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 ASX:MEI

INVESTOR PRESENTATION

Caldeira Project Scoping Study

The world's highest grade ionic adsorption clay REE project

SEPTEMBER 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 and 5 August 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 Project Scoping Study confirms potential for the world's lowest cost source of rare earths with outstanding financial metrics* dated 8 July 2024. Please refer to the ASX announcement for full details and supporting information.

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COMPANY OVERVIEW

MEI SNAPSHOT	
ASX Code	MEI
Share Price (09/09/24)	A\$0.09
Shares on Issue	2,291M
Options / Rights	156M
Market Capitalisation	A\$206M
Cash (31/06/2024) pro forma	A\$44M

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



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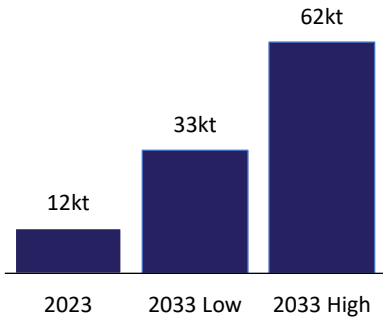
STRONG DEMAND FUNDAMENTALS

Global demand forecasts for NdPr depend on the market penetration of renewable energy technologies

Global Demand for NdPr (kt)¹

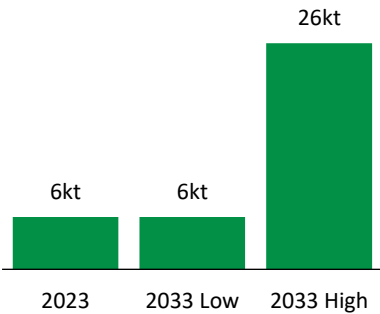
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Electric Vehicles



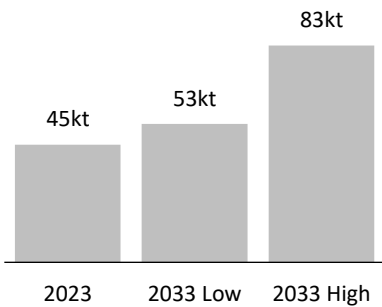
	2023	2033
Dy/Tb	0.5 kt	1.3-3.0 kt

Wind Power



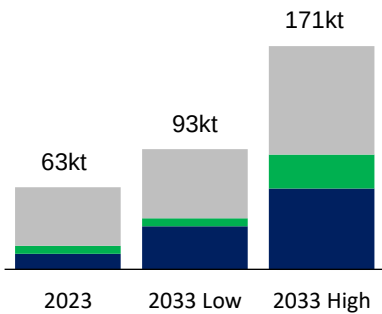
	2023	2033
Dy/Tb	0.2 kt	0.3-1.6 kt

Other Sectors²



	2023	2033
Dy/Tb	0.3 kt	0.4-0.6 kt

Total



	2023	2033
Dy/Tb	1.1 kt	1.9-5.1 kt

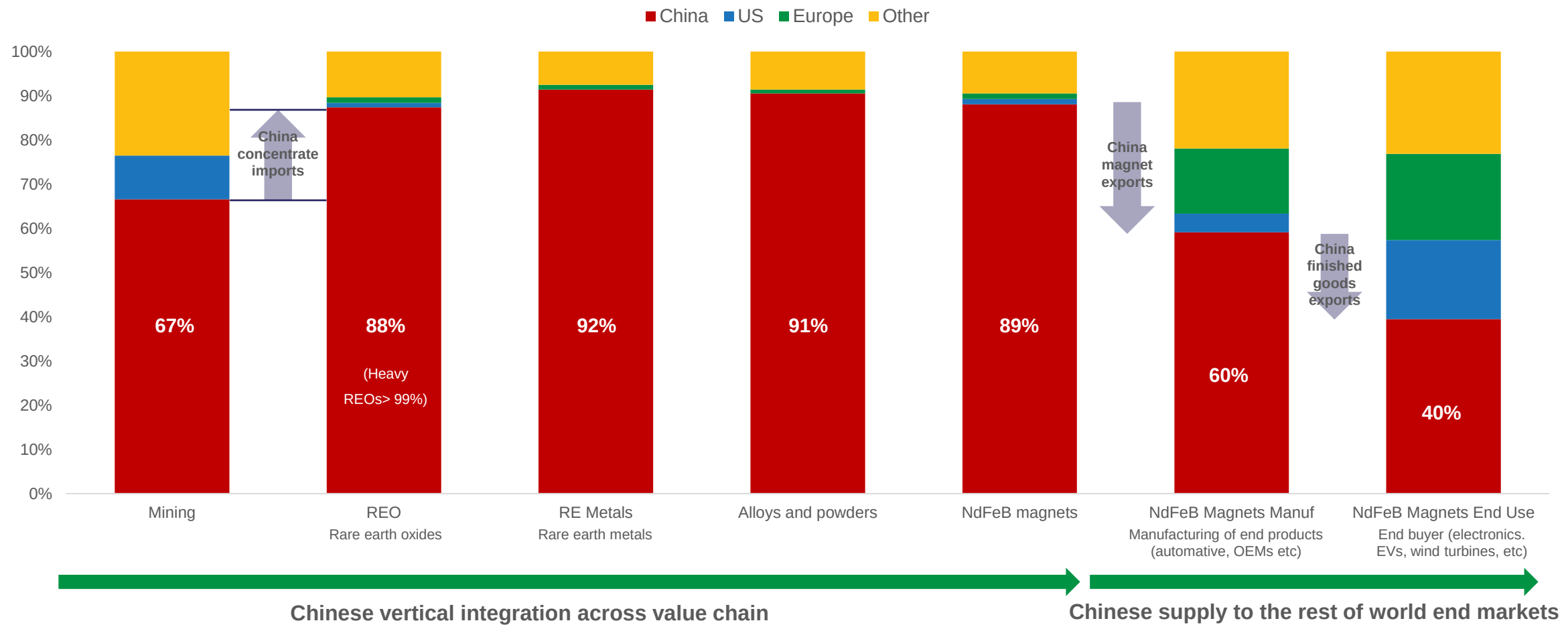
Source: Iluka Resources ASX announcement dated 19 June 2024, Notes: 1. Iluka’s estimate with inputs from Adamas, Project Blue, Argus and other data sources 2. Other automotive uses, consumer electronics, cordless power tools, industrial applications, speakers, home appliances etc.

RARE EARTH SUPPLY CHAIN DOMINATED BY CHINA'S VERTICAL INTEGRATION

China accounts for approximately ~90% of all rare earth oxide production globally; and effectively 100% of all heavy rare earth oxide production

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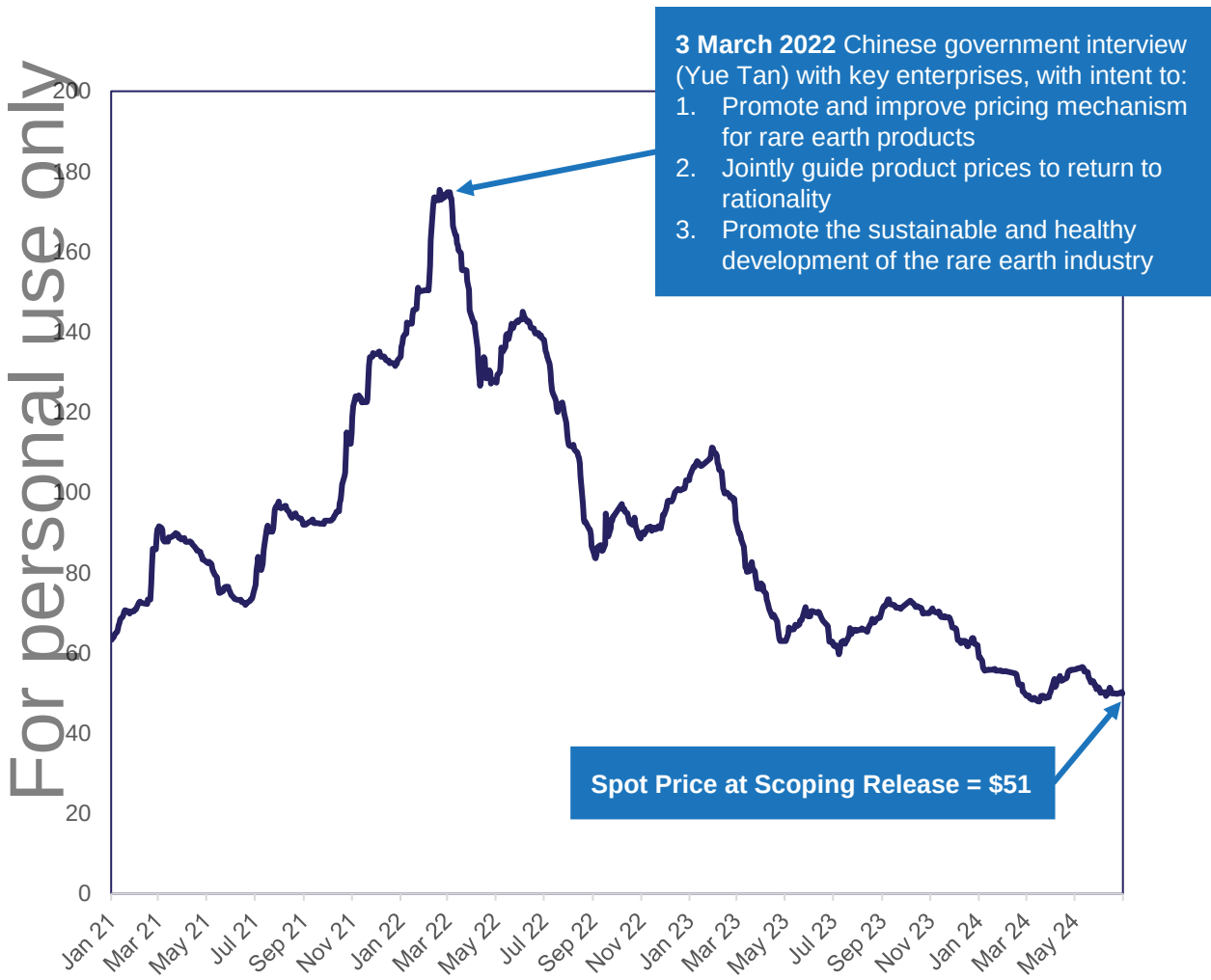
Global market share of rare earth supply chain (2023 estimate)



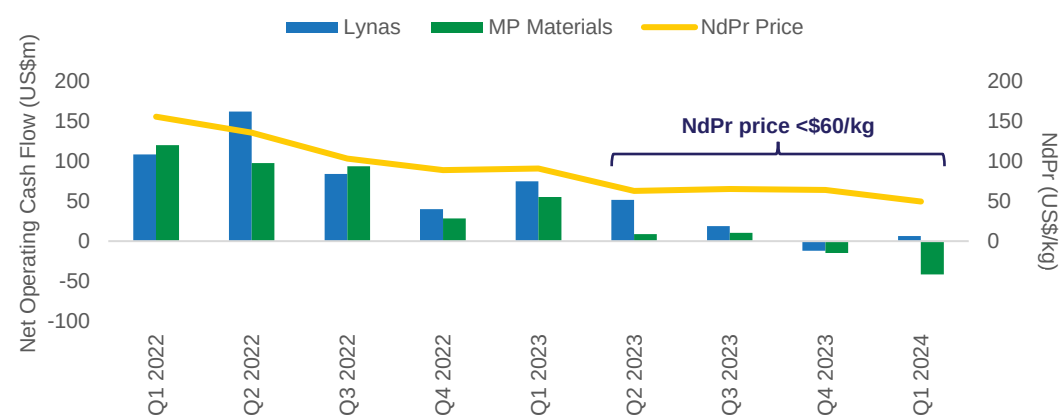
Source: Iluka Resources ASX announcement dated 19 June 2024

PRICE SETTINGS FOR RARE EARTHS ARE NOT SUSTAINABLE

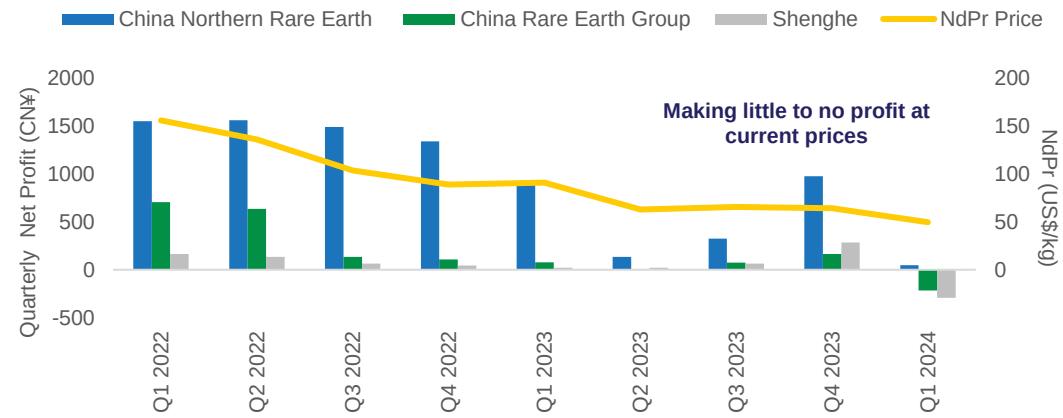
China has consolidated its rare earths enterprises, forming two mega conglomerates that have enhanced China's purchasing power



Western RE producers quarterly net operating cash flow vs NdPr price¹



Chinese RE producers quarterly net profit vs NdPr price

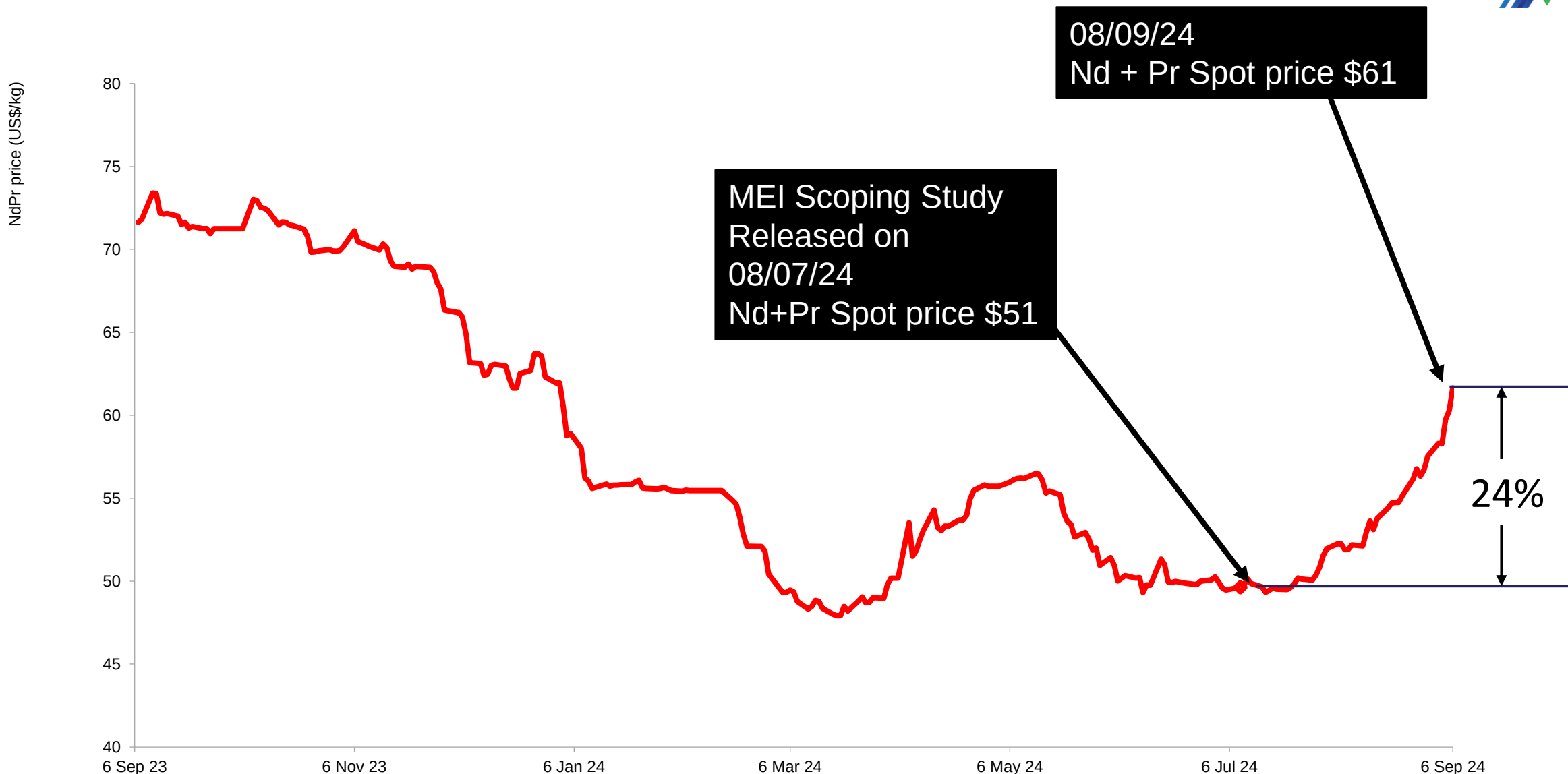


Source: Iluka Resources ASX announcement dated 19 June 2024, Notes: 1. Net profit excluding non-recurring gains and losses. Lynas Rare Earths converted from A\$ to US\$ at a rate of 1:0.65

Updated Nd+Pr Price



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Bloomberg SHRAPNOX index.

RARE EARTH DEPOSIT TYPES AND COMPARABLES

Ionic clay allows for expedited development timelines, reduced capex and lower opex than hard rock peers



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	Ionic Clay-hosted REE	Hard Rock-hosted REE
	  	    
Investment	 - Lower initial capex allows for increased scalability - Typically, ~US\$15/kg TREO annual output (<i>capital intensity</i>)¹	 Typically ~US\$150/kg TREO annual output (<i>capital intensity</i>)
Mining	 - Surface mining, with minimal stripping of waste material - Pits backfilled leaving no tailings or waste dumps	 - Drill and blast with large mining fleet (typically, with high strip ratios) - Capital-intensive open cut and underground operations required
Processing	 - Simple dissolution of REE from clay in ammonium sulphate - High recoveries and no radioactive waste streams	 - High temperature mineral cracking using strong reagents for REE minerals - Lower recoveries and tailings often radioactive and are costly to dispose of
Exploration	 Quick and inexpensive – shallow aircore drilling into at-surface deeply weathered granite (clays)	 Similar to other hard rock base minerals requiring substantial drilling and geochemistry
Payability & Products	 Contains both high value light and heavy REEs (NdPr & DyTb)	 Typically light REEs only (NdPr)
Established Operations	 Serra Verde Brazil	 - Mountain Pass (USA) - Mt Weld (Australia)
Location	 - Predominantly mined in China and Myanmar - Brazil is an emerging jurisdiction	 - Majority of production based in China - Operations in Australia (Mt Weld) and USA (Mountain Pass)

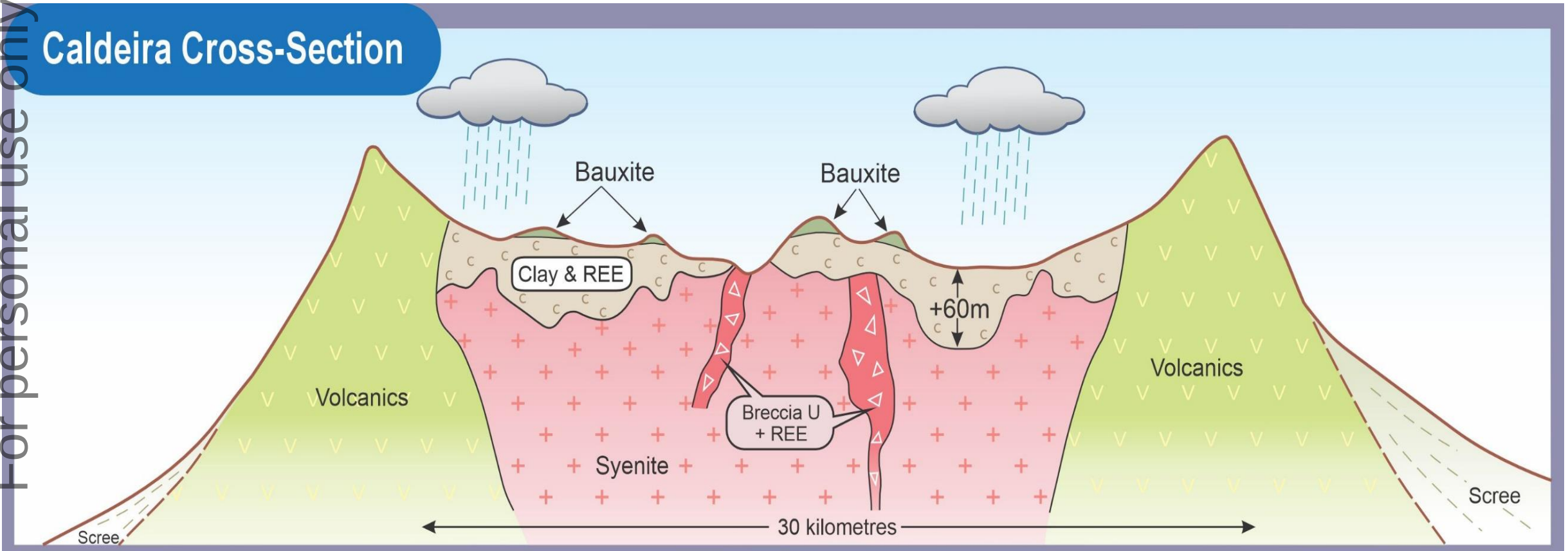
Source: (1) Hochschild Mining plc, Capital Markets Presentation, September 2021

The two types of Rare Earth Deposits

Primary vs Secondary

Caldeira Cross-Section

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TIER 1 RARE EARTHS DEPOSIT IN WORLD CLASS LOCATION

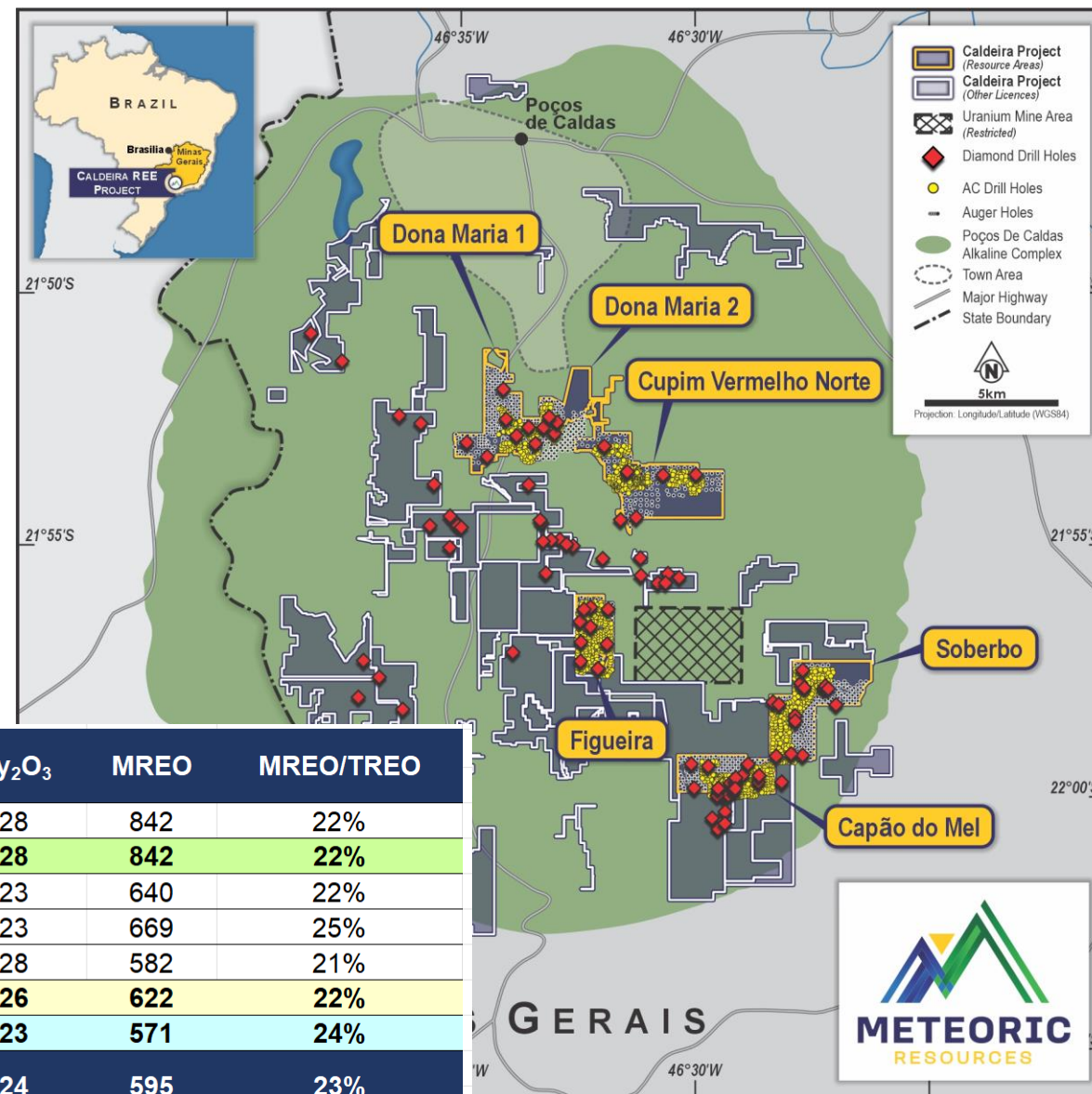
Phase 1 will focus on the southern licenses and target high grade zones with open-cut mining



- PIADD001 – 143m @ 6,406ppm TREO [0m], with
 - 6m @ 10,378ppm TREO [9m],
 - 6m @ 11,664ppm TREO [21m], and
 - 8m @ 23,946ppm TREO [85m]
- CVSDD0004 – 200m @ 3,387ppm TREO [0m] including:
 - 16m @ 4,199ppm TREO [3m] and 28m @ 6,859ppm TREO [31m], with
 - 5m @ 11,888ppm TREO [36m] and 5m @ 10,726ppm TREO [44m]
- COQDD0002 – 24m @ 4,127ppm TREO [1m]
- AGODD0002 - 37m @ 3,143ppm TREO [0m]
- BDPDD0002 - 31m @ 5,727ppm TREO [0m], with 4m @ 10,454ppm TREO [26m]
- BDPDD0003 - 25m @ 5,391ppm TREO [6m], with 3m @ 10,685ppm TREO [22m].

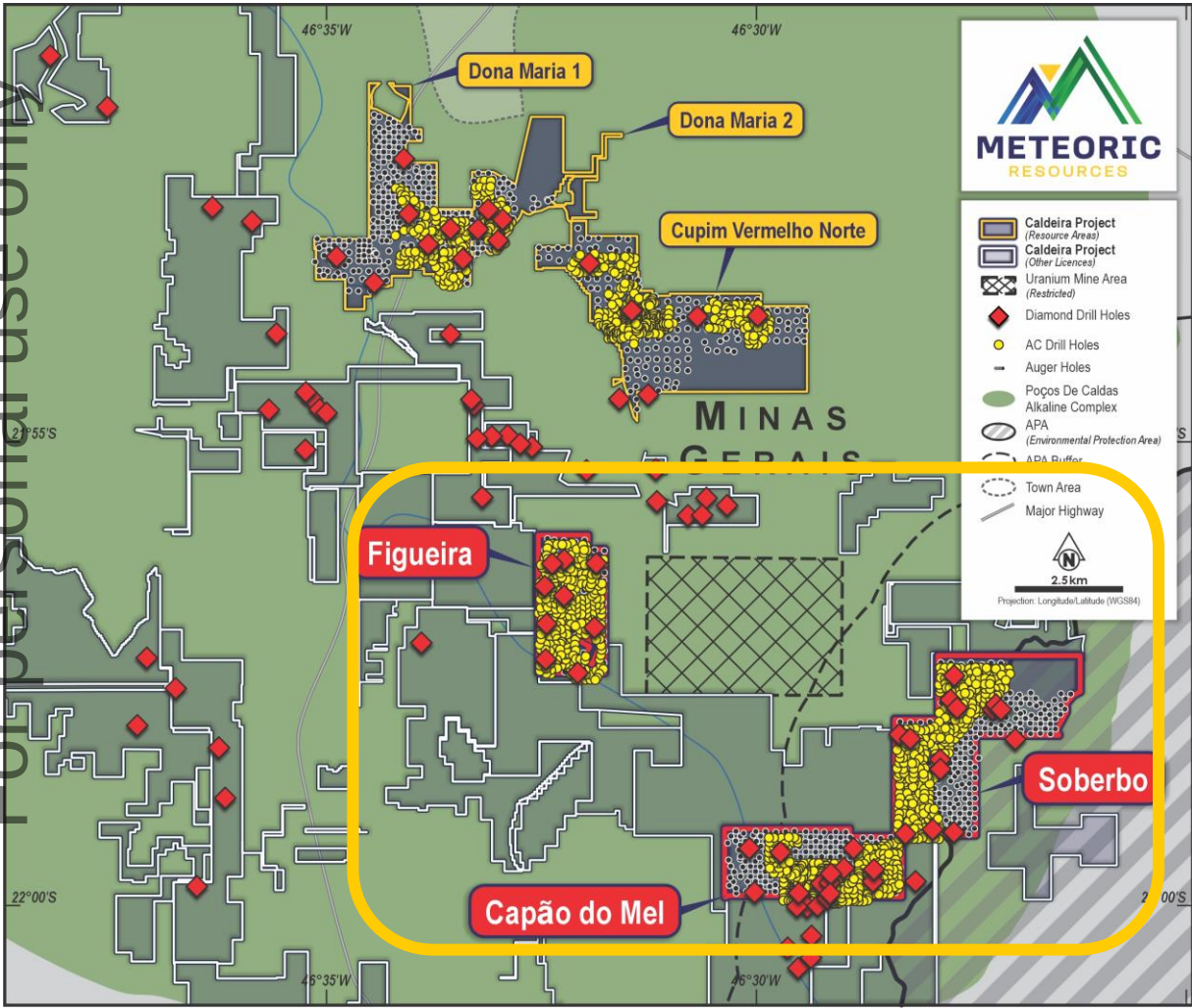
Mineral Resources as of 05/08/2024

Licence	Category	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	11	3,888	222	586	6	28	842	22%
Total	Measured	11	3,888	222	586	6	28	842	22%
Capão do Mel	Indicated	74	2,908	163	449	5	23	640	22%
Soberbo	Indicated	86	2,730	165	476	5	23	669	25%
Figueira	Indicated	138	2,844	145	403	5	28	582	21%
Total	Indicated	298	2,827	155	436	5	26	622	22%
Total	Inferred	431	2,363	138	406	4	23	571	24%
Total	M + I + I	740	2,572	146	420	5	24	595	23%

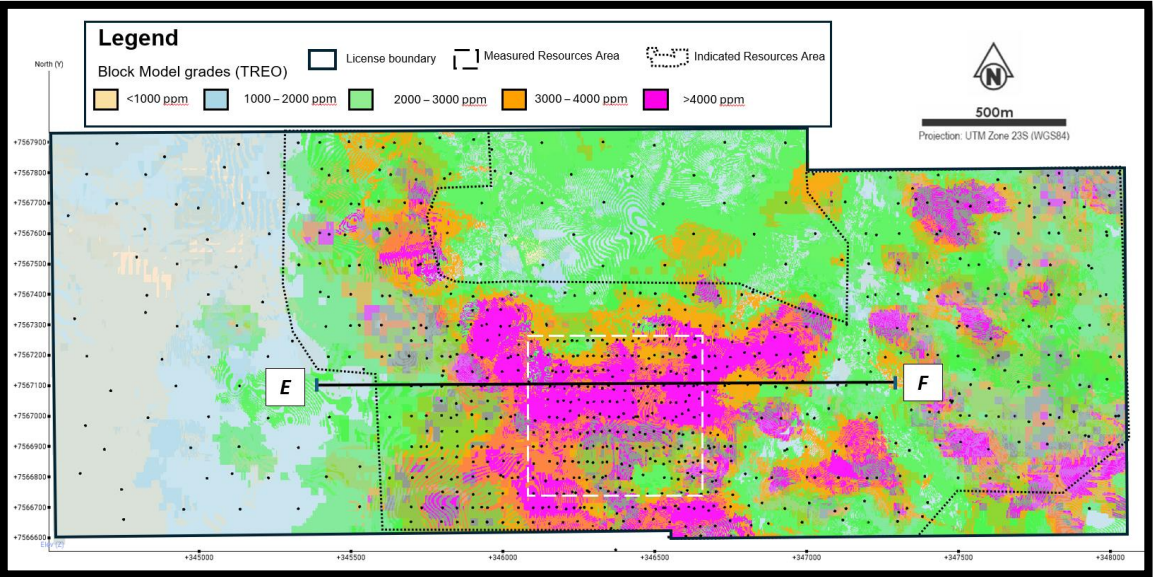


The Southern Process Hub – Module 1

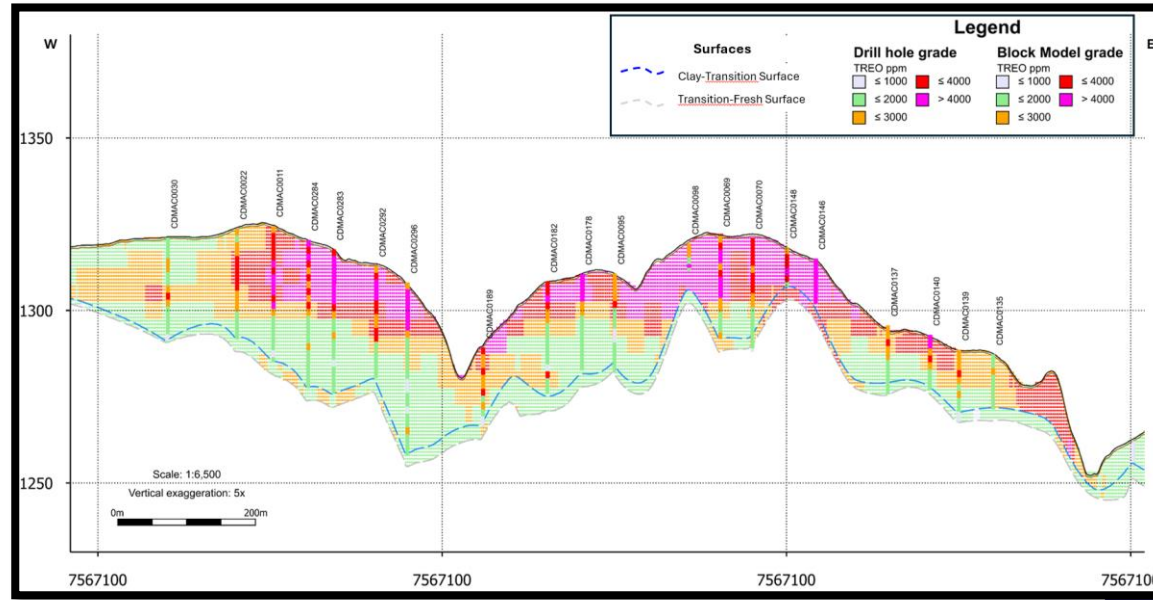
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Capão do Mel - Plan view



Capão do Mel - Plan view



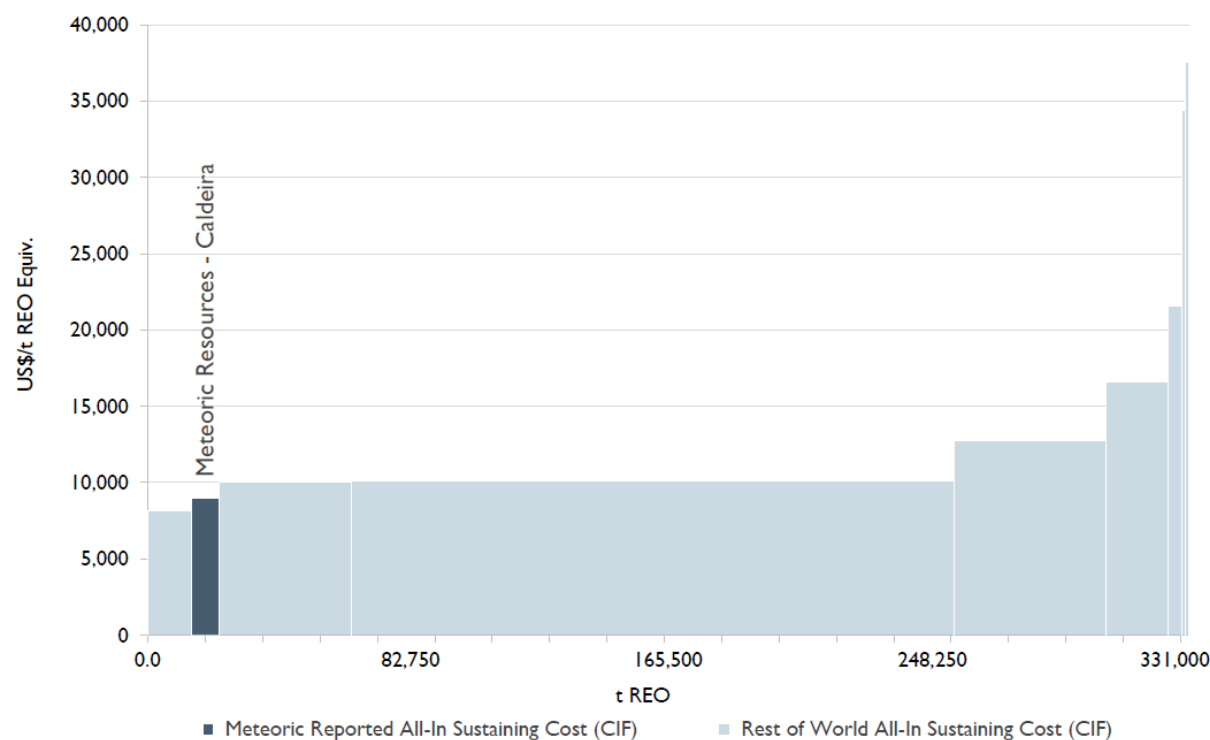
OPERATING COSTS

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



- Outstanding operating cost efficiency driven by low input costs
- 100% site-based renewable power
- Ready access to skilled labour
- Adjacent to dedicated infrastructure
- Free dig material with short hauling distance
- Low mining strip ratio (0.12:1 waste:ore)
- Simple and low cost AMSUL processing flowsheet delivering high metallurgical recoveries
- Owner-operated mining fleet to manage mining, ore and waste transportation (at \$2.02/t) over multiple shallow open pits
- Processing costs of US\$9.52/t
- Annual sustaining capital estimate of US\$6M for LOM

Cost Metrics	Unit	Years 1-5 Average	LOM Average
Annual C1 opex	US\$M	61	64
Annual C1 opex	US\$/kg TREO	5.50	7.04
Annual AISC	US\$/kg TREO	7.00	9.00
NdPr only C1 opex	US\$/kg NdPr	17.60	21.30



C1 opex includes all mining, processing and general and administration costs

CAPITAL COSTS, FUNDING AND OFFTAKE

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



Capital costs for the base case 5Mtpa processing facility and mining fleet 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

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

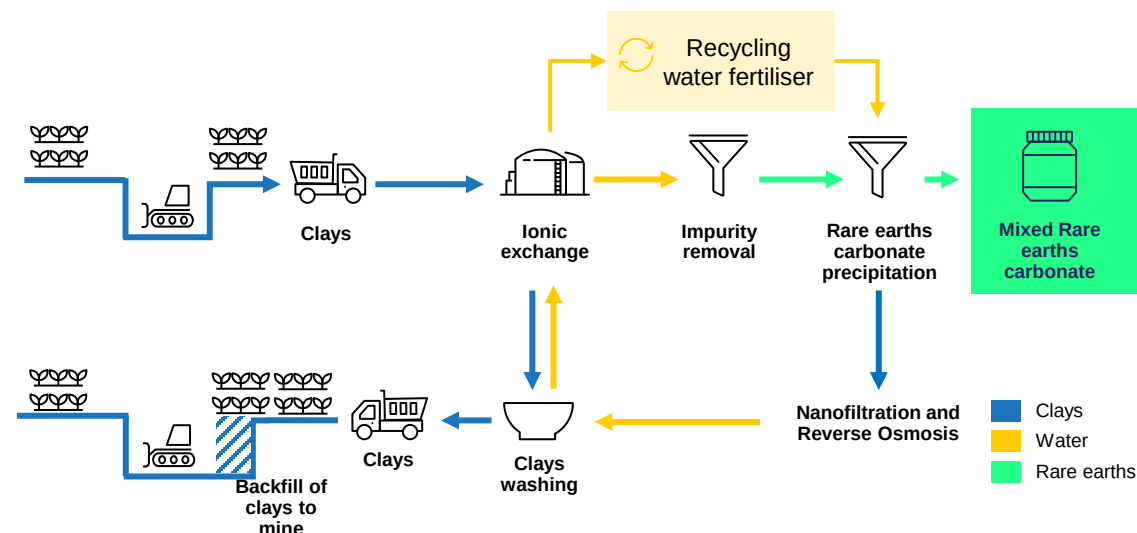
SIMPLE PROCESS FLOWSHEET WITH NO RADIOACTIVE TAILINGS

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 than hard rock peers

Key advantages

- 01 Low acidity, short cycle, process driven by ionic clay metallurgy
- 02 No radioactive tailings
- 03 Exceptional recoveries
- 04 Proven process flowsheet and technologies
- 05 Large-scale opportunity

Process Flowsheet



A simple process with low technical risk and high environmental credentials

No drill and blast

No tailings dams

INVESTMENT PROPOSITION



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

For ionic clay rare earth projects, Caldeira has...

- ❑ The most contained metal (**181,031t TREO**)
- ❑ The highest grade (**+4,500ppm**)
- ❑ The highest recoveries (**73% MREO**)

These industry leading metrics have the potential to deliver...

- ❑ The world's lowest cost rare earth products
- ❑ Low capital intensity per unit of production capacity
- ❑ Strong returns throughout the commodity price cycle

Caldeira can also be a low impact rare earths operation...

- ❑ Low carbon intensity with 100% renewable power
- ❑ Benign processing using a soluble fertiliser product
- ❑ Dry stacked tailings and backfilling of mining areas



METEORIC

CONTACT US

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CALDEIRA PROJECT RESOURCE ESTIMATES – 740Mt @ 2,572 ppm TREO

World’s Highest Grade Ionic Adsorption Clay REE Deposit (1,000ppm TREO cut-off grade) (ASX 5/8/2024)

Licence	JORC Category	Material Type	Tonnes	TREO ppm	PR ₆ O ₁₁ ppm	Nd ₂ O ₃ ppm	Tb ₄ O ₇ ppm	Dy ₂ O ₃ ppm	MREO ppm	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	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%