MAGNUM MINING AND EXPLORATION LIMITED

Breakthrough REE Test Work Delivers Exceptional Results

Magnum Mining & Exploration Limited (ASX: **MGU**, **Magnum**, or the **Company**) is delighted to announce preliminary results from leach test work on outstanding REE samples from the Feirinha Prospect on its 100% owned Palmares REE Project, Brazil.

HIGHLIGHTS

- Leach tests at **very low residency time** (5 minutes compared to some peers[3,4] of 30 minutes) and room temperature, deliver **leachates in excess 1,100ppm TREO (338ppm MREO)** from hard rock samples-Table 1
- **Recovered NdPr values range up to 212ppm**, confirming high-value magnet feedstock potential
- **Over 270ppm of the more valuable Heavy REE** differentiates Feirinha from its peers
- Simple leach at ambient temperatures and very low residency time is highly encouraging for this early-stage and **leach process optimisation is yet to be undertaken**
- **Low Th and U levels** (deleterious elements) enhance metallurgical and permitting outlook
- Consistency across multiple pegmatite targets are highly suggestive of broad based mineralisation
- Ionic clays hosting the pegmatite REE occurrence will be tested with **extensive auger programme** and is anticipated to deliver both scale and enhanced leach results

Chairman Michael Davy commented: "*These results firmly establish Palmares as one of the most exciting new rare earth projects in Brazil. With comparable grades to Brazilian Rare Earths and Meteoric, and a unique advantage in heavy rare earth enrichment, Magnum is well positioned to capture investor and strategic partner attention. The scale, consistency, and quality of results mark Palmares as a potential for a tier-one discovery*.

These results now support the Company's plans to immediately undertake an extensive auger drilling program across the already mapped ~1.3km strike length of G2 pegmatites, which host the high grade REE mineralisation. The Company will also follow up on other known repetitions along strike and will aim to commence the program shortly."

Magnum controls 100% of the Palmares REE Project consisting of 18 mineral exploration permits covering ~348km^2 on the Jequié Belt, Bahia State, Brazil (**Figure 1**). This area is highly

prospective for ionic clay-hosted and hard rock Rare Earth Element (REE) mineralisation. The Jequié Belt is the site of intensive exploration by peers and is yielding potentially world-class REE deposits.

FEIRINHA REE PROSPECT

The Feirinha REE Prospect is located in the south of the belt (**Figure 2**). The prospect hosts a swarm of pegmatite dykes that have been the focus of exploration, including geological mapping, rock chip sampling, and trenching. Highly anomalous REE results, ranging up to **1.69% Total Rare Earth Oxides (16,900ppm)** (TREO) have been obtained[1] (**Figure 3**).

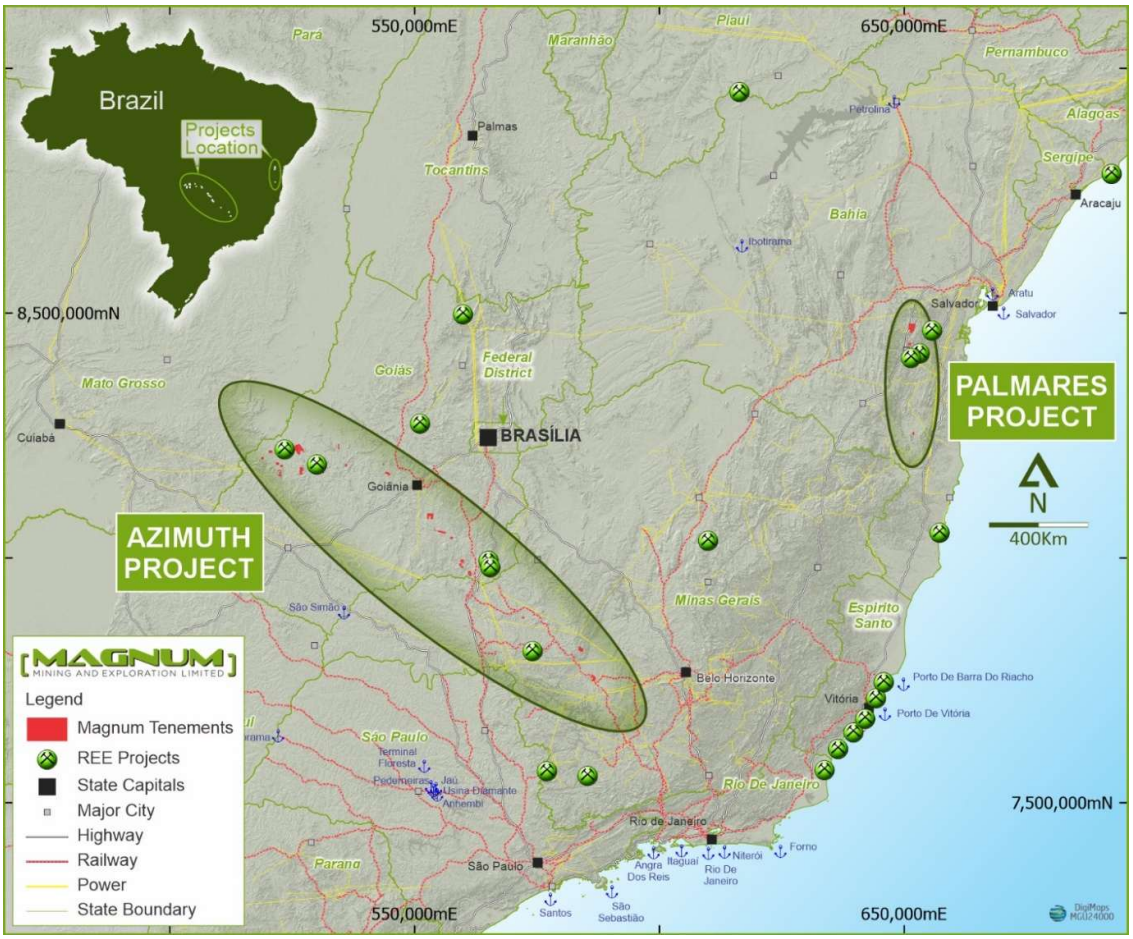

***Figure 1** – Magnum's Project areas in Brazil. The Palmares REE Project is located in Bahia state in south-central Brazil. The Azimuth REE Project is located along the Az125 lineament. Both projects cover 1,549km^2.*

LEACH TESTING

Mineralogical work on the Feirinha rock samples indicated that the main REE host minerals, dominated by monazite (one of the richest natural sources of REE's), are highly oxidised. Leach testing has been carried out to get an early handle on the likely recoveries of REE from the samples and, importantly, define an assaying regime that links directly to economic assessment

[1] ASX:MGU "Palmares Delivers up to 1.69% TREO Grades (Revised)", 20 December, 2024

of the prospect. This work considerably derisks the project and provides the Company with confidence to undertake exploratory drilling, where G2 pegmatites were mapped for ~1.3km strike length (with known repetitions to exist along strike)[2].

Twenty three samples were subjected to the leach process, these being a mix of rock chip and trench channel samples[1]. Two leach trials were completed: one using an ammonium sulphate leachate with pH of 4 and another with a pH of 2, both at room temperature. These initial results indicate that REE recovery increases with a decreasing PH. A summary of the results of the pH2 leach assays using a leach residence time of only five minutes are shown in Table 1.

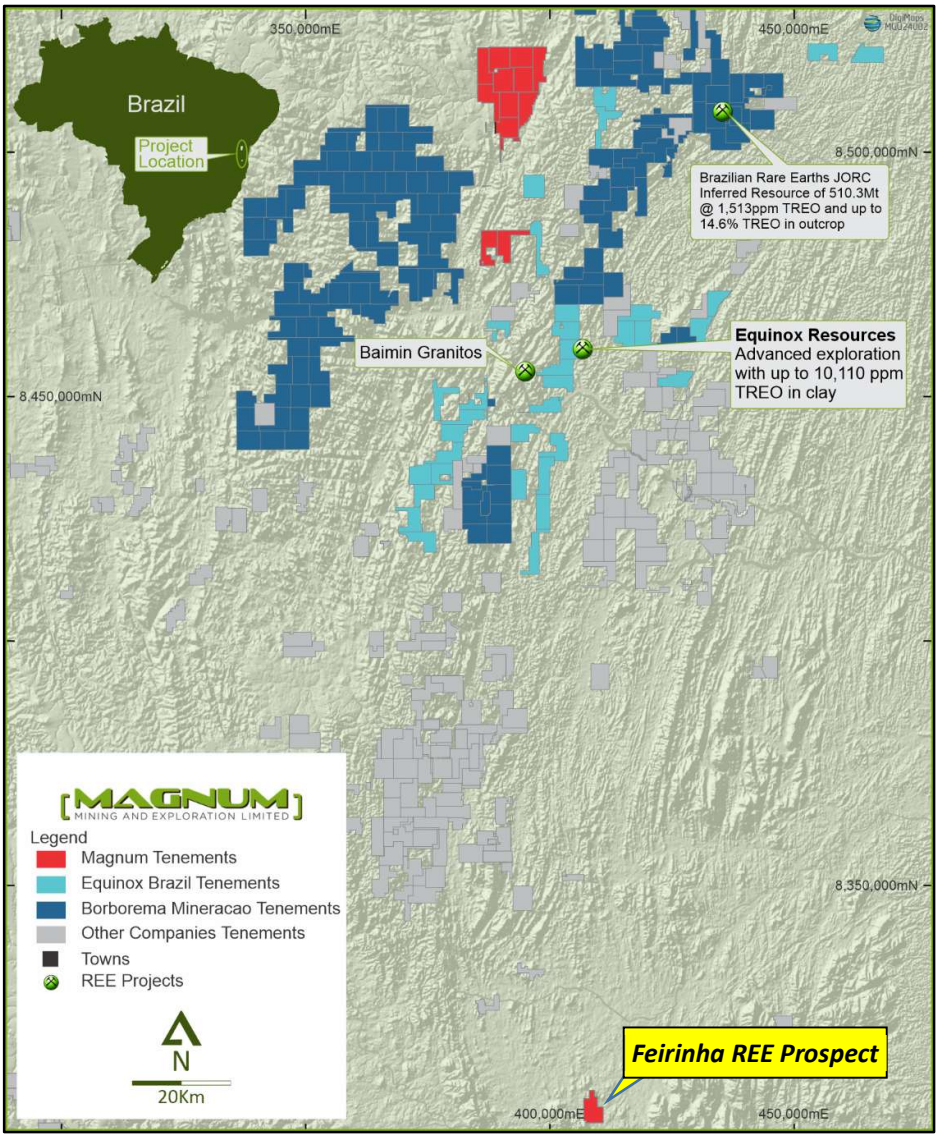

Figure 2 *- The Palmares REE Project leases (red) are surrounded by major players who are reporting exploration success. The Borborema ground is owned by Brazilian Rare Earths (ASX: BRE).*

[2] ASX: MGU "High Grade Rare Earth Leach Testing Begins", 29 August, 2025

EARLY-STAGE DATA CONFIRMS POSITIVE TRAJECTORY

The results demonstrate that effective leachate generation from hard rock samples is achievable under ambient temperature conditions and with minimal residence time. The obtained leach performance is more typically characteristic of ionic clay systems, rather than hard rock. Crucially, a residence time of only five minutes was used, compared to the up to 30 minutes used by some peers[3,4].

The maximum leachate values obtained are **1,162ppm TREO**, **338ppm MREO**[5] and **212ppm NdPr**. These results are consistent with regional deposit characteristics[2] and are particularly promising given that leach process optimisation is yet to be undertaken. In particular, both pH and leach residency time have not yet been fully optimised for this mineralisation. It is also anticipated that once comprehensive drill testing of the clays hosting the pegmatites is completed, leach recoveries will increase.

Crucially, Feirinha is high in the heavy REE (HREO) that include Terbium (Tb), Dysprosium (Dy), Holmium (Ho), Erbium (Er), Thulium (Tm), Ytterbium (Yb), Lutetium (Lu), and Yttrium (Y). This will be critical going forward: the HREO attract premium pricing and have growing demand due to scarcity.

Table 1 - Summary of leach assays from 23 Feirinha samples. Leaching was carried out at a pH of 2 with a five minute residency time.

	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Y	TREO	MREO	HREO
Min ppm	2.72	13.35	0.82	2.76	0.37	0.03	0.24	0.03	0.12	0.02	0.05	0.01	0.03	0.01	0.44	**27.8**	5.1	1.13
Max ppm	151.5	500.0	43.4	169.5	29.1	4.4	23.5	3.4	18.9	2.8	6.3	0.6	2.9	0.3	59.4	**1162**	*338*	*273.5*

Magnum will be focussing on the NdPr and HREO potential of the prospect. These elements are the drivers for economic development as they are in increasing demand for the production of super magnets, or Neodymium magnets, crucial to the burgeoning EV, wind turbine, and defence industries.

The current spot market price of NdPr is US$69,643/tonne[6].

DELETERIOUS ELEMENTS

Levels of Thorium and Uranium levels in the leachate are very low, with maxima of 3.4 and 5.2ppm, respectively. These are considered extremely low and below or at general crustal abundance levels (i.e. what is considered normal background levels in all rocks).

[3] ASX:VMM "80% Average Ionic Recoveries from First Colossus Hole', 20 March, 2024
[4] ASX:BRE "Monte Alto Metallurgical Results Successfully Deliver High-Purity MREC, 12 June, 2025
[5] MREO: Magnet Rare Earth Oxides - Dy, Gd, Ho, Nd, Pr, Sm and Tb
[6] https://www.metal.com/Rare-Earth-Oxides/201102250162, 1 October, 2025

NEXT STEPS

Activities planned for the Feirinha REE Prospect include:

1. Initiate follow-up auger across priority REE anomalies. This is a first pass aerially extensive survey that covers are larger area than the rock chip and trench sampling that has been completed on discrete pegmatite dykes. The ionic clay hosts to these dykes is being targeted for the bulk of the REE mineralisation
2. Schedule RC or air core drilling on the zones defined by the auger sampling to test depth extent
3. Metallurgical leach testing to confirm ionic clay characteristics, recovery potential, and optimisation of leach methodology
4. Fast-tracking of resource definition drilling to support a possible maiden JORC resource.

Magnum has, through its Brazilian presence, initiated discussions with Senai CiMATEC, a leading Brazilian centre of innovative technology and education hub. Senai CiMATEC is active in the area of REE processing and extraction.

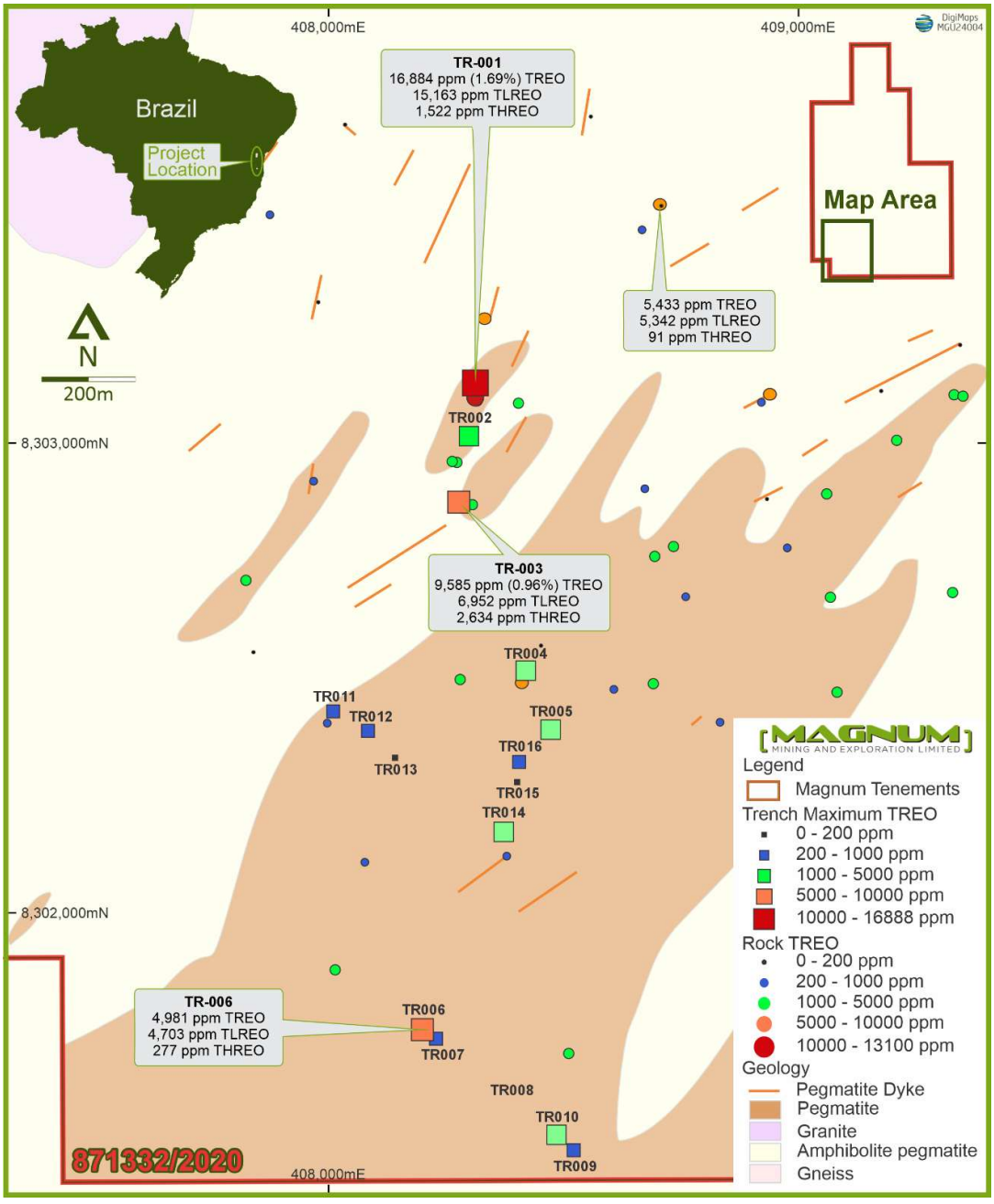

Figure 3 *- Feirinha Prospect Total Rare Earth Oxide assays from rock sampling and maximum values from trenches.*

ABOUT THE PALMARES REE PROJECT

The Palmares REE Project is a green field exploration project highly prospective for REE. It consists of 18 granted tenements (refer to JORC Table 1) covering ~348km^2 of highly prospective ground in the State of Bahia, Brazil.

The Company's tenement holdings host rare earth element (REE) mineralisation interpreted to be analogous to ion adsorption clay (IAC) systems, regolith-hosted monazite grain accumulations, and primary in-situ REE mineralisation, commonly as pegmatites.

The Palmares REE Project is located within the Jequié Complex which is part of the northeastern São Francisco Craton. This geological domain comprises the Volta do Rio Plutonic Suite, which includes high-potassium ferroan (A-type) granitoids, subordinate mafic to intermediate lithologies, and thorium-enriched monazitic leucogranites associated with REE mineralisation. The region is structurally influenced by pronounced NE-SW trending shear zones, potentially linked to REE-enriched hydrothermal activity.

Exploration activities have targeted both bedrock and regolith profiles. At the Feirinha Prospect, the hard rock REE mineralisation is hosted in pegmatite veins.

Structural controls on bedrock mineralisation, such as faulting and intrusive dykes, remain poorly constrained. Additional geological mapping of outcropping and subcropping exposures will be augmented by both auger sampling and drilling.

Regolith-hosted mineralisation occurs in the district. This is typically characterised by a surface lateritic horizon often enriched in REEs. A leached mottled zone commonly occurs beneath the laterite and often transitions seamlessly into a saprolite with that is commonly enriched with secondary REE mineralisation.

The district is an emerging REE mining camp. Brazilian Rare Earths (ASX:BRE) and Equinox Resources (ASX:EQN) have announced major discoveries.

CAUTIONARY 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 entry into a definitive agreement with Midmetal, 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.

Neither the Company, nor any other person, gives any representation, warranty, assurance or guarantee that the occurrence of the events expressed or implied in any forward-looking statement will actually occur. Except as required by law, and only to the extent so required, none of the Company, its subsidiaries or its or their directors, officers, employees, advisors or agents or any other person shall in any way be liable to any person or body for any loss, claim, demand, damages, costs or expenses of whatever nature arising in any way out of, or in connection with, the information contained in this document. The Company disclaims any intent or obligations to or revise any forward-looking statements whether as a result of new information, estimates, or options, future events or results or otherwise, unless required to do so by law.

COMPETENT PERSON'S STATEMENT

The information in this announcement is based on information 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. 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.

The information in this announcement that is footnoted below relates to exploration results that have been released previously on the ASX. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that, all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's finding is presented have not been materially modified from the original market announcements.

ASX ANNOUNCEMENTS REFERENCED DIRECTLY IN THIS RELEASE

- *"Palmares Delivers up to 1.69% TREO Grades (Revised)" released on the ASX on 20th of December 2024 and available to view on https://www.mmel.com.au/site/investor-information/asx-annoucements-and-financial-reports*
- *"High Grade Rare Earth Leach Testing Begins" released on the ASX on 29th of August 2025 and available to view on https://www.mmel.com.au/site/investor-information/asx-annoucements-and-financial-reports*

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JORC Code, 2012 Edition – Table 1 report

SECTION 1 – SAMPLING TECHNIQUES AND DATA

CRITERIA	COMMENTARY
Sampling techniques	• 114 selected rock samples were collected by the field geologist within the claim 871332/2020. The samples weight ranges from 0.5 to 1.50 kg. The sample location selection and sampling were undertaken by geologist Lucas Costa and Sara Silva. The location co-ordinates were recorded by handheld GPS. • 100 samples from 14 trenches were collected from selected pegmatite intervals. The trench head location was recorded by handheld GPS, the azimuth using a compass and the interval from the trench head point measured using a graduated measuring tape.
Drilling techniques	• Not applicable
Drill sample recovery	• Not applicable
Logging	• Sample lithology was identified in the field by the field geologist. • Location co-ordinates were recorded by handheld GPS.
Sub- sampling techniques and sample preparation	• Sample analysis was done by ALS Global, Brazil • Samples were dried at 105ºC • Sample was crushed to 70% passing 2mm and homogenised • A Jones riffle splitter was used to extract a 30g subsample • The sample was subject to an ammonium sulphate leach for 5 minutes at room temperature at a pH of 2 and 4 • Geochemical analysis was by ICP-AES/ICP-MS–MS for analysis for rare earth elements and other elements: Al, B, Ba, Be, Ca, Ce, Co, Cs, Cu, Dy, Er, Eu, Fe, Gd, Hf, Ho, K, La, Li, Lu, Mg, Mn, Mo, Na, Nb, Nd, Ni, P, Pb, Pr, Rb, Sc, Si, Sm, Sn, Sr, Ta, Tb, Th, Ti, Tm, U, V, W, Y, Yb, Zr. • REE assays are reported as elemental values. Where Total Rare Earth Oxides are discussed, the conversion from elemental values to oxide equivalents used the following factors
Quality of assay data and laboratory tests	• Blanks and standards are used during assaying.
Verification of sampling and assaying	• No duplicate samples have been collected. • No referee assays have been done.

La	1.1728
Ce	1.1713
Pr	1.1703
Nd	1.1664
Sm	1.1596
Eu	1.1579
Gd	1.1526
Tb	1.1510
Dy	1.1477
Ho	1.1455
Er	1.1435
Tm	1.1421
Yb	1.1387
Lu	1.1371
Y	1.2699

CRITERIA	COMMENTARY
Location of data points	• Handheld GPS was used to determine sample locations with an accuracy of approximately ±5m. • The UTM SIRGAS2000 zone 24S grid projection is used. • Original Handheld GPS coordinates are maintained in the database. • This is considered appropriate at this early stage of exploration.
Data spacing and distribution	• Data spacing for samples are varied and dependent on outcrop distribution. • Data spacing is sufficient for this early stage of exploration
Orientation of data in relation to geological structure	• Rock grab sampling: these are collected at points where sufficient and geologically interesting outcrops are encountered. There is no data direction • Ground Magnetic survey: survey lines are east-west for ease of GPS navigation. Structures in the area are north-east to north-north-east. • Resistivity survey: lines were oriented north-west, perpendicular to the mapped pegmatite dykes. • Trenching was done perpendicular to the mapped pegmatite dykes.
Sample security	• All samples to be transported to the lab under the control of the field geologist. • Samples are taken from the field and transported back shad to be organized in batches for transport to the lab. • All samples submitted to the lab are packed in plastic bags (in batches) and sent to the lab where it is processed as reported above. • The transport of samples from the Site to GGS-Geosol laboratory in Vespasiano was undertaken by a contractor.
Audits or reviews	• No audits have been done.

SECTION 2 – REPORTING OF EXPLORATION RESULTS

Criteria listed in the preceding section also apply to this section

CRITERIA	COMMENTARY
Mineral tenement and land tenure status	• The Palmares REE Project is 100% owned and controlled by Magnum Mining and Exploration Ltd, an Australian ASX listed public company. • The project consists of 18 granted mineral exploration permits covering ~348km^2 on the Jequié Belt, Bahia State, Brazil. • All permits are in good standing. • The permits are registered at Agencia Nacional de Mineracao (ANM) • Permits held in the Palmares REE Project are:

TENEMENT	HA	COUNTY STATE	STATUS
871332/2020	1933.3	PALMARES-BA	GRANTED
870199/2024	1984.2	Itaquara / BA	GRANTED
870198/2024	1966.36	Itaquara / BA	GRANTED
870200/2024	1966.44	Itaquara / BA	GRANTED
870201/2024	1981.75	Itaquara / BA	GRANTED
870202/2024	1966.43	Jaguaquara / BA	GRANTED
870203/2024	1960.3	Jaguaquara / BA	GRANTED
870204/2024	1961.76	Jaguaquara / BA	GRANTED
870205/2024	1922.23	Jaguaquara / BA	GRANTED
870206/2024	1970.37	Jaguaquara / BA	GRANTED
870207/2024	1947.71	Jaguaquara / BA	GRANTED
870208/2024	1970.21	Jaguaquara / BA	GRANTED

CRITERIA	COMMENTARY
	<table><tr><td>870211/2024</td><td>1929.87</td><td>Jaguaquara / BA</td><td>GRANTED</td></tr><tr><td>870210/2024</td><td>1930.7</td><td>Jaguaquara / BA</td><td>GRANTED</td></tr><tr><td>870209/2024</td><td>1894.25</td><td>Jaguaquara / BA</td><td>GRANTED</td></tr><tr><td>870212/2024</td><td>1551</td><td>Jaguaquara / BA</td><td>GRANTED</td></tr><tr><td>870213/2024</td><td>1984.35</td><td>JEQUIÉ / BA</td><td>GRANTED</td></tr><tr><td>870214/2024</td><td>1962.61</td><td>JEQUIÉ / BA</td><td>GRANTED</td></tr></table>
Exploration done by other parties	• The area remains poorly explored with no known (recorded) historic exploration having taking place. • Servico Geologico do Brasil (Geological Survey of Brazil) has undertaken regional geological field mapping and regional airborne geophysical surveying.
Geology	• The Palmares REE Project is located in the Jequié Complex, a terrain of the north-eastern São Francisco Craton. This craton includes the Volta do Rio Plutonic Suite of high-K ferroan ("A-type") granitoids, subordinate mafic to intermediate rocks; and thorium rich monazitic leucogranites with associated REE. The region is affected by intense NE-SW regional shearing which may be associated with a REE enriched hydrothermal system. • The style of mineralisation being explored for is an REE enriched lateritic zone at surface. This may grade into an REE-bearing hard rock source. • The sought after mineralisation is classified as Ionic Adsorption Clay (IAC) deposits, and regolith hosted deposits of monazite mineral grains, and primary in-situ REE-Nb-Sc mineralisation.
Drill hole information	• Not applicable
Data aggregation methods	• Data includes aggregation of calculated Total Rare Earth Oxides (TREO), Total Light Rare Earth Oxides (LTREO, La, Ce, Pr, Nd, Sm, and Eu) and Total Heavy Rare Earth Oxides (HTREO, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu). This was done by applying the oxide factors to the elemental assays (factors shown above) and then adding those results to form the totals. The TREO comprises the addition of the LTREO and the HTREO.
Relation between mineralisation widths and intercept lengths	• Not applicable
Diagrams	• See diagrams included in this announcement.
Balanced reporting	• All results are reported in this release.
Other substantive exploration data	• Drilling, geological mapping, geophysical surveying, and metallurgical testing exist and have been reported in previous announcements
Further work	• Drilling of anomalous zones • Desorption test work will be undertaken to assess the recovery of REE from the samples tested • Regional surface geochemical sampling of the rest of the Palmares REE Project