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METEORIC RESOURCES

Fremantle RIU Conference

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

ASX:MEI

February 2024

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The information in this presentation that relates to exploration results is based on information reviewed, collated and fairly represented by Dr Andrew Tunks a Competent Person and a Member of Australian Institute of Geoscientists #2820 and a consultant to Meteoric Resources NL. Dr Tunks has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which has been undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results. Dr. Tunks consents to the inclusion in this report of the matters based on this information in the form and context in which it appears. The Company confirms that all material assumptions and technical parameters underpinning the exploration results in this report continue to apply and have not materially changed. The Company is not aware of any new information or data that materially affects the information included in this release.

The information in this presentation that relates to exploration results is based on information reviewed, collated and fairly represented by Dr Carvalho a Competent Person and aa Member of the Australasian Institute of Mining and Metallurgy and a consultant to Meteoric Resources NL. Dr.Carvalho has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which has been undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr. Carvalho consents to the inclusion in this report of the matters based on this information in the form and context in which it appears

The information in this presentation that relates to Mineral Resources is based on information compiled by Dr. Beck Nader, a Competent Person who is a Fellow of Australian Institute of Geoscientists #4472. Dr. Beck Nader is a consultant for BNA Mining Solutions. He has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify him as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr. Beck Nader consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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COMPANY OVERVIEW

Supported by an experienced and competent Board, the share price has performed significantly well this year

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MEI Snapshot

ASX Code	**MEI**
Share Price (1/02/24 Close)	**A$ 0.195**
Shares on Issue	**1,940M**
Market Capitalisation	**A$328M / US$216M**
Cash (1/02/2024)	**A$ 32M**
Liquidity (3-Month Avg.)	**A$ 3M / day**
Largest Shareholder	**c. 8.47%**

Board of Directors

Executive Chairman	**Dr Andrew Tunks**
Executive Director	**Dr Marcelo de Carvalho**
Non-Executive Director	**Dr Paul Kitto**
Non-Executive Director	**Mr. Peter Gundy**

Chief Executive Officer	**Nick Holthouse**

METEORIC RESOURCES

INVESTMENT HIGHLIGHTS – CALDEIRA PROJECT

Developing the world's largest rare earths deposit for a Western supply chain

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1. **Globally Significant Inferred Mineral Resource with Measured and Indicated updates to come**
   490 Mt @ 2,600ppm TREO Inferred Resource with High Grade Portion of 120Mt @ +4,000ppm TREO (3,000ppm TREO CoG)
2. **Highest grade ionic clay project globally with basket composition of 31% NdPr and 1% DyTb**
   Nd, Pr, Dy and Tb are essential elements for magnets with consumption of Rare Earth Magnets expected to grow CAGR 7% Year on Year
3. **Strong Metallurgical Recoveries from historical and recent ANSTO test work**
   Simple AMSUL wash provide recoveries to the leach of up to Nd 92% - Pr 86% - Tb 72% and Dy 71%
4. **Significant land holding within the Caldeira Clay District**
   193Km2 over 69 separate licenses. Resource growth upside currently only over 6 of the licenses
5. **Experienced leadership team**
   Experienced Board and Management team with Project Development and REE industry expertise
6. **Strong development support in Brazil**
   Strong support from Local, State and Federal Governments; not only for development of mining operations at Caldeira but also for Mid and Down-stream processing
7. **Rapid Path to Development**
   Simple Metallurgical Flowsheet, Government support for permitting and low capital intensity MREC project targeting an FID in 4Q CY2025

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RARE EARTH DEPOSIT TYPES AND COMPARABLES

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

	Ionic Clay-hosted REE		Hard Rock-hosted REE	
Investment	✓	▪ Lower initial capex allows for increased scalability ▪ Typically, ~US$15/kg TREO annual output *(capital intensity)*[1]	?	▪ Typically ~US$150/kg TREO annual output *(capital intensity)*
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 with 3 high-quality projects	?	▪ 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

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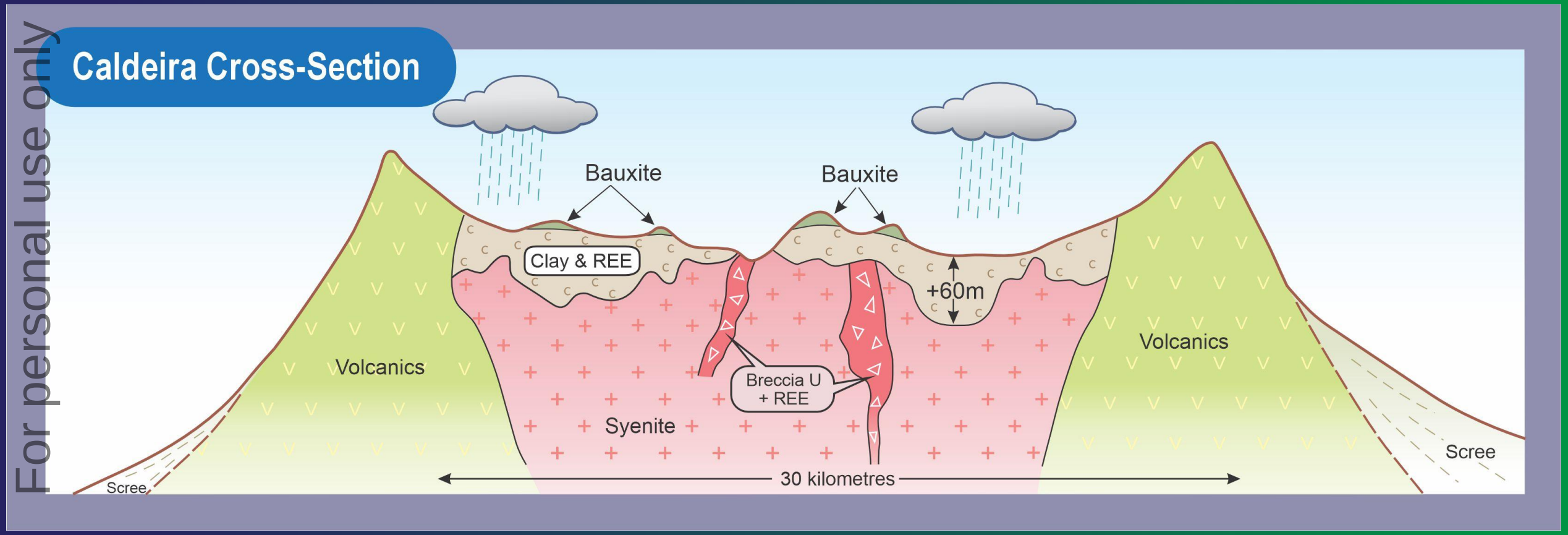
WHY IS IT SO GOOD?



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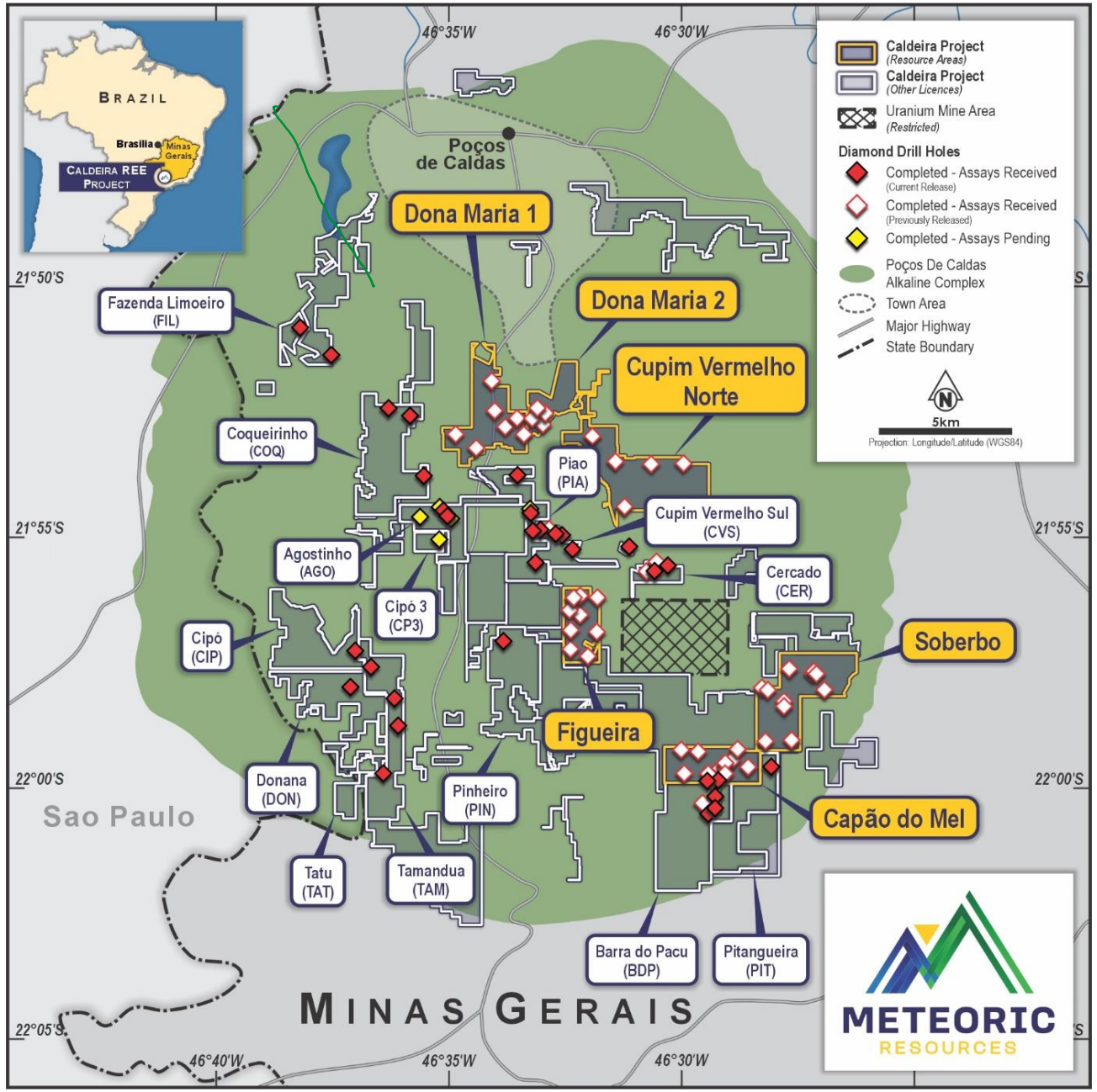
CALDEIRA LICENCES

Caldeira Project Highlights

- 69 Licences including 28 ML's and 27MLA's – for an area of 193km^2
- Only 6 licences were drilled in previous exploration
- Project lies within the state of Minas Gerais approximately four hours drive north of Saõ Paulo

Mature Jurisdiction

- Stable regulatory regime with over 8,000 mining companies in operation and no history of nationalisation of mining assets
- One of the world's largest producers of niobium, iron-ore, tantalum, lithium, vanadium and bauxite backed by a strong presence from major international mining companies
- Nearby existing clay bauxite operations with well-developed testing and engineering capabilities
- Supportive community engagement with local landholders



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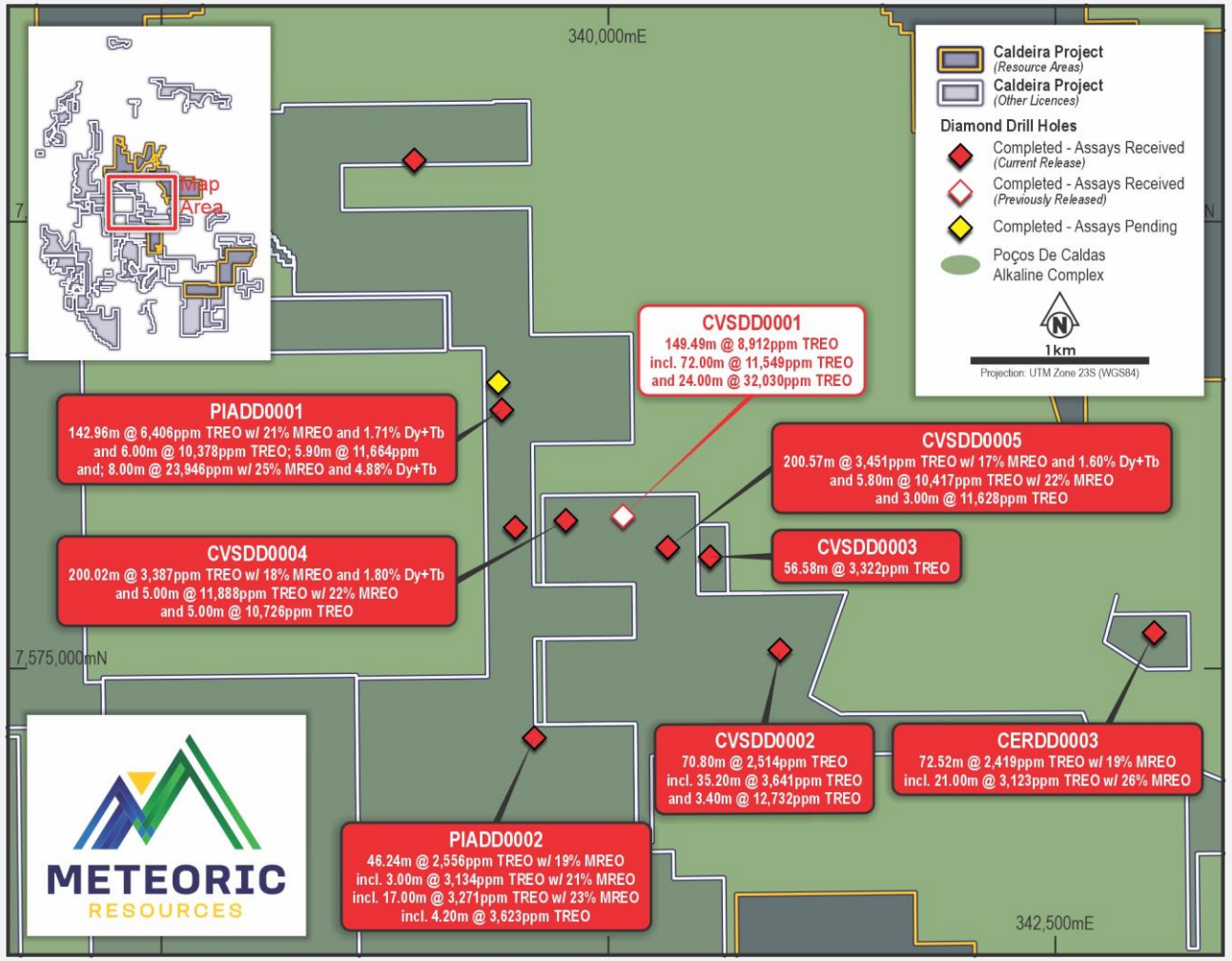
METEORIC'S DRILLING

Exploration Drilling (Outside the Caldeira Project Resource Estimate)[1]

- **CVSDD001 - 149.5m @ 8,912 ppm TREO [0m]**
  - **with 52m @ 12,692ppm or 1.27 % TREO [61m]**
- 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]
- CVSDD0005 – **201m @ 3,451ppm TREO** [0m] including:
  - **6m @ 10,417ppm TREO** [1m]
  - **10m @ 7,180ppm TREO** [65m]
- CERDD0004 – **67m @ 2,026ppm TREO** [0m] including:
  - **17m @ 3,295ppm TREO** [8m]
- COQDD0002 – **24m @ 4,127ppm TREO** [1m]
- CVSDD0002 – **71m @ 2,514ppm TREO** [0m] including:
  - **7m @ 7,594ppm TREO** [2m], with
  - **3m @ 14,564ppm TREO** [6m], and
  - **34m @ 5,454ppm TREO** [80m]
- 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].**



Notes: 1. Refer to ASX announcements 24 July 2023 and 31 August 2023

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CALDEIRA PROJECT MAIDEN RESOURCES – 409Mt @ 2626 ppm TREO

World's Highest Grade Ionic Adsorption Clay REE Deposit (ASX 1/5/2023)

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Licence	JORC Category	Tonnes Mt	TREO ppm	Pr_6O_{11} ppm	Nd_2O_3 ppm	Tb_4O_7 ppm	Dy_2O_3 ppm	MREO ppm	MREO/TREO (%)
Capão do Mel	Inferred	**68**	**2,692**	148	399	4	22	572	**21.3%**
CVN	Inferred	**104**	**2,485**	152	472	5	26	655	**26.4%**
Dona Maria 1 & 2	Inferred	**94**	**2,320**	135	404	5	25	569	**24.5%**
Figueira	Inferred	**50**	**2,811**	135	377	5	26	542	**19.3%**
Soberbo	Inferred	**92**	**2,948**	190	537	6	27	759	**25.8%**
Total	**Inferred**	**409**	**2,626**	**154**	**447**	**5**	**25**	**631**	**24.0%**

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METALLURGICAL TESTWORK

The current testwork program has proven the project's IAC characteristics across all licenses

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Historic Metallurgy Bulk Sample

- 4,917ppm TREO[1]
- MREO = 1,250 ppm
- 25.5% Magnet REO (Pr, Nd, Dy Tb)
- 33.6% Magnet REO (Pr, Nd, Dy Tb, Gd, Ho, Sm, Y (when adjusted to peers MREO criteria)

Historical Rec. to Mixed Rare Earth Carbonate (MREC)

REO	Sample1	Sample2	Sample3	Sample4	AVERAGE
La_2O_3	61%	62%	59%	64%	**62%**
Ce_2O_3	4%	4%	4%	4%	**4%**
Pr_6O_{11}	53%	51%	49%	54%	**52%**
Nd_2O_3	65%	63%	61%	67%	**64%**
Sm_2O_3	53%	52%	48%	53%	**52%**
Eu_2O_3	55%	53%	52%	56%	**54%**
Gd_2O_3	56%	57%	53%	57%	**56%**
Tb_4O_7	50%	47%	42%	48%	**47%**
Dy_2O_3	41%	38%	35%	40%	**39%**
Ho_2O_3	33%	28%	15%	29%	**26%**
Er_2O_3	28%	29%	31%	29%	**29%**
Tm_2O_3	26%	25%	22%	25%	**25%**
Yb_2O_3	15%	19%	17%	19%	**18%**
Lu_2O_3	21%	21%	19%	22%	**21%**
Y_2O_3	37%	38%	35%	37%	**37%**

New ANSTO Testwork Results commissioned by MEI

- *88% average over 9.4m from 2.6m in CDMDD004, including best values of* ***Nd 92% - Pr 86% - Tb 72% and Dy 71%***
- *86% average over 7.9m from 2.0m in DM1DD003, including best values of* ***Nd 91% - Pr 87% - Tb 71% and Dy 73%***
- *84% average over 24.8m from 2.2m in DM1DD002, including best values of* ***Nd 94% - Pr 95% - Tb 81% and Dy 75%***
- Results confirm the majority of samples tested are ionic and amenable to low Capex and Opex AMSUL leaching at pH 4.0
- Testwork will now be optimised to quantify reagent concentrations and leach kinetics and potentially further increase the recoveries

To Follow in 2024

- Completion of recovery to leach package – *Complete*
- Completion of impurity removal and precipitation test work – *Q1 2024*
- Materials handle and size fraction analysis – *Q2 2024*
- Continuous Piloting – *Q3 2024*
- All leading into the development of an optimised flowsheet and additional Met test work programmes - *Q3 2024 onwards*

Notes: 1. Refer to ASX announcement 20 December 2022

Focus on Southern Licenses for the Caldas Plant

Quality consultants engaged to progress towards a de-risked FID to produce MREC at Caldeira

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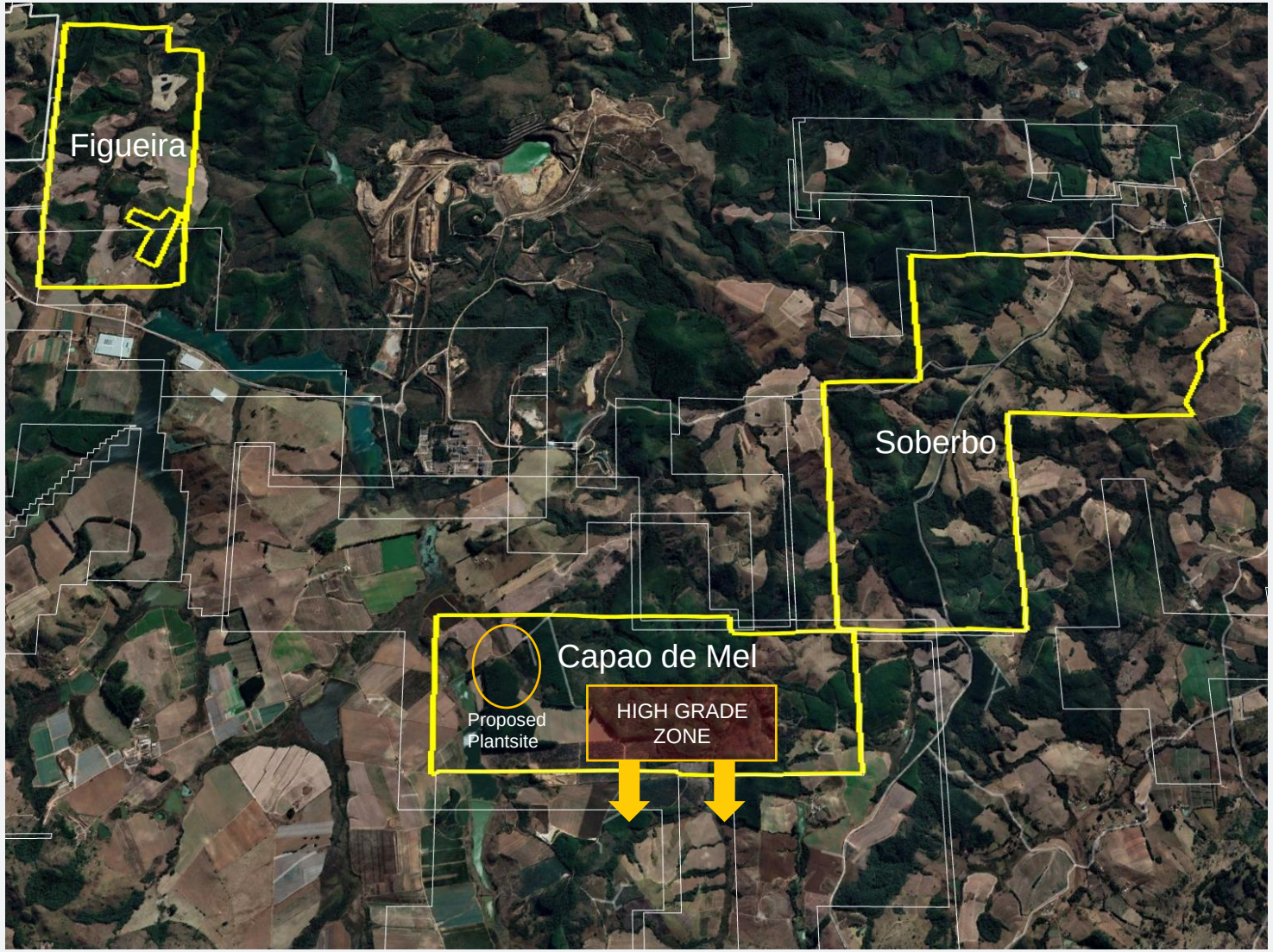

Caldas Process Plant progresses with Current work packages to develop a Circa 5Mtpa processing facility with a +4000ppm feed grade includes:

- Engineering Studies - Ausenco
- Metallurgical flowsheet development - ANSTO
- EIA process – Alger Consulting
- Resource infill drilling – Inhouse

Proposed plant site location has:

- Access to all weather road network
- Access to existing HV power (100% Hydro)
- Access to water abstraction points

ALGER Consultoria e Assessoria Jurídica

Australian Government ANSTO

Ausenco

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A Green Mine for Green Metals

Ionic adsorption clay project flow sheet - powered by 100% Hydro electricity..

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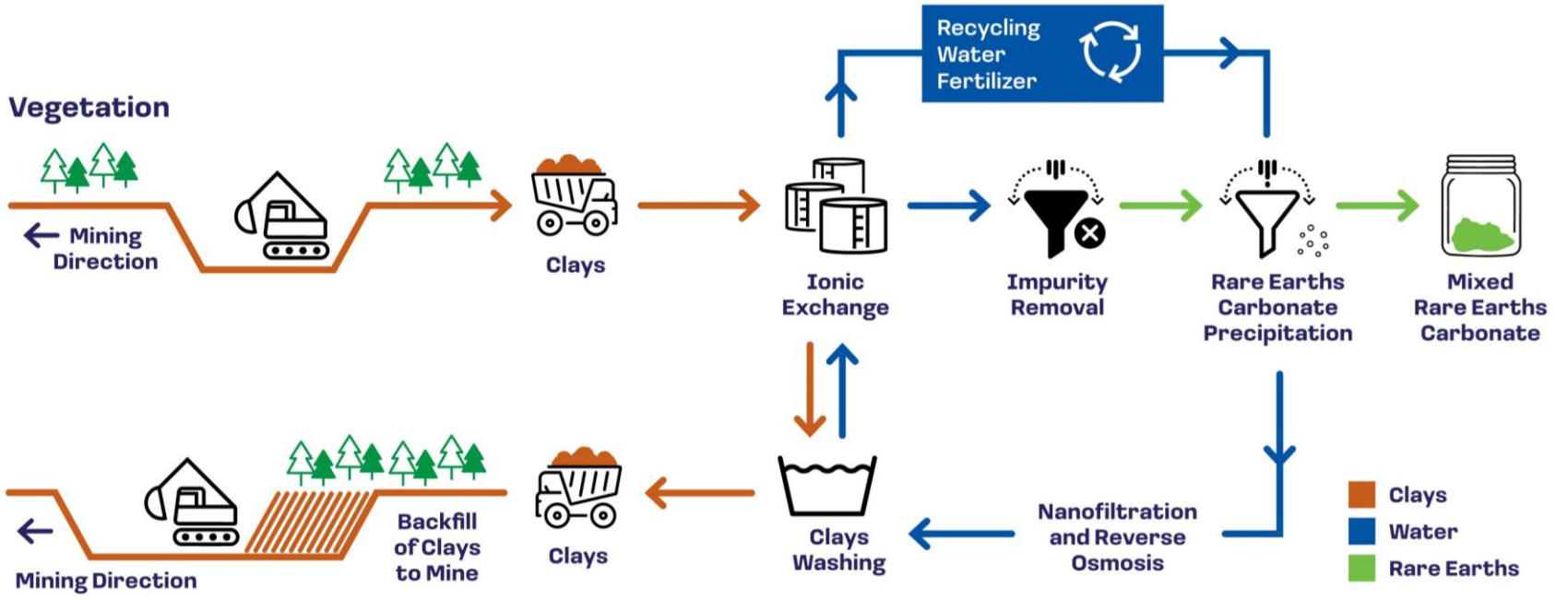
Simple, Environmentally Friendly Process

Ammonium Sulfate = Fertilizer = $(NH_4)_2 SO_4$



A simple process with low technical risk and high environmental compliance

- **No drill and blast**
- **No waste dumps**
- **No tailings dams**

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BRAZIL GOVERNMENT COLLABORATION

State Government of Minas Gerais continues to assist with permitting and development support

Collaboration Agreement Overview

METEORIC RESOURCES + GOVERNO DE MINAS / INVEST MINAS

- Meteoric Resources has entered into a non-binding Cooperation Agreement with the State Economic Department (Invest Minas) and the State Government of Minas Gerais[1]
- The Cooperation Agreement will assist with the development of the Caldeira Project and to look at further downstream processing options through to magnet production
- The Cooperation Agreement through Invest Minas will facilitate approvals and licensing processes between Meteoric Resources and government regulators and departments
- Expected to fast track Caldeira permitting processes and project development
- Caldeira Project also placed on a list of high priority mining projects in the region

Notes: 1. Refer to ASX announcement released 11 August 2023.

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KEY PACKAGES CONTINUE TO DE-RISK IN 2024

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Engineering

- Ausenco Scoping Study completed – awaiting M and I resource update to announce financial metrics
- Feasibility studies are underway - BFS or similar will be required by Lenders
- Recruitment of GM Projects

Environmental

- Alger remain on target for a Q2 2024 EIA Submission date
- Q4 2025 Construction permit date holds

Metallurgy

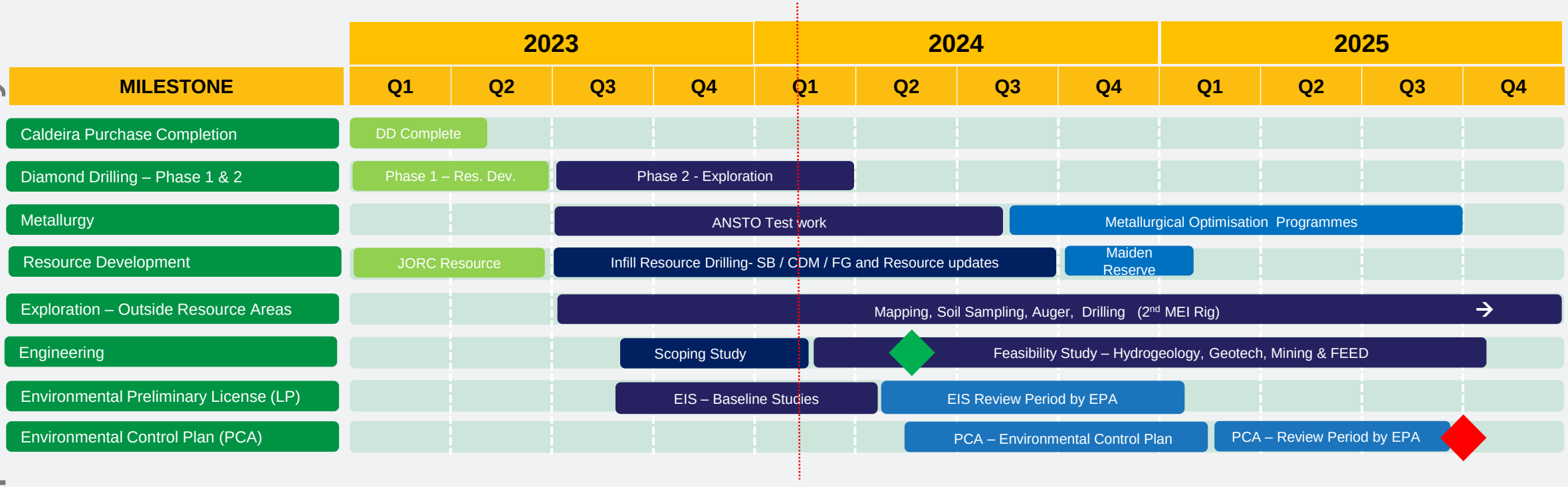
- Completion of Package 1 works with ANSTO in mid 2024
- Develop onsite metallurgical capability with dedicated pilot plant, laboratory and local recruitment
- Develop work programmes for ongoing test work both onsite and with external consultants

Resource Infill Drilling

- On track for 200Mt Measured and Indicated drilling programme to complete by Q3 2024
- Sequential Resource updates for licenses commencing Q1 2024.
- Ongoing exploration to determine near mine value resources

INDICATIVE PROJECT TIMETABLE AND KEY MILESTONES

Focus is on 2025 for the construction permit and beyond with all key development packages progressing



Key: Underway | Completed | Planned Works

Scoping Study release

Permit to Construct

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LOOKING FORWARD – OFFTAKES AND FINANCING

Developing relationships with downstream processing entities and Government agencies

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Meteoric continues to develop and progress relationships for a Western supply chain:

Financing and Grants

- Australian Government - Export Finance Australia
- US Government
  - DoD - Pentagon
  - DoE
  - DoC
  - Senate Select Committee
  - US Aid et. al.

Multiple Grants and Funding streams are available for the current Mine to MREC Objective and for Vertical Integration plans beyond

Offtakes

Conversations continue with all significant US and European Mid and Downstream entities

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Contact Information

Meteoric Resources

ABN 64 107 985 651

W www.meteoric.com.au
A Level 1, 35 Ventnor Avenue, West Perth WA 6005

Dr Andrew Tunks - *Executive Chairman*

T +61 400 205 555
E ajtunks@meteoric.com.au

Nick Holthouse – *CEO*

T +61 428 964 276
E nholthouse@meteoric.com.au

ASX:MEI