



## **BRAZIL RARE EARTH PROJECTS – PRESENTATION**

**Magnum Mining & Exploration Limited** (ASX: **Magnum**, or the **Company**) announced on 5 May 2025 (ASX Release “Acquisition Complete for Brazil Rare Earth Projects”) that the acquisition of 100% of the issued shares of Palmares Estudos Geologicos LTDA (Palmares) from Beko Invest Limited had been completed on 21 April 2025.

Magnum provides its shareholders, and the wider market, with the attached presentation with regards to this important acquisition for the Company.

### **BY ORDER OF THE BOARD**

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# Prime Rare Earth

World Class Portfolio of Rare Earth  
Elements & Scandium in Brazil

BAHIA, GOIÁS, AND MINAS GERAIS.BRAZIL

# Rare Earths: China's restrictions drives exploration interest

- ④ China has again weaponised Rare Earth Elements by halting exports to the USA
- ④ Interest in REE exploration and mine development has skyrocketed as a result
- ④ Magnum has positioned itself in a proven highly prospective REE area in Brazil to address that demand

## The New York Times

### *China Halts Critical Exports as Trade War Intensifies*

Beijing has suspended exports of certain rare earth minerals and magnets that are crucial for the world's car, semiconductor and aerospace industries.

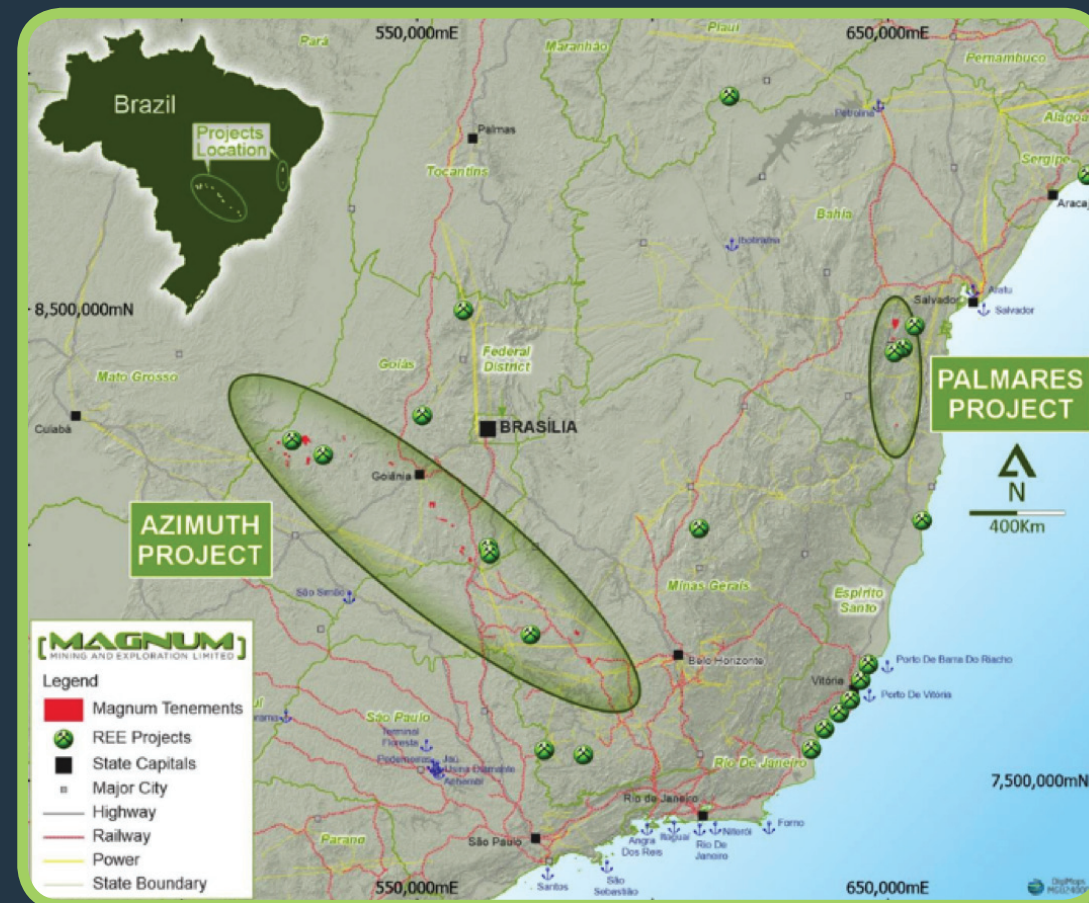
# Magnum's Brazilian REE Projects

## Palmares REE Project

18 granted claims situated in the centre-south of Bahia state. The leases cover a 43 km long and 13 km wide target zone totalling 348 km<sup>2</sup>

## Azimuth REE Project

72 granted tenements covering 1,201km<sup>2</sup> of highly prospective ground over 900km of the regional AZ125° Line





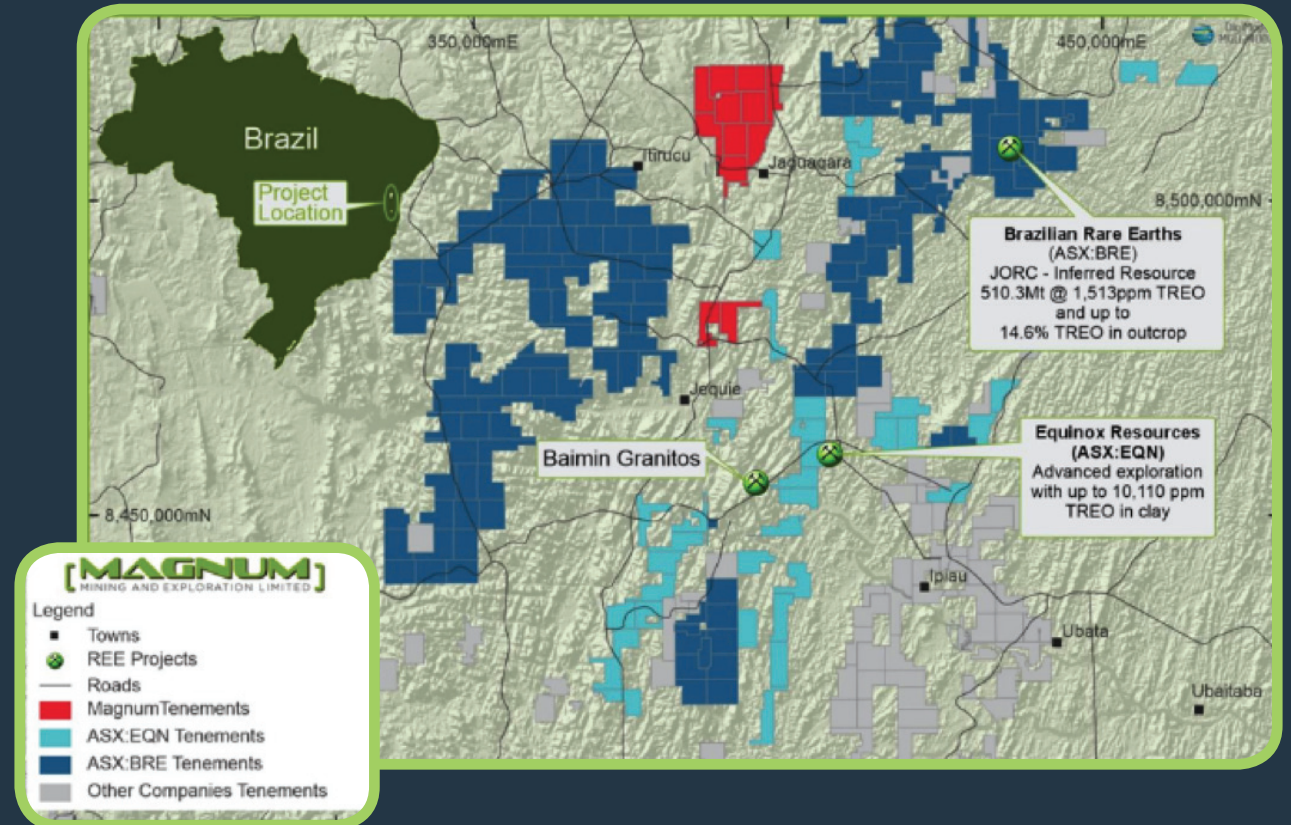
# Palmares – Surrounded by recent REE discoveries

- ⌚ Consists of 18 granted claims (~348km<sup>2</sup>) in Bahia State, mainly surrounded by REE exploration projects held by ASX listed companies Equinox Resources Limited (ASX: EQN)<sup>1</sup>, Brazilian Rare Earths Limited (ASX: BRE)<sup>2</sup>, and Meteoric Resources NL (ASX:MEI)<sup>3</sup>
- ⌚ Claims are located on the Jequié Belt, a carbonatite and alkaline intrusive corridor known to host ionic clay REE, particularly heavy rare earths (HREEs) critical for green technologies

<sup>1</sup> ASX:EQN "Ultra-High Grade REE in Clay of 10,110ppm TREO at Surface at Mata da Corda", 30 July, 2024

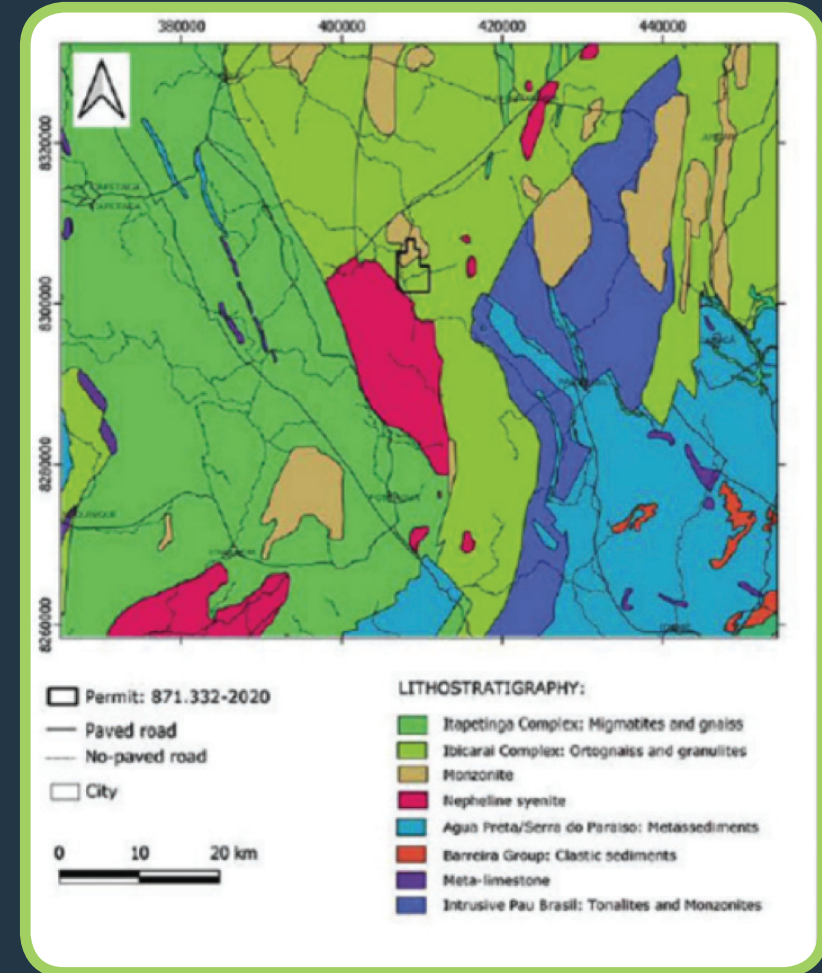
<sup>2</sup> ASX:BRE "High-Grade Discoveries Enhance Scale of Pele Project", 26 March, 2025

<sup>3</sup> ASX:MEI "Mineral Resources Increased to 1.1 Billion Tonnes", 12 March, 2025



# Palmares – The right geology in a highly prospective belt

- The Project is located in the southeastern portion of the São Francisco Craton, in the Paleoproterozoic crustal segment called Itabuna-Salvador-Curaçá Belt, formed around 2.0 Ga, with a N-S orientation and composed of rocks of high metamorphic grade to granulite
- Locally, gneiss, granite, syenite, amphibolite and diabase/gabbro rocks host pegmatites dykes that are elevated in REE + Sc



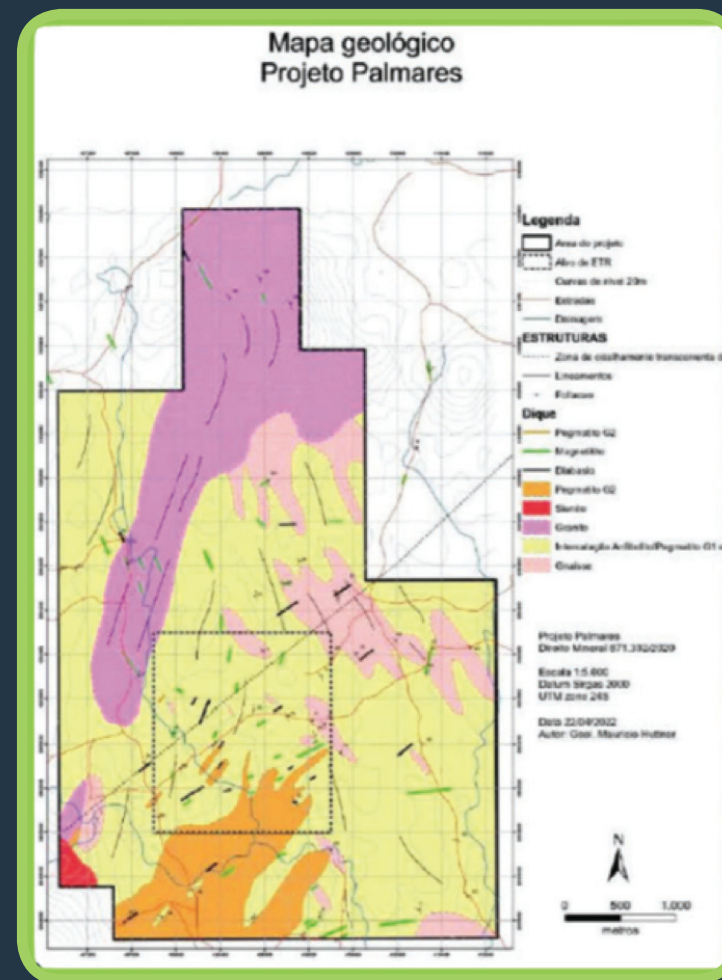
# Palmares – Initial exploration highly encouraging

➤ As previously announced<sup>1</sup>, exploration to date includes:

- Geological mapping
- Trenching
- Surface and trench sampling
- Ground magnetic surveys
- Resistivity surveys

➤ Assaying of the pegmatite dyke swarm has returned spectacular REE grades of up to 1.69% Total Rare Earth Oxides (TREO)

<sup>1</sup> ASX:MGU "Palmares Delivers Up To 1.69% TREO Grades (Revised)" 20 Dec 2024

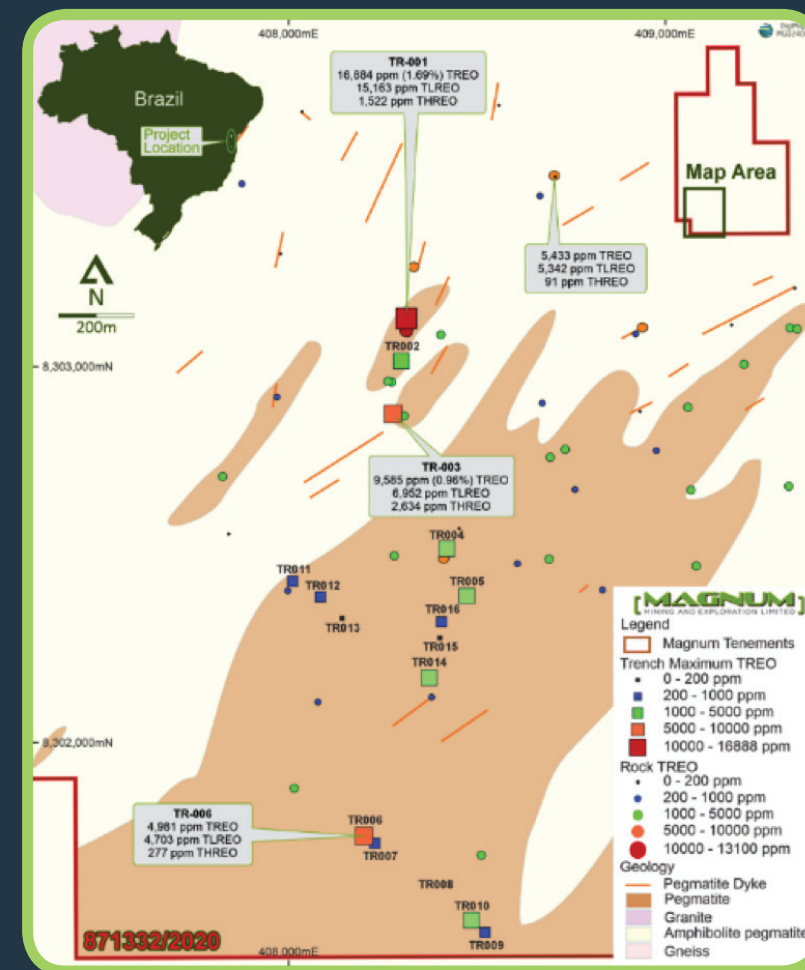




# Palmares – Up to 1.69% TREO

- ⌚ Trench samples returned up to 1.69% (16,884ppm) TREO, with Total Heavy Rare Earth Oxides (THREO) at 2,633ppm
- ⌚ Rock samples showed up to 1.31% TREO (13,082ppm), with THREO at 2,227ppm
- ⌚ THREO contains high levels of Terbium (Tb) and Dysprosium (Dy), both currently dominated by Chinese supply
- ⌚ Anomalous Cerium (Ce) up to 6,507ppm suggests the mineralisation is similar to ionic clay deposits

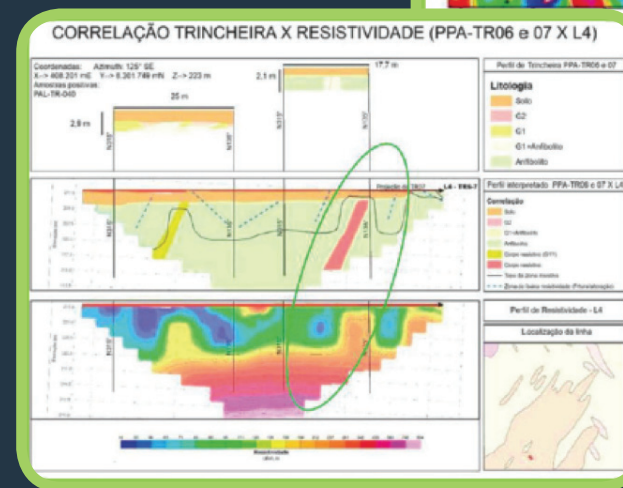
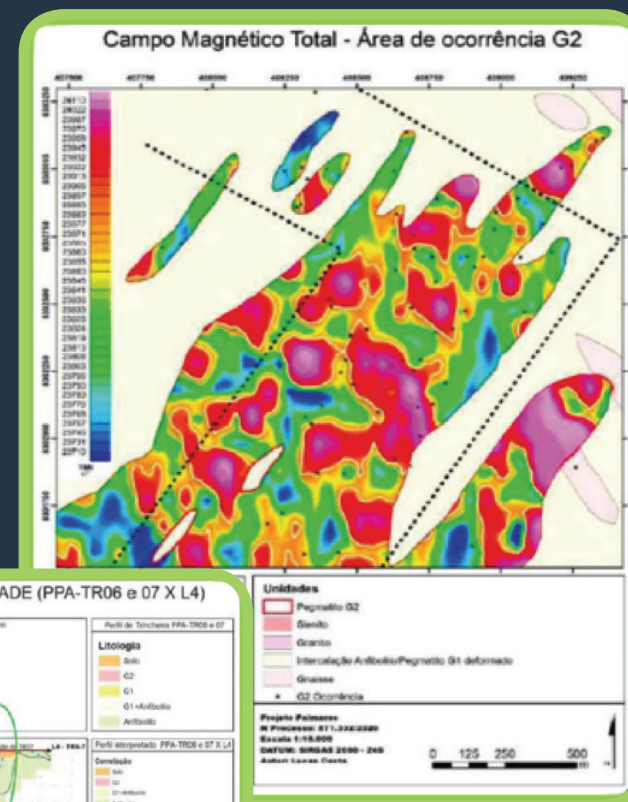
<sup>1</sup> ASX:MGU "Palmares Delivers Up To 1.69% TREO Grades (Revised)" 20 Dec 2024





# Palmares – Geophysical data reveals blind targets

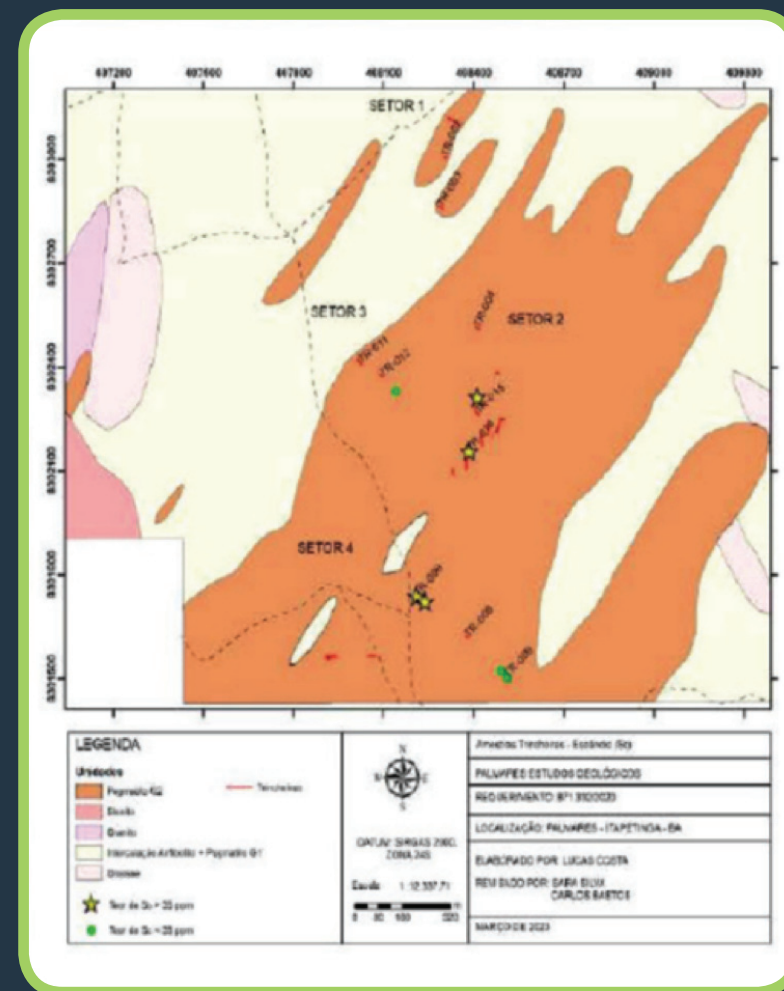
- ⌚ Combination of ground magnetometry, radiometrics, and resistivity methods have proven successful in outlining known pegmatite dykes
- ⌚ Potential dykes with no observable outcrop have been defined
- ⌚ Extension of geophysical surveying is being planned to facilitate target definition for a proposed drilling campaign



# Palmares – Scandium Credits

- ⌚ The highest scandium (Sc) values are associated with magnetic basic rocks (magnetitite) and weathered amphibolites.
- ⌚ The Sc content in these lithologies ranged from 30 to 65 ppm.
- ⌚ These occurred in both rock and channel samples

Lithology	Number of samples	Sc (ppm)
Magnetitite	13	30.6 - 55.4
Amphibolite	15	32.3 - 64.7
Amphibolite + G1	8	33.2 – 59.7
Pegmatite G2	1	31.2 – 34.7



# Palmares – Next Steps

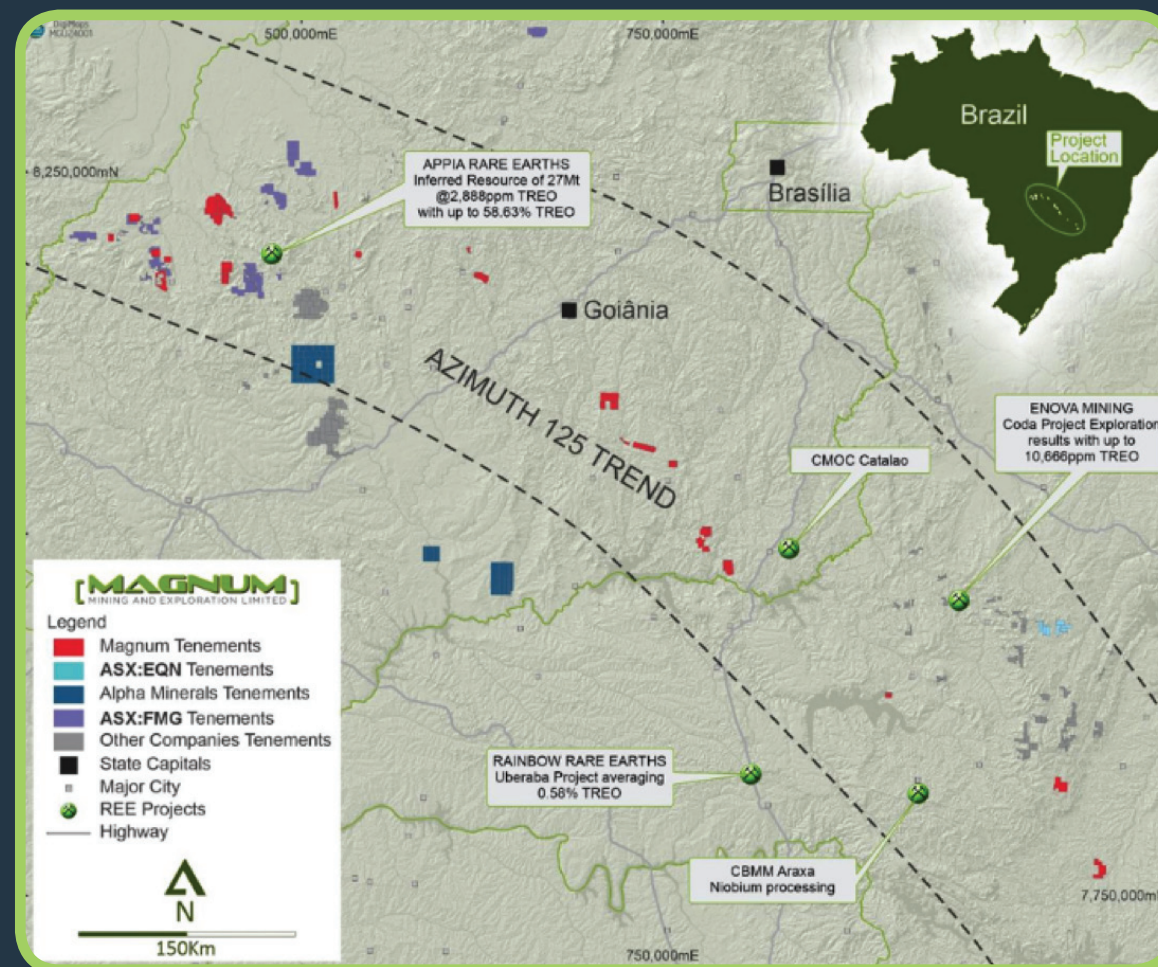
- ④ Less than 0.1% of the Palmares REE Project area has been explored
- ④ Expansion of the geophysical programme is being planned to facilitate targeting
- ④ A drilling campaign will be designed to test the down dip and along strike extent of the dyke systems and map out geochemical continuity
- ④ Metallurgical tests planned to evaluate REE recoveries





# Azimuth Project

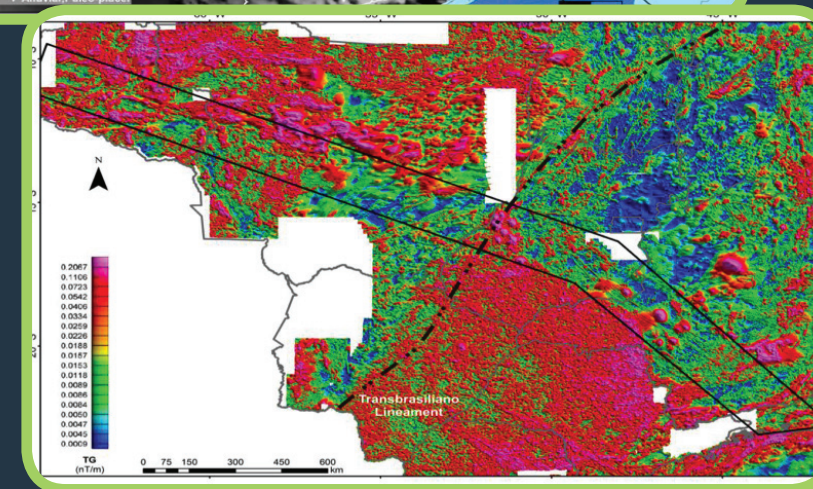
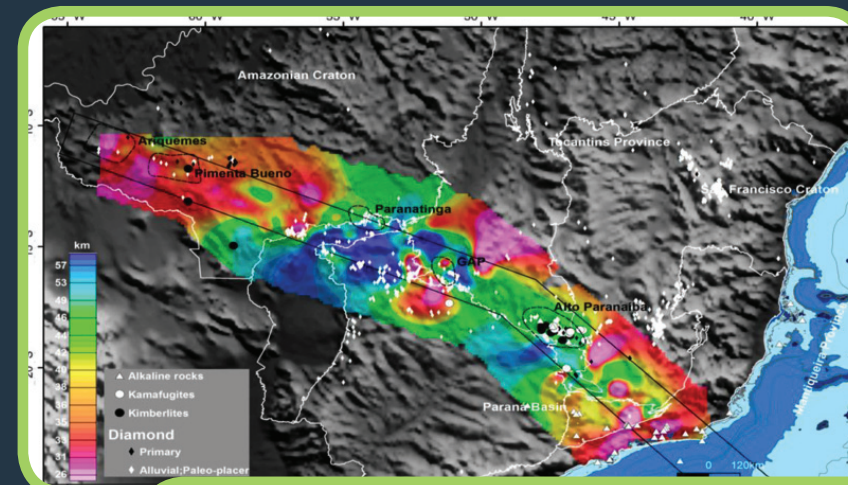
- ⤵ Consists of 72 granted tenements covering ~1,201km<sup>2</sup> of highly prospective ground. These extend over 900km of the regional AZ125° Lineament.
- ⤵ The AZ125° Lineament is a crustal trans-Brazilian feature that reflects the deep plumbing system in the region. Diamond bearing lamprophyres and kimberlites have been the historic exploration targets. The lineament is now recognised as a major source of other metal mineralisation due to the exotic intrusives that occur along it.





# Azimuth - Untouched potential in an REE rich terrain

- ③ The Alkaline target contains rare earth and niobium mineralisation, enriched by lateralisation in the tropical climate.
- ③ The Goias State is home to the world class Serra Verde and PCH IAC Rare Earth projects (Az 125°).
- ③ Azimuth also contains multiple copper targets and has yielded anomalous values from grab sampling, demonstrating elevated concentrations from 0.1325% to 1.141% copper.



# Azimuth - Next Steps

- ⤵ Azimuth is predominantly green fields project
- ⤵ Multiple high-priority targets have been identified from regional aeromagnetic data
- ⤵ A regional sampling and prospecting campaign will be undertaken to prioritise these targets for prospect-scale mapping, sampling, and geophysical surveying
- ⤵ Initial follow-up will be by shallow assessment with auger holes to assess mineralisation tenor, extent, and grade





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# Cautionary Statements

## COMPETENT PERSON'S STATEMENT

The information in this announcement is based on, and fairly represents information and supporting documentation compiled by Mr Marcus Flis, a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy and a full time employee of Rountree Pty Ltd. Rountree Pty Ltd is an independent geological consultancy. Mr Flis 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 Exploration Results, Mineral Resources and Ore Reserves." Mr Flis consents to the inclusion of the matters outlined in this announcement the form and context in which they appear.

## FORWARD LOOKING STATEMENTS

This release contains "forward-looking information" that is based on the Company's expectations, estimates and projections as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to studies, the Company's business strategy, plan, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations. Generally, this forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this news release are cautioned that such statements are only predictions, and that the Company's actual future results or performance may be materially different. Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking information.

Forward-looking information is developed based on assumptions about such risks, uncertainties and other factors set out herein, including but not limited to general business, economic, competitive, political and social uncertainties; the actual results of current development activities; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; future prices of metals; failure of plant, equipment or processes to operate as anticipated; accident, labour disputes and other risks of the mining industry; and delays in obtaining governmental approvals or financing or in the completion of development or construction activities. This list is not exhaustive of the factors that may affect our forward-looking information. These and other factors should be considered carefully, and readers should not place undue reliance on such forward-looking information.

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## PROXIMATE STATEMENTS

This announcement contains references to mineral exploration results derived by other parties either nearby or proximate to the Mormon Canyon Project and includes references to topographical or geological similarities to that of the Mormon Canyon Project. It is important to note that such discoveries or geological similarities do not in any way guarantee that the Company will have similar exploration successes on the Mormon Canyon Project, if at all.



# FOR MORE INFORMATION

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**[MAGNUM]**  
MINING AND EXPLORATION LIMITED