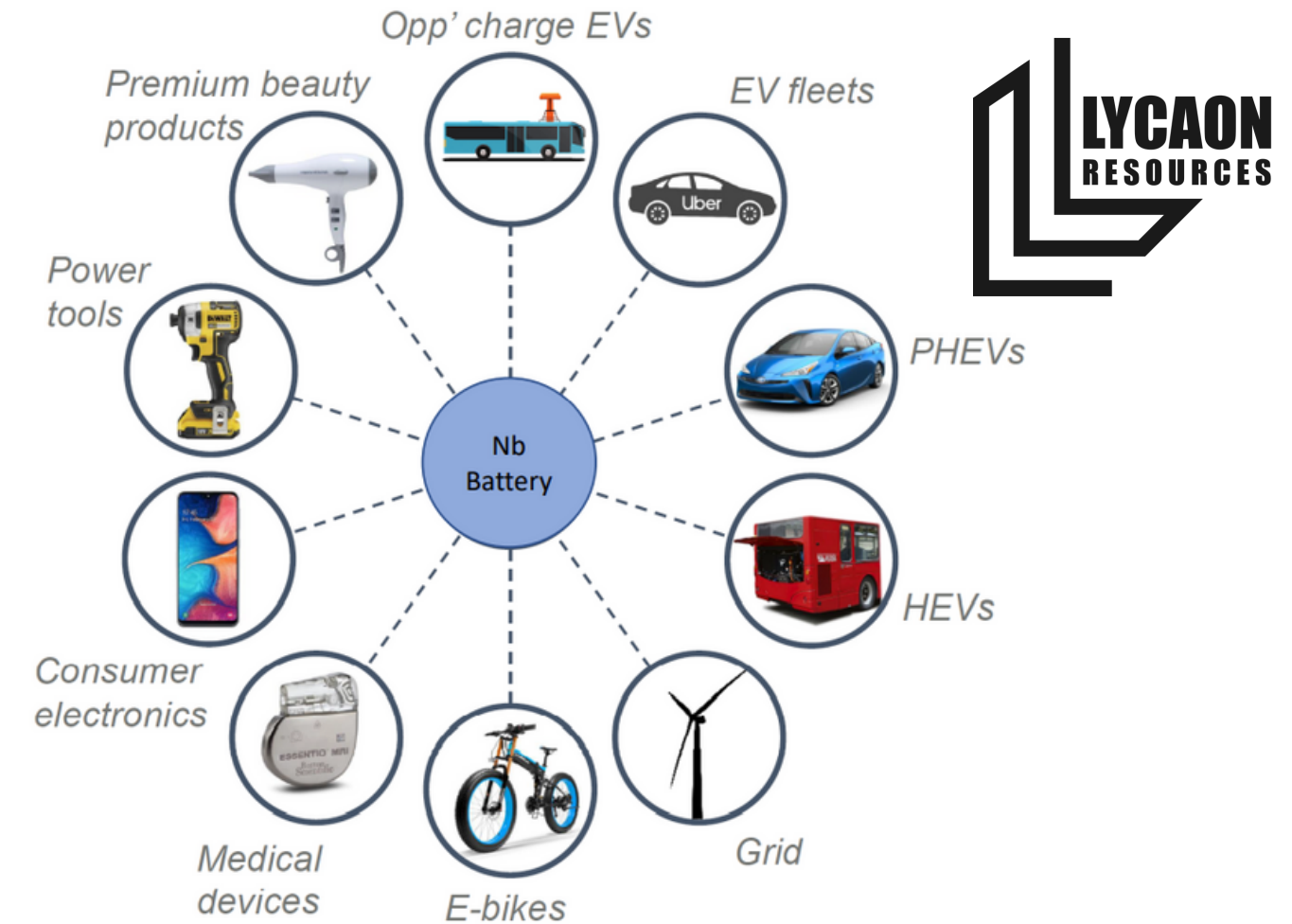
Carbonatites may be mineralised with rare earth elements, niobium, phosphorus, tantalum, uranium, thorium, copper, iron, titanium, vanadium, barium, fluorine and zirconium

The identification of a **mineralised carbonatite intrusion by WA1 is a significant finding for the West Arunta region**, and given other intrusive bodies within the region **enhances the potential for further discovery with future exploration efforts**

**A new province scale critical minerals opportunity in Western Australia**

# Niobium (Nb) - a Battery Mineral

- Niobium-based batteries will revolutionize the battery market
- Super-fast charging and discharging rate ( <6 minutes)
- Increased energy density of batteries
- More power and increased range
- Improves performance at low temperatures
- More charging cycles (+20,000 cycles)
- Demand for niobium to increase 100% by 2030<sup>1</sup>



## Companies involved with Niobium Battery Technology

**TOSHIBA**

**WILLIAMS** | ADVANCED ENGINEERING

**Echion**  
Technologies

**nanoOne**  
.....

**BATTERY STREAK**  
CHARGE LIGHTNING FAST

**nyobolt**

**CBMM**  
INOVAR • RESPEITAR • COMPETIR



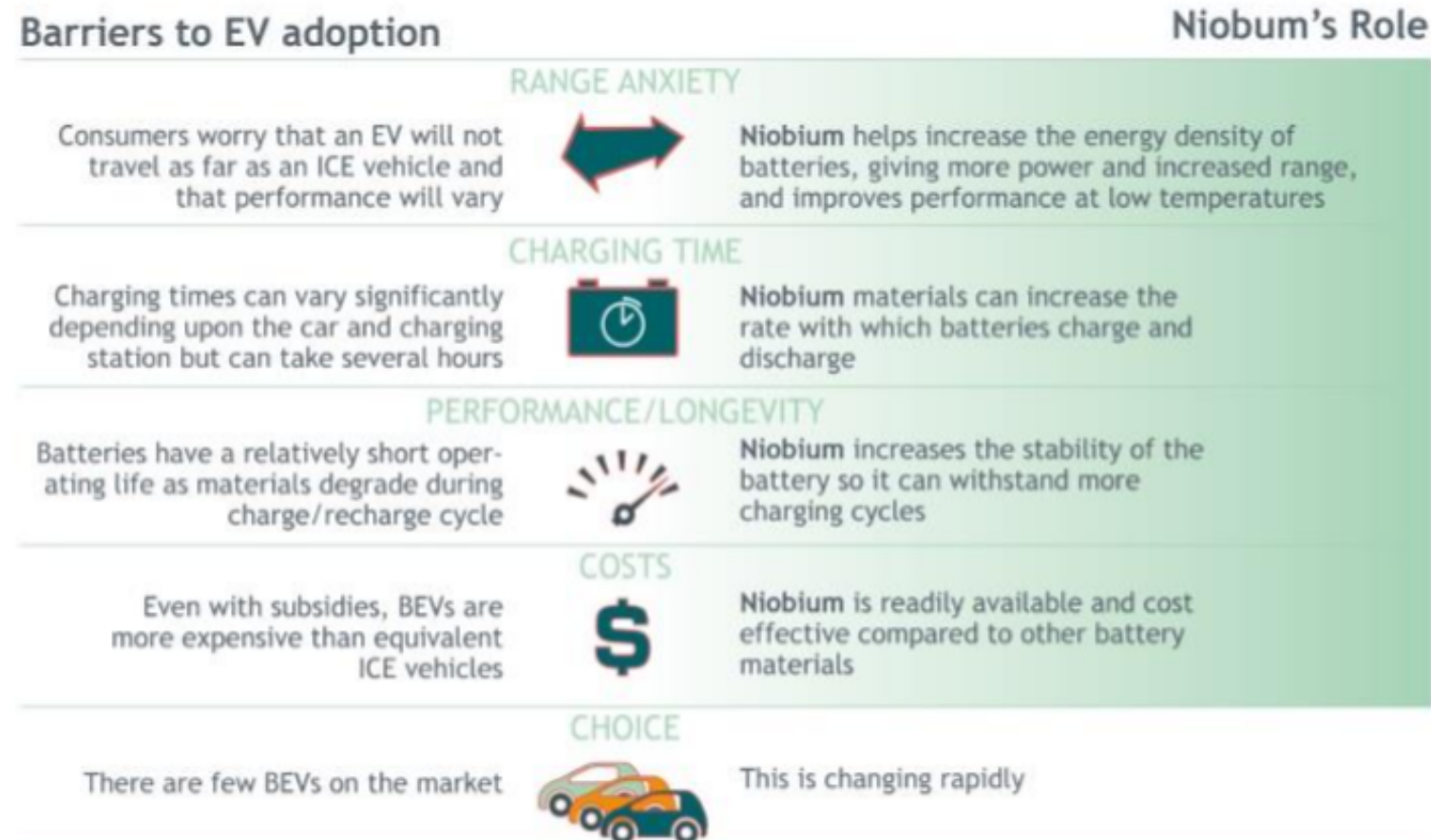
# Niobium (Nb) - a Battery Mineral



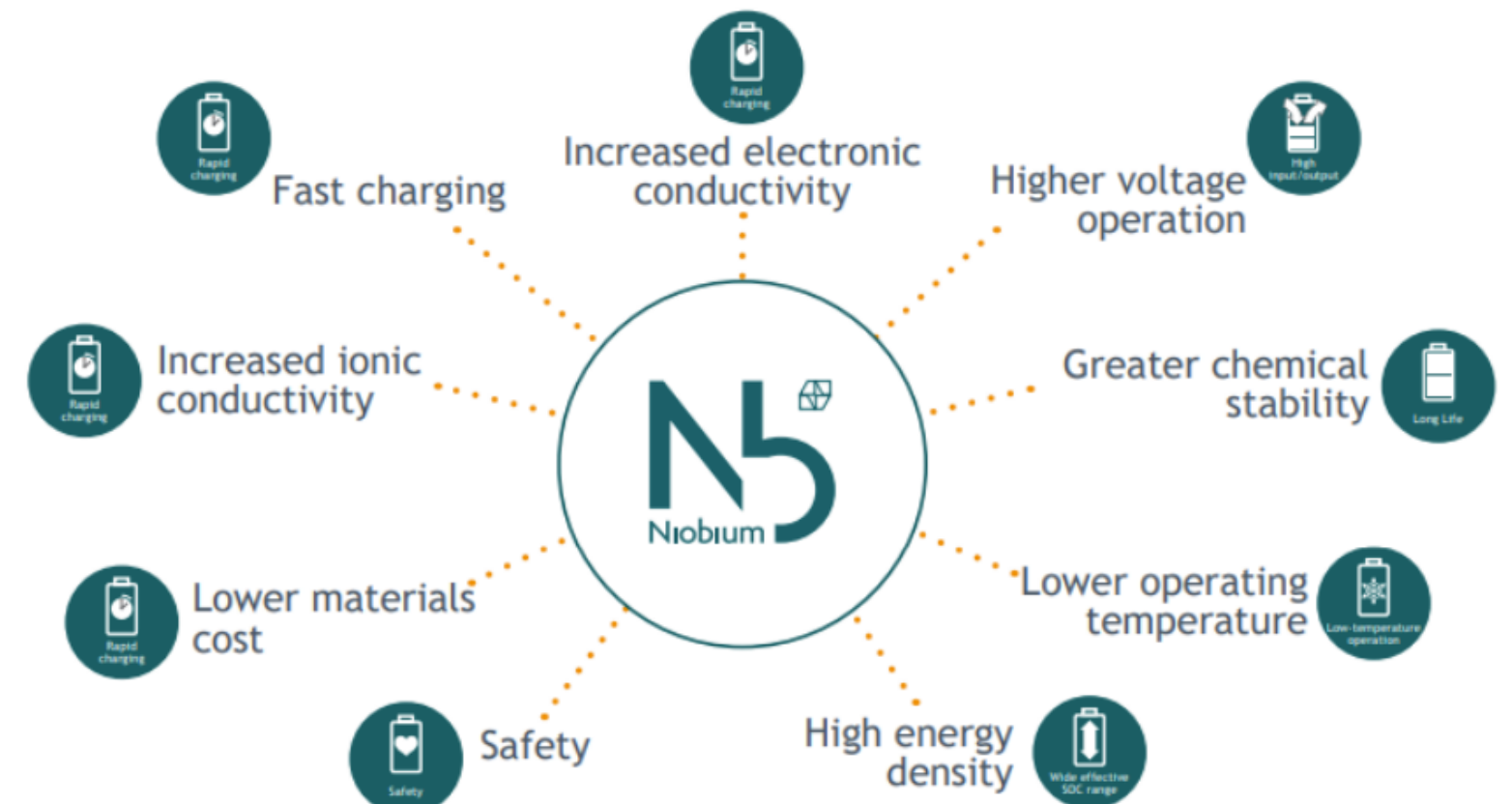
- **Niobium** has been **identified by the Australian Government** and many other countries as a **critical mineral**
- Niobium is a metal with a **very high melting point**
- Ferroniobium (FeNb, 65% Nb) is **used in alloys** in small amounts (<1%) to make steel usage more efficient
- **Stronger, lighter, corrosion resistant and heat resistant**
- It is an **essential metal for advanced technology with additional uses in gas and wind turbines**
- Niobium **improves the performance of batteries** by improving chargeability and stability



Niobium addresses almost all of the major barriers to electric vehicle adoption.



## Niobium Benefits for Lithium Ion Batteries



# Contact Us

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