Brazilian Rare Earths Limited: Report Exceptional Assay Results at Monte Alto Project

26.08.2024 | ABN Newswire

Sydney, Australia - Brazilian Rare Earths Ltd. (ASX:BRE) is pleased to report the latest assay results for the diamond drill program at the Monte Alto Rare Earths Project (Monte Alto) located in Bahia, Brazil.

Reported assays are from 22 diamond core holes totalling 3,430 meters, and, as at the date of the announcement, there are another 51 diamond core holes, totalling 8,009 metres, with assays pending. The latest diamond drilling results expand and extend the continuity of ultra-high grade REE-Nb-Sc-U mineralised zones along the +800m long Monte Alto target exploration corridor.

The latest drilling results intersected numerous wide intervals of high (+10% TREO) and ultra-high grade REE-Nb-Sc-U (+20% TREO) mineralised zones under the free-dig monazite sand mineralisation cap that extends from surface down to ~75m below surface.

Exceptional rare earth grades of up to 39.1% TREO were recorded, the highest-grade rare earth assay for a diamond drill sample of hard rock mineralization at the project so far, with up to 68,341ppm NdPr and 3,381ppm of the heavy rare earths DyTb. In addition to these ultra-high rare earth grades, the hard rock mineralisation recorded niobium grades of up to 1.4%, scandium grades of up to 313ppm and uranium grades of up to 5,191ppm.

Across the central and northern parts of the Monte Alto exploration project corridor, the latest drilling successfully delineated a parallel series of REE-Nb-Sc-U cumulate zones that extend from the shallow monazite sand mineralised cap and plunge to the southeast.

Drillhole MADD0099 recorded the longest REE-Nb-Sc-U intercept to date (75.8m at 13.8% TREO, including 47.1m at 19.6% TREO and 16m at 29.1% TREO). This outstanding drill hole intersected the edge of a high-grade plunging mineralised trend, where it remains open to the south and at depth. The high-grade mineralised intercept begins ~80m vertically below the base of monazite sand mineralised cap.

In the northern part of the Monte Alto project, extensive zones of thick REE-Nb-Sc-U mineralisation were delineated below the base of high-grade monazite sand cap over a strike distance of +250m. These shallow mineralised zones recorded exceptional grades, with the latest results including: 13.2m at 34.7% TREO (MADD0042), 4.3m at 31.2% TREO (MAD0046), and 10.8m at 27.9% TREO (MADD0044). These ultra-high grade mineralised zones have a gentle to moderate dip, and the recorded down hole lengths are equivalent to true thickness.

The latest drilling results from the southern end of Monte Alto intersected a series of stacked high-grade cumulate horizons of up to 8.2m at 18.8% TREO (MADD0021) and delineated numerous gently dipping high-grade REE-Nb-Sc-U cumulate horizons with vertical thicknesses of ranging from 1m to 8m, and total stacked cumulative thickness reaching +10m.

Ultra-High Grade REE-Nb-Sc-U Mineralisation

The ultra-high grade REE-Nb-Sc-U mineralisation notionally represents as large mafic cumulates of REE, niobium, scandium and uranium mineralisation. These magmatic cumulates are coeval with the leucogranites of BRE's Rocha da Rocha Province and repeat along the extensive geophysical trendline that runs down the spine of the province, including at the recent discovery at the southern end of the province, the Sulista project, nearly ~80km south of Monte Alto.

The hard rock REE-Nb-Sc-U mineralisation has exceptional grades of the key permanent magnet light rare earth elements of NdPr, the highly valuable heavy rare earth elements DyTb, as well as world class grades of niobium, scandium and uranium. The latest drilling results highlight the tenor of this mineralisation with rare earth grades of up to 39.1% TREO, 6.8% (68,341ppm) NdPr, 3,381ppm DyTb, and 14,349ppm niobium, 313ppm scandium and 5,191ppm uranium.

The latest results highlight that the REE-Nb-Sc-U mineralisation has remarkably low variability in grade

across the intercept, consistent with assay results from the maiden drilling program. This uniformity in grade and appearance can be visually seen in Figure 6*, which is an ultra-high grade 16m intercept with 29.1% TREO within drill hole MAD0099. Full assay results for individual drill samples are presented in Appendix C*.

Monte Alto - Shallow Monazite Sand Mineralisation

The latest diamond drilling program continued to discover extensive horizons of high-grade monazite sand from surface to a depth of up to ~75m. Significant intercepts from the latest assay results include:

- 24.9m at 3.9% TREO from surface with 7,737ppm NdPr and 279ppm DyTb (MADD0001)

- 16m at 3.7% TREO from 8m with 10,535ppm NdPr and 322ppm DyTb (MADD0002)

- 19.7m at 3.5% TREO from 6.5m with 9,019ppm NdPr and 331ppm DyTb (SDD0003)

- 8m at 2.7% TREO from 30m with 5,549ppm NdPr and 225ppm DyTb (MADD0043)

- 7m at 2.7% TREO from 50m with 5,161ppm NdPr and 274ppm DyTb (MADD0043)

- 8m at 2.1% TREO from 28m with 1,352ppm NdPr and 77ppm DyTb (SDD0011)

- 4.1m at 5.2% TREO from 44m with 10,333ppm NdPr and 523ppm DyTb (SDD0011)

These shallow, high-grade rare earth intercepts represent large grains of monazite contained within a weathered free-dig saprolite lithology. This is analogous to a 'mineral sands' style deposit, with valuable free-dig mineral sands available near surface for potential extraction and gravity separation.

The monazite sand mineralised zones are found from surface down to ~75m depth, and the higher grade (+1% TREO) zones can reach a cumulative thickness of up to ~30m.

Preliminary metallurgical test work has confirmed that the particle size distribution of the monazite grains is predominately from 0.1 - 1 mm in size and can be up to 4 mm in size. The metallurgical test work showed that the monazite grains are amenable to low-cost gravity and magnetic separation processing.

These latest results extend the extensive high-grade monazite sand zones delineated by previously reported auger and sonic drilling, which included the following significant intercepts:

- 26m at 6.8% TREO from 0.4m with 11,951ppm NdPr and 389ppm DyTb (STU0370)

- 14m at 11.2% TREO from 16m with 19,559ppm NdPr and 1,087ppm DyTb (STU0181)

- 10m at 13.1% TREO from 31m with 20,889ppm NdPr and 1,082ppm DyTb (SSU0033)

- 16m at 7.2% TREO from 18m with 10,379ppm NdPr and 624ppm (SSU0014)

- 13m at 7.8% TREO from 3m with 12,054ppm NdPr and 584ppm (SSU0059)

- 9m at 7.7% TREO from 16m with 14,191ppm NdPr and 698ppm DyTb (SSU0050)

- 3m at 16.7% TREO from 7m with 29,163ppm NdPr and 1,573ppm DyTb (STU0353)

- 8m at 5.4% TREO from 8m with 9,159ppm NdPr and 507ppm DyTb (SSU0033)

The latest drilling results enhance the exploration model and support a large, shallow, free-dig deposit that is highly enriched in large-grain monazite sands.

Tantalum-Niobium Correlation

Niobium and tantalum are often found in association and the potential for tantalum grades in REE-Nb-Sc-U mineralisation is under investigation. A systematic review of all Monte Alto drillhole data for tantalum mineralisation is now underway and is expected to be complete by the end of the quarter.

Next Steps - Monte Alto Exploration

- Assays pending for 8,009m of diamond drilling

- Priority exploration drilling to further delineate REE-Nb-Sc-U mineralisation

- Systematic review of exploration data for tantalum mineralisation

- Regional Monte Alto 'district' exploration update

*To view tables and figures, please visit:
https://abnnewswire.net/lnk/64M262D4

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:
Brazilian Rare Earths Limited

Contact:

Bernardo da Veiga MD and CEO Brazilian Rare Earths bdv@brazilianrareearths.com