



 **ASX:MEI**

METEORIC

An afternoon with ORDS - Rare Earths

Caldeira - The World's Highest Grade Ionic Adsorption Clay REE Deposit

NOVEMBER 2024

DISCLAIMER



These materials prepared by Meteoric Resources NL (“Meteoric” or the “Company”) include forward looking statements. Forward looking statements can generally be identified by the use of forward looking words such as “may”, “will”, “expect”, “intend”, “plan”, “estimate”, “anticipate”, “continue”, and “guidance”, or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs.

Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the Company’s actual results, performance and achievements to differ materially from any future results, performance or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licenses and permits and diminishing quantities or grades of reserves, political and social risks, changes to the regulatory framework within which the Company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation.

Forward looking statements are based on the Company and its management’s good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the Company’s business and operations in the future. The Company does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that the Company’s business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by the Company or management or beyond the Company’s control.

Although the Company attempts and has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements or events not to be as anticipated, estimated or intended, and many events are beyond the reasonable control of the Company. Accordingly, readers are cautioned not to place undue reliance on forward looking statements. Forward looking statements in these materials speak only at the date of issue. Subject to any continuing obligations under applicable law or any relevant securities exchange listing rules, in providing this information the Company does not undertake any obligation to publicly update or revise any of the forward looking statements or to advise of any change in events, conditions or circumstances on which any such statement is based.

The information in this presentation that relates to Mineral Resource Estimates at the Cupim Vermelho Norte and the Dona Maria 1 & 2 prospects was prepared by BNA Mining Solutions and released on the ASX platform on 1 May 2023. The information in this release that relates to Mineral Resource Estimates at the Soberbo and Capão del Mel deposits was prepared by BNA Mining Solutions and released on the ASX platform on 14 May and 13 June 2024 respectively. The information in this release that relates to Mineral Resource Estimates at the Figueira deposit was prepared by BNA Mining Solutions and released on the ASX platform on 5 August 2024. The Company confirms that it is not aware of any new information or data that materially affects the Mineral Resources in this publication. The Company confirms that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. The Company confirms that the form and context in which the BNA Mining Solutions findings are presented have not been materially modified.

This presentation includes exploration results, estimates of Mineral Resources and scoping study results. The Company has previously reported these results and estimates in ASX announcements dated 16 December 2022, 1 May 2023, 27 June 2023, 24 July 2023, 31 August 2023, 27 September 2023, 8 December 2023, 14 December 2023, 30 January 2024, 29 February 2024, 14 May 2024 and 13 June 2024, 8 July 2024, 5 August 2024 and 22 October 2024. The Company confirms that it is not aware of any new information or data that materially affects the information included in previous announcements (as may be cross referenced in the body of this announcement) and that all material assumptions and technical parameters underpinning the exploration results and Mineral Resource estimates continue to apply and have not materially changed.

All references to the scoping study and its outcomes in this presentation relate to ASX announcement Caldeira Scoping Study – Potential for the World’s Lowest Cost Source of Rare Earths with Outstanding Financial Metrics dated 8 July 2024 together with the updated Scoping Study dated 22 October 2024. Please refer to the announcement for full details and supporting information.

COMPANY OVERVIEW

MEI SNAPSHOT	
ASX Code	MEI
Share Price (18/11/24 Close)	A\$0.10
Shares on Issue	2,299M
Market Capitalisation	A\$230M
Cash (30/09/2024)	A\$35.6M
Trading volume (3-month Avg.)	5.6M

BOARD AND MANAGEMENT	
Executive Chairman	Dr Andrew Tunks
Executive Director	Dr Marcelo de Carvalho
Managing Director	Mr Stuart Gale
Non-Executive Director	Dr Paul Kitto
Non-Executive Director	Mr. Peter Gundy
Non-Executive Director	Dr Nomi Prins
Project Technical Director	Mr Nick Holthouse
Chief Financial Officer	Mr Andy Thomson



BRAZIL – TIER 1 JURISDICTION

Government support and recognition of the importance of developing the industrial supply chain



BIP

Brazil Climate and Ecological Transformation
Investment Platform – linking development
and capital together

Strategic Minerals Policy

Recently created to assist in
approval process for strategic
minerals.

Approvals

Approval process
clearly defined with
Caldeira EIA progress
to the Preliminary
License well underway

Road Map to Mining

Well established mining
regulation and tenement
system



Ministério de
Minas e Energia



Royalties to Local Communities

3% Royalty split between the Municipality,
State and Federal Authorities .
and Landowners

Renewables Lead

80% renewables across Brazil
100% for the Caldeira Project
area.



KEY DEVELOPMENT PROGRAMS

Progressing critical workstreams with key partners



Engineering / Pre-Feasibility

- Pre-Feasibility due in Q1 2025
- Focus on driving further Capex and Opex reduction
- Commencement of separated oxides scoping study

Metallurgy

- Completion of ANSTO test work in Nov 2024
- Demonstration facility for MREC and separation test work
- Emphasis on filtration and dewatering

Environmental Approvals

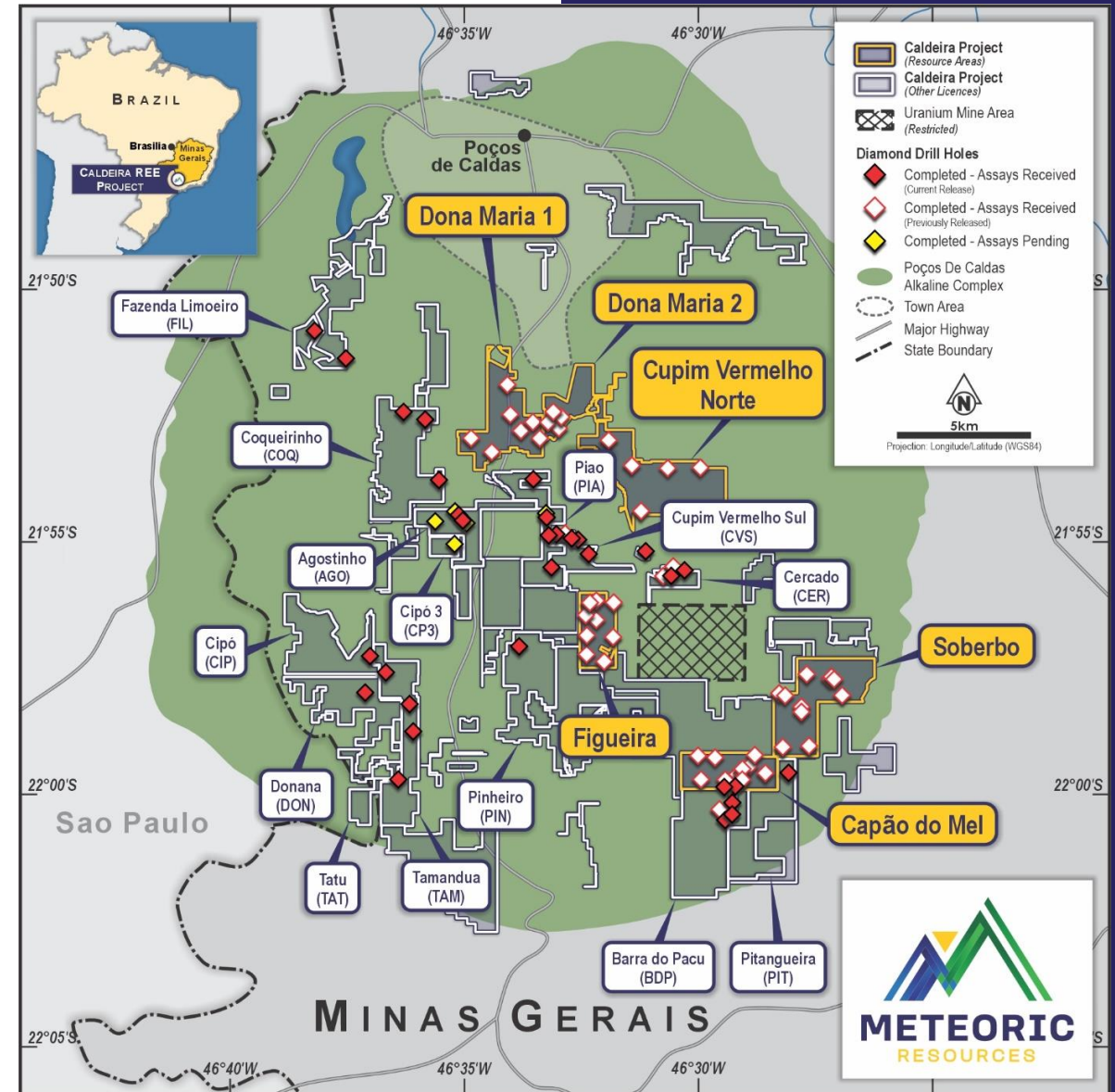
- Remain on track for Q4 2025 construction permit delivery - Alger Consuleria
- EIS report lodged and review underway
- Public Hearing Caldas successfully held



PROJECT DEVELOPMENT

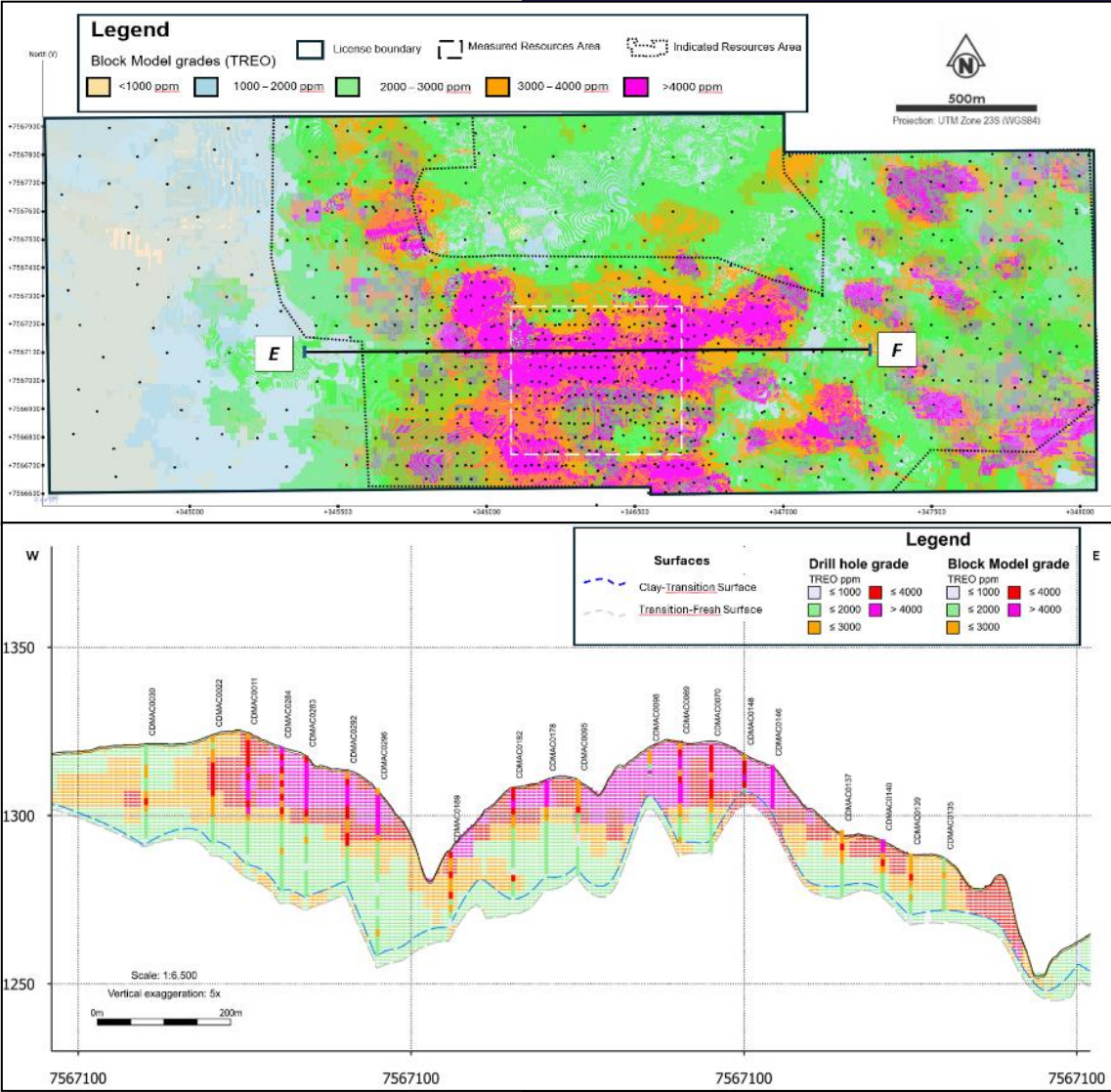
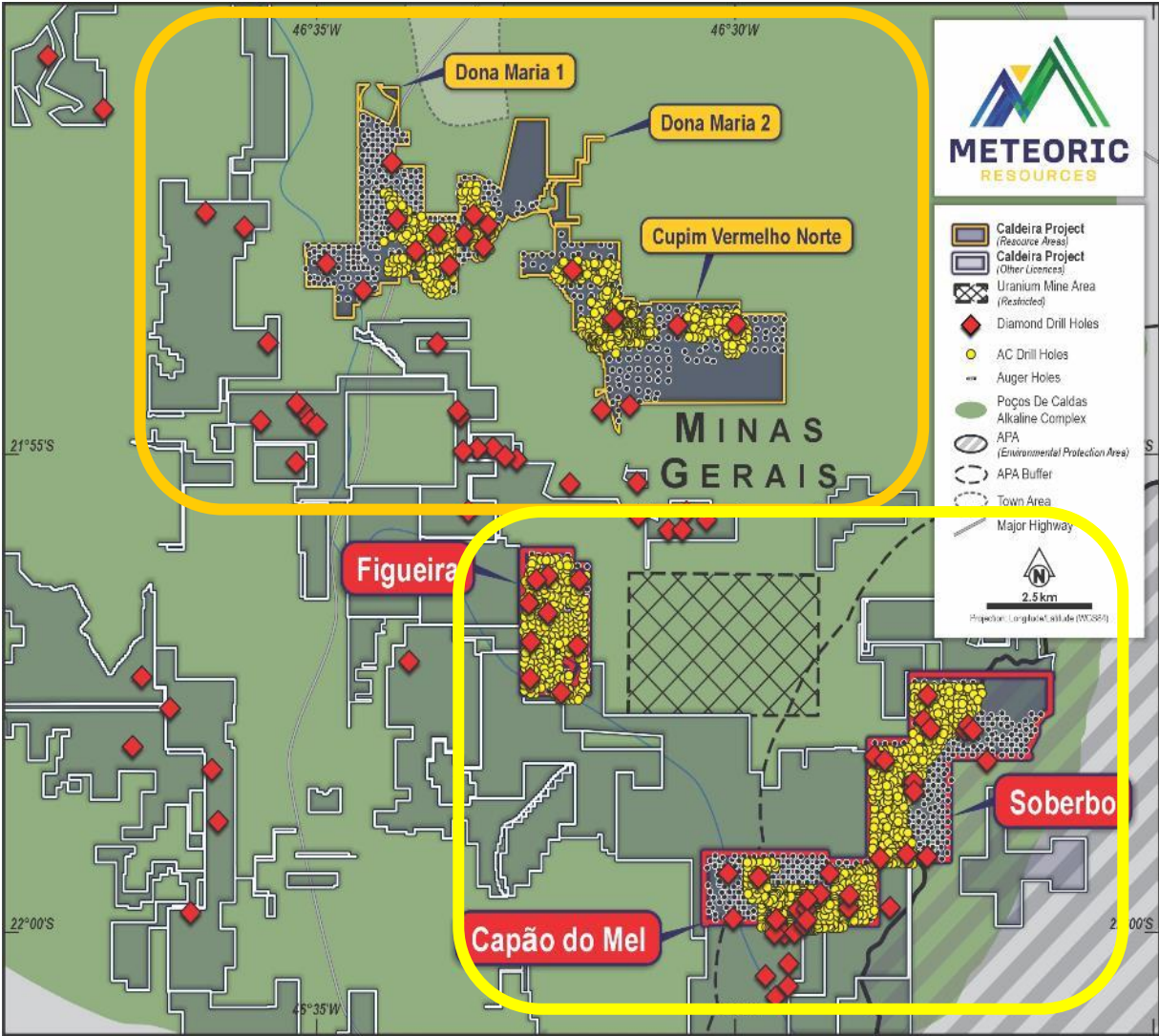
Multiple targets provide ongoing growth optionality

- **740Mt @ 2,572ppm TREO** with additional resource updates to follow
- **Six license** areas drilled from the 69 available
- Enormous **potential** for resource growth
- Targeting additional **value adding heavy REE** on remaining 63 licenses
- **Recent drilling results** identifying high grade intercepts



ONGOING EXPLORATION SUCCESS

Developing the potential for expansion into the Northern areas



Capão do Mel - Plan view

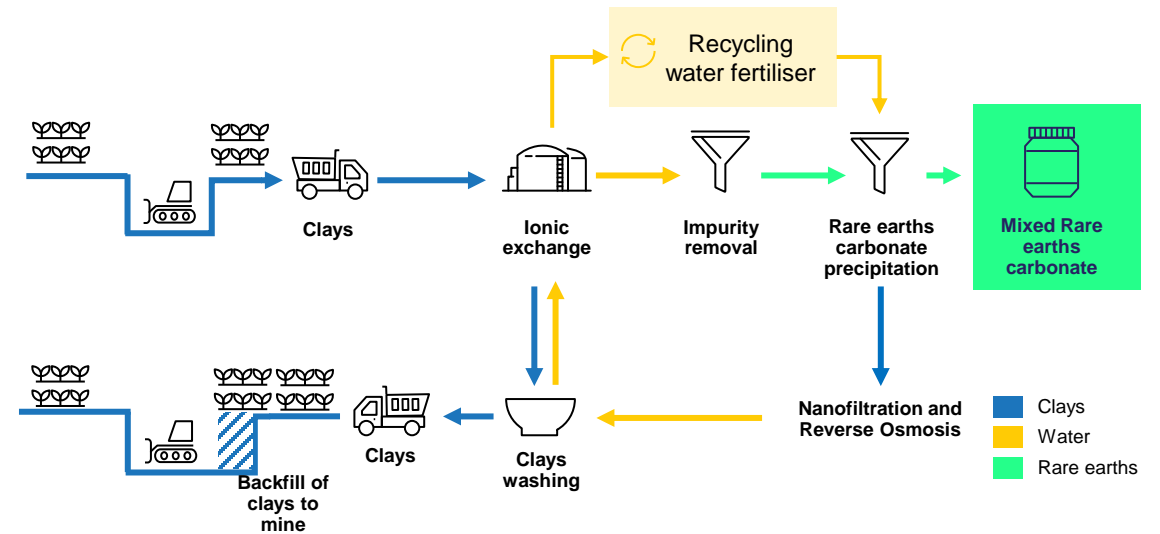
SIMPLE PROCESS FLOWSHEET

Caldeira's favourable ionic clay metallurgy allows Meteoric to produce a refined mixed rare earth carbonate product at a significantly lower cost and energy intensity

Key advantages

- 01** Low acidity, short cycle, process driven by ionic clay metallurgy
- 02** Free dig with no drill and blast
- 03** Exceptional recoveries
- 04** Proven process flowsheet and technologies
- 05** Dry stack tails with no tailings dam requirement

Process Flowsheet



A simple process with low technical risk
and high environmental credentials

Scalable opportunities across the Calderia Project

METALLURGY AND PROCESSING

Simple, low-cost and the capacity to achieve high recoveries with minimal environmental impact



- Produces a mixed rare earth carbonate (MREC) product recovering 73% of highly valuable MREO*
- Metallurgical test work by ANSTO deliver outstanding recoveries
- Successful testing of spent clays competence and handling
- Uses low-cost AMSUL leaching at pH 4.5 – 5.0 at ambient temperature and pressure
- Leach time of less than 30 minutes
- Continuous pilot test results released shortly



WORLD-CLASS PROJECT PHYSICALS

Industry-leading project of scale with expansion potential



NPV₈ \$1.4bn

Pre-tax at
Adamas
forecast
discounted by
40%

IRR 40%

Based on
conservative
pricing
assumptions

**Payback 2.2
years**

Even under
current pricing
scenario 3.7
years

Life of Mine (ASX 22/10/2024)	Unit	Value
Life of Mine	Years	20
Plant Nameplate Capacity ROM	Mtpa	5
Ramp up from 3Mtpa to 5Mtpa	years	1
Total Quantity Mined (Dry Tonnes)	Mt	98
TREO Feed Grade	PPM	3,724
Stripping ratio	waste: ore	0.21
Total Production (REO)	t	193,584
Annual Production (REO)	t	9,679
MREO recovery	%	73
LOM average TREO Recovery	%	54

OPERATING COSTS

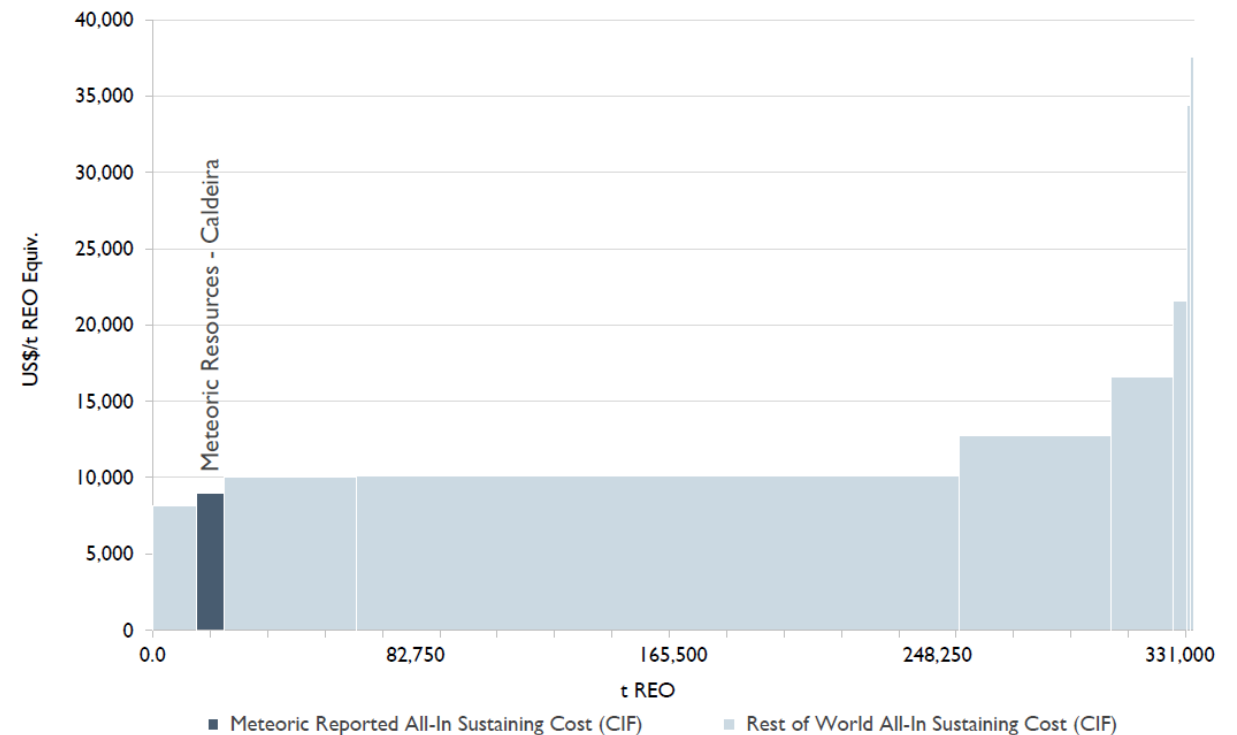
Production from Caldeira will be placed at the bottom of the industry cost curve



Low operating cost:

- Free dig material
- Low strip ratio
- Short haulage
- Simple and low-cost ammonium sulfate (AMSUL) processing flowsheet
- High grade ore
- High metallurgical recoveries
- No tailings facility

Cost Metrics	Unit	Years 1-5 Average	LOM Average
Annual C1 opex	US\$M	61	65
Annual C1 opex	US\$/kg TREO	5.33	6.74
Annual AISC	US\$/kg TREO	7.00	9.00
NdPr only C1 opex	US\$/kg NdPr	16.84	20.40



C1 opex includes all mining, processing and general and administration costs.
Refer ASX releases 8 July & 2 October 2024 for further information.

RARE EARTHS PRODUCTION

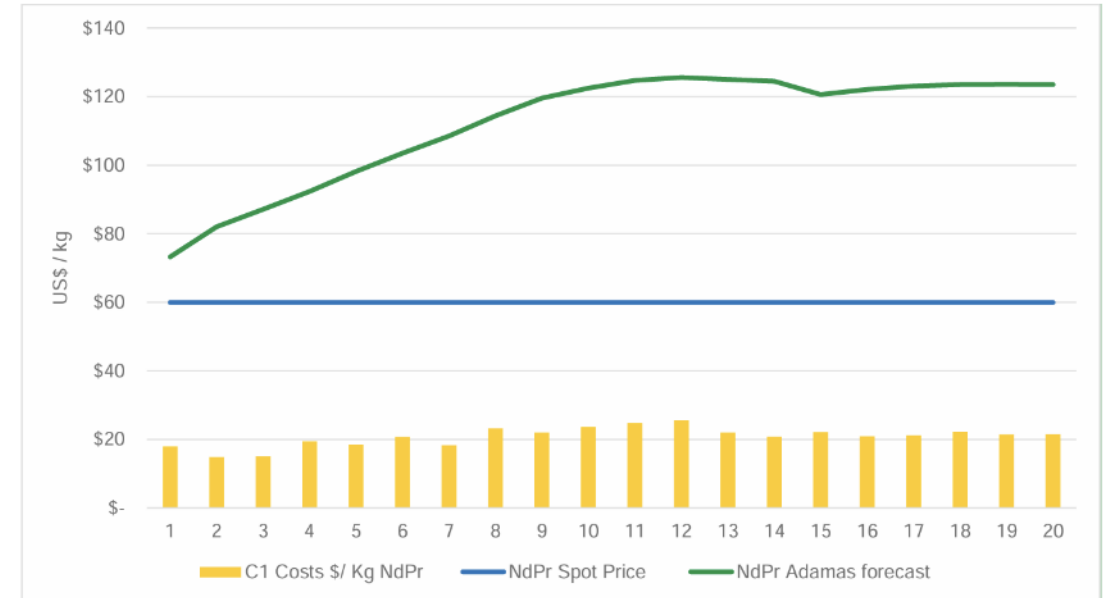
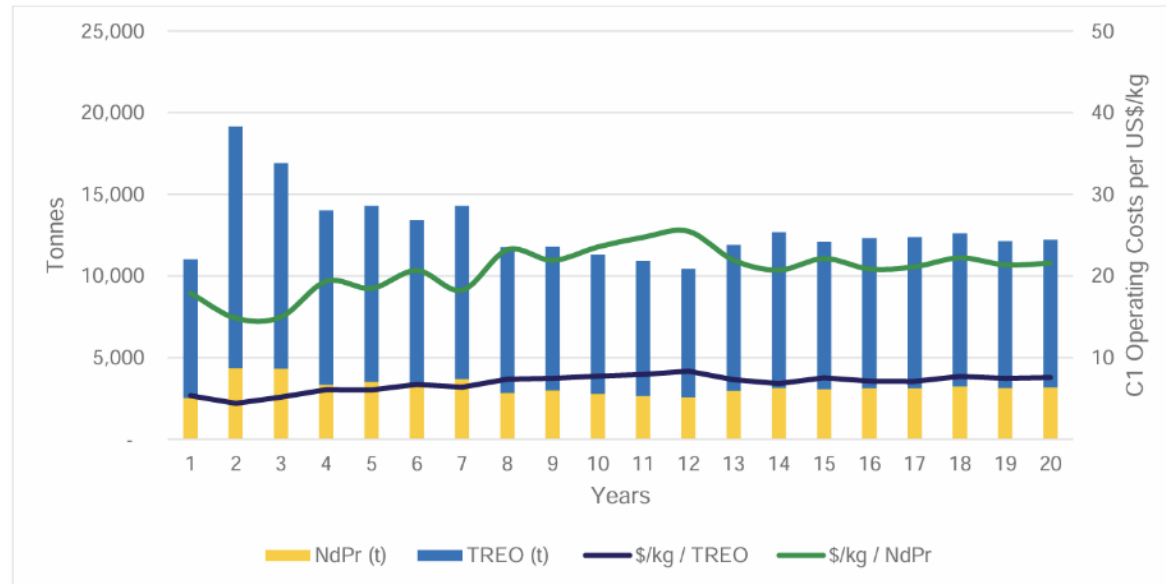
Attractive margins for NdPr production and TREO production throughout the cycle



- Total production of 194kt REO within 340kt MREC over the 20-year mine life
- NdPr production accounts for ~33% of TREO production by volume (~60% MREO)
- Average production LOM 9ktpa with +11ktpa in the first five years

- NdPr production generates a margin over discounted Adamas pricing and spot pricing at 70% payabilities
- Other TREO revenue further improves margins
- C1 cost of US\$7/kg LOM including US\$5.50/kg in the first five years

Total Production over the current 20-year mine life will be 194kt of REO contained within 340kt of MREC.



CAPITAL COSTS, FUNDING AND OFFTAKE

Low capital intensity and operating costs make Caldeira a highly financeable project in all market conditions



Capex

- Capital costs for the base case 5Mtpa estimated at US\$297M
- Class 5 estimate (nominal accuracy of +/- 40%) with a 35% contingency for a reported total capital cost estimate of US\$403M
- Includes all direct and indirect costs, taxes and owner's costs
- Low capital intensity per tonne of MREC and REO

Funding

- Rare earths projects are garnering significant government support in the form of debt and grant financing
- BNDES ramping up support for the Strategic Minerals sector
- United States Export-Import Bank engaged with other ECA supportive
- Pursue strategic partnerships

Description	Cost (US\$M)
Equipment	103
Structural and Materials	36
Construction	80
Indirect	72
Mining	6
Contingency	106
Total	403



US\$250M letter
of support from
US EXIM Bank



Neo and Ucore
3ktpa each
TREO offtakes

QUALITY ASSET WITH STRONG PERIPHERAL SUPPORT NETWORK

Caldeira is the world's most attractive rare earth development project and a true industry disruptor



High grade resource

Low operating cost

Low capital intensity

Excellent financial metrics

Strong Government support

Massive Exploration upside



METEORIC

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APPENDIX 2: Caldeira Project Minerals Resource Estimate

Table 2: Caldeira Project MRE by license at 1,000ppm TREO cut-off (refer MEI Announcements dated 1 May 2023, 14 May, 13 June 2024 and 5 August 2024). Differences may occur due to rounding.



Licence	JORC Category	Material Type	Tonnes	TREO	Pr ₆ O ₁₁	Nd ₂ O ₃	Tb ₄ O ₇	Dy ₂ O ₃	MREO	MREO /TREO
Capão do Mel	Measured	Clay	11	3,888	222	586	6	28	842	21.7%
Total	Measured		11	3,888	222	586	6	28	842	21.7%
Capão do Mel	Indicated	Clay	74	2,908	163	449	5	23	640	22.0%
Soberbo	Indicated	Clay	86	2,730	165	476	5	23	669	24.5%
Figueira	Indicated	Clay	138	2,844	145	403	5	28	582	20.5%
Total	Indicated		298	2,827	155	436	5	26	622	22.0%
Total	Measured + Indicated		308	2,864	158	441	5	26	629	22.0%
Capão do Mel	Inferred	Clay	32	1,791	79	207	2	13	302	16.9%
Capão do Mel	Inferred	Transition	25	1,752	86	239	3	14	341	19.5%
Soberbo	Inferred	Clay	89	2,713	167	478	5	24	675	24.9%
Soberbo	Inferred	Transition	54	2,207	138	395	4	20	558	25.3%
Figueira	Inferred	Clay	9	3,105	139	379	5	28	551	17.7%
Figueira	Inferred	Transition	24	2,174	115	328	4	21	468	21.5%
Cupim Vermelho Norte ³	Inferred	Clay	104	2,485	152	472	5	26	655	26.4%
Dona Maria 1 & 2	Inferred	Clay	94	2,320	135	404	5	25	569	24.5%
Total	Inferred		431	2,363	138	406	4	23	571	24.0%
Total	Measured + Indicated + Inferred		740	2,572	146	420	5	24	595	23.1%