

**Pensana Plc  
("Pensana" or the "Company")**

**Update on Financing and Project Development**

Further to the release of the Interim Results on 31 March 2023, the Company provides the following update on Financing and Project Development.

As reported the Company is at an advanced stage in its financing of both the Saltend rare earth separation facility in the UK and the Longonjo mine in Angola. The total capital requirement is US\$550 million. Both projects are fully permitted, with FEED studies complete and early works programmes well underway on each site led by highly experienced project delivery teams.

The Company has been engaged with three parties to provide the required funding; namely the previously announced US\$175 million bond issue being arranged by ABG Sundal Collier, for which the Company has received green bond accreditation from CICERO rating agency, a \$220 million strategic equity investor which is before its investment committee and a \$150 million debt package being arranged by a South African bank.

**Project Development Timeline**

The funds are required to be put in place between now and the end of the calendar year in order to meet the proposed construction and commissioning schedule with first production targeted in 2025.

**Offtake Arrangements**

The Company has established a direct relationship with the key Japanese magnet manufacturers and has entered into an MOU for 25% of Saltend's annual production. It has ongoing discussions with Japanese trading houses with direct access to the Japanese automotive sector.

Terms have been agreed with a major European wind turbine OEM and the Company has been shortlisted to supply major US and European automotive OEMs. Offtake discussions with several automotive component manufacturers in the US and Europe are underway.

The Company is working closely with its customers to establish an independent and sustainable supply chain providing them with a cost effective, fully transparent and an ultra-low embedded carbon range of rare earth products.

At a time when there is growing public concern about the provenance of rare earth extraction and the resilience of supply chains in general, the Company's ability to demonstrate, in particular to consumer facing automotive OEMs, that it can provide an independently validated sustainable product from the UK is an increasingly attractive point of differentiation.

**Technical Due Diligence - Longonjo and Saltend**

The technical due diligence undertaken by independent third parties on behalf of the financing parties has highlighted that the state-of-the-art Longonjo mine is one of the largest and highest grade undeveloped rare earth mines in the world.

The near surface, deeply weathered orebody, has an average depth of 35 metres, with a mine grade of 3.72% TREO and NdPr 0.78% and over the first five years is anticipated to produce around 46,000 tonnes per annum of mixed rare earth sulphate for export to Saltend.

The Longonjo mine is linked to the Atlantic Port of Lobito via the Benguela rail line which in a recent joint announcement by the Governments of Angola, Zambia and DRC has been designated as the Lobito Trade Corridor and concessioned to Portuguese infrastructure group Mota-Engil for a \$450 million upgrade.

Exploration results from the Sulima West target on the Coola exploration licence located 40 kilometres north of Longonjo reported rare earth grades of up to 9.7% TREO averaging 3.4% TREO over 68 metres in surface trenches highlighting the potential to extend the 20-year mine life at Longonjo.

Saltend will initially produce around 12,500 tonnes of TREO including 4,500 tonnes of NdPr oxide per year making it one of the top three producers in the world outside China and has capacity for expansion to meet the growing demand for magnet metal rare earths from electric vehicles and offshore wind.

### **Independent Rare Earth Processing Hub**

Located in the Saltend Chemical Park in the Humber Freeport, Saltend will be the world's first rare earth processing hub, capable of processing third party feedstock imported from around the world. A number of discussions are underway with potential third-party feedstock suppliers for access to uncommitted processing capacity at Saltend.

The Company has partnered with the adjacent Yorkshire Energy Park for a private wire connection to offshore wind battery storage under which it will have access to 4 MW rising to 10 MW of low carbon electricity for ten years and together with Longonjo's ten-year low-cost supply of hydro-electric power the Company is able to demonstrate that it can supply ultra-low embedded carbon products from mine to customer.

A direct example of this is Pensana's partnership with Polestar to create the first truly climate-neutral car by 2030. The scope of the Polestar 0 project is to identify and eliminate all greenhouse gas emissions from the extraction of raw materials to when the car is delivered to the customer and onwards to the end of vehicle life.

### **Hydro-electric Power at Longonjo and Low-cost Electricity in the UK**

The company has entered into a ten-year contract for electricity at prices around US\$ 2 cents per kwh to power the Longonjo mine supplied from the hydroelectrical power grid.

For Saltend the UK Government's Business Industry supercharger program will exempt firms from certain costs arising from renewable energy obligations such as the Feed in Tariff, Contracts for Difference and the Renewables Obligation, as well as GB Capacity Market costs in addition to lower network charges providing power at a competitive rate to other major economies around the world.

This future low-cost supply of low-carbon electricity may power the Saltend separation facility expansion plans including the conversion of NdPr Oxide into magnet metal, this use of offshore wind to produce ultra-low carbon magnet metal will be a significant step to further decarbonize the rare earth supply chain.

The Company and Equinor are studying the use of low carbon hydrogen produced from Equinor's flagship 600MW low-carbon hydrogen production plant with carbon capture, Hydrogen to Humber (H2H) at Saltend, to recycle the seven tonnes of rare earth permanent magnets in the nacelles of wind turbines currently being installed in the 3.6GW Dogger Bank windfarm.

The Company is committed to responsible and sustainable production and has implemented a range of environmental and social initiatives to support the communities in which it operates.

## Financial and Production Summary

The key material assumptions and outcomes of the results of the study are set out below:

		UNIT
<b>PRODUCTION ASSUMPTIONS</b>		
Life of Mine (based on Proven and Probable Reserves)	20	years
Average grade, TREO (Year 1-5)	3.73	%
Average grade, TREO (Year 6-20)	2.10	%
Average grade, NdPr (Year 1-5)	0.79	%
Average grade, NdPr (Year 6-20)	0.46	%
Average strip ratio (LOM)	0.21	waste:feed
Design ROM throughput	1.5	mtpa <sub>dry</sub>
Design concentrator production	110,000	tpa <sub>dry</sub>
Design MRES Refinery production	41,100	tpa <sub>dry</sub>
Design Saltend Refinery capacity	46,600	tpa <sub>dry</sub>
<b>Annual Production of Rare Earth Oxides (TREO)</b>	12,500	tpa
<b>Annual Production NdPr Oxides<sup>1</sup></b> (included in TREO)	4,500	tpa
Average concentrator recovery (NdPr)	41	%
Average MRES recovery (NdPr)	72	%
Average SX recovery (NdPr)	93	%
<b>OPERATING COSTS<sup>2</sup></b>		
Average annual operating cost	198	US\$ million
Average operating (total rare earth oxide)	20	US\$/kg
<b>CAPITAL COSTS</b>		
Saltend Refinery	197	US\$ million
Longonjo Mine Infrastructure	49	US\$ million
Longonjo Concentrator Plant	123	US\$ million
Longonjo MRES Refinery	133	US\$ million
<b>Total Capital Pre-production</b>	502	US\$ million
Average annual sustaining capital (year 1 - 5)	7	US\$ million
Average annual sustaining capital (from year 6)	19	US\$ million
<b>FINANCIAL METRICS<sup>3</sup></b>		
<b>Revenue</b> (average p.a. based on first five years steady state production)	989	US\$ million
<b>EBITDA</b> (average p.a. based on first five years steady state production)	631	US\$ million
<b>NPV<sub>8</sub></b> (un-leveraged, post-tax) <sup>4</sup>	3.5	US\$ billion
<b>IRR</b>	60	%
<b>Payback from first production</b>	1.5	years

Source: Company information. Management estimates, inclusive of Longonjo and Saltend operations, are based on underlying independent studies undertaken by independent consultants.

Notes:

1. Targeted annual production assumes sourcing third party MREDS / MREC feed to be processed at Saltend as an alternative to ramping Longonjo up
2. Based on cost and production excluding 3rd party feedstock. Total cost of US\$198 million per annum is split US\$127 million for Longonjo and \$71 million for Saltend.
3. Assumes third party feed to be purchased at same cost per tonnes of MRES when compared to Longonjo.
4. NPV is calculated at an operational level pre-financing which is anticipated to be a blend of equity and long-term debt financing. Revenue is based on NdPr oxide prices according to Adamas Intelligence base forecast (Q2 2022). NdPr oxide prices starting at \$172/kg in 2023, escalating at CAGR of 3.1% p.a. to 2035, flat real thereafter.

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**For further information, please contact:**

**Shareholder/analyst enquiries:**

**Pensana Plc**

Paul Atherley, Chairman

Tim George, Chief Executive Officer

Rob Kaplan, Chief Financial Officer

George Zacharias, Group Company Secretary

[IR@pensana.co.uk](mailto:IR@pensana.co.uk)

**Media enquiries:**

**FGS Global:**

Gordon Simpson / Richard Crowley

[Pensana-LON@fgsglobal.com](mailto:Pensana-LON@fgsglobal.com)

## About Pensana Plc

The electrification of motive power is the most important part of the energy transition if we are to tackle climate change and one of the biggest energy transitions in history. Magnet metal rare earths are central to that transition, forming a critical part of the technology for efficient electric vehicle motors and offshore wind turbines.

Pensana plans to establish its Saltend processing hub as an independent and sustainable supplier of the key rare earth magnet metal oxides to a market which is currently dominated by China.

The US\$195 million Saltend facility is being designed to produce circa 12,500 tonnes per annum of rare earth products, of which 4,500 tonnes will be neodymium and praseodymium oxide (NdPrO), representing over 5% of the world market in 2025.

Pensana's plug-and-play facility is located within the world-class Saltend Chemicals Park, a cluster of leading chemicals and renewable energy businesses in the Humber Freeport and will create over 500 jobs during construction and over 125 direct jobs once in production.

Powered by low-carbon offshore wind, it will be the first major separation facility to be established in over a decade and will become one of the few major producers located outside China.

Feedstock will be shipped as a clean, high purity mixed rare earth sulphate (MRES) from the Company's Longonjo low-impact operations in Angola. The mine's state-of-the-art concentrator and proprietary MRES processing plant are designed by Wood to the highest international standards.

The operations will be powered by renewable energy from hydroelectric power and connected to the Port of Lobito by the recently upgraded Benguela railway line.

Pensana believes 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 addressing the energy transition.

# PENSANA<sup>Plc</sup>

Pensana is also aiming to establish Saltend as an attractive alternative to mining houses that 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)