The Carbonatite Advantage: Appia Reports 300 Metres of Rare Earth Mineralization at 2.55% TREO in Brazil

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There are rare earth projects, and then there are carbonatites.

That distinction matters.

Earlier this morning, Appia Rare Earths & Uranium Corp. (CSE: API | OTCQB: APAAF | FWB: A0I0) reported diamond drilling results from the Ultra Hard Rock target in Goiás, Brazil – a carbonatite-hosted system where 13 holes returned long, continuous intervals of Total Rare Earth Oxide (TREO) beginning at surface. One headline intercept: 300 metres grading 2.55% TREO, including 1.7 metres at 14.27% TREO.

For seasoned rare earth investors, the more important word in that sentence is not “14.27%.”

It is “carbonatite.”

Why Carbonatites Matter

Carbonatites are unusual igneous intrusions composed predominantly of carbonate minerals. In the rare earth world, they are significant because they host many of the largest and most economically viable rare earth deposits ever developed.

Unlike many sedimentary or lateritic systems, carbonatites are primary magmatic sources of rare earth elements (REEs). They are the plumbing systems through which the Earth concentrates and

upgrades these elements in the first place. When mineralization is hosted within a carbonatite body, investors are not looking at secondary dispersion — they are looking at source.

That distinction affects scale, grade continuity, metallurgy, and ultimately, mine design.

In Goiás, drilling at the Ultra Hard Rock target intersected up to 300 metres of carbonatitic intrusion, with TREO grades beginning at surface. Hole UNA-DDH-015 returned:

- 300 m at 2.55% TREO
- 97 m at 4.52% TREO
- 6 m at 13.30% TREO
- 1.7 m at 14.27% TREO

These are not narrow vein hits. They are broad, continuous intercepts consistent with a substantial intrusive body.

Carbonatite-hosted systems often exhibit predictable geometry. Once the body is outlined, expansion drilling can delineate volume rather than chase isolated lenses. Appia reports that mineralization remains open at depth and reappears to the northeast, suggesting additional expansion potential.

Magnet Rare Earths: The Strategic Subset

The release also highlights Magnet Rare Earth Oxides (MREO) — defined here as neodymium (Nd), praseodymium (Pr), terbium (Tb), and dysprosium (Dy). These are the elements that underpin permanent magnet supply chains used in electric vehicles, wind turbines, robotics, and defense applications.

MREO/TREO ratios in the reported holes range roughly between 14% and 20%. That proportion is not incidental. It provides early insight into potential revenue weighting, since magnet rare earths command structurally higher value than light rare earths like lanthanum and cerium.

Equally notable: uranium and thorium averages are reported at 7.46 ppm and 66.48 ppm, respectively – comparatively low levels that may reduce permitting and processing complications, depending on final metallurgical flowsheets.

Hard Rock vs. Ionic Clay

The Goiás property hosts two mineralization styles: the hard rock carbonatite and an ionic adsorption clay (IAC) system associated with weathered granite. While ionic clays have drawn attention globally for their ease of leaching, carbonatites represent the foundational source from which many of these weathered systems derive.

From a geological standpoint, owning exposure to the primary intrusive source adds a different layer of leverage. Carbonatites can support long-life operations if tonnage proves sufficient, and they often host multiple rare earth-bearing minerals within the same system.

Appia holds a 25% interest in the Ultra Hard Rock and Ultra IAC projects, covering 42,932 hectares in Goiás. Under the earn-in structure, Ultra Rare Earth Inc. is obligated to exchange Appia's project interest for a 25% equity stake in Ultra upon completion of key technical milestones – namely, a prefeasibility study on the IAC project and a mineral resource estimate on the Hard Rock target.

In practical terms, the current drilling is not just

exploration. It is value-definition toward a resource.

The Structural Advantage

Rare earth investing is often framed around grade headlines. But grade alone does not determine viability.

Geometry matters. Continuity matters. Metallurgy matters. Source geology matters.

Carbonatites offer structural advantages because they are coherent intrusive systems. When drilling outlines 300-metre intervals from surface, it speaks to volume potential and simplified open-pit scenarios, assuming economic parameters hold.

The reported assays were processed through ALS laboratories using lithium borate fusion and ICP-MS analysis, with internal QA/QC protocols including blanks, duplicates, and certified reference materials. Thirteen additional drill holes remain pending.

For now, the most significant takeaway is not the 1.7 metres at 14.27% TREO — although that interval will command attention.

It is that the mineralization sits within a defined carbonatite body, delineated to depth, open laterally, and showing continuity across multiple holes.

In rare earth geology, source matters.

And carbonatite is source.