



Auger Drilling to Start on Brazil Rare Earths Project

Magnum Mining & Exploration Limited (ASX: MGU, Magnum, or the Company) is pleased to announce that its first pass auger drilling program on its Azimuth 125 (Az125) REE Project in Brazil is due to start in October.

HIGHLIGHTS

- An initial **19 high priority REE target areas have been identified** in the Az125 REE Project tenements

- Prioritisation of targeting is based on radiometric anomalism and geology, **specifically targeting ionic clay hosted REE**

- Rapid Reconnaissance Exploration auger-based sampling will be done as a first pass assessment, **targeting potential ionic clay REE mineralisation**

- Az125 REE Project tenements occur in the Azimuth 125° lineament; **a well-endowed and highly prospective geological feature in central Brazil**

- The Az125 REE Project consists of 72 granted tenements covering ~1,201km² across the states of Minas Gerais and Goiás, **known for hosting world-class ionic clay REE deposits** such as ASX: MEI (Meteoric Resources Ltd)¹

- Magnum's Brazil based exploration team, **with a previous track record of REE discovery**, will undertake the work

Magnum controls 100% of ~1,201km² tenements in the Azimuth 125 trend in Goias and Minas Gerais states, Brazil². This area is highly prospective for ionic clay-hosted and hard rock Rare Earth Element (REE) mineralisation, (**Figure 1 and Figure 2**).

The Company has concluded a prioritisation of the areas identified in this trend. This was based principally on regional geology and radiometric signatures for ionic clay hosted REE. The typical alkaline suite of lithologies that are known to host hard rock REE have a characteristic radiometric signature. In the clays that typically form above them, as a result of rock oxidation ("weathering"), this signature manifests as a thorium anomaly.

¹ ASX:MEI: "Caldeira Project Scoping Study confirms potential for the world's lowest cost source of rare earths with outstanding financial metrics", 8 July, 2024.

² ASX:MGU: "Update on Brazil Rare Earth Project", 30 January, 2025

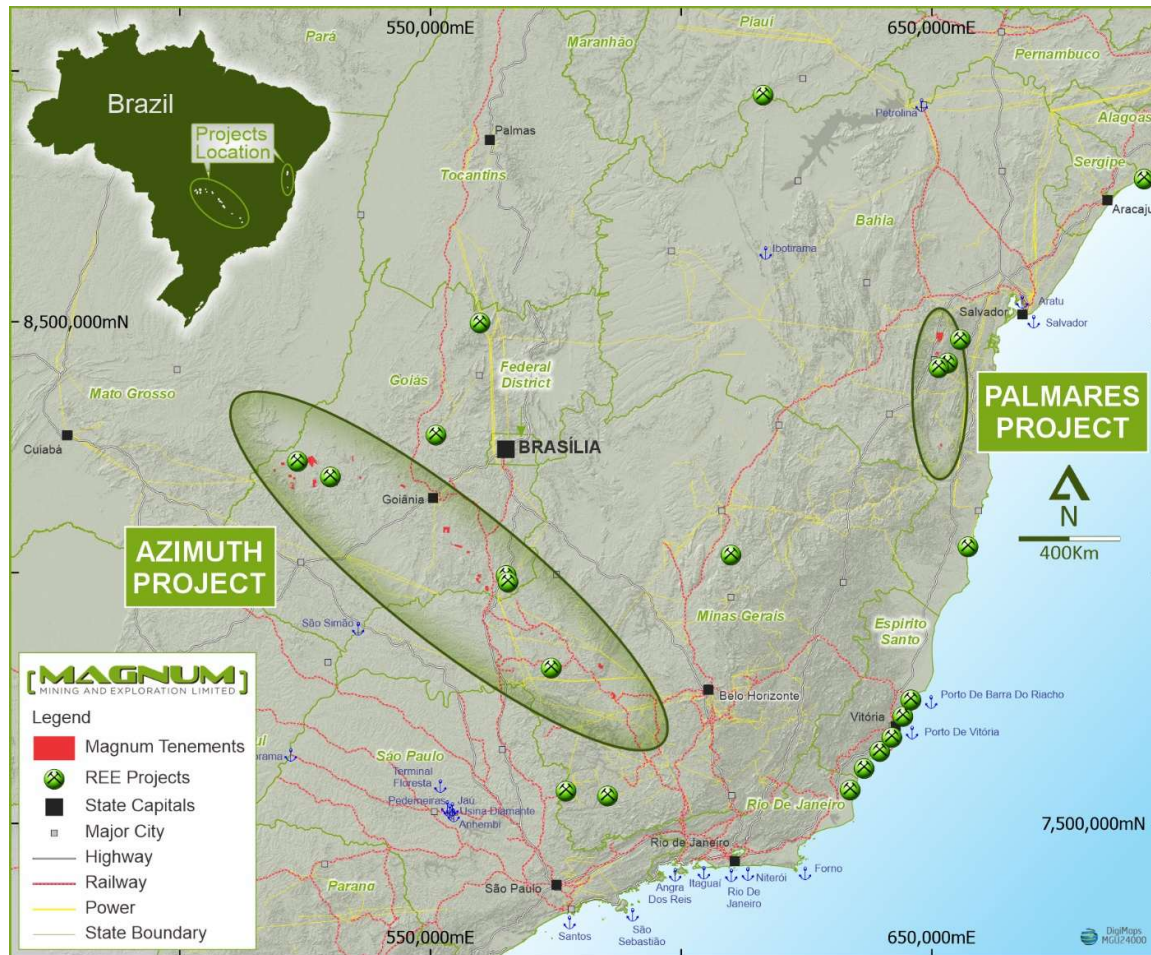


Figure 1 – Magnum’s Azimuth 125 and Palmares REE Projects are located across the states of Bahia, Minas Gerais and Goiás states in south-central Brazil. The area is experiencing intense exploration in this emerging REE region. The Azimuth 125 Project’s areas are proximal to notable REE projects. Both projects cover 1,549km².

An example of this is Appia Rare Earth and Uranium Corp’s PCH Project³ where a strong thorium anomaly is evident (**Figure 2**). Magnum’s process to peg exploration leases in this area used this example and Enova’s prospect (**Figure 12**) to identify potentially REE rich ionic clays.

A total of 19 high priority areas have been chosen for follow up (**Figure 4**). Examples of the thorium radiometric signatures of selected prospects are shown in **Figure 5** and can be compared to that of Appia’s area (**Figure 3**).

No historic exploration activity has occurred on any of these areas; they represent novel green fields opportunities.

³ CSE:API: “Appia Announces Excellent Desorption Results From Its Four New Ionic Adsorption Clay Targets at the PCH Project in Goiás, Brazil”, 4 February, 2025.

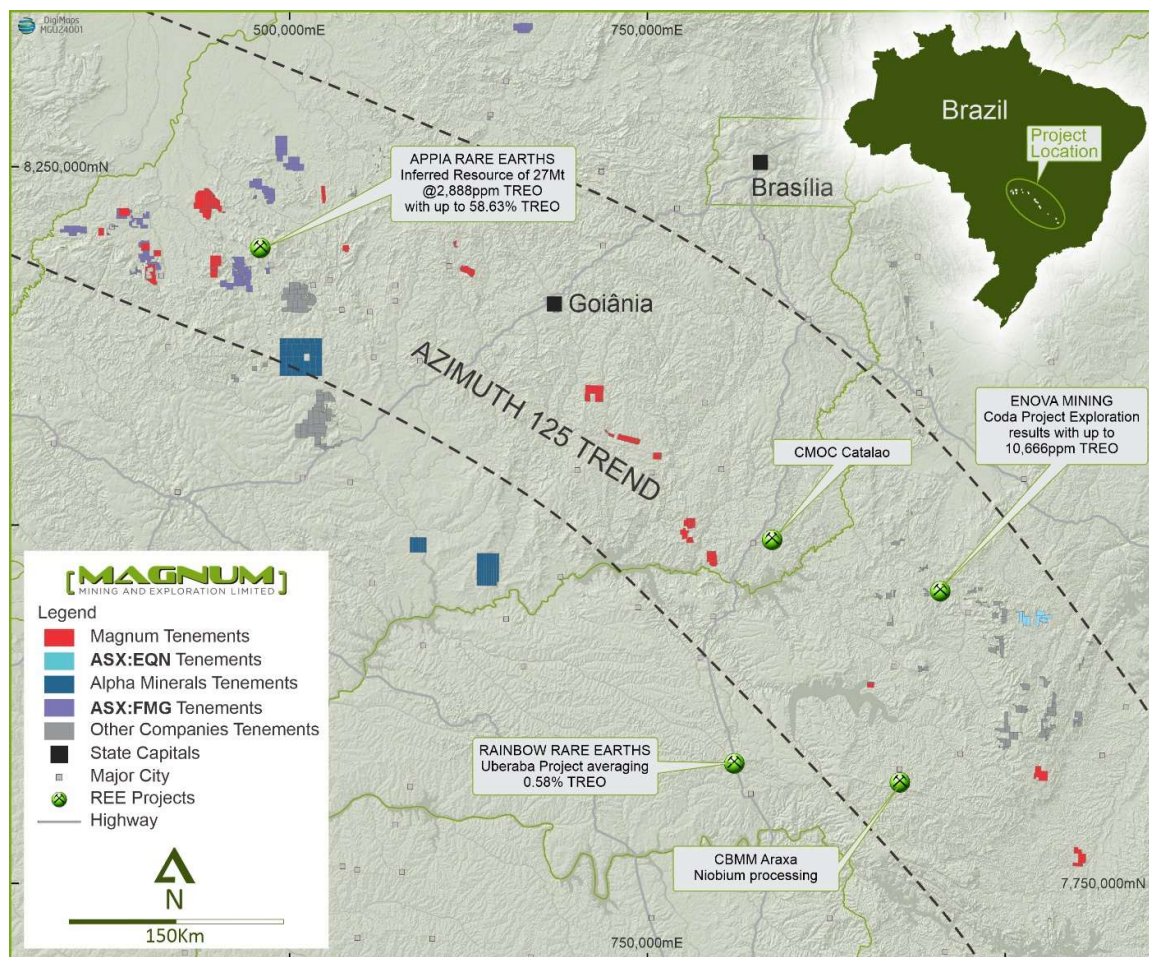


Figure 2 -The Az125 REE Project is centred on the Azimuth 125° Lineament. The lineament is associated with significant REE mineralisation with Appia, Enova, and Rainbow announcing exploration success. The tenements straddle the north-north-east trending Transbrazilian Lineament at its intersection with the Azimuth 125° Lineament.

NEXT STEPS

Each target will be initially tested with multiple auger holes to confirm the presence of REE mineralisation and to, if available, log rock fragments to identify the underlying lithologies.

It is expected that auger sampling will start in October but is dependent on land access discussions.

The work will be done by in-house personnel, with a previous track record of REE discovery.

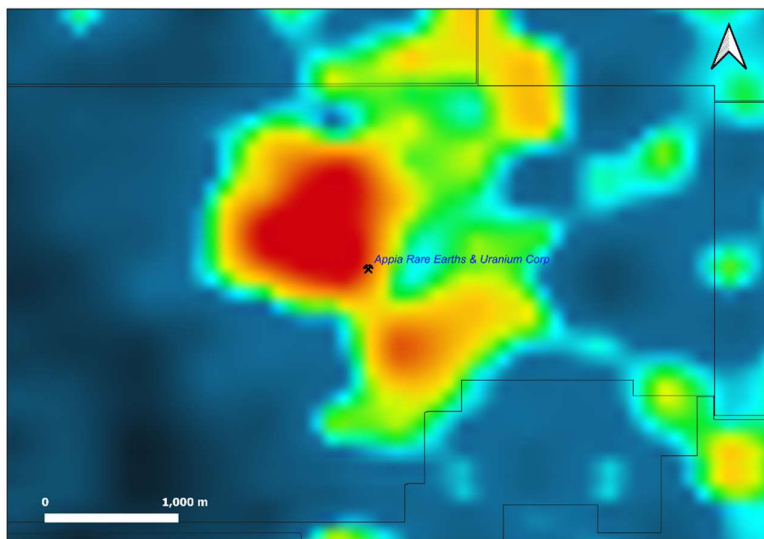


Figure 3 - Image of airborne radiometric thorium channel over Appia's PCH Project, Brazil. Note scale bar.



Figure 4 - REE prospects identified on Magnum's Az125 REE Project (Yellow dots). The local road network provides easy access to these prospects. Note proximity to the city of Brasília.

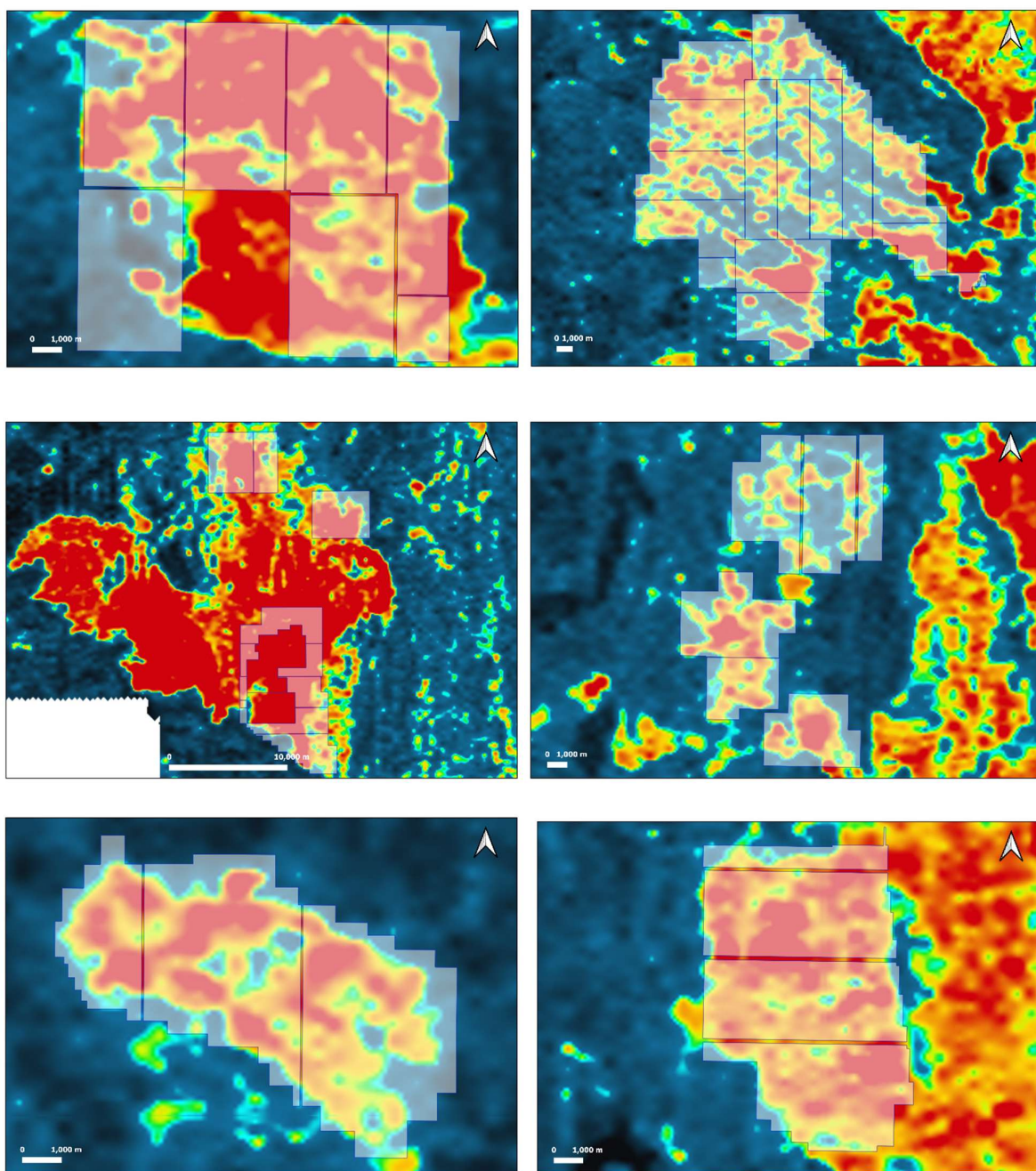


Figure 5 - Thorium signatures for selected targets. White shaded areas are Magnum's leases. Note scale bar in each image. The targets are (left to right, top to bottom, refer to Figure 4 for locations):

Piracanjuba, Montes Claros de Goiás

Piranhas, Corumbaíba

Anicums, Cumari

ABOUT THE AZIMUTH 125 REE PROJECT

The Azimuth 125 (Az125) REE Project is a green field exploration project highly prospective for REE. It consists of 72 granted tenements (refer to JORC Table 1) covering ~1,201km² 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. The Az125 leases cover granitic and alkaline intrusives lithologies that are a primary source of REEs, including monazite, xenotime, allanite, titanite, and apatite. Intrusive alkaline rocks typically host REE minerals eudialyte and loparite. These minerals may be weathered, and adsorbed and concentrated into surficial ionic clay deposits. The geophysical signatures of the source rocks are key to the exploration for REE deposits along this lineament.

Carbonatites that are characterised by expressive geophysics anomalies are especially renowned for hosting significant concentrations of REEs and are often associated with minerals like bastnäsite and monazite.

Aeromagnetic data is used extensively to focus in on permissive lithologies for REE, while radiometric data is used to prioritise those targets.

The region has attracted major REE explorers, which include those with both announced REE resources and significant exploration results, as well as Fortescue Metals Group whom have secured a landholding close to some of the Azimuth Project granted claims.

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

“Update on Brazil Rare Earth Project” released on the ASX on 30th of January 2025 and available to view on <https://www.mmel.com.au/site/investor-information/asx-announcements-and-financial-reports>

BY ORDER OF THE BOARD**Mark Pryn**

Company Secretary

Email: info@mmel.com.au

Phone: +61 3 9682 2966

Evan Smith

Investor Relations

evan.smith@advisir.com.au

Phone: +61 431 176 607

JORC Code, 2012 Edition – Table 1 report**SECTION 1 – SAMPLING TECHNIQUES AND DATA**

| CRITERIA | COMMENTARY |
|---|--|
| Sampling techniques | <ul style="list-style-type: none"> Data reported herein consists of three airborne geophysical surveys. The surveys were flown by the Brazilian government Magnetic data was collected with a stinger-mounter magnetometer on a fixed wing aircraft Radiometric data was collected with a spectrometer using a 2,560 in³ sodium iodide downward facing crystal supported by a 512 in³ upward facing crystal. |
| Drilling techniques | <ul style="list-style-type: none"> Not applicable – no drilling undertaken. |
| Drill sample recovery | <ul style="list-style-type: none"> Not applicable – no drilling undertaken. |
| Logging | <ul style="list-style-type: none"> Not applicable – no drilling undertaken. |
| Sub- sampling techniques and sample preparation | <ul style="list-style-type: none"> Not applicable – no drilling undertaken. |
| Quality of assay data and laboratory tests | <ul style="list-style-type: none"> Not applicable. |
| Verification of sampling and assaying | <ul style="list-style-type: none"> No applicable. |
| Location of data points | <ul style="list-style-type: none"> Survey navigation was by differential GPS (Trimble AG-132) with an accuracy of sub ±10m. Data was collected using the WGS-84 SAD-69 (IBGE) datum and later converted to UTM SIRGAS2000 zone 23S projection. |
| Data spacing and distribution | <ul style="list-style-type: none"> Aeromagnetic/radiometric data was collected along lines spaced 500m apart with tie lines flown east-west at 5,000m spacing. Sensor height is 100m Data spacing is approximately 8m along ground (magnetometers) and 80m along ground (spectrometer) |
| Orientation of data in relation to geological structure | <ul style="list-style-type: none"> Aeromagnetic/Radiometric surveys were flown north-south. This is considered adequate in the early stages of exploration. |
| Sample security | <ul style="list-style-type: none"> No applicable. |
| Audits or reviews | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> The Azimuth REE Project is 100% owned and controlled by Magnum Mining and Exploration Ltd, an Australian ASX listed public company. The project consists of 72 granted mineral exploration permits covering ~1,201km² on the Azimuth 125° Lineament, Minas Gerais and Goiás states, Brazil. All permits are in good standing. The permits are registered at Agencia Nacional de Mineracao (ANM). Permits held in the Azimuth REE Project are: | | | | |
| # | TENEMENT | HA | COUNTY STATE | STATUS | COMMODITY |
| 1 | 830284/2024 | 1765.35 | PATROCINIO /MG | GRANTED | REE |
| 2 | 830285/2024 | 1978.36 | SANTA ROSA DA SERRA /MG | GRANTED | REE |
| 3 | 830286/2024 | 1711.35 | SANTA ROSA DA SERRA /MG | GRANTED | REE |
| 4 | 830287/2024 | 1731.35 | SANTA ROSA DA SERRA /MG | GRANTED | REE |
| 5 | 830288/2024 | 1478.97 | SANTA ROSA DA SERRA /MG | GRANTED | REE |
| 6 | 830289/2024 | 1604.16 | IGUATAMA /MG | GRANTED | REE |
| 7 | 830290/2024 | 1815.11 | IGUATAMA /MG | GRANTED | REE |
| 8 | 830291/2024 | 1882.06 | IGUATAMA /MG | GRANTED | REE |
| 9 | 830281/2024 | 1531.83 | IGUATAMA /MG | GRANTED | REE |
| 10 | 860248/2024 | 1758.56 | PIRACANJUBA /GO | GRANTED | REE |
| 11 | 860247/2024 | 1028.19 | PIRACANJUBA /GO | GRANTED | REE |
| 12 | 860219/2024 | 1964.55 | PIRACANJUBA /GO | GRANTED | REE |
| 13 | 860220/2024 | 1963.93 | PIRACANJUBA /GO | GRANTED | REE |
| 14 | 860221/2024 | 1932.79 | PIRACANJUBA /GO | GRANTED | REE |
| 15 | 860222/2024 | 1932.53 | PIRACANJUBA /GO | GRANTED | REE |
| 16 | 860227/2024 | 1976.42 | PIRACANJUBA /GO | GRANTED | REE |
| 17 | 860226/2024 | 1899.26 | PIRACANJUBA /GO | GRANTED | REE |
| 18 | 860225/2024 | 396.81 | PIRACANJUBA /GO | GRANTED | REE |
| 19 | 860224/2024 | 1889.61 | PIRACANJUBA /GO | GRANTED | REE |
| 20 | 860223/2024 | 1954.28 | PIRACANJUBA /GO | GRANTED | REE |
| 21 | 860190/2024 | 1894.43 | BOM JARDIM DE GOIÁS /GO | GRANTED | REE |
| 22 | 860191/2024 | 1972.35 | PIRANHAS /GO | GRANTED | REE |
| 23 | 860192/2024 | 1066.45 | PIRANHAS /GO | GRANTED | REE |
| 24 | 860246/2024 | 1972.35 | PIRANHAS /GO | GRANTED | REE |
| 25 | 860198/2024 | 1448.05 | PIRANHAS /GO | GRANTED | REE |
| 26 | 860196/2024 | 1916.3 | PIRANHAS /GO | GRANTED | REE |
| 27 | 860194/2024 | 1897.74 | PIRANHAS /GO | GRANTED | REE |
| 28 | 860197/2024 | 1597.89 | PIRANHAS /GO | GRANTED | REE |
| 29 | 860195/2024 | 1975.17 | PIRANHAS /GO | GRANTED | REE |
| 30 | 860241/2024 | 1965.49 | PIRANHAS /GO | GRANTED | REE |
| 31 | 860193/2024 | 1798.77 | CÓRREGO DO OURO /GO | GRANTED | REE |
| 32 | 860189/2024 | 1951.59 | BOM JARDIM DE GOIÁS /GO | GRANTED | REE |
| 33 | 860187/2024 | 1933.25 | BOM JARDIM DE GOIÁS /GO | GRANTED | REE |
| 34 | 860199/2024 | 1993.41 | MONTES CLAROS DE GOIÁS /GO | GRANTED | REE |
| 35 | 860202/2024 | 1997.22 | MONTES CLAROS DE GOIÁS /GO | GRANTED | REE |
| 36 | 860200/2024 | 1295.98 | MONTES CLAROS DE GOIÁS /GO | GRANTED | REE |
| 37 | 860203/2024 | 1949.28 | MONTES CLAROS DE GOIÁS /GO | GRANTED | REE |
| 38 | 860204/2024 | 1851.99 | MONTES CLAROS DE GOIÁS /GO | GRANTED | REE |
| 39 | 860205/2024 | 1999.62 | MONTES CLAROS DE GOIÁS /GO | GRANTED | REE |
| 40 | 860207/2024 | 1999.68 | MONTES CLAROS DE GOIÁS /GO | GRANTED | REE |
| 41 | 860208/2024 | 1923.15 | MONTES CLAROS DE GOIÁS /GO | GRANTED | REE |
| 42 | 860206/2024 | 1999.65 | MONTES CLAROS DE GOIÁS /GO | GRANTED | REE |
| 43 | 860209/2024 | 1969.44 | MONTES CLAROS DE GOIÁS /GO | GRANTED | REE |
| 44 | 860210/2024 | 1963.35 | MONTES CLAROS DE GOIÁS /GO | GRANTED | REE |
| 45 | 860211/2024 | 442.5 | MONTES CLAROS DE GOIÁS /GO | GRANTED | REE |
| 46 | 860243/2024 | 1977.68 | MONTES CLAROS DE GOIÁS /GO | GRANTED | REE |
| 47 | 860242/2024 | 1854.61 | MONTES CLAROS DE GOIÁS /GO | GRANTED | REE |
| 48 | 860212/2024 | 1919.77 | JUSSARA /GO | GRANTED | REE |
| 49 | 860213/2024 | 958.19 | NOVO BRASIL /GO | GRANTED | REE |
| 50 | 860217/2024 | 1907.76 | ANICUNS /GO | GRANTED | REE |
| 51 | 860218/2024 | 751.18 | ANICUNS /GO | GRANTED | REE |
| 52 | 860215/2024 | 745.7 | ANICUNS /GO | GRANTED | REE |
| 53 | 860216/2024 | 1970.98 | ANICUNS /GO | GRANTED | REE |
| 54 | 860229/2024 | 1953.94 | CALDAS NOVAS /GO | GRANTED | REE |
| 55 | 860228/2024 | 1972.11 | CALDAS NOVAS /GO | GRANTED | REE |
| 56 | 860231/2024 | 552.95 | CALDAS NOVAS /GO | GRANTED | REE |
| 57 | 860230/2024 | 1894.26 | CORUMBAIBA /GO | GRANTED | REE |
| 58 | 860232/2024 | 1862.56 | CORUMBAIBA /GO | GRANTED | REE |
| 59 | 860236/2024 | 1600.2 | CORUMBAIBA /GO | GRANTED | REE |
| 60 | 860234/2024 | 1961.99 | CORUMBAIBA /GO | GRANTED | REE |
| 61 | 860235/2024 | 1063.27 | CORUMBAIBA /GO | GRANTED | REE |
| 62 | 860233/2024 | 821.25 | CORUMBAIBA /GO | GRANTED | REE |
| 63 | 860239/2024 | 1902.73 | CUMARI /GO | GRANTED | REE |
| 64 | 860240/2024 | 505.19 | CUMARI /GO | GRANTED | REE |
| 65 | 860238/2024 | 1860.12 | ANHANGUERA /GO | GRANTED | REE |
| 66 | 860237/2024 | 1852.56 | ANHANGUERA /GO | GRANTED | REE |
| 67 | 860384/2020 | 1997.33 | Block Arenopolis GOIAS | GRANTED | Au |
| 68 | 860385/2020 | 1670.48 | | GRANTED | Au |
| 69 | 860386/2020 | 1906.42 | | GRANTED | Au |
| 70 | 860397/2020 | 1698.09 | | GRANTED | Au |
| 71 | 860398/2020 | 1800.17 | | GRANTED | Au |

| CRITERIA | COMMENTARY | | | |
|--|---|-------------|------------|------------|
| | 72 | 860519/2020 | 212.7 | GRANTED Au |
| | TOTAL | | 120,144.76 | |
| Exploration done by other parties | <ul style="list-style-type: none"> The area remains poorly explored with no recorded historic exploration. Servico Geologico do Brasil (Geological Survey of Brazil) has undertaken regional geological field mapping and regional airborne geophysical surveying. | | | |
| Geology | <ul style="list-style-type: none"> The basement rocks underlying Brazil formed during the Precambrian and include the São Francisco Craton which outcrops in Minas Gerais and Bahia. The Azimuth REE Project is located within the Tocantins Structural Province in the Brasília Fold Belt, which is part of the Goiás Magmatic Arc. The Tocantins Province is composed of a series of SSW-NNE trending terranes of mainly Proterozoic ages which stabilised in the Neoproterozoic in the final collision between the Amazon and São Francisco cratons. The Tocantins Province is divided into an eastern and western section. The eastern section is located in a N-S arc-shaped folded belt known as the Brasília Folded Belt (BFB), which extends northwards to the state of Tocantins and southwards to the state of Minas Gerais. The Brasília Fold Belt consists of a deformed mobile belt deposited during the Meso to Neoproterozoic in the western margin of the São Francisco Craton over a basement of Paleoproterozoic granitic-gneissic terrane affected by Mesoproterozoic deformation. The Azimuth REE Project lies at the centre of the BFB on the western margin of the belt and extends from adjacent to Appia's PCH deposit to \ near CBMM's Araxa REE deposit. It lies in the Goiás Alkaline Province of the BFB, an area dominated by Upper Cretaceous alkaline magmatism. The area is transected by the Azimuth 125° (AZ125°) Lineament. This is crustal scale feature that cuts across the whole of Brazil. It is associated with basic dyke swarms and intrusives. The Azimuth REE Project has claims over the area where the AZ125° intersects the NE trending Transbrasiliano Lineament. The northern permits are underlain by Iporá Granite with carbonatite (phosphate intrusion) and detrital-alluvial cover. The southern permits are underlain by gabbros of the Goiás Alkaline Province with overlying detrital-alluvial cover. The mineralisation sought falls into two categories: <ul style="list-style-type: none"> Carbonatite hosted REE Rare earth ionic adsorption clay-(IAC) style deposits IAC is the focus of exploration at the Project. Ionic clay-style deposits are especially important because they are rich in heavy rare earth elements (HREEs), which are more valuable and less abundant than the light rare earth elements (LREEs). These include elements like dysprosium and terbium, which are essential for many high-tech applications, including wind turbines, hybrid vehicles, and defence technologies. | | | |
| Drill hole information | <ul style="list-style-type: none"> Not applicable – no drilling undertaken. | | | |
| Data aggregation methods | <ul style="list-style-type: none"> Not applicable. | | | |
| Relation between mineralisation widths and intercept lengths | <ul style="list-style-type: none"> Not applicable – no drilling undertaken. | | | |
| Diagrams | <ul style="list-style-type: none"> See diagrams included in this announcement. | | | |
| Balanced reporting | <ul style="list-style-type: none"> All results are reported in this release. | | | |
| Other substantive exploration data | <ul style="list-style-type: none"> No substantive exploration data exists for the permit areas other than the airborne geophysical surveys. | | | |
| Further work | <ul style="list-style-type: none"> Regional surface geochemical sampling of the Azimuth REE Project ground will be done in a prioritised way. | | | |