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INVESTOR PRESENTATION

ASX:MEI



APRIL 2023

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COMPETENT PERSONS STATEMENT:

The information in this document that relates to exploration results is based on information reviewed, collated and fairly represented by Dr Andrew Tunks who is a member of the Australasian Institute Geoscientists and a director of 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 document of the matters based on this information in the form and context in which it appears. Dr Tunks confirms information in this release is an accurate representation of the available data and studies for the material mining project. Additionally, Dr Tunks confirms that the entity is not aware of any new information or data that materially affects the information contained in the ASX releases referred to in this report.

INVESTMENT HIGHLIGHTS

Meteoric is rapidly validating Caldeira as a Tier-1 Rare Earth Elements Project



Unique asset well positioned comparably to peers

- The Project, comprises of 30 mining licenses (21 licenses and 9 applications). Further acquisitions are possible
- Target mineralisation stretches over twenty-kilometres in trend and is completely open at depth



Globally significant, Tier-1 Rare Earth Elements asset

- Head grade of the composite sample for testwork collected from 44 holes, over 140 samples, was 4,917ppm TREO
- Caldeira is globally recognised due to its high quality magnet REE basket (25.5%)



Quality historical workings

- 85% of all (1311) historic holes finished with TREO grades higher than 1000ppm
- Average recovery of Tb +Dy was 43% and Pr + Nd was 58%



Proven and established jurisdiction

- Stable regulatory regime with over 8,000 mining companies in operation and no history of nationalisation of mining assets
- Existing ionic clay operations with well-developed testing and engineering capabilities (BRE and Serra Verde)



Well capitalised with balance sheet flexibility

- Strong cash balance of ~A\$18.5m (*post Caldeira Project payment*)
- Capital to be allocated towards a MRE, PEA, extensional and infill drilling as well as further metallurgical testwork



Experienced leadership with a history of creating value

- Proven track record of development success and experience, evidenced by a cross section of ASX listed directorships
- Highly qualified and technically competent, with three board members having a PhD in their applicable field

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COMPANY OVERVIEW

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



MEI Snapshot

ASX Code	MEI
Share Price (11/4/23)	\$0.115
Shares on Issue	1,734.1m
Market Capitalisation	A\$199.4m
Liquidity (3-Month Avg.)	c. \$2m / day
Largest Shareholder	c. 9.24%

Board of Directors

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

Director Experience and Background:



Share Price History

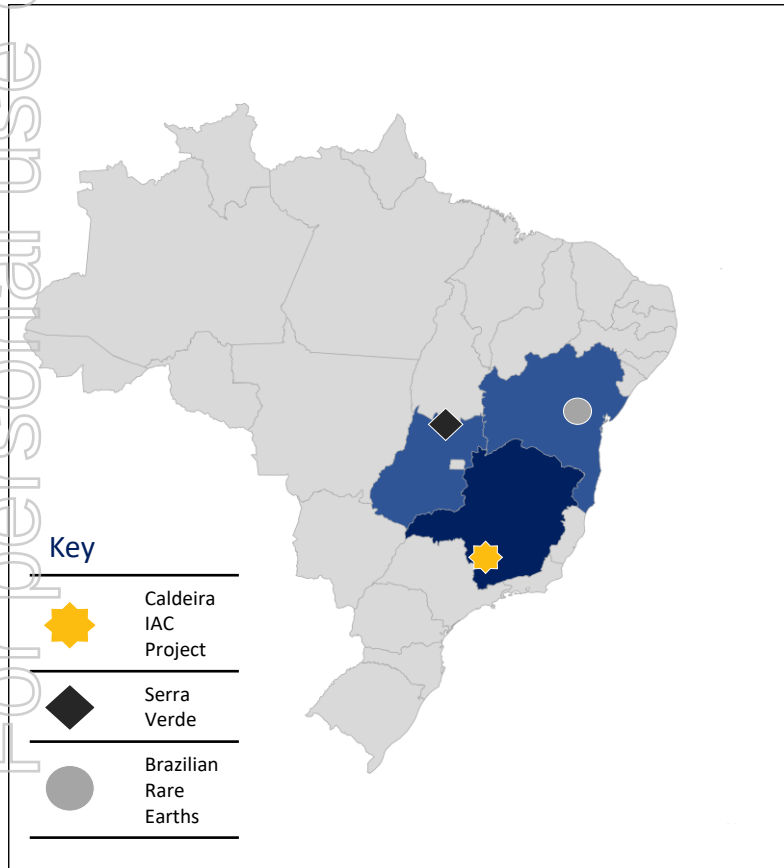
Significant share price appreciation following the transformative acquisition / date of the **Tier-1 Caldeira Project**. Heightened volume following the confirmation of Caldeira as an Ionic Adsorption Clay Deposit, re-commencement of drilling and execution of the definitive acquisition agreement.



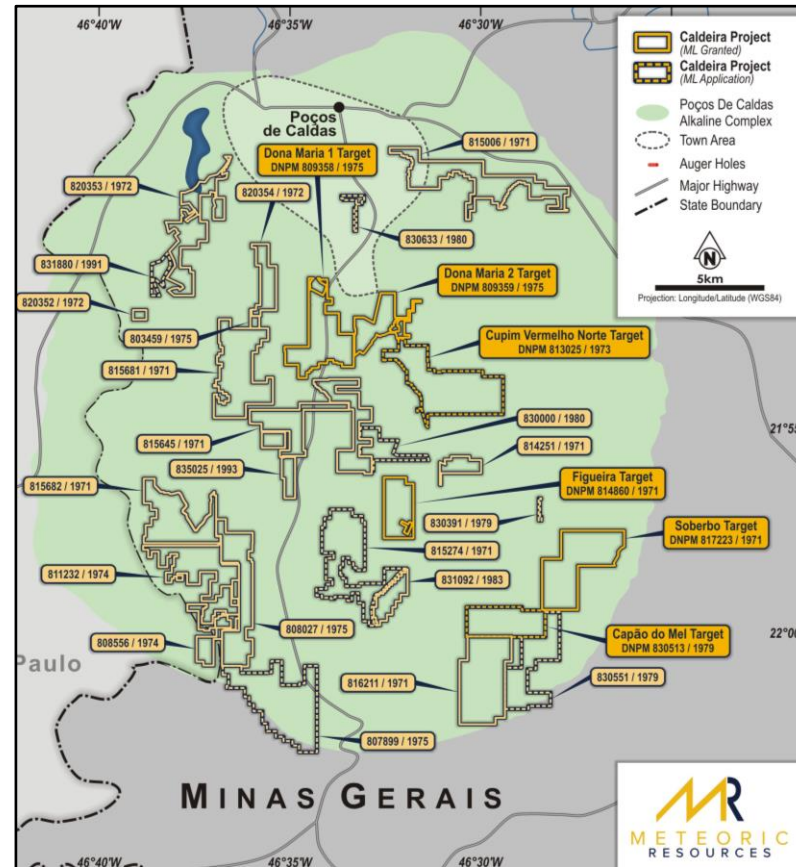
IONIC ADSORPTION CLAY - BRAZILIAN LANDSCAPE

Meteoric Resources is well positioned to capitalise on a proven mining jurisdiction and unique project

Comparable Assets



Project Mining Licenses



Caldeira Project Highlights

- 30 Licences with 21 ML's and 9 MLA's
- The Project area is over 20km and is completely open at depth
- Project lies within the state of Minas Gerais approximately four hours drive north of São 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
- Existing ionic clay operations with well-developed testing and engineering capabilities
- Supportive community engagement with local landholders

METEORIC
RESOURCES

CALDEIRA GRADES, DRILLING INTERCEPTS AND PEERS

Outstanding grades, wide continuous intercepts and open at depth

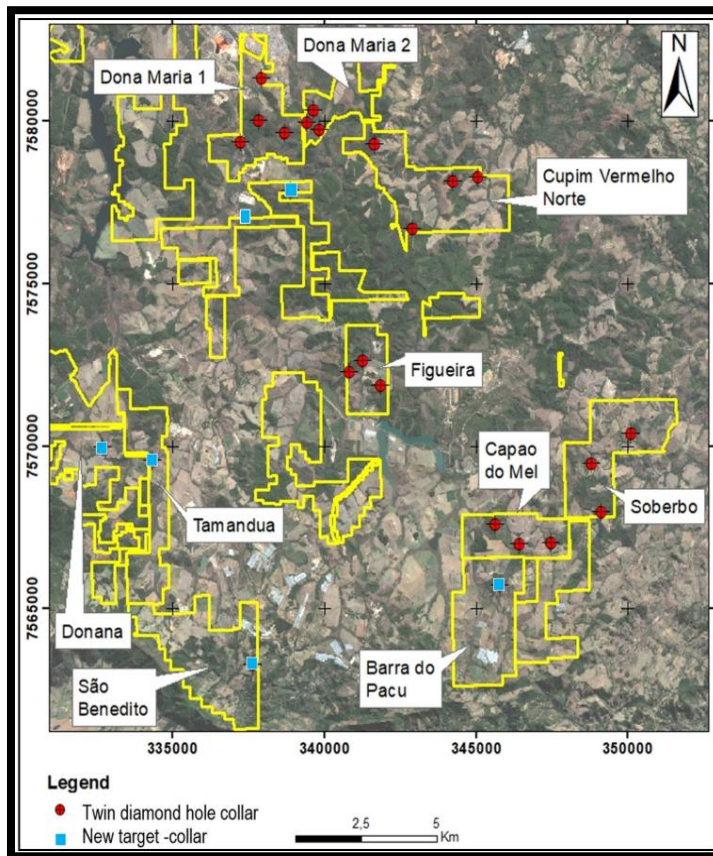
Caldeira Project – Current Exploration

Phase 1 Diamond Drilling program is underway

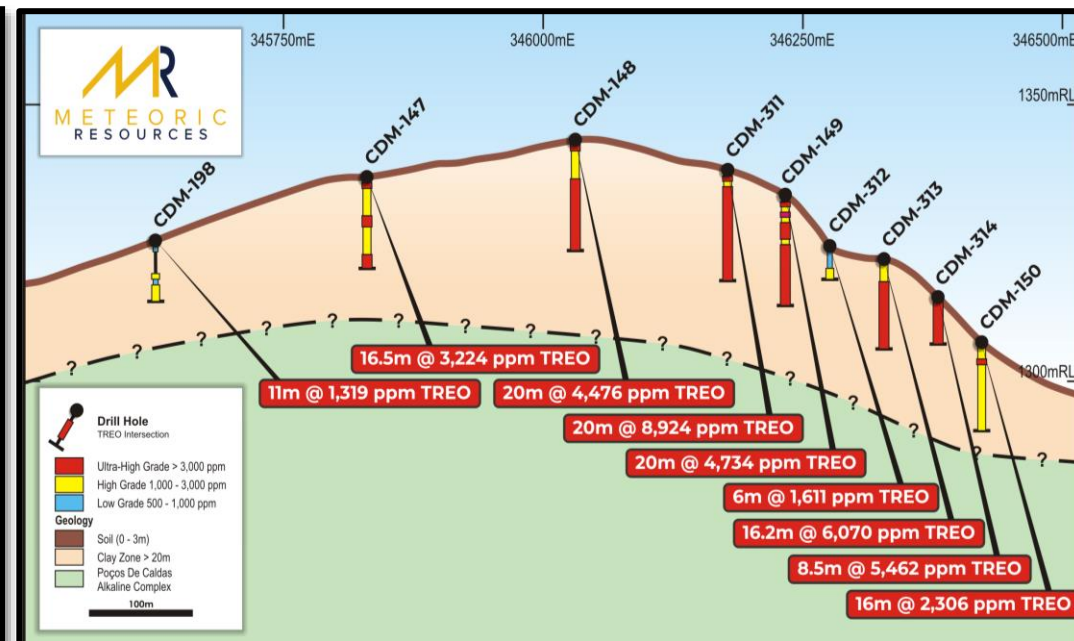
Due Diligence Resample: as part of the Due Diligence assessment, a total of 31 drill holes from JOGMEC's 2016-2019 drilling program were resampled. 315 pulp samples were collected from 23 drill holes and 109 samples of original unprocessed sample were collected from 8 drill holes, completing 424 samples

A program of 25 diamond holes was designed to test depth of REE mineralisation. The Diamond Drill cores will be split into 2 portions with half for assay and half to come back to Australia for metallurgical test work at ANSTO laboratory in Sydney

20 of the holes are designed to twin historic auger holes drilled by the previous explorer, with the remaining 5 holes to expand known mineralisation.



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 1000ppm TREO. Vertical exaggeration = 5 times (refer ASX release 16/12/2022)

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 (ASX: 20/12/22)

- The head grade of the composite sample for testwork collected from 44 holes (over 140 samples (200 kg)) was 4,917ppm TREO including 25.5% Magnet REE. Magnetic Oxides (Nd+Pr+Tb+Dy) equivalent total grades are 1,250 ppm.
- Assays of REO across the three randomly selected subsamples of the 200kg composite sample, collected from Capo do Mel Prospect, were reported by SGS GeoSol.

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

Metallurgy Results and Future Work

- Testing has confirmed Caldeira as an Ionic Adsorption Clay REE deposit, where excellent REE desorption was achieved under atmospheric conditions using a standard ammonium sulphate solution at weakly acidic conditions pH 4.
- Testwork at SGS Geosol shows incredibly rapid leach kinetics for REE in ammonium sulphate with maximum leach % occurring within 5-10mins.
- Recoveries to the leach are exceptional with Nd & Pr above 70% Tb 60-70% and Dy 50-60%.
- Metallurgical recoveries of Magnet REE's (Nd + Pr) are high among MEI's peer group given the low temperature and weak acid process. Average REE recoveries were 58%, alongside the average recovery of the more valuable high temperature magnet REEs (Tb +Dy) at 43%.
- Formally engaged with rare earths metallurgy specialists - Australian Nuclear Science Technology Organisation (ANSTO) to devise and conduct a series of metallurgical recovery tests on the Project ores.

Metallurgical Recoveries

REO	Sample 1	Sample 2	Sample 3	Sample 4	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%

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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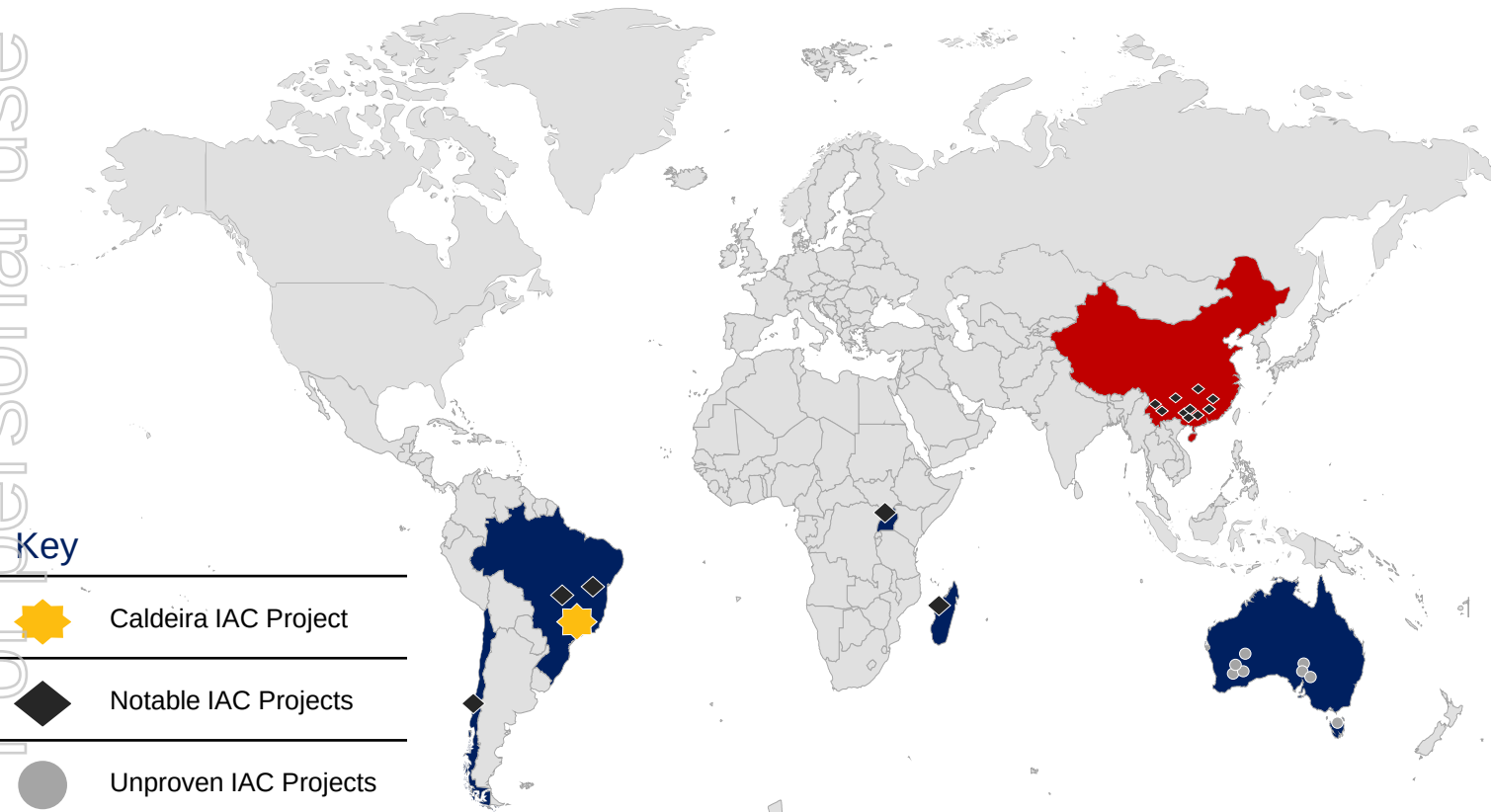
	Ionic Clay-hosted REE	Hard Rock-hosted REE
		
Location	- Predominantly mined in China, with small deposits found in Myanmar - However, global clay-hosted REE stocks are depleting	Majority of production based in China, with some projects under consideration in Australia, United States, and Africa
Payability	70% - 80% payability as mixed rare earth elements - Contains both light and heavy REEs	35% - 40% payability as a mineral concentrate - Typically light REEs only
Scale	- Lower initial capex allows for increased scalability - Typically ~US\$15/kg TREO annual output (<i>capital intensity</i>)¹	- Significant scale required before achieving economic feasibility due to higher initial capex requirements - Typically ~US\$150/kg TREO annual output (<i>capital intensity</i>)¹
Exploration	Quick and inexpensive – aircore drilling into deeply weathered granite (clays)	Similar to other hard rock base minerals requiring substantial drilling and geochemistry
Mining	- Surface mining, with minimal stripping of waste material - Progressive rehabilitation of landscape – 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 desorbable REE from clay in ammonium sulphate followed by conventional REE separation - No radioactive waste streams	- High temperature mineral cracking using strong reagents to solubilise the REE minerals (capital-intensive equipment required) - Tailings are often radioactive and are costly to dispose

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

GLOBALLY SIGNIFICANT IAC DEPOSITS & INFRASTRUCTURE

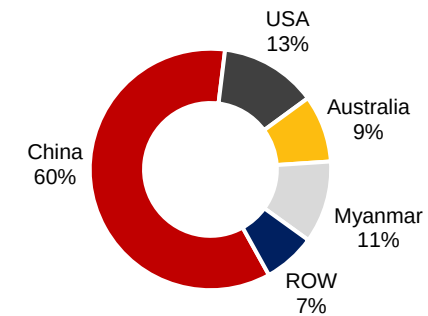
China holds a dominant position in the global rare earth element market - accounting for c. 60% of global production

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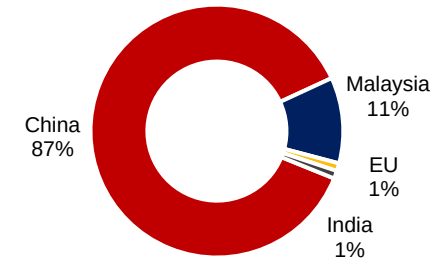


Illustrative Global Supply Chain Breakdown

REE Production



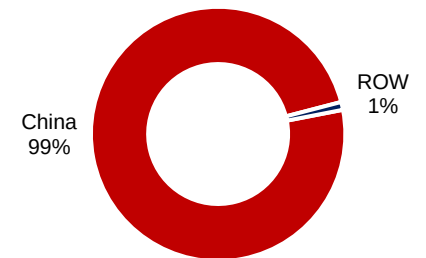
REE Processing



REE Metals



REE Recycling



USE OF FUNDS

Funds recently raised will primarily be used to significantly advance the Tier-1 Caldeira Project



Caldeira Tier-1 IAC Rare Earth Project

	A\$m	% of Total
Ongoing Resource Drilling Program	3.5	19%
Assays	2.5	14%
Studies Consultants	0.7	4%
Environment Baselines	0.5	3%
Regional Growth (<i>drilling outside resource</i>)	1.0	5%
Legals	0.4	2%
Preliminary Economic Assessment (PEA)	1.0	5%
Metallurgical test work (ANSTO)	0.7	4%
Non-REE Projects	1.0	5%
Possible Acquisitions	1.5	8%
Contingency (10%)	1.3	7%

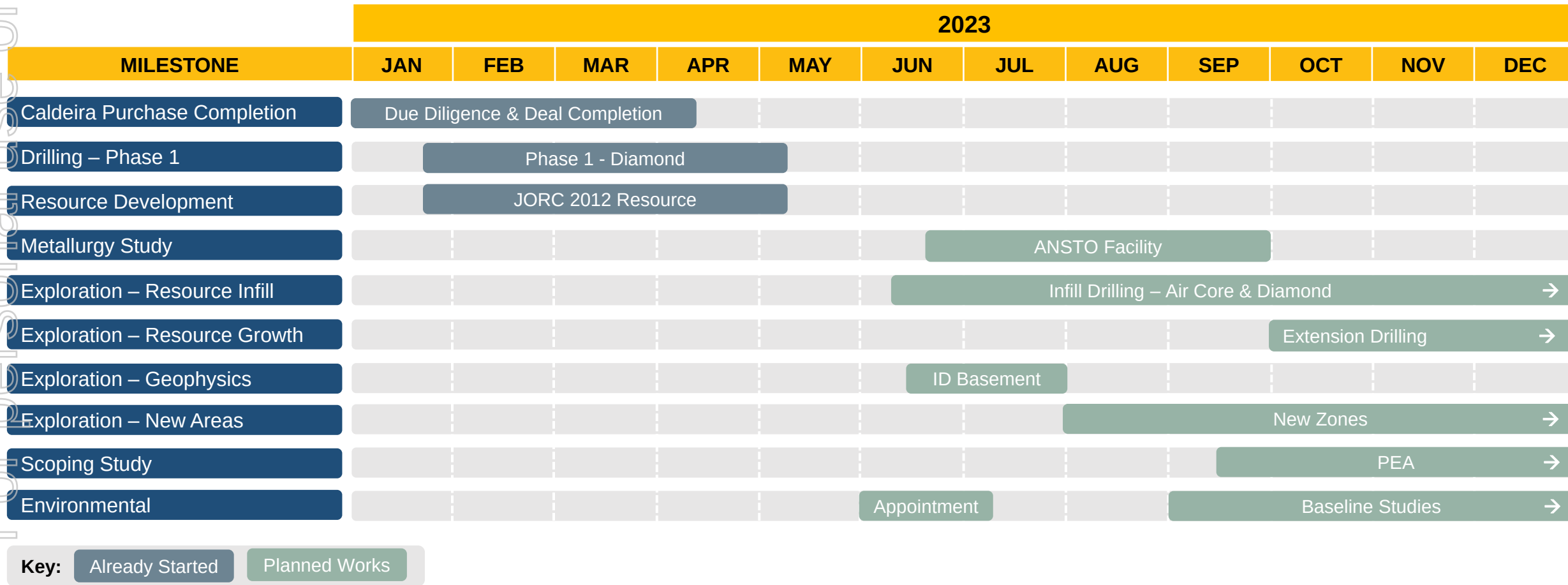


Corporate & Offer Costs

	A\$m	% of Total
Corporate and Offer Costs – Australia	2.0	11%
Corporate - Brazil	2.0	11%
Contingency (10%)	0.4	2%
Total uses of funds	18.5	100%

INDICATIVE TIMETABLE AND KEY MILESTONES

Meteoric is well positioned for a milestone 2023 with several material catalysts at the project level





CONTACT INFORMATION

Meteoric Resources NL

T: +61 8 9226 2011

E: info@meteoric.com.au

W: www.meteoric.com.au

A: Level 1, 33 Ord St, West Perth WA 6005

ABN: 64 107 985 651

ASX: MEI

Dr Andrew Tunks - *Executive Chairman*

T: +61 400 205 555

E: ajtunks@meteoric.com.au

Victoria Humphries - *Investor & Media Relations*

T: +61 431 151 676

E: victoria@nwrcommunications.com

