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**THIS ANNOUNCEMENT CONTAINS INSIDE INFORMATION**

**Pensana Plc**

("Pensana" or the "Company")

**Update on the results from the Coola exploration programme**

Pensana Plc is pleased to announce the following update on the results from the exploration programme undertaken on the Coola licence, located 16 kilometres north of the Company's state-of-the-art Longonjo rare earth project in Angola.

Having identified highly anomalous technology metals including rare earths, scandium and fluorite in soils surrounding the 7 500km<sup>2</sup> Coola project in 2020, field exploration activities resumed in Q3 2021, and a range of very encouraging results has been reported from the Coola carbonatite and the recently identified Sulima West.

**Highlights**

- Twenty-two samples from a 4.2 km diameter ring structure at Sulima West, located 50 km from the Coola carbonatite, were all mineralised and returned values of between 0.6% and 10.6% TREO, averaging 4.2% TREO (NdPr average = 0.86%). The iron content in these rocks averaged 28% Fe and the Manganese averaged 5.6% Mn.
- Sulima West has been intersected by ten large exploration trenches up to 90 metres in length, coinciding with a large radiometric anomaly. The trenches are understood to have been excavated during 1960-61 but have not been followed up with modern exploration methods.
- Rock chip sampling of the 0.9 km diameter Coola carbonatite ring dyke returned values of between 0.6% and 4.9% TREO (average 2.6%). Soil geochemistry over the covered carbonatite returned values of between 0.37% and 13.18% TREO (average 3.21%).
- Mineralogical studies of the Coola carbonatite identified the rare earth mineral to be bastnäsite, which occurs as discrete veins, veinlets, and segregations within the carbonatite.
- Soil geochemistry over the fluorite-rich zone at Coola identified an area of 13 000 m<sup>2</sup> with average fluorite values of 17% (Calcium Fluoride) CaF<sub>2</sub>.

**Exploration Manager, Grant Hayward, commented:**

*"We are extremely encouraged by the initial results from both Coola and Sulima West and are eager for the field season to commence to follow up on these exciting targets. Whilst it is early stage, these are very large structures reporting grades which are in some cases higher than those for Longonjo.*

*There are several radiometric anomalies and ring structures still to be evaluated, and we very much look forward to further exploration in 2022 with the easing of Covid related travel restrictions."*

Exploration results include significant total rare earth oxide (TREO) values from the rock chip and soil sampling programmes completed in 2021 on Pensana's Coola prospecting license (No. 059/02/01/T) in Huambo Province, central Angola.

Field activities in Q3 2021 focused primarily on the Coola carbonatite, which showed encouraging rare earth element (REE) scandium (Sc) and fluorite mineralisation, following the initial 2020 sampling programme. Subsequent follow-up work thereon included detailed geological mapping, soil and rock chip sampling, and augering of the central soil covered diatreme.

During this period, a visit was conducted at the Sulima West target, a radiometric anomaly located approximately 50km northwest of Coola, where a series of historic trenches and pits had been identified. Initial sampling of some of these trenches was completed during this visit.

Analytical results from these programmes have been received and the results of the work completed to date is summarised below:

**Main findings at the Coola Carbonatite include:**

- Geological mapping of the 0.9 km diameter Coola intrusive centre identified three main lithologies, namely a carbonatite ring dyke, fenite breccias with carbonate matrix, and a strongly oxidised and hydrated barite-rich rock.
- Rock chip sampling of the 20-50 m wide portions of the carbonatite ring dyke returned values of between 0.6% and 4.9% TREO (average 2.6%). Soil geochemistry over areas of soil covered carbonatite returned values of between 0.37% and 13.18% TREO (average 3.21%).
- Rock chip sampling of the breccia and oxidised barite-rich rock generally showed TREO grades of <1.0% TREO. Soil geochemistry over areas of soil covered breccia returned values of between 0.44% and 3.93% TREO (average 1.37%). Soil geochemistry over areas of soil covered oxidised and hydrated barite-rich rock returned values of between 0.28% and 8.26% TREO (average 1.84%).
- Mineralogical studies of the carbonatite identified the REE mineral to be bastnäsite, which occurs as discrete veins, veinlets, and segregations within the carbonatite.
- Scandium values of rock chip samples from all lithologies showed highest values of 67 ppm Sc. Scandium values in soil samples were highest in the breccia and oxidised and hydrated barite rich rock ranging from 30 – 220 ppm and averaging 92 ppm Sc. The scandium in the carbonatite averaged 25 ppm Sc.
- Soil geochemistry over the fluorite-rich zone at Coola identified an area of 13 000 m<sup>2</sup> with average fluorite values of 17% CaF<sub>2</sub>.
- Augering of the regolith within the central diatreme generally showed low TREO grades of 0.3-1% TREO. Geochemistry indicated that the area is underlain by oxidised and hydrated fenite lithologies.

**Main findings at the Sulima West target include:**

- Sulima West is a 4.2 km diameter ring structure with a corresponding radiometric anomaly. Inspection of the satellite imagery of this ring structure identified 10 large trenches of about

90m length located in the western segment of the structure. These trenches correspond with the highest radiometric response.

- Little information on these trenches was available from the Geological Institute of Angola, however local anecdotal information reports that the trenches were excavated between 1960 and 1961 by the *Companhia Minerais do Lubito* and a further pitting programme was completed in 1972 by unknown parties.
- The trenches extend over an area of 40 000m<sup>2</sup>, are up to 90 metres in length and up to 3 metres deep. Four pits were located with depths of up to 10 metres.
- The trenches and pits are excavated in an iron/manganese-rich laterite of unknown thickness. The precursor lithology of the laterite is unknown but may represent a deeply weathered carbonatite.
- Twenty-two samples of the Fe/Mn rich material within the trenches returned values of between 0.6% and 10.6% TREO (NdPr range = 0.11-3.07%) and averaged 4.2% TREO (NdPr average = 0.86%). Fe content in these rocks average 28% and Mn averages 5.6%.
- The REE distribution is LREE enriched and is suspected to be monazite as the highest TREO values correspond to the most anomalous phosphorous values.

**The information contained within this announcement is considered by the Company to constitute inside information as stipulated under the Market Abuse Regulations (EU) No.596/2014. Upon the publication of this announcement via a Regulatory Information Service, this inside information will be considered to be in the public domain. The person responsible for arranging for the release of this announcement on behalf of the Company is Paul Atherley, Chairman.**

**ENDS**

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## **About Pensana plc**

The electrification of motive power is the most important part of the energy transition and one of the biggest energy transitions in history. Magnet metals are central to the transition and critical to high value manufacturing applications such as electric vehicles and offshore wind turbines.

Pensana plans to establish Saltend as an independent, sustainable supplier of the key magnet metal oxides to a market which is currently dominated by China. The US\$194 million Saltend facility is being designed to produce circa 12,500 tonnes per annum of rare earth oxides, of which 4,500 tonnes will be neodymium and praseodymium (NdPr), representing circa 5% of the world market in 2025.

The Saltend facility is located within the world class Saltend Chemicals Park, a cluster of leading chemicals and renewable energy businesses at the heart of the UK's energy estuary, and host to a range of companies including BP Petrochemicals technology, INEOS, Air Products, Triton Power, Nippon Gohsei and Tricoya.

Pensana's plug and play facility will create over 500 jobs during construction and over 125 direct jobs once in production. It will be the first major separation facility to be established in over a decade and will become one of only three major producers located outside China.

Initial feedstock will be shipped as a clean, high purity mixed rare earth sulphate (MRES) from the Company's Longonjo low impact operations in Angola. A state-of-the-art concentrator and MRES processing plant are being designed by Wood to the highest international standards. They will be powered by minimal carbon hydro-electric power and connected to the Port of Lobito by the recently upgraded Benguela railway line.

Pensana is of the view that provenance of critical rare earth materials supply, life cycle analysis and GHG Scope 1, 2 and 3 emissions will all become significant factors in supply chains for major customers. The Company intends to offer customers an independently and sustainably sourced supply of the metal oxides and carbonates of increasing importance to a range of applications central to the energy transition, industrial, medical, military and communications sectors.

For many miners around the world who are looking to access the European and US supply chains, it is becoming increasingly clear that the proposed EU and possible UK carbon border taxation would mean that it is no longer acceptable for manufacturers to source material extracted or processed unsustainably.

Pensana is aiming to establish Saltend as an attractive alternative to mining houses who may otherwise be limited to selling their products to China, having designed the facility to be easily adapted to cater for a range of rare earth feedstocks.

[www.pensana.co.uk](http://www.pensana.co.uk)