

Brazilian Rare Earths Limited: Record Rare Earths Grades at Monte Alto Project

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Sydney, Australia - [Brazilian Rare Earths Ltd.](#) (ASX:BRE) (OTCMKTS:BRELY) (OTCMKTS:BRETF) is pleased to report a major set of assay results from diamond drilling at the Monte Alto Rare Earths Project (Monte Alto), located in Bahia, Brazil.

- Record ultra-high-grade rare earths grades at Monte Alto of up to 45.7% Total Rare Earth Oxide (TREO)
- Exceptional rare earths NdPr grades up to 69,558 ppm (6.96%) and heavy rare earths DyTb grades of up to 11,696 ppm (1.17%)
- High-grade assays of up to 17,029 ppm (1.7%) niobium oxide (Nb₂O₅), 382 ppm scandium oxide (Sc₂O₃), 962 ppm tantalum oxide (Ta₂O₅), and 5,781 ppm uranium oxide (U₃O₈)
- New drilling results confirm the continuity and scale of the ultra-high-grade REE-Nb-Sc-Ta-U mineralised envelope, that remains open along strike and at depth
- High-grade rare earths monazite-sand results include 18m at 6.8% TREO, from surface

Significant intercepts from the latest Monte Alto diamond drilling results include:

- 37m at 16.1% TREO from 10m, with 23,476 ppm NdPr, 1,157 ppm DyTb, 4,637 ppm Nb₂O₅, 108 ppm Sc₂O₃, 316 ppm Ta₂O₅, and 1,965 ppm U₃O₈ (MADD0101), including:
 - o 29m at 18.5% TREO from 10m, with 27,071 ppm NdPr, 1,293 ppm DyTb, 5,127 ppm Nb₂O₅, 122 ppm Sc₂O₃, 350 ppm Ta₂O₅, and 2,205 ppm U₃O₈ (MADD0101), including:
 - o 7.1m at 35% TREO from 21.9m, with 56,681 ppm NdPr, 2,522 ppm DyTb, 8,628 ppm Nb₂O₅, 237 ppm Sc₂O₃, 582 ppm Ta₂O₅, and 4,063 ppm U₃O₈ (MADD0101)
 - 38.8m at 16% TREO from 121m, with 25,978 ppm NdPr, 1,319 ppm DyTb, 4,302 ppm Nb₂O₅, 150 ppm Sc₂O₃, 299 ppm Ta₂O₅, and 2,052 ppm U₃O₈ (MADD0115), including:
 - o 19.2m at 27% TREO from 131.1m, with 44,120 ppm NdPr, 2,234 ppm DyTb, 7,224 ppm Nb₂O₅, 224 ppm Sc₂O₃, 494 ppm Ta₂O₅, and 3,279 ppm U₃O₈ (MADD0115)
 - 7.8m at 22.7% TREO from 86.2m, with 37,118 ppm NdPr, 1,943 ppm DyTb, 6,715 ppm Nb₂O₅, 212 ppm Sc₂O₃, 432 ppm Ta₂O₅, and 2,982 ppm U₃O₈ (MADD0110), including:
 - o 3.8m at 31.2% TREO from 86.2m with 52,095 ppm NdPr, 2,713 ppm DyTb, 9,469 ppm Nb₂O₅, 222 ppm Sc₂O₃, 585 ppm Ta₂O₅, and 3,707 ppm U₃O₈ (MADD0110)
 - 14m at 21.3% TREO from 236m, with 36,381 ppm NdPr, 1,820 ppm DyTb, 5,921 ppm Nb₂O₅, 150 ppm Sc₂O₃, 370 ppm Ta₂O₅, and 2,643 ppm U₃O₈ (MADD0106), including:
 - o 6.4m at 28.9% TREO from 243m, with 49,810 ppm NdPr, 2,487 ppm DyTb, 8,158 ppm Nb₂O₅, 179 ppm Sc₂O₃, 509 ppm Ta₂O₅, and 3,467 ppm U₃O₈ (MADD0106)
 - 20m at 15.8% TREO from 118m, with 25,777 ppm NdPr, 1,190 ppm DyTb, 4,054 ppm Nb₂O₅, 190 ppm Sc₂O₃, 261 ppm Ta₂O₅ and 2,297 ppm U₃O₈ (MADD0069)
 - 15m at 16.4% TREO from 60m, with 27,907 ppm NdPr, 1,458 ppm DyTb, 4,963 ppm Nb₂O₅, 152 ppm Sc₂O₃, 314 ppm Ta₂O₅, and 2,172 ppm U₃O₈ (MADD0040)
 - 15.7m at 15.8% TREO from 236.9m, with 26,481 ppm NdPr, 1,262 ppm DyTb, 4,431 ppm Nb₂O₅, 135 ppm Sc₂O₃, 271 ppm Ta₂O₅, and 1,938 ppm U₃O₈ (MADD0139)
 - 13m at 15.5% TREO from 10m, with 26,763 ppm NdPr, 1,325 ppm DyTb, 4,480 ppm Nb₂O₅, 117 ppm

Sc₂O₃, 283 ppm Ta₂O₅, and 1,744 ppm U₃O₈ (MADD0138)

- 10.4m at 16% TREO from 108.3m, with 26,850 ppm NdPr, 1,378 ppm DyTb, 4,542 ppm Nb₂O₅, 169 ppm Sc₂O₃, 285 ppm Ta₂O₅, and 2,201 ppm U₃O₈ (MADD0047)

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

"Less than a year ago, we announced the first drill 'discovery' of ultra-high-grade REE-Nb-Sc-Ta-U mineralisation at Monte Alto.

Today, we are pleased to report new drilling results that include some of the highest grades ever reported globally, including exceptional rare earths grades of up to 45.7% TREO. These outstanding drilling results confirm Monte Alto's position as one of the highest grade rare earths and critical minerals projects in the world.

Since the breakthrough discovery of Monte Alto, our exploration team has completed a total of 22,658 metres of diamond drilling. Notably, the Monte Alto deposit remains open along strike and at depth for high-grade rare earths, niobium, tantalum, scandium, and uranium mineralisation. The scale and continuity of the high-grade mineralisation provides a strong foundation for an updated JORC resource estimate, which is expected in the second quarter of 2025.

Finally, the potential for district-scale exploration and development near Monte Alto is unrivalled. Our recent discoveries, within ~4 km of the main deposit, underpin a compelling exploration opportunity for new ultrahigh-grade REE-Nb-Sc-Ta-U discoveries."

The world-class Monte Alto project is hosted within the Volta do Rio Plutonic Suite (VRPS), a large-scale magmatic system that extends over 180 km in Bahia, Brazil. Brazilian Rare Earths (BRE) holds a dominant land position across the VRPS, which holds exceptional exploration potential for new discoveries of ultra-high-grade mineralisation, including rare earth elements (REE), niobium (Nb), scandium (Sc), tantalum (Ta), and uranium (U). BRE's key exploration projects within this province include the Monte Alto, Sulista and Pele projects.

The latest diamond drilling results successfully expanded the Monte Alto deposit envelopes, confirming the three-dimensional continuity of high-grade REE-Nb-Sc-Ta-U mineralisation and monazite-sand deposits (Figure 1). The new drilling results also delineated a series of stacked, continuous ultra-high-grade horizons of REE-NbSc-Ta-U mineralisation across a geological fold that connects the southern and northern domains of the Monte Alto deposit.

Monte Alto's chevkinite and apatite-britholite REE-Nb-Sc-Ta-U mineralisation is unrivalled, with no deposits of comparable scale and grade identified from publicly available information and reviewed research papers.

Successful Drilling Results

The new drilling assays are from 69 diamond core holes totalling 10,412 metres. Results from 32 drill holes totalling 5,093 metres have been previously reported. Assays are pending for a further 18 diamond core holes totalling 3,011 metres.

Exceptional rare earths grades of up to 45.7% TREO₁ were returned from the latest drilling, which is now the highest grade rare earths assay at Monte Alto so far. Ultra-high grades of neodymium and praseodymium of up to 69,558 ppm NdPr₁ and exceptional heavy rare earths grades of dysprosium and terbium of up to 11,696 ppm DyTb₁ were intersected in the drill results.

In addition to these ultra-high rare earths grade assays, drilling results also set a new project record niobium grade of 1.7% Nb₂O₅, scandium grades of up to 382 ppm Sc₂O₃, tantalum grades of up to 962 ppm Ta₂O₅ and uranium grades of up to 5,781 ppm U₃O₈.

Targeted in-fill diamond drilling successfully enhanced the geological interpretation of the deposit and improved confidence in the continuity of grade, which will underpin the upcoming mineral resource estimate in Q2 2025.

At the boundary of the Monte Alto deposit, a limited number of drill holes were completed for geological and geotechnical assessment. These include 4 new drill holes in this announcement, plus 27 historical holes, totalling 4,141 metres.

Shallow and stacked ultra-high-grade REE-Nb-Sc-Ta-U mineralisation

The latest drill holes intersected a series of stacked, thick intervals of high-grade (+10% TREO) and

ultra-highgrade (+15% TREO) REE-Nb-Sc-Ta-U mineralisation from shallow depths.

The best exploration result was diamond drill hole MADD0101, a continuous 28.8 metres (true-width) ultra-highgrade 18.5% TREO intercept starting from just 10 metres of depth. This wide drill intercept was contained within a combined 36.7m intercept of 16.1% TREO, from 10 metres of depth (see Figure 3).

This shallow ultra-high-grade REE-Nb-Sc-Ta-U mineralisation occurs in stacked, closely spaced horizons of weathered, free-dig mineralisation. These stacked horizons are gently dipping, supporting potential low-strip ratio resources. Deeper hard rock intercepts include 4.7m at 14.9% TREO (MADD010) and 7.8m at 22% TREO (MADD010). These new results highlight that the combined true thickness of regolith and hard rock mineralisation exceeds 40 metres at the centre of Monte Alto.

Increasing grade, continuity and scale at depth

The latest drill results increase the confidence in geological and grade continuity across the Monte Alto deposit.

Deeper drill holes significantly extended continuous horizons of thick and ultra-high-grade REE-Nb-Sc-Ta-U mineralisation at the centre of the Monte Alto deposit. The new drill results also in-filled a previous exploration gap between the southern and central portions of the Monte Alto deposit (see Figure 4).

Northwest of the centre of the Monte Alto deposit, a new intercept of 15m at 16.4% TREO from 60 metres (MADD0040) confirmed the down-dip continuation of ultra-high-grade near-surface mineralisation (13.2m at 34.7% TREO), intercepted in a previously reported drill hole MADD0043.5 The cumulate horizon continues at depth, with results including 20m at 15.8% TREO from 118 metres (MADD0069), that intersected an ultra-highgrade mineralized zone ~80 metres below the base of the overlying high-grade monazite-sand deposit.

New drill hole assays across the northwest and southeast of the Monte Alto centre, increased the continuity of high-grade mineralisation at depth throughout the deposit. Highlights include 19m at 27% TREO (MADD0115), 15.3m at 12.3% TREO (MADD0114), and 10.5m at 14.3% TREO (MADD0120). These intercepts verified the continuity of a major, high-grade REE-Nb-Sc-Ta-U cumulate horizon that extends along the length of the Monte Alto deposit. This REE-Nb-Sc-Ta-U cumulate horizon extends to the south-west to the previously reported hole MADD0099, which returned an exceptional ultra-high-grade intercept of 47.1m downhole at 19.6% TREO.

Further to the southwest, the REE-Nb-Sc-Ta-U cumulate zone was successfully extended by an extra 200m down-plunge where the deposit remains open. Ultra-high-grades of rare earths were recorded in drill holes MADD0106 (14m at 21.3% TREO), MADD0116 (8m at 15.2% TREO), and MADD0139 (15.7m at 15.8% TREO).

The results of these new drill holes also define near-continuous horizons of cumulate mineralisation that extend from outcropping mineralisation in the northwest of Monte Alto (where previously reported ultra-high-grade boulder samples averaged 32.7% TREO to ~550m down-plunge to the southeast. This cumulate mineralisation now extends ~250m below surface and remains open at depth.

The southward projection of the cumulate horizon bridges an existing exploration gap between the southern and northern parts of the Monte Alto deposit. The combined drill-tested strike length of the cumulate zone at the Monte Alto deposit measures ~700m, extending from the recently discovered near-surface ultra-high-grade zone of 13m at 15.5% TREO (including 6.9m at 25.7%, MADD0138) at the northern end of the deposit, to a mineralised zone of 5.9m at 9.3% TREO (MADD0026) southwestward. Cumulate REE-Nb-Sc-Ta-U mineralisation remains open to the north and south of these recent discoveries, highlighting significant potential for the Monte Alto deposit to increase in size along strike.

Results from drill hole MADD0138, located at the northern edge of the deposit, underscores the potential for a continuous horizon of mineralisation that extends an additional ~350m northward towards drill hole MADD0039.

Although a modest intercept compared to other stellar Monte Alto results, MADD0039 suggests that the broad REE-Nb-Sc-Ta-U cumulate zone may extend over at least ~1 km of strike within the Monte Alto project area.

*To view the full release, please visit:
<https://abnnewswire.net/Ink/23MGNQEY>

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.

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