

Bringing online the world's first major Rare Earth Mine in over a decade

Overview

- The Longonjo NdPr Project in Angola is centred on a 1.5km blanket of mineralization situated within a 3,670km² approved mining license area. The Company intends to develop it into one of the world's major sources of neodymium and praseodymium, which are the critical rare earth metals with applications in modern energy technologies. The Company is targeting release of a bankable feasibility study in mid-October to be followed by main financing of the Project whereafter the Company is looking to commence main construction of the project in the first quarter of 2021 and achieve first production of concentrate in mid-2022.
- On 4 May 2020, the Group further announced that it had been granted a new prospection licence over a 7,456 square kilometres area located 16 kilometres from the Longonjo Project (the "**Coola Project**"). There are two known carbonatites in the licence area with reported NdPr rare earth mineralisation (as per academic studies) at this site with initial exploration work having recently commenced.

Attractive PFS Economics

- Upfront mine development capital cost of circa US\$200m, significant capital infrastructure already in place with access to \$2billion railway line that runs through to \$1.8billion Port of Lobito catering for ease of product export.
- 14-month construction and commissioning period.
- Annual production 60ktpa concentrate containing 4.6kt NdPr and 20.7kt TREO with a phase 2 expansion after three years.
- Access to low carbon power from Luaca hydro-electric dam, as well as power infrastructure and rail is key to low capital and operating costs.
- Drilling results show potential for extension of mineralization which could extend the open pit operation. Resources remain open along strike.
- Additional exploration upside with grant of additional exploration licence for 7,456km² Coola Project located 16km from Longonjo and containing two known carbonatites with reported NdPr rare earth mineralization.
- Bankable Feasibility underway and updated Mineral Resource estimate due in September
- DFS underway.

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Rare Earth Market

- The US\$16 trillion post COVID stimulus programmes are transforming the renewable energy sector, creating unprecedented demand for critical rare earth magnet metals. Electrification of motive power is seeing the replacement of fossil fuels in a wide range of major industries from air, sea and land transportation; to clean power generation and as the world emerges from lockdown evidence of this step change is becoming more prevalent daily. Germany recently announced the biggest ever financial support for the German auto industry with €130 billion allocated to 70,000 charging stations and doubling the vehicle subsidy to €6,000 targeting annual production of 10 million vehicles by 2030 and the UK, France and other EU countries have been quick to follow suit.
- Industry specialist Adamas Intelligence has highlighted that EVs will drive a 350% increase in magnet metal demand over the next five years leading to shortages in NdPr oxide supply however even more importantly that the demand from offshore wind over the next 20 years is forecast to grow at 1,500%, overwhelming the demand from EVs. Longonjo aims to be the first rare earth mine to be developed since 2012 outside China. High ESG Standards

High ESG Standards

- Hydro-electric dam to supply low carbon power and low impact tailings design.
- Investment designed to meet Equator Principles and Scope 1, 2 and 3 under the Green House Gas Proposal.
- Intention to create local jobs and provide training programmes.

Reserves and Resources

	Tonnes (Mt)	REO (%)	NdPr (%)	REO (mt)	NdPr (mt)
Longonjo					
Indicated	60	1.9	0.4	1.1	2.3
Inferred	167	1.3	0.3	2.2	5.0
Total	226	1.5	0.3	3.3	7.4

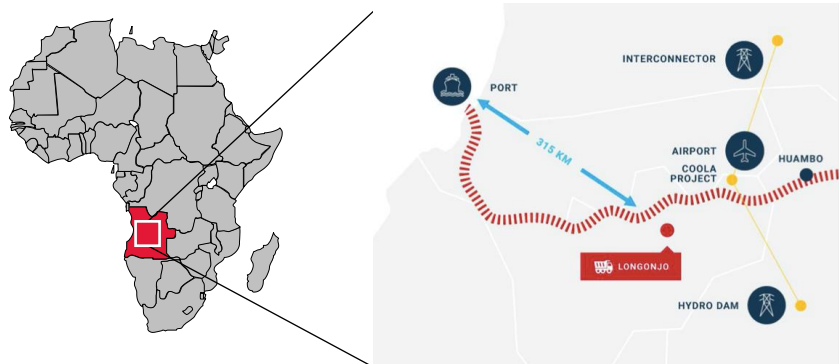
Pensana Rare Earths Plc

(LSE:PRE)
(ASX:PM8)



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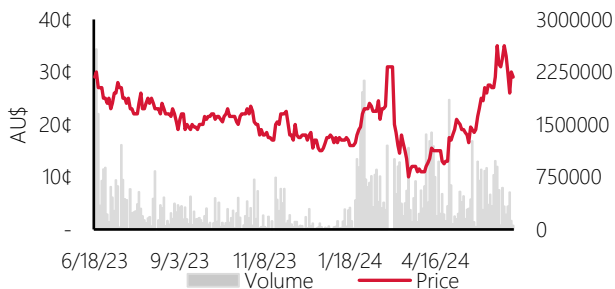
Sites



Financial Performance*

Values in US\$m unless otherwise stated

Share Price (AU\$)	0.70
Share Price (US\$)	0.5
Shares Outstanding (m)	189
FDSO	-
Market Cap	100.0
Debt	0
Cash & Equivalents	2.5
Enterprise Value	102.5



Key Shareholders & Management

Firm	Stake	Individual	Position
QG Africa Mining L.P	17.7%	Paul Atherley	Chairman
Selection Capital	4.82%	Tim George	CEO
National Nominees	4.81%	Rob Kaplan	CFO
J.P. Morgan Nominees Australia	3.35%	David Hammond	COO
Richard Lockwood	2.7%	Paulo Nunes	Country Manager (Angola)
Citicorp Nominees (Pty) Ltd	2.7%		

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摘要

- 安哥拉的Longonjo NdPr项目以1.5公里的矿化带为中心，该区域位于3670 km²批准的采矿许可证区域内。该公司打算将其发展成为全球主要的钕和镨来源之一，它们是在现代能源技术中应用的重要稀土金属。该公司计划在10月中旬发布一项可融资的可行性研究报告，然后再为该项目提供主要资金，此后，该公司希望在2021年第一季度开始该项目的主体建设，并计划在2016年中旬首次实现精矿生产。2022年。
- 于2020年5月4日，集团进一步宣布已获得新勘探许可证，该区域面积为7,456平方公里，距Longonjo项目（“可乐项目”）16公里。许可地区有两个已知的碳酸盐岩，据报道该矿床有NdPr稀土矿化（据学术研究），最近开始了初步勘探工作。

有优势的PFS经济

- 矿山开发的前期资本成本约为2亿美元，重要的资本基础设施已经到位，可通往20亿美元的铁路线，直通至18亿美元的洛比托港，以方便产品出口。
- 14个月的建设和调试期。
- 年产60ktpa精矿，其中含4.6kt NdPr和20.7kt TREO，并在三年后进入第二阶段扩展。
- 从卢阿卡水电大坝获得低碳电力，以及电力基础设施和铁路，对于降低资本和运营成本至关重要。
- 钻探结果显示扩大矿化的潜力，这可能会延长露天开采的时间。罢工期间资源仍然开放。
- 额外的勘探上行空间，与距离Longonjo 16 km的7,456 km² Coola项目签订了额外的勘探许可证，该项目包含两个已知的碳酸盐岩，据报道具有NdPr稀土矿化作用。
- 银行可行性研究报告正在进行，最新矿产资源估算将于9月发布
- DFS正在进行中。

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稀土市场

- 16万亿美元的COVID后刺激计划正在改变可再生能源行业，从而对关键的稀土磁铁金属产生了前所未有的需求。电动化正看到航空，海运和陆路运输等众多主要行业中化石燃料的替代；清洁发电，随着世界从封锁中崛起，这一步骤的变化每天都变得越来越普遍。德国最近宣布了对德国汽车业的最大一笔财政支持，为70,000个充电站分配了1,300亿欧元，并将车辆补贴增加一倍至6,000欧元，目标是到2030年年产1000万辆汽车，英国，法国和其他欧盟国家已经实现了这一目标。快速跟风。
- 行业专家Adamas Intelligence强调指出，在未来五年内，电动汽车将推动磁铁金属需求增加350%，导致NdPr氧化物供应短缺，但更重要的是，预计未来20年来自海上风电的需求将增长1,500%，压倒了电动汽车的需求。Longonjo的目标是成为自2012年以来在中国境外开发的第一座稀土矿。高ESG标准

一流ESG标准

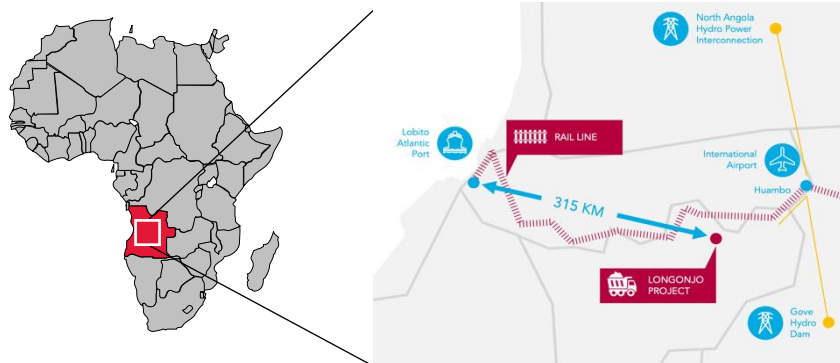
- 水力发电大坝提供低碳电力和低冲击尾矿设计。
- 该投资旨在满足温室气体提案下的赤道原则和范围1、2和3。
- 打算创造当地就业机会并提供培训计划。

储量和资源量

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稀土公司在安哥拉西部开发Longonjo钕-镨项目

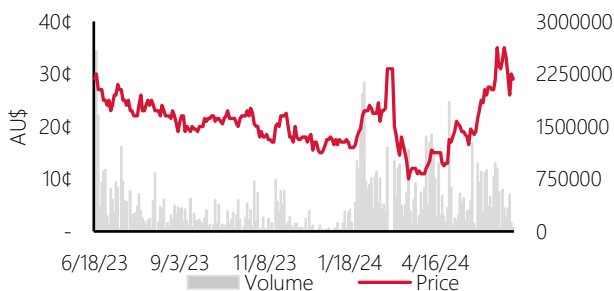
现场地图



财务绩效*

除非另有说明，以百万美元为单位的价值

股票价格 (GBP)	0.29
股票价格 (USD)	0.19
已发行股票 (m)	160.6
完全稀释后的股份	-
市值	30.5
债务	0.3
现金及现金等价物	3.3
企业价值	27.5



最大股东和 Company 管理

股东	所有权股份	姓名	职位
HSBC Custody Nominees (Australia)	10.8%	Tim George	CEO
Selection Capital	5.7%	Rob Kaplan	CFO
Richard Lockwood	3.4%	Graeme Clatworthy	General Manager (Angola)
J.P. Morgan Nominees Australia	2.5%	Paulo Nunes	Country Manager (Angola)
Ashanti Investment Fund	2.3%		