

25 September 2024

ALTONA RARE EARTHS PLC

("Altona" or "the Company")

OPERATIONAL UPDATE

Altona (LSE: REE), a resource exploration and development company focused on critical raw materials in Africa, is pleased to provide an operational update on its Monte Muambe Rare Earths and fluorspar project in Mozambique and its Kambopo South copper project in Zambia.

Highlights

- Initial flotation rougher tests results received for Monte Muambe. Test F5 shows a high rare earths recovery (69.3%) and good selectivity of rare earth minerals vs fluorite. Results provide a positive pathway for further optimisation of flotation parameters.
- Review of the Monte Muambe project's potential for fluorspar production initiated, including the possible short-term production of met grade fluorspar from low-tonnage high-grade hydrothermal fluorspar veins.
- These fluorspar veins have legacy drilling intercepts of up to 10m at 54.77% CaF_2 ^[i] and trenching intercepts of up to 16m at 71% CaF_2 ^[ii].
- Presence of sediment-hosted copper mineralisation 4 km East of the Kabompo South licence visually confirmed by the Company's CEO during a recent site visit.
- Geophysical consultant engaged to reprocess and review legacy geophysical data as well as the diamond potential for Kabompo South.

Monte Muambe - Metallurgy

Mineralogy and partial flotation rougher tests results have been received from SGS Lakefields. Froth flotation is a standard separation method for minerals from milled ore, and rougher flotation is the first stage of concentration.

Mineralogical testing confirmed that rare earths are mostly contained in rare earths fluoro-carbonates (bastnaesite, parasite and synchisite) (71 wt%), monazite (18%), and other rare earths minerals (11%).

A range of flotation parameters and reagents were tested. The best results were obtained with test F5, which showed a good selectivity of rare earths minerals vs fluorspar, and a recovery of 69.3% for rare earths. Results obtained so far provide a clear pathway for further optimisation of flotation parameters, which will take place over the next weeks.

Flotation parameters are particularly important at Monte Muambe as an increase of the rare earths concentrate grade considered in the scoping study is expected to significantly reduce the capex and opex of the downstream hydrometallurgy process.

Monte Muambe - Fluorspar production potential re-assessment

Since 2021 the Company's exploration work at Monte Muambe has been focused on its rare earths deposits. Monte Muambe, however, was originally known for its fluorspar potential, and legacy mineral exploration activities were largely focused on this mineral. Considering the currently depressed prices of

exploration activities were largely focused on this mineral. Considering the currently depressed prices of rare earths, the Company considers that re-assessing the economic potential of associated minerals is a prudent course of action.

Fluorspar is encountered in two forms at Monte Muambe: as disseminations in rare earth ore, and as hydrothermal veins lining the contact between carbonatites and fenites.

Assays of drilling samples obtained by Altona since 2021 have shown the ubiquitous presence of disseminated fluorspar in rare earths ore at Target 1 and Target 4, with a grade averaging 13.2% CaF₂ for samples having over 1.5% TREO, and reaching as high as 70.45% CaF₂. The representative rare earths ore sample sent to SGS Lakefields for metallurgical testing contains 16.8 wt% CaF₂. Besides the production of a rare earths concentrate, the objective of on-going metallurgical test work at SGS Lakefields is also to assess the possible separation of a fluorspar concentrate by-product.

Legacy exploration work in the western part of the Monte Muambe carbonatite intrusion resulted in the definition of a historical JORC compliant inferred mineral resource of 1.6 million tonnes at 19% CaF₂. This estimate covers both disseminated fluorite and hydrothermal fluorite. A review of legacy drilling and trenching data shows that hydrothermal fluorite veins have a thickness ranging from 10 to 20m, with grade of up to over 70% CaF₂.

Fluorspar is an essential mineral used in many industries for its intrinsic properties, and as the main source of the element fluorine. Fluorspar is identified by both the United States and the European Union as a critical mineral. The main standard grades of fluorspar are acid grade (>97% CaF₂), which is used to produce hydrofluoric acid as a base for the fluoride chemical industry, ceramic grade (85-95% CaF₂) and metallurgical grade (60-85% CaF₂), which is mainly used as a flux for the metallurgical industry. Fluorspar is crucial to the production of lithium batteries, and manufacturing an electric vehicle requires about 45 kg of fluorspar. Hydrofluoric acid is also an essential input for the production of photovoltaic panels.

Since 2021, fluorspar prices have been steadily increasing, driven by a supply gap and dwindling reserves in China. After reaching record prices in the third quarter of 2023, fluorspar prices currently stand at about USD 480 per ton, 40% higher than the average for 2021. Analysts forecast a chronic demand-supply gap, with the US Department of Energy expecting demand to exceed supply by 40-70% by 2035^[iii].

For the above reasons, the Company has decided to undertake an in-depth review of Monte Muambe's potential for fluorspar production. Beside on-going metallurgical test work, the Company will review legacy data, collect new samples and data on site in October 2024, and prepare a conceptual study with a view of assessing the possible short-term production of met grade fluorspar from known high-grade hydrothermal fluorspar veins of the Fluorite Zone.

Kabompo South copper project

The Company's CEO Cedric Simonet undertook a site visit to large scale exploration licence 21403-LEL-HQ ("Kabompo South licence") in September 2024. The visit confirmed satisfactory access conditions, as well as the general geological context. Mr Simonet was able to observe sediment-hosted copper mineralisation having been recently mined at the Kamweji occurrence, just 4 km to the East of the Kabompo South licence. Legacy drilling data on this occurrence include 7.9m (TT) at 1.84% Cu and 16.6m (TT) at 1.71% Cu, contained mostly in chalcocite^[iv]. The Katangan sedimentary formations outcropping at Kamweji extend to the West into the Kabompo South licence.

The Company has engaged the services of Earthmaps Consulting, a Namibia based geophysical services company headed by industry veteran Klaus-Peter Knupp to reprocess and review the project's legacy geophysical datasets, which include a high-resolution ground magnetometer survey covering about 50% of the licence.

Separately, the Company is also reviewing the Kabompo South licence's potential for diamonds, based on legacy reports of the presence of diamonds in the Dongwe river, including inside the licence area.

Cedric Simonet, CEO of Altona, commented: *"Metallurgy is the most challenging part of rare earths mining projects. Over the past months we have tremendously increased our understanding of the mineralogy and metallurgy of Monte Muambe, and I am very pleased with the test work's progress. While more work is necessary, and will continue over the next weeks, results received so far show a clear path towards a viable beneficiation process and the production of a rare earths concentrate."*

"The possible short-term production of fluorspar, another critical mineral, from Monte Muambe is a very exciting possibility and challenge, which fits neatly in the Company's strategy to diversify its portfolio of commodities and realise the value from its assets."

This announcement contains information which, prior to its disclosure, was inside information as stipulated under Regulation 11 of the Market Abuse (Amendment) (EU Exit) Regulations 2019/310 (as amended).

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About Altona Rare Earths Plc

Altona is a resource exploration and development company focused on critical raw materials in Africa. The Company is listed on the Main Market of the London Stock Exchange with the ticker "REE". Rare Earths are a group of 17 chemical elements, many of which are critical to the World's ongoing transition from carbon-based to renewable energies, and to the defence and communication sectors.

The Company is currently developing Monte Muambe, its flagship Magnet Rare Earths Project, located in Northwest Mozambique. The Project was acquired in June 2021, and the Company has so far drilled over 7,800m, and defined a maiden JORC Mineral Resource Estimate of 13.6 million tons at 2.42% TREO. A Competent Person Report including the Scoping Study for Monte Muambe was published on 18 October 2023. The Project is now at Prefeasibility Study stage, with a focus on metallurgical testing and process.

Altona is presently diversifying its portfolio by acquiring a limited number of critical raw material projects to complement Monte Muambe. The acquisition of the Kabompo South copper project in Zambia and of the Sesana copper-silver project in Botswana represents the first steps towards the implementation of this expanded strategy.

^[i] Legacy hole MURC011, 22 to 32m

^[ii] Globe Metals & Mining, ASX Announcement of 30 April 2012

^[iii] <https://www.energy.gov/sites/default/files/2023-05/2023-critical-materials-assessment.pdf>

^[iv] Kihn CM, Wheeler JC, 1973 - Kamweji Exploration area - EL 31/1 - Final Report. Roan Consolidated Mines Ltd.

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