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Investor Presentation

The World's Highest Grade Ionic Adsorption Clay REE Deposit



SEPTEMBER 2023



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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 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 a 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.

The information in this presentation that relates to Mineral Resources is based on information compiled by Dr. Volodymyr Myadzel, a Competent Person who is a Member of Australian Institute of Geoscientists #3974. Dr. Volodymyr Myadzel 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 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. Volodymyr Myadzel consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. The Company confirms that it is not aware of any new information or data that materially affects the Ore Reserves 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 RPM findings are presented have not been materially modified.

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COMPANY OVERVIEW

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

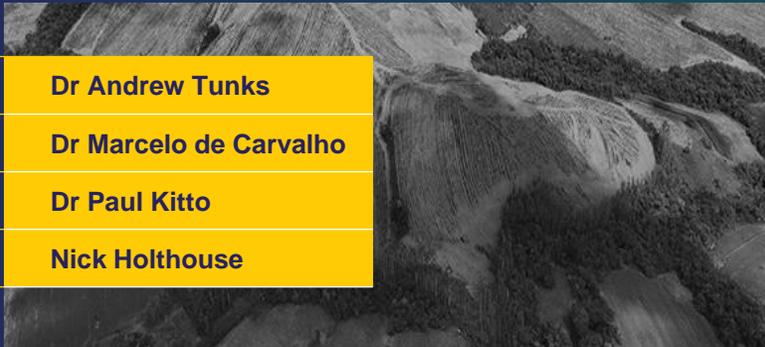
MEI Snapshot

ASX Code	MEI
Share Price (17/07/23 Close)	A\$ 0.245
Shares on Issue	1,940M
Market Capitalisation	A\$480M
Liquidity (3-Month Avg.)	A\$ 3M / day
Largest Shareholder	c. 8.47%

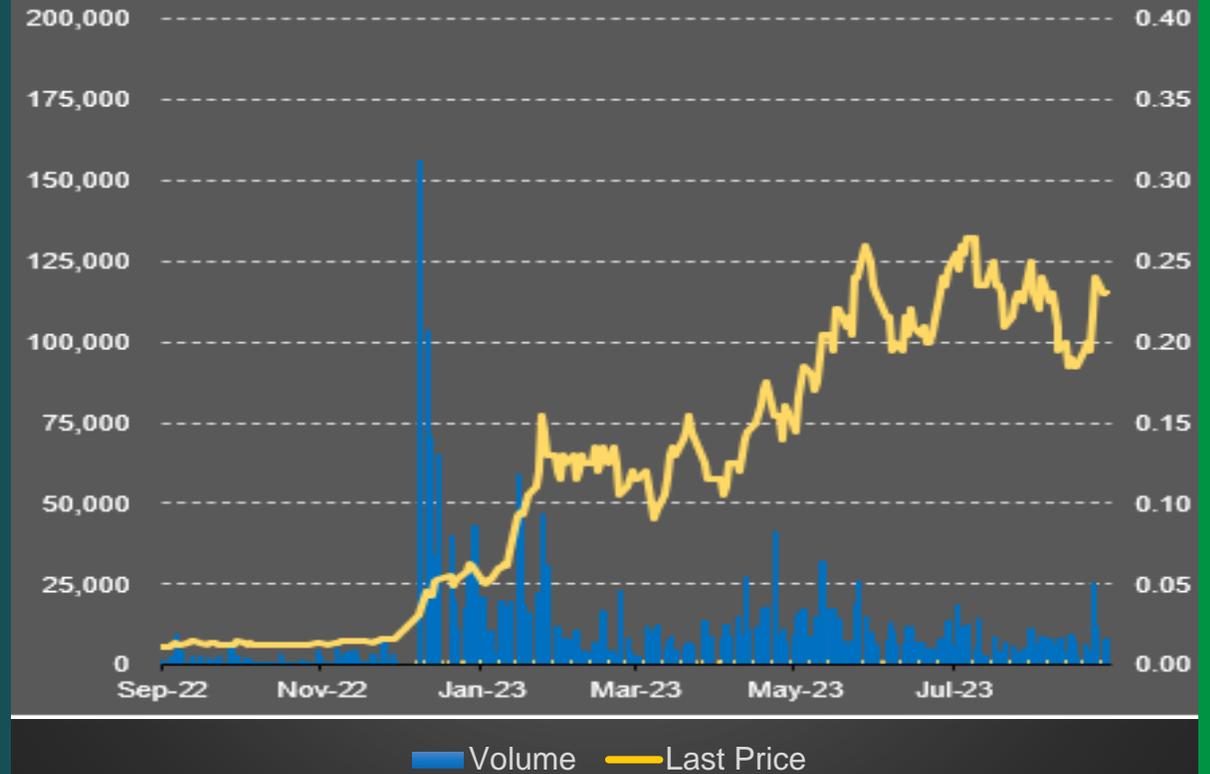


Board of Directors

Executive Chairman	Dr Andrew Tunks
Executive Director	Dr Marcelo de Carvalho
Non-Executive Director	Dr Paul Kitto
Chief Executive Officer	Nick Holthouse



MEI:AU

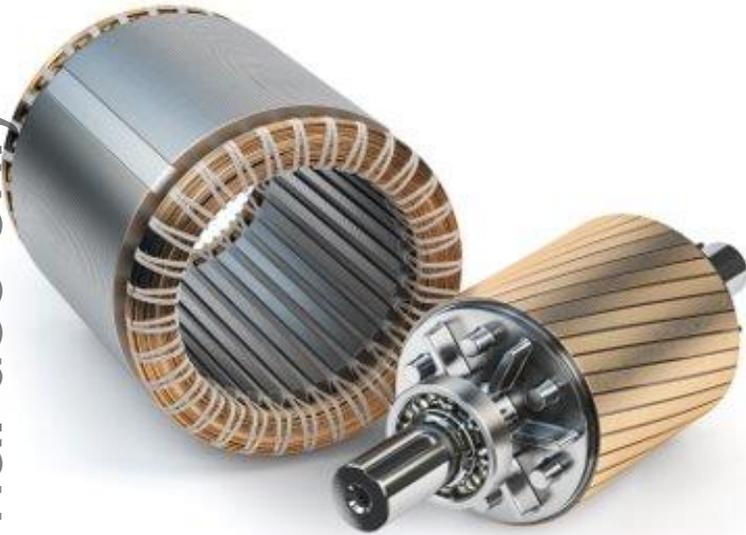


Director Experience and Background



RARE EARTHS AND WHY WE NEED THEM

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4 REE have permanent magnet power

praseodymium 59 Pr	neodymium 60 Nd
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Light Rare Earth Elements (LREE)

terbium 65 Tb	dysprosium 66 Dy
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Heavy Rare Earth Elements (HREE)

hydrogen 1 H																	helium 2 He
lithium 3 Li	beryllium 4 Be											boron 5 B	carbon 6 C	nitrogen 7 N	oxygen 8 O	fluorine 9 F	neon 10 Ne
sodium 11 Na	magnesium 12 Mg	Light Rare Earth Elements LREEs		Heavy Rare Earth Elements HREEs				High Value, High Demand Elements				aluminium 13 Al	silicon 14 Si	phosphorus 15 P	sulfur 16 S	chlorine 17 Cl	argon 18 Ar
potassium 19 K	calcium 20 Ca	scandium 21 Sc	titanium 22 Ti	vanadium 23 V	chromium 24 Cr	manganese 25 Mn	iron 26 Fe	cobalt 27 Co	nickel 28 Ni	copper 29 Cu	zinc 30 Zn	gallium 31 Ga	germanium 32 Ge	arsenic 33 As	selenium 34 Se	bromine 35 Br	krypton 36 Kr
rubidium 37 Rb	strontium 38 Sr	yttrium 39 Y	zirconium 40 Zr	niobium 41 Nb	molybdenum 42 Mo	technetium 43 Tc	ruthenium 44 Ru	rhodium 45 Rh	palladium 46 Pd	silver 47 Ag	cadmium 48 Cd	indium 49 In	tin 50 Sn	antimony 51 Sb	tellurium 52 Te	iodine 53 I	xenon 54 Xe
caesium 55 Cs	barium 56 Ba	hafnium 72 Hf		tantalum 73 Ta	tungsten 74 W	rhenium 75 Re	osmium 76 Os	iridium 77 Ir	platinum 78 Pt	gold 79 Au	mercury 80 Hg	thallium 81 Tl	lead 82 Pb	bismuth 83 Bi	polonium 84 Po	astatine 85 At	radon 86 Rn
francium 87 Fr	radium 88 Ra	rutherfordium 104 Rf		dubnium 105 Db	seaborgium 106 Sg	bohrium 107 Bh	hassium 108 Hs	meitnerium 109 Mt	darmstadtium 110 Ds	roentgenium 111 Rg							

lanthanum 57 La	cerium 58 Ce	praseodymium 59 Pr	neodymium 60 Nd	promethium 61 Pm	samarium 62 Sm	europium 63 Eu	gadolinium 64 Gd	terbium 65 Tb	dysprosium 66 Dy	holmium 67 Ho	erbium 68 Er	thulium 69 Tm	ytterbium 70 Yb	lutetium 71 Lu
actinium 89 Ac	thorium 90 Th	protactinium 91 Pa	uranium 92 U	neptunium 93 Np	plutonium 94 Pu	americium 95 Am	curium 96 Cm	berkelium 97 Bk	californium 98 Cf	einsteinium 99 Es	fermium 100 Fm	mendelevium 101 Md	nobelium 102 No	lawrencium 103 Lr

RARE EARTH DEPOSIT TYPES AND COMPARABLES

Ionic clay allows for expedited development timelines, reduced capex requirements and a higher value product

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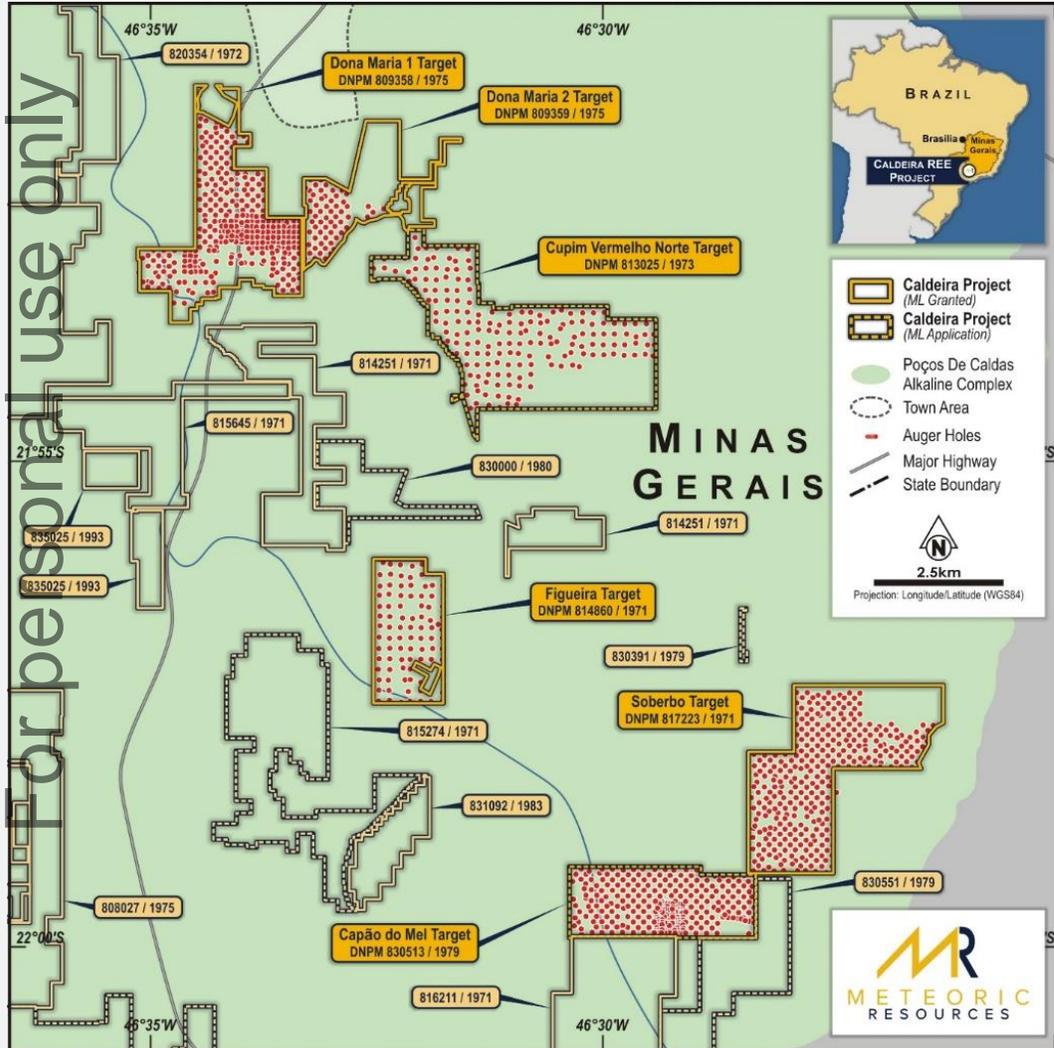
	Ionic Clay-hosted REE	Hard Rock-hosted REE
		
Location	<ul style="list-style-type: none"> Predominantly mined in China and Myanmar 	<ul style="list-style-type: none"> Majority of production based in China,
Payability	<ul style="list-style-type: none"> Contains both light and heavy REEs 	<ul style="list-style-type: none"> Typically light REEs only
Scale	<ul style="list-style-type: none"> Lower initial capex allows for increased scalability Typically ~US\$15/kg TREO annual output (<i>capital intensity</i>)¹ 	<ul style="list-style-type: none"> Typically ~US\$150/kg TREO annual output (<i>capital intensity</i>)
Exploration	<ul style="list-style-type: none"> Quick and inexpensive – aircore drilling into deeply weathered granite (clays) 	<ul style="list-style-type: none"> Similar to other hard rock base minerals requiring substantial drilling and geochemistry
Mining	<ul style="list-style-type: none"> Surface mining, with minimal stripping of waste material Pits backfilled leaving no tailings or waste dumps 	<ul style="list-style-type: none"> Drill and blast with large mining fleet (typically, with high strip ratios) Capital-intensive open cut and underground operations required
Processing	<ul style="list-style-type: none"> Simple dissolution of REE from clay in ammonium sulphate No radioactive waste streams 	<ul style="list-style-type: none"> High temperature mineral cracking using strong reagents for REE minerals Tailings are often radioactive and are costly to dispose

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

SIGNIFICANT HISTORIC EXPLORATION

JOGMEC successfully explored project between 2016 and 2019

Drilling Collar Plan – 1311 Holes



Drilling Results (ASX 16/12/2022)

10m @	8,810 ppm TREO ending in	1,942 ppm TREO	(Hole FG-82)
20m @	8,924 ppm TREO ending in	9,945 ppm TREO	(Hole CDM-311)
15m @	7,042 ppm TREO ending in	3,425 ppm TREO	(Hole CDM-286)
7m @	7,646 ppm TREO ending in	12,429 ppm TREO	(Hole DM2-28)
20m @	6,779 ppm TREO ending in	4,652 ppm TREO	(Hole CDM-47)
12m @	8,367 ppm TREO ending in	5,829 ppm TREO	(Hole CVN-22)
13m @	6,600 ppm TREO ending in	6,817 ppm TREO	(Hole CVN-80)
20m @	5,918 ppm TREO ending in	2,239 ppm TREO	(Hole CDM-27)
14m @	5,979 ppm TREO ending in	2,325 ppm TREO	(Hole FG-27)
15m @	7,551 ppm TREO ending in	7,915 ppm TREO	(Hole FG-89)
13m @	7,641 ppm TREO ending in	2,072 ppm TREO	(Hole SB-109)
19m @	6,895 ppm TREO ending in	7,840 ppm TREO	(Hole CDM-134)
15m @	6,709 ppm TREO ending in	4,460 ppm TREO	(Hole SB-44)

TIER 1 IONIC ADSORPTION CLAY (IAC) RARE EARTH

The due diligence program and previous metallurgical work has proven the project's IAC characteristics across various prospects

Metallurgy Bulk Sample

- 4,917ppm TREO
- 25.5% Magnet REE
- MREO = 1,250 ppm

Classification	Element	REE (ppm)	Conversion Factor	Oxide	REO (ppm)	REO /TREO %
LREE	Lanthanum	La	1.1728	La ₂ O ₃	2300	46.8%
	Cerium	Ce	1.2284	Ce ₂ O ₃	898	18.3%
	Praseodymium	Pr	1.1702	Pr ₆ O ₁₁	321	6.5%
	Neodymium	Ne	1.1664	Nd ₂ O ₃	882	17.9%
HREE	Samarium	Sm	1.1596	Sm ₂ O ₃	100	2.0%
	Europium	Eu	1.1579	Eu ₂ O ₃	25	0.5%
	Gadolinium	Gd	1.1526	Gd ₂ O ₃	69	1.4%
	Terbium	Tb	1.151	Tb ₄ O ₇	9	0.2%
	Dysprosium	Dy	1.1477	Dy ₂ O ₃	40	0.8%
	Holmium	Ho	1.1455	Ho ₂ O ₃	7	0.1%
	Erbium	Er	1.1435	Er ₂ O ₃	17	0.3%
	Thulium	Th	1.1142	Tm ₂ O ₃	2	0.0%
	Ytterbium	Yt	1.1379	Yb ₂ O ₃	13	0.3%
	Lutetium	Lu	1.1372	Lu ₂ O ₃	2	0.0%
	Yttrium	Y	1.2697	Y ₂ O ₃	232	4.7%
Totals		4151			4917	100%

Metallurgy Results and Future Work

- Leach in ammonium sulphate solution
- pH 4
- Maximum leach % occurring within 5-10mins
- Recoveries to the leach are exceptional
 - Nd & Pr above 70%
 - Tb 60-70% and
 - Dy 50-60%
- First pass un optimised recoveries to the liquor will be available for all six resource areas in Early October.

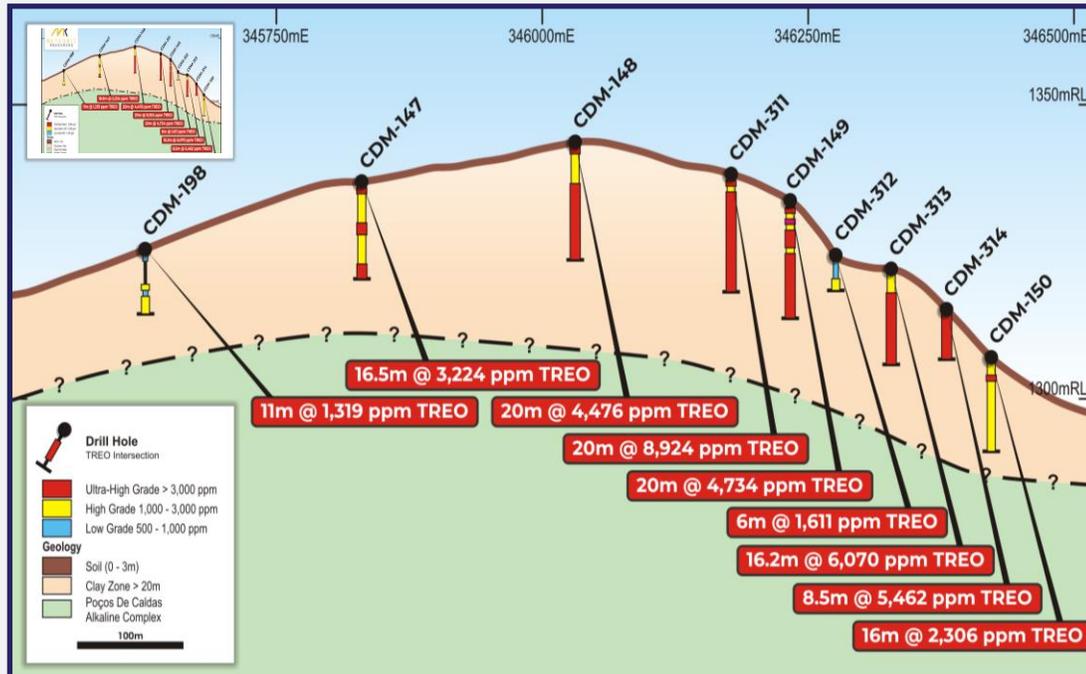
Metallurgical Recoveries (ASX 27/6/23)

REO	Sample1	Sample2	Sample3	Sample4	AVERAGE
La ₂ O ₃	61%	62%	59%	64%	62%
Ce ₂ O ₃	4%	4%	4%	4%	4%
Pr ₆ O ₁₁	53%	51%	49%	54%	52%
Nd ₂ O ₃	65%	63%	61%	67%	64%
Sm ₂ O ₃	53%	52%	48%	53%	52%
Eu ₂ O ₃	55%	53%	52%	56%	54%
Gd ₂ O ₃	56%	57%	53%	57%	56%
Tb ₄ O ₇	50%	47%	42%	48%	47%
Dy ₂ O ₃	41%	38%	35%	40%	39%
Ho ₂ O ₃	33%	28%	15%	29%	26%
Er ₂ O ₃	28%	29%	31%	29%	29%
Tm ₂ O ₃	26%	25%	22%	25%	25%
Yb ₂ O ₃	15%	19%	17%	19%	18%
Lu ₂ O ₃	21%	21%	19%	22%	21%
Y ₂ O ₃	37%	38%	35%	37%	37%

CALDEIRA GRADES, DRILLING INTERCEPTS AND PEERS

Outstanding grades, wide continuous intercepts and open at depth

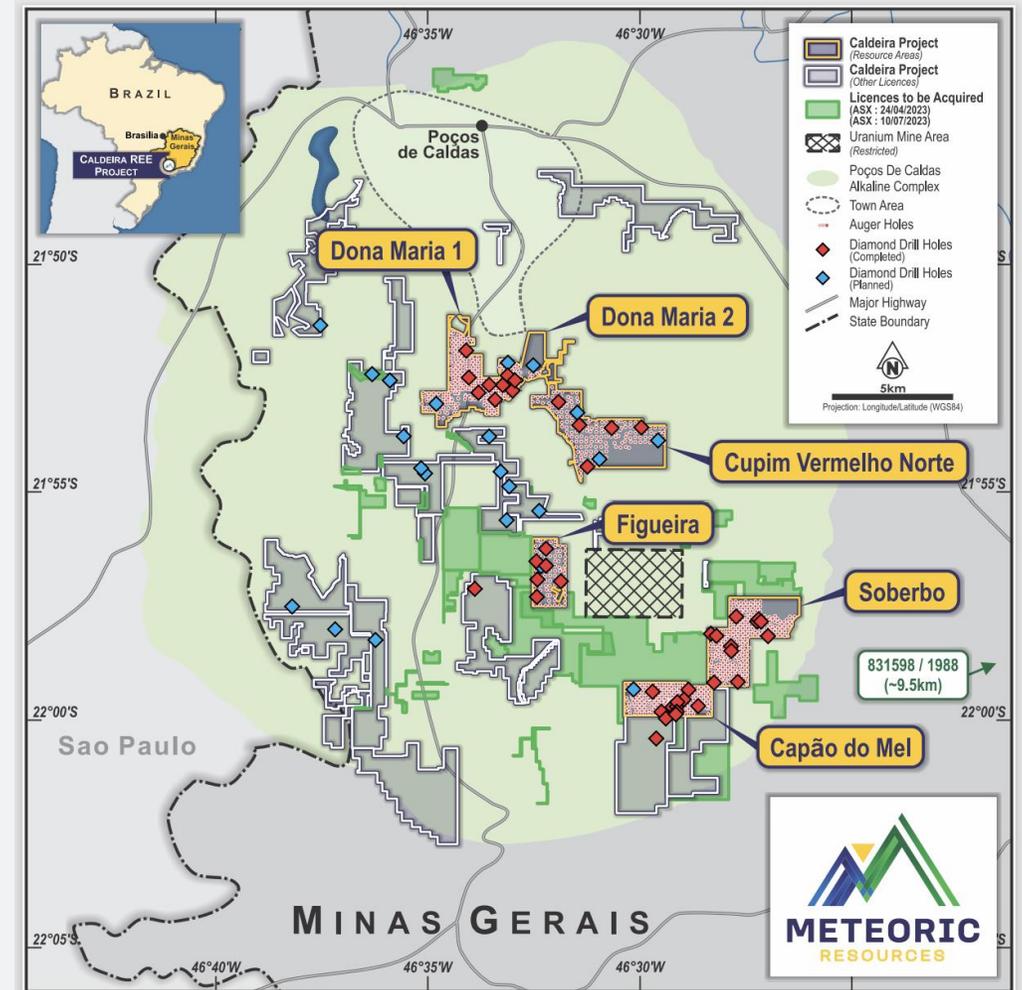
Capo Do Mel Prospect



Stylised Cross Section 7,566,800m N

New drilling is designed to intersect the underlying granite (green) at depth to establish the thickness of the prospective clay zone. Every hole on this section finished in grades above 1,000ppm TREO. Vertical exaggeration = 5 times (refer ASX release 16/12/2022).

Caldeira Project – Diamond Drilling



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Meteoric's Drilling

Depth Extensions beneath and outside the MRE

Exploration Drilling (Outside the Caldeira Project Resource Estimate) (24/7/2023)

CVSDD001 - 149.5m @ 8,912 ppm TREO [0m],

- with 52m @ 12,692ppm or 1.27 % TREO [61m],

BDPDD001 – 73.3m @ 3,939ppm TREO [0m], including 42,3m @ 4,719ppm TREO [0m]

CDMDD003 - 26.7m @ 1,561ppm TREO [0m], including 4.2m @ 3,582ppm TREO [0.9m]

CRDD001 - 58m @ 2,702ppm TREO [0m], including 33m @ 3,006ppm TREO [5m]

Resource Drilling

CDMDD009 - 16.9m @ 3,649ppm TREO [0m], including 7m @ 5,834ppm TREO [0m]

CDMDD010 - 52.6m @ 2,619ppm TREO [0m], including 5m @ 3,016ppm TREO [17m]

CDMDD011 - 25m @ 6,575ppm TREO [0m], including 4.5m @ 15,598ppm TREO [2m]

FGDD004 - 97.7m @ 1,817ppm TREO [0m], including 12.3m @ 3,666ppm TREO [22.8m]

FGDD005 - 11.1m @ 2,670ppm TREO [0m], including 7.1m @ 3,072ppm TREO [4m]

FGDD006 - 59m @ 2,594ppm TREO [0m], including 28m @ 3,905ppm TREO [10m]

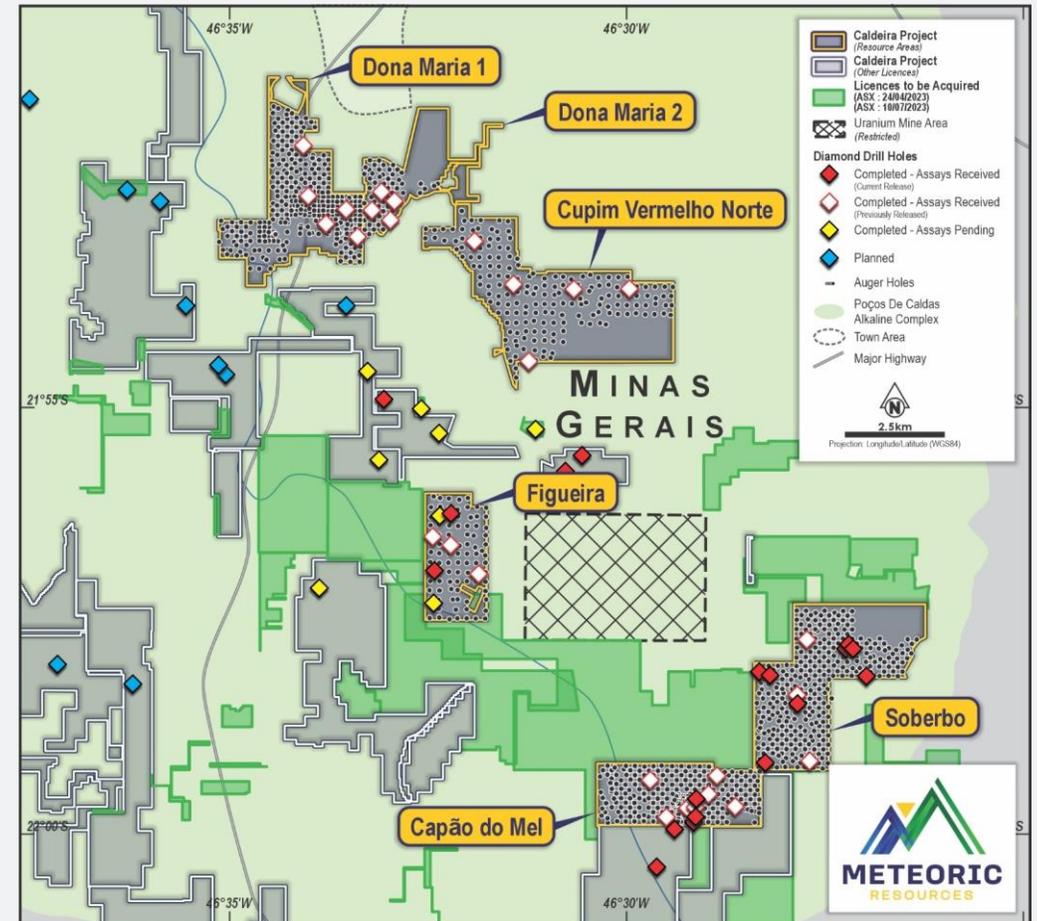
SBDD004 - 22.7m @ 2,359ppm TREO [0m], including 10.3m @ 3,755ppm TREO [0m]

SBDD008 - 26.2m @ 3,306ppm TREO [0m], including 18.2m @ 4,172ppm TREO [8m]

SBDD009 - 26.2m @ 3,958ppm TREO [0m], including 19.2m @ 4,785ppm TREO [7m]

SBDD010 - 24.3m @ 2,992ppm TREO [0m], including 14m @ 4,038ppm TREO [7m]

SBDD011 - 24.5m @ 2,240ppm TREO [0m], including 10m @ 3,781ppm TREO [12m]



CALDEIRA PROJECT MAIDEN RESOURCES – 409Mt @ 2626 ppm TREO

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

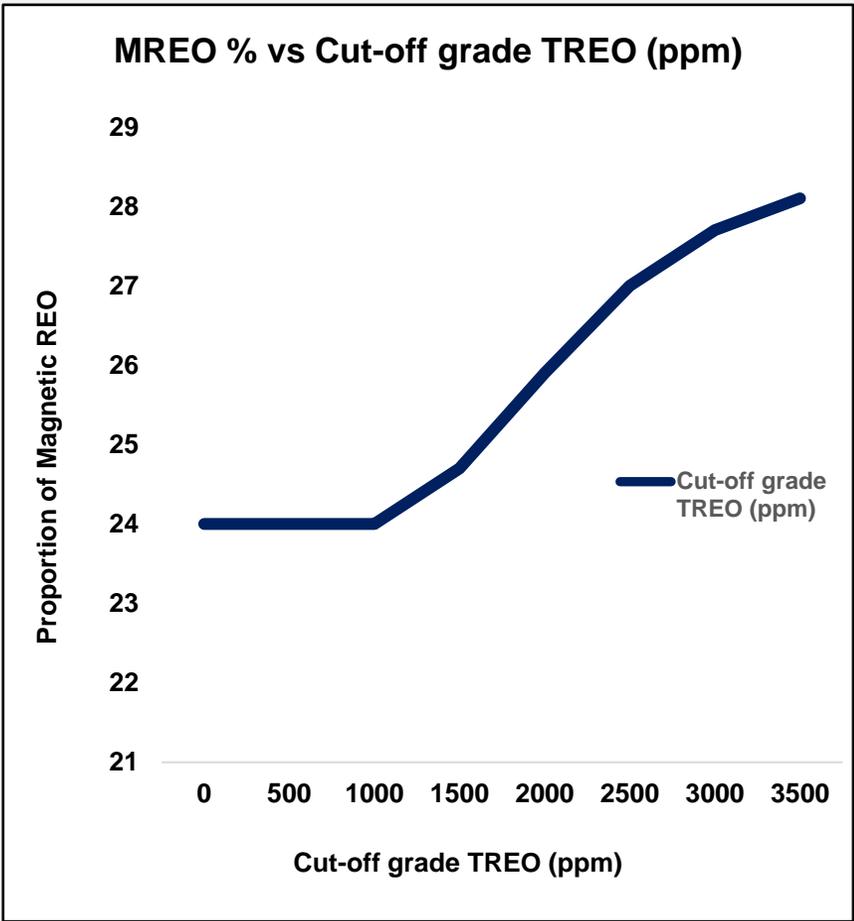
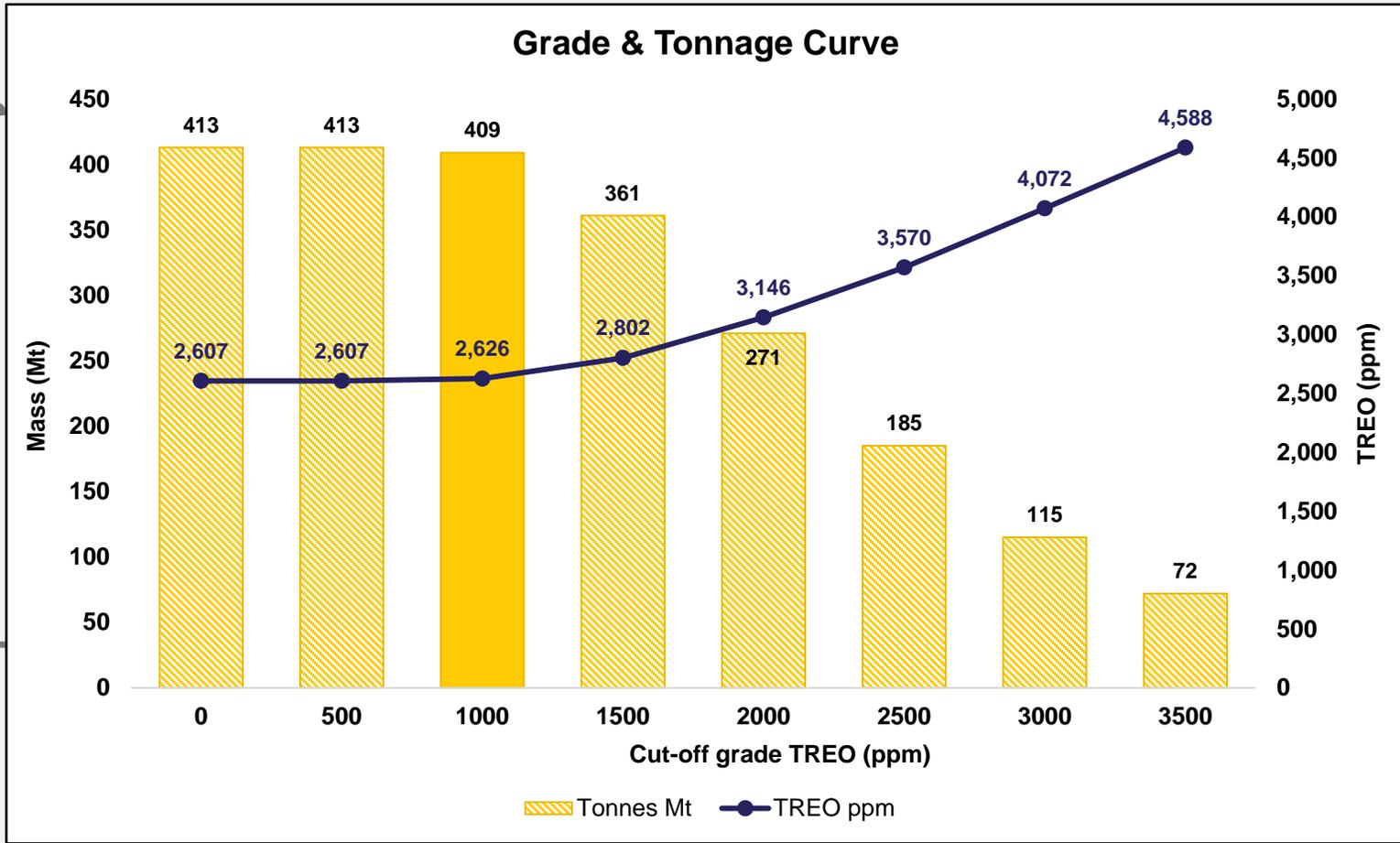
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Licence	JORC Category	Tonnes Mt	TREO ppm	Pr ₆ O ₁₁ ppm	Nd ₂ O ₃ ppm	Tb ₄ O ₇ ppm	Dy ₂ O ₃ ppm	MREO ppm	MREO/TREO (%)
Capão do Mel	Inferred	68	2,692	148	399	4	22	572	21.3%
CVN	Inferred	104	2,485	152	472	5	26	655	26.4%
Dona Maria 1 & 2	Inferred	94	2,320	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%

SUBSTANTIAL ULTRA HIGH-GRADE RESOURCE

Magnetic Rare Earth Oxide proportion increases as cut-off grade increases

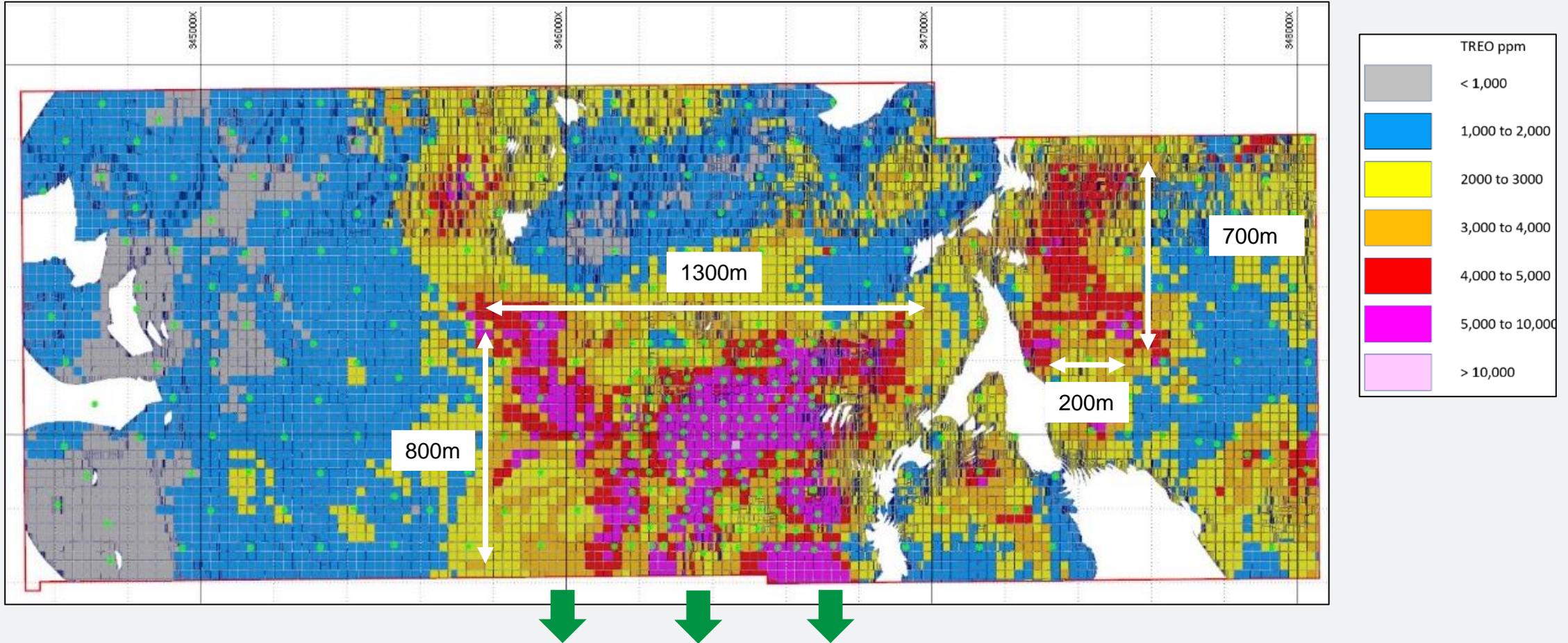
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HIGH GRADE START TO MINE LIFE

Capão do Mel - Plan View Block Model

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In-House drilling capabilities

Hanjin 8D Multipurpose Drill rig

Currently configured to drill Air Core (150m of rods).

50,000m In-Fill drilling program commenced on the Southern licenses of Figueira, Capao do Mel and Soberbo.

Initial production steady at 100m per day (expected to ramp up to 200m per day).

Potential to add a second Drill Rig in 6-8 weeks doubling production to ensure Resource Update deadline is met.



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Government Partnership

- Meteoric Resources has entered into a non-binding Cooperation Agreement with the State Economic Department (Invest Minas) and the State Government of Minas Gerais
- 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
- Environmental consultants Alger have been engaged to undertake Environmental Impact Study (EIS) for the Caldeira Project



Governor Zema addressing audience



Meteoric Directors Dr Andrew Tunks (left) and Dr Marcelo de Carvalho (right) with Alger Partners Dr Antonio Malard (center-left) and Mr Germano Luiz Gomes Vieira (centre right)

Focus on Southern Licenses for Initial Operations

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The Focus for an initial REE processing facility and mining operations remains on the Southern licenses of Figueira, Capao do Mel and Soberbo.

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

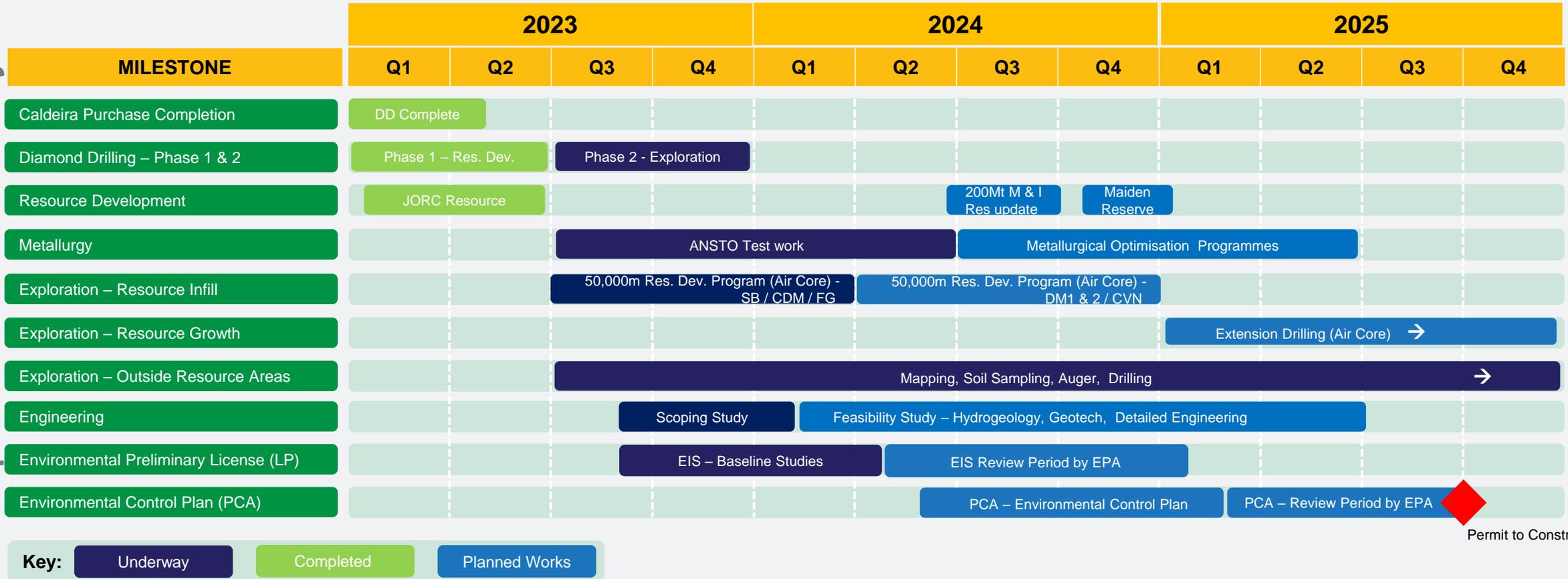
Proposed plant site location has:

- Access to all weather road network
- Access to existing HV power
- Access to water abstraction points

INDICATIVE PROJECT TIMETABLE AND KEY MILESTONES

Meteoric is positioned for a milestone 2023 and beyond with multiple packages progressing

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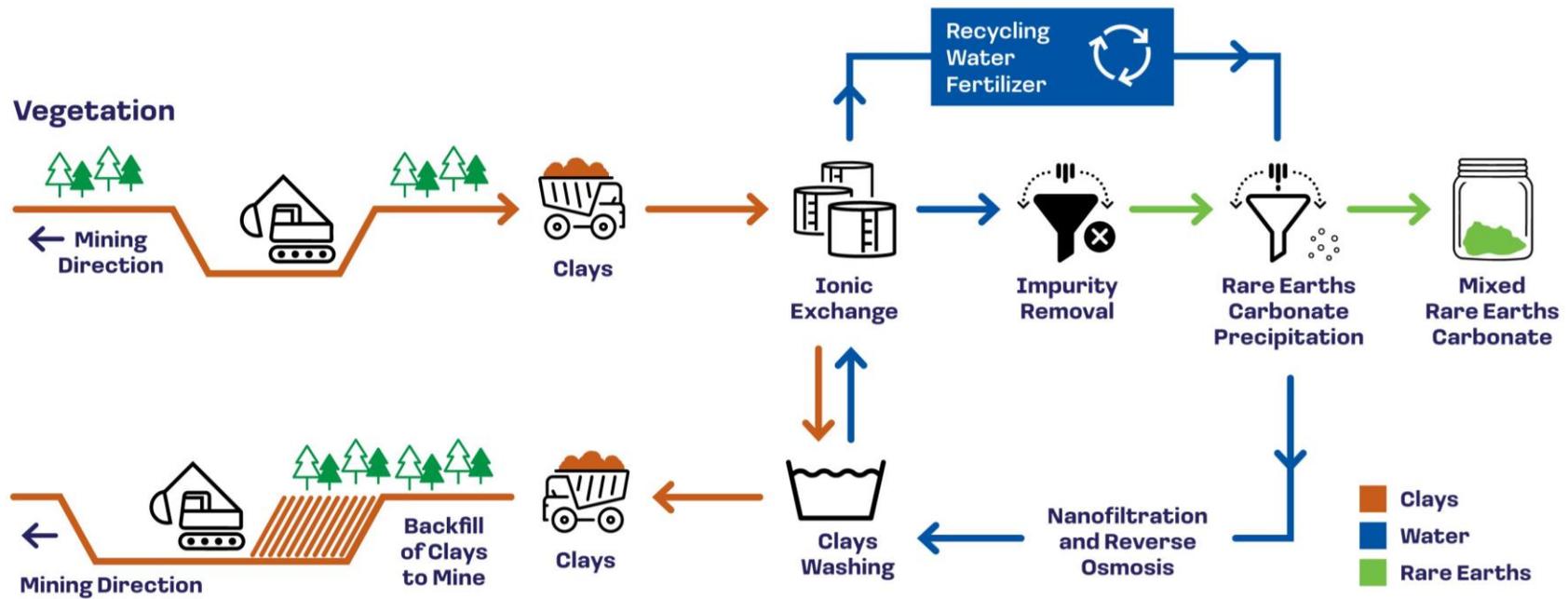
Permit to Construct

A Green Mine for Green Metals

IONIC ADSORPTION CLAY PROJECT FLOW SHEET

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Simple, Environmentally Friendly Process



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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Contact Information

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