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Rainbow Rare Earths Limited
 ("Rainbow" or "the Company")
 LSE: RBW

Updated Bulk Density Calculations increase Phalaborwa Resource tonnage by ca. 16%

- Bulk density estimate for the Phalaborwa Resource has been confirmed by a drilling campaign to increase with depth
- This has resulted in a significant increase of ca. 16% in the Resource tonnes from 30.4 Mt to 35.1 Mt, extending the operating life by over two years

News Release

Rainbow Rare Earths is pleased to announce that updated bulk density estimates for the Phalaborwa Resource has confirmed a ca. 16% increase in overall expected tonnages. This should lead to an increase in the project life from the current 14 years in the Preliminary Economic Assessment by over two years.

As previously announced, Rainbow's technical team has been focused on evaluation of the density at depth of the two phosphogypsum stacks that make up the Resource at the Phalaborwa rare earth development project in South Africa.

To this end, the Company has been advised by US-based global gypsum experts Ardaman and Associates, Inc., a Tetra Tech Company ("Ardaman"), who have been tasked with the design of the new gypsum stack for the ongoing Definitive Feasibility Study at Phalaborwa. Ardaman gave Rainbow a revised drilling technique for the current gypsum stacks based on their experience of over 100 gypsum stacks worldwide, and it was expected that the in-situ dry density for the stacks would increase at depth compared to the conservative bulk density estimate of 1.2 t/m³ used in the Phalaborwa Mineral Resource Estimate.

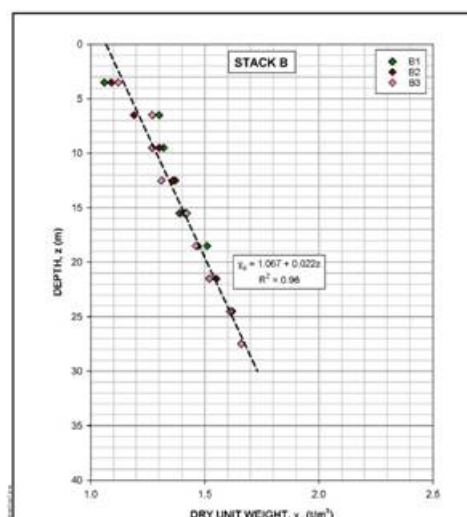
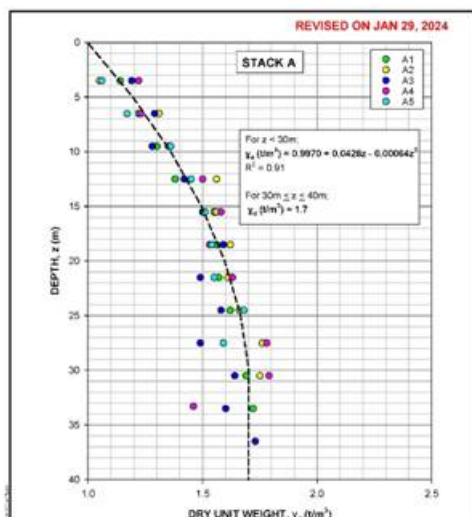
A drilling campaign was carried out at Phalaborwa in H2 FY 2023 to provide representative samples from the stacks and samples from this campaign were submitted to Ardaman for comprehensive bulk density testing at their laboratory in Orlando, USA. Ardaman has provided the results of these tests, which reveal a clear correlation of higher bulk density with increasing depth as shown in the graphics at the end of this announcement.

The increased bulk density reported by Ardaman has resulted in a significant increase of ca. 16% in the Resource tonnes from 30.4 Mt to 35.1 Mt, extending the operating life by over two years.

Samples from the drill campaign will now be assayed for grade by SGS in South Africa in order to allow for an updated JORC compliant Mineral Resource Estimate. This work is also expected to upgrade the Inferred Resources to the Measured and Indicated categories.

George Bennett, CEO of Rainbow, commented: "The improvement in the Resource tonnage at Phalaborwa is extremely positive. While we await the assay results and the JORC compliant Resource classification upgrade, it is clear that the growth in tonnages will lead to an increase in the life of the project by over two years in due course."

Bulk Density Calculations for Phalaborwa Stack A and Stack B



DRY UNIT WEIGHT VS. DEPTH FOR UNDISTURBED GYPSUM SAMPLES		Date
Figure No.	6	31/11/2024

DRY UNIT WEIGHT VS. DEPTH FOR UNDISTURBED GYPSUM SAMPLES		Date
Figure No.	8	31/11/2024

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Notes to Editors:

About Rainbow:

Rainbow Rare Earths aims to be a forerunner in the establishment of an independent and ethical supply chain of the rare earth elements that are driving the green energy transition. It is doing this successfully via the identification and development of secondary rare earth deposits that can be brought into production quicker and at a lower cost than traditional hard rock mining projects, with a focus on the permanent magnet rare earth elements neodymium and praseodymium, dysprosium and terbium.

The Company is focused on the development of the Phalaborwa Rare Earths Project in South Africa and the earlier stage Uberaba Project in Brazil. Both projects entail the recovery of rare earths from phosphogypsum stacks that occur as the by-product of phosphoric acid production, with the original source rock for both deposits being a hardrock carbonatite. Rainbow intends to use a proprietary separation technique developed by and in conjunction with its partner K-Technologies, Inc., which simplifies the process of producing separated rare earth oxides (versus traditional solvent extraction), leading to cost and environmental benefits.

The Phalaborwa Preliminary Economic Assessment has confirmed strong base line economics for the project, which has a base case NPV₁₀ of US\$627 million^[1], an average EBITDA operating margin of 75% and a payback period of < two years. Pilot plant operations commenced in 2023, with the project expected to reach commercial production in 2026, just five years after work began on the project by Rainbow.

More information is available at www.rainbowrareearths.com.

[1] Net present value using a 10% forward discount rate

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