# METEORIC

#### ASX: MEI

## THE CALDEIRA PROJECT

Building the World's most sustainable producer of rare earths

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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.

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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 foreseeable by the Company or management or beyond the Company's control.

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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 12 March 2025. 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 information in this release that relates to Mineral Resource Estimates at the Bara do Pacu deposit was prepared by BNA Mining Solutions and released on the ASX platform on 15 April 2025. 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, 22 October 2024, 12 December 2024 and 5 February 2025. 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 release relate to the ASX announcement dated 22 October 2024 titled Caldeira's Scoping Study Confirms Exceptional Financials. Please refer to the ASX announcement for full details and supporting information.

### **COMPANY OVERVIEW**

#### **MEI SNAPSHOT**

ASX Code	MEI
Share Price (13/05/25 Close)	A\$0.094
Shares on Issue	2,336M
Market Capitalisation	A\$220M
Cash (31/03/2025)	A\$23.8M
Trading volume (3-month Avg.)	8.8M

#### **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
Chief Financial Officer	Mr Andy Thomson



### CALDEIRA PROJECT

A near term sustainable asset supporting strategic and electrification developments



Global NdPr supply will need to increase by ~80% or at least 50kt in the next decade to meet demand<sup>1</sup>



Where will the supply to meet this demand come from?



Caldeira is significant and advanced rare earths ionic absorption clay project outside of China



All Governments, supportive of "Critical / Strategic Minerals" developments



Caldeira supported by Brazil's objective to foster downstream processing and advanced manufacturing

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Ideally located to support strategic initiatives for Western markets

1. Project Blue Consulting estimate for neodymium and praseodymium demand 2024 – 2034.

#### A NEW BRAZILIAN RARE EARTHS PROVINCE IN THE MINING FRIENDLY STATE OF MINAS GERAIS

CALDEIRA REE PROJECT

METEOR:

### CALDEIRA PROJECT

Low cost, multi target resource with significant growth optionality and strong government support

- World class resource:
  - High grade with high recoveries
  - Low capital development costs
  - Low operating costs
- Resource of 1.5 billion tonnes @ 2,359ppm
- 666Mt at 2,685ppm of Measured and Indicated
- Basket contains high quantities of Critical Minerals subject to Export Controls
- Targeting additional value by adding greater heavy REO
- Environmental permitting on track



### A GLOBAL LEADER IN SCALE AND QUALITY

Rapid resource growth makes Caldeira a world-class project with significant upside



Graph of tonnage v TREO grade for total Resources (M+I+I) of worldwide Ionic Absorption Clay deposits (MEI peers). The size of the sphere is related to contained metal i.e. tonnes x grade (Refer Appendix B).

Graph of tonnage v TREO grade for reported Measured and Indicated Resources of Ionic Adsorption Clay deposits (MEI peers). The size of the sphere is related to contained metal i.e. tonnes x grade (Refer Appendix B). METEORIC

6

### **CALDEIRA PROVIDES SOLUTION TO SUPPLY UNCERTAINTY**

Critical minerals with strategic geopolitical importance and a market controlled by China

- On 4 April 2025, China's Ministry of Commerce and General Administration announced restrictions on the export of medium and heavy rare earths and alloys
- These rare earths are critical feedstock components in the EV automobile, IT and military defence industries
- Increasing uncertainties in global trade flows following US tariff proposals
- China maintains a foothold on global REE production and processing with virtual control over the rare earths supply chain
- Further highlights the strategic importance of a steady, sustainable supply of rare earths to western markets
- Caldeira represents a highly economic alternative global rare earths source

#### Rare Earth Oxide annual production estimates – Oct 2024 Scoping Study

Recovered REO tonnes by Year	Element	1	2	3	4	5	6 - 10	11 - 15	15 - 20
Yttrium	$Y_2O_3$	340	570	540	480	480	2,490	2,100	2,170
Lanthanum	La <sub>2</sub> O <sub>3</sub>	5,170	9,030	6,910	6,200	6,100	25,640	24,280	24,860
Cerium	CeO <sub>2</sub>	10	20	20	20	20	80	80	70
Praseodymium	$Pr_6O_{11}$	700	1,200	1,130	900	940	4,100	3,810	4,120
Neodymium	$Nd_2O_3$	1,830	3,180	3,200	2,450	2,580	11,500	10,600	11,670
Samarium	Sm <sub>2</sub> O <sub>3</sub>	170	300	320	240	260	1,190	1,080	1,180
Europium	$Eu_2O_3$	40	70	80	60	60	290	250	270
Gadolinium	Gd <sub>2</sub> O <sub>3</sub>	110	200	210	160	170	820	690	740
Terbium	Tb <sub>4</sub> O <sub>7</sub>	10	20	20	20	20	90	80	80
Dysprosium	Dy <sub>2</sub> O <sub>3</sub>	60	100	100	80	80	430	360	380
Holmium	Ho <sub>2</sub> O <sub>3</sub>	10	10	10	10	10	60	50	60
Erbium	$Er_2O_3$	20	30	30	30	30	140	120	130
Thulium	$Tm_2O_3$	2	3	3	3	3	20	10	10
Ytterbium	Yb <sub>2</sub> O <sub>3</sub>	10	10	10	10	10	70	60	60
Lutetium	Lu <sub>2</sub> O <sub>3</sub>	1	2	2	2	2	10	10	10
Total Tonnes	REO	8,500	14,700	12,600	10,700	10,800	46,900	43,600	45,800

![](_page_6_Picture_10.jpeg)

### **BARRA DO PACU (BDP) – EXTENSION**

High-grade 32Mt @ 4,130ppm TREO in maiden MRE of 389Mt @ 2,204ppm with 77Mt Indicated @ 2,917ppm

![](_page_7_Figure_2.jpeg)

Figure 1B Section 346,225mE - North-South section (A-B) extending south through CDM starter pit and into high-grade resources in the north of BDP, showing high-grade mineralisation (>4,000ppm TREO) in drill holes and block model, plus depth of clay mineralisation. The high-grade mineralisation begins from surface and increases in thickness to the south in BDP where drill intercepts of greater than 30m true thickness can be noted in aircore holes BPPAC0171, 0178, 0181and 0115.

8

### WORLD-CLASS PHYSICALS AND FINANCIALS<sup>1</sup>

Industry leading project of scale and simplicity with expansion potential

Exceptional performance driven by a high-grade feed strategy prioritising +4,000ppm TREO material in the first 10+ years of operations

NPV<sub>8</sub> \$1.4bn Pre-tax at Adamas

forecast discounted

by 40%

US\$403M capex

Including a 35%

contingency

driven by a high-grade	Life of Mine	Years	20
g +4,000ppm TREO years of operations	Plant Nameplate Capacity ROM	Mtpa	5
	Ramp up from 3Mtpa to 5Mtpa	years	1
	Total Quantity Mined (Dry Tonnes)	Mt	98
IRR 40%	TREO Feed Grade	PPM	3,724
pricing assumptions	Stripping ratio	waste: ore	0.21
	Total Production (REO)	t	193,584
Payback 2.2 years	Annual Production (REO)	t	9,679
And 3.7 years at current	MREO recovery	%	73
spot pricing	LOM average TREO Recovery	%	54

Life of Mine (Scoping Study Oct 2024)

1. Refer to Caldeira Project Updated Scoping Study announcement dated 22 October 2024

![](_page_8_Picture_5.jpeg)

Value

Unit

### SIMPLE PROCESS FLOWSHEET

Ionic clay metallurgy produces a refined mixed rare earth carbonate product at a low cost and energy intensity

- Free dig, no drill and blast with low strip ratio 0.21 LOM
- 2 Low acidity pH 4.5 5, with 30 min leach time, at ambient temp and pressure
- 3 ANSTO continuous testing confirms exceptional recoveries ~70% MREO

- Proven process flowsheet and technologies
- 5 Dry stack tails process to backfill with no tailings dam requirement
- 6 Scalable opportunities across the project with demonstration facility for MREC and separation testwork being planned

#### Simple process flowsheet with low technical risk and high environmental credentials

![](_page_9_Figure_9.jpeg)

### **CAPITAL COSTS, FUNDING AND OFFTAKE**

Low capital intensity and operating costs make Caldeira a financially robust project

#### Funding

- Continued **government support** in the form of debt and grant
- **BNDES** ramping up support for the Strategic Minerals sector
- **BIP** inclusion development of downstream industry
- Pursue strategic partnerships
- Export Credit Agency basis for project financing

#### Capex

- 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

![](_page_10_Figure_13.jpeg)

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

### **PROJECT WORKSTREAMS**

Rapid progress being made across critical workstreams with leading industry partners

#### **Environmental Approvals**

- EIS report lodged and review underway
- Public Hearing Caldas successfully held
- On track for Q2 2026 construction permit delivery

#### **Engineering / Project Studies**

- Construction of a pilot plant to support process and deliver MREC
- Commencement of separated rare earth oxides Scoping Study

- MREC Pre-Feasibility Study to be completed in June quarter 2025
- Incorporates new high-grade Mineral Resource additions

#### **Project Partners**

![](_page_11_Picture_12.jpeg)

![](_page_11_Picture_13.jpeg)

![](_page_11_Picture_14.jpeg)

![](_page_11_Picture_15.jpeg)

![](_page_11_Picture_16.jpeg)

![](_page_11_Picture_17.jpeg)

![](_page_11_Picture_18.jpeg)

### **FUTURE EXPANSION POTENTIAL**

Scope for a Northern operating hub to materially increase longer-term production

![](_page_12_Figure_2.jpeg)

### **CALDEIRA PROJECT**

The world's most attractive scalable rare earth development project

HIGH GRADE RESOURCELOW OPERATING COSTLOW CAPITAL INTENSITYEXCELLENT FINANCIAL METRICSSCALE OPTIONALITY

![](_page_13_Picture_3.jpeg)

![](_page_13_Picture_4.jpeg)

![](_page_14_Picture_0.jpeg)

![](_page_14_Picture_1.jpeg)

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### **APPENDIX A**

#### Caldeira Mineral Resource Estimate (15 April 2025)

Licence	JORC Category	Material Type	Tonnes Mt	TREO ppm	Pr <sub>6</sub> O <sub>11</sub> ppm	Nd <sub>2</sub> O <sub>3</sub> ppm	Tb₄O <sub>7</sub> ppm	Dy <sub>2</sub> O <sub>3</sub> ppm	MREO ppm	MREO/TREO
Capão do Mel	Measured	Clay	11	3,888	222	586	6	28	842	21.7%
Cupim Vermelho Norte	Measured	Clay	26	2,607	156	477	5	25	663	25.4%
Total	Measured		37	2,983	176	509	5	26	715	24.0%
Capão do Mel	Indicated	Clay	74	2,908	163	449	5	23	640	22.0%
Barra do Pacu	Indicated	Clay	77	2,917	143	376	4	21	545	18.7%
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%
Cupim Vermelho Norte	Indicated	Clay	90	2,658	163	489	5	26	683	25.7%
Dona Maria 1	Indicated	Clay	111	2,253	128	376	4	23	531	23.6%
Dona Maria 2	Indicated	Clay	53	2,303	132	390	4	22	548	23.8%
Total	Indicat	ed	629	2,668	148	422	5	24	599	22.4%
Total	Measured + I	ndicated	666	2,685	150	427	5	25	605	22.5%
Capão do Mel	Inferred	Clay	32	1,791	79	207	2	13	302	16.9%
Barra do Pacu	Inferred	Clay	190	2,153	112	296	3	18	429	19.9%
Soberbo	Inferred	Clay	89	2,713	167	478	5	24	675	24.9%
Figueira	Inferred	Clay	9	3,105	139	379	5	28	551	17.7%
Cupim Vermelho Norte	Inferred	Clay	78	2,237	126	377	4	23	530	23.8%
Dona Maria 1	Inferred	Clay	49	2,225	121	383	5	25	534	24.0%
Dona Maria 2	Inferred	Clay	29	2,324	130	397	4	21	552	23.8%
Capão do Mel	Inferred	Transition	25	1,752	86	239	3	14	341	19.5%
Barra do Pacu	Inferred	Transition	122	1,837	95	253	3	15	355	19.9%
Soberbo	Inferred	Transition	54	2,207	138	395	4	20	558	25.3%
Figueira	Inferred	Transition	24	2,174	115	328	4	21	468	21.5%
Cupim Vermelho Norte	Inferred	Transition	67	1,665	92	281	3	17	393	23.6%
Dona Maria 1	Inferred	Transition	42	1,703	95	275	3	17	390	22.9%
Dona Maria 2	Inferred	Transition	21	1,615	86	251	3	15	355	22.0%
Total	Inferre	ed	832	2,097	115	325	4	19	462	22.0%
Total	Measured + Indica	ted + Inferred	1,497	2,359	130	370	4	21	526	22.3%

Caldeira Project MRE by licence at 1,000ppm TREO cut-off. Differences may occur due to rounding.

### **APPENDIX B**

#### Peer Comparison Reference Data

Source data for (Bubble Plot), showing IAC Deposits with reported Measured + Indicated + Inferred Resources (Mt) x TREO Grade (ppm).

Company	Project	Classification	Resource (Mt)	Grade (ppm)	Cut-Off (ppm)	MREO (ppm)	Bubble Size	Reference
		Measured,						
Serra Verde	Pela Ema	Indicated +	911	1,214	NSR	242	111	Minedocs August 2016
		Inferred						
Aclara	Carina Module	Inferred	168	1,510	NSR	346	25	Aclara Resources Inc. 12 December 2023
Aclara	Penco	Measured, Indicated +	29	2,275	NSR	351	7	Aclara Resources Inc. 12
	Module	Inferred						December 2020
Brazilian Critical Minerals	Ema	Inferred	1,017	793	500	216	81	Brazilian Critical Minerals Ltd 22 April 2024
Brazilian Rare Earths	Rocha Da Rocha	Inferred	485	1,074	200	309	52	Brazilian Rare Earths Ltd 19 December 2023
Appia	PCH	Indicated +	53	2,841	NSR	587	15	Appia Rare Earths & Uranium Corp 1 March 2023
Viridis	Colossus	Measured, Indicated + Inferred	493	2,508	1,000	601	124	Viridis Mining & Minerals Ltd 22 January 2025
lonic Rare Earths	Makuutu	Indicated +	617	630	200	152	39	Ionic Rare Earths Limited 15 May 2024
Abx Group	Deep Leads, Rubble Mound, Wind Break	Measured, Indicated + Inferred	89	844	350	220	8	ABx Group 2 May 2024
Meteoric	Caldeira	Measured + Indicated +	1,497	2,359	1,000	526	353	This announcement
Resources		Inferred						

Source data for Figure 4 (Bubble Plot), showing IAC Deposits with reported Measured + Indicated Resources (Mt) x TREO Grade (ppm).

Company	Project	Classification	Resource (Mt)	Grade (ppm)	Cut-Off (ppm)	MREO (ppm)	Bubble Size	Reference
Serra Verde	Pela Ema	Measured + Indicated	390	1,500	NSR	0	59	Minedocs August 2016
Appia	PCH	Indicated	7	2,513	NSR	562	2	Appia Rare Earths & Uranium Corp 1 March 2023
Viridis	Colossus	Measured + Indicated	330	2,164	1000	659	71	Viridis Mining & Minerals Ltd 22 January 2025
Ionic Rare Earths	Makuutu	Indicated	518	640	200	152	33	Ionic Rare Earths Limited 15
Aclara	Penco Module	Measured + Indicated	28	2,292	NSR	523	6	Aclara Resources Inc. 12 December 2023
Meteoric Resources	Caldeira (Global)	Measured + Indicated	666	2,655	1000	605	179	This announcement
Meteoric Resources	CDM	Measured + Indicated	85	3,035	1000	666	26	MEI ASX 13 June 2024
Meteoric Resources	BdP	Indicated	77	2,917	1000	545	22	MEI ASX 15 April 2025
Meteoric Resources	SOB	Indicated	86	2,730	1000	669	23	MEI ASX 14 May 2024
Meteoric Resources	FIG	Indicated	138	2,844	1000	582	39	MEI ASX 5 August 2024
Meteoric Resources	CVN	Measured + Indicated	116	2,647	1000	679	31	MEI ASX 12 March 2025
Meteoric Resources	DM1 + DM2	Indicated	164	2,269	1000	536	37	MEI ASX 12 March 2025