Brazilian Rare Earths Limited: Exceptional Heavy Rare Earth Discovery at Monte Alto Project

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Sydney, Australia - Brazilian Rare Earths Ltd. (ASX:BRE) is pleased to report high-grade assay results from regional exploration at the Monte Alto Rare Earth Project (Monte Alto), located in Bahia, Brazil.

Key Points:

- Outstanding heavy rare earth discovery near Monte Alto: New discovery of outcropping rare earth mineralisation with grades up to 14.6% TREO, and heavy rare earth grades of up to 5,691ppm dysprosium oxide (Dy2O3), 737ppm terbium oxide (Tb4O7) and 74,543ppm yttrium oxide (Y2O3). Located just 2.5 km from the ultra-high grade Monte Alto deposit

- High-grade rare earth channel-sampling at Monte Alto East: Channel samples across a 3-metre-wide exposure at Monte Alto East returned grades of up to 10.7% TREO and included exceptional heavy rare earth grades of 4,306ppm Dy2O3 and 508ppm Tb4O7 and 51,556ppm Y2O3

- Discovery of high-grade rare earth outcrops: Multiple outcrops of high-grade REE-Nb-Sc-Ta-U hard rock mineralisation with grades of up to 11.7% TREO, and confirmed extensive areas of shallow, high-grade monazite-sand mineralisation with grades exceeding 1% TREO

- Monte Alto expands to a 'district-scale' exploration opportunity: New rare earth discoveries extend over intense district-scale magnetic anomalies adjacent to the Monte Alto deposit, and underpin a +2x increase in the Monte Alto target exploration area to over 4 km by 3 km

Brazilian Rare Earths' CEO and Managing Director, Bernardo da Veiga, commented:

"These outstanding regional exploration results at Monte Alto underscore the prospectivity of our high-grade rare earth province. The discoveries significantly expand Monte Alto's target exploration area and demonstrate its world-class scale, exceptional rare earth grades and substantial potential for exploration upside.

We are thrilled with the exceptionally high-grade heavy rare earth assays from an outcropping discovery located just 2.5km from Monte Alto. Heavy rare earths grades of up to 6,428ppm of dysprosium and terbium (DyTb) are remarkable - and represent some of the highest-grade DyTb assays ever reported globally."

Monte Alto, the most advanced project within BRE's extensive Rocha da Rocha province, has been delineated by a series of drilling programs to a mineralised strike length of approximately 1 km and width of 0.5 km. These successful exploration programs discovered wide zones of ultra-high-grade hard rock REE-Nb-Sc-Ta-U mineralisation, overlain by a high-grade monazite-sand deposit extending from surface to depths of around 75 metres.

The Monte Alto deposit is hosted within the Volta do Rio Plutonic Suite (VRPS), a provincial-scale magmatic system that underpins other major exploration projects such as Sulista and Pele.

District-Scale Exploration Opportunity at Monte Alto

The latest assay results from Monte Alto highlight the significant exploration potential across a series of intense district-scale magnetic anomalies that run adjacent to the initial Monte Alto deposit (Figure 1*).

These magnetic anomalies reveal new, highly-prospective rare earth exploration corridors, extending approximately 3 km to the south and 4 km to the southwest of the initial Monte Alto discovery, more than doubling Monte Alto's target exploration area (see Appendix B* for a comparison of the size of the Monte Alto project to BRE's other projects).

Advanced reprocessing of airborne magnetic data, incorporating reduction-to-pole and high-pass filtering techniques, has produced detailed magnetic interpretations that reveal strong correlations between magnetic

intensity trendlines/corridors and the mineralised stratigraphy of the VRPS.

Spanning across the Monte Alto tenements, these extensive magnetic anomalies link the initial Monte Alto discovery with new regional rare earth zones and align with mafic cumulate horizons associated with high-grade REE-Nb-Sc-Ta-U mineralisation.

Early prospecting along these exploration corridors has already led to three significant new bedrock-hosted rare earth discoveries, with outcrop samples returning rare earth assays exceeding 10% TREO. Additionally, regional auger exploration drilling has discovered extensive areas of shallow, high-grade monazite-sand mineralisation, with rare earth grades as high as 4.6% TREO, underscoring the district-scale exploration potential of the broader Monte Alto project area.

Monte Alto East: High-Grade Heavy Rare Earth Discovery

Monte Alto East is characterised by a prominent north-south magnetic and radiometric anomaly trendline, originating near the initial Monte Alto deposit and extending over 10 km southward through the Velinhas project area (Figure 2*).

Recent ground-based prospecting discovered a substantial outcrop of high-grade rare earth mineralisation (Sample R458) just 2.5 km south of the Monte Alto deposit. This outcrop returned exceptional assay grades of key heavy rare earth elements, including dysprosium, terbium, and yttrium.

The mineralisation at this outcrop is hosted in granite gneiss, dipping approximately 74 degrees northwest, with an apparent width of ~3 metres (Figure 3*).

The weathered hard rock outcrop is highly enriched in xenotime, a rare earth mineral rich in heavy rare earth elements that are critical for advanced technologies such as electronics, robotics, electric vehicle motors and defense applications.

A geological grab sample from the outcrop returned an exceptional heavy rare earth assay of:

- R458: 14.6% TREO, including 5,691ppm Dy_2O_3, 737ppm Tb_4O_7, 74,543ppm Y_2O_3 and 2,313ppm U_3O_8

These results define a 1.5 km north-south mineralised trend within the Monte Alto East Corridor, containing high-grade rare earth mineralisation in weathered bedrock outcrops and overlying soils. Ongoing exploration aims to expand these discoveries and evaluate the potential for large deposits of high-grade heavy rare earth mineralisation within the expanded Monte Alto exploration target area.

Monte Alto Corridors: Large-Scale Extensions to the World-Class Monte Alto Discovery

The initial Monte Alto discovery features ultra-high-grade hard rock REE-Nb-Sc-Ta-U mineralisation overlain by an extensive surface deposit of high-grade monazite sand. Reprocessing of airborne magnetic data has identified a series of intense parallel western magnetic anomalies, and a central south-west trending extension corridor, potentially linking the initial Monte Alto discovery with new regional rare earth exploration corridors (Figure 4*).

Initial prospecting over these corridors discovered outcropping hard rock REE-Nb-Sc-Ta-U mineralisation, with grab samples returning assay values of:

- R377: 10.3% TREO, including 18,510ppm NdPr, 1,136ppm DyTb, 5,763ppm Nb_2O_5, 247ppm Sc_2O_3, 368ppm Ta_2O_5 and 1,222ppm U_3O_8

- R509: 11.7% TREO, including 23,851ppm NdPr, 1,515ppm DyTb and 1,061ppm U_3O_8

These findings confirm a connection between areas of high magnetic intensity and REE-Nb-Sc-Ta-U mineralisation within the VRPS mineral system. Previous exploration results confirm the high-grade mineral system is repeated across the Rocha da Rocha rare earth province.

A parallel 1 km long exploration target zone which hosts the high-grade R377 outcrop (Figure 5*) is located 500m the west of the Monte Alto discovery. The R509 high-grade mineralised outcrop is located on a prospective western corridor that continues over 4 km towards the southwest, where it converges with the Monte Alto corridor into an extensive area of high-grade +1% TREO monazite-sand mineralised zones (Figure 3*).

Southwest High-Grade Monazite Sand Zone

On the Monte Alto central extension corridor, auger drilling discovered high-grade monazite-sand

mineralisation exceeding 1% TREO, including:

- 2m at 1.4% TREO from 21m, and open at depth (STU0706)

- 3m at 1.1% TREO from 23m, within 14m at 0.3% TREO and open at depth (SSU0106)

These drill holes intersected monazite sands at depths of over 20m, yet most of the early auger holes within this southeast area were shallow (less than 16m). As such, the southeast continuation of this corridor remains untested and highly prospective for deeper deposits of high-grade monazite sand, which extends to depths of ~75 metres below surface at Monte Alto Project.

On the Western corridor, high-grade monazite-sand mineralisation with grades up to 4.6% TREO has been discovered across a 1,500m long exploration zone. Significant intervals from these previously reported drill holes include:

- 2m at 4.1%TREO, with 14,260ppm NdPr, from 20m within:

o 10m at 1.3% TREO, with 3,572ppm NdPr, from 14m (SSU0090, open at depth)

- 2m at 4.6%TREO, with 12,682ppm NdPr, from 32m within:

o 10m at 1.2% TREO, with 2,885ppm NdPr, from 30m, within:

o 17m at 0.8% TREO, with 1,732ppm NdPr, from 23m (SSU0097, open at depth)

- 2m at 3.1% TREO with 6,807ppm NdPr from 11m, within:

o 7m at 1.0% TREO, with 2,090ppm NdPr, from 7m (STU0317)1

Deep sonic drill holes, and notably drill holes STU0706 and SSU0106 to the east, indicate potential for largescale high-grade monazite-sand mineralisation, located just 3.5 km from the initial Monte Alto deposit.

Priority exploration will focus on mapping the extension of the rare earth mineralised system of the VPRS across the broader Monte Alto district-scale exploration area. To accelerate this regional exploration program, BRE plans to deploy a drone-based geophysical survey system in the coming months to amplify magnetic and radiometric image resolution. Furthermore, this drone-based survey system will also be used to accelerate highresolution geophysical data coverage across the larger Sulista and Pele project areas.

Next Steps

- Monte Alto metallurgical study: Release of first-phase study results

- Pending assays: 8,009m of diamond drilling at the initial Monte Alto deposit

- Sulista and Pele exploration update: Targeting high-grade monazite-sands and ultra-high grade REENb-Sc-Ta-U hard rock mineralisation

*To view tables and figures, please visit:
https://abnnewswire.net/lnk/4E81AH9S

About Brazilian Rare Earths Limited:

Brazilian Rare Earths Limited (ASX:BRE) is an Australian company, rapidly advancing its Tier 1 rare earth project in Northeast Brazil.

Company exploration to date has discovered and delineated a globally significant, district-scale mineral province containing large volumes of both heavy and light rare earths critical to advanced industries and applications that will deliver a green energy transition.

The Company is led by a team of experienced mining executives and geologists with hundreds of years of cumulative experience in finding, developing, and operating mineral assets to generate value across a wide variety of jurisdictions, and commodities throughout the globe.

Source:
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