



INVESTOR PRESENTATION

ASX:MEI



APRIL 2023

DISCLAIMER

The material in this Presentation has been prepared by Meteoric Resources and is general background information about Meteoric's current activities as at the date of this presentation. This information is given in summary form and does not purport to be complete.

Information in this presentation, including forecast financial information, should not be considered as advice or a recommendation to investors or potential investors in relation to holding, purchasing or selling securities or other financial products or instruments and does not take into account your particular investment objectives, financial situation or needs.

Before acting on any information you should consider the appropriateness of the information having regard to these matters, any relevant offer document and in particular, you should seek independent financial advice. All securities and financial product or instrument transactions involve risks, which include (among others) the risk of adverse or unanticipated market, financial or political developments and, in international transactions, currency risk.

This presentation may contain forward looking statements including statements regarding our intent, belief or current expectations with respect to Meteoric's businesses, operations, market conditions, results of operation, financial condition, capital adequacy, specific provisions and risk management practices. Readers are cautioned not to place undue reliance on these forward-looking statements. Meteoric does not undertake any obligation to publicly release the result of any revisions to these forward-looking statements to reflect events or circumstances after the date hereof to reflect the occurrence of unanticipated events. While due care has been used in the preparation of forecast information, actual results may vary in a materially positive or negative manner. Forecasts and hypothetical examples are subject to uncertainty and contingencies outside Meteoric's control. Past performance is not a reliable indication of future performance.

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

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

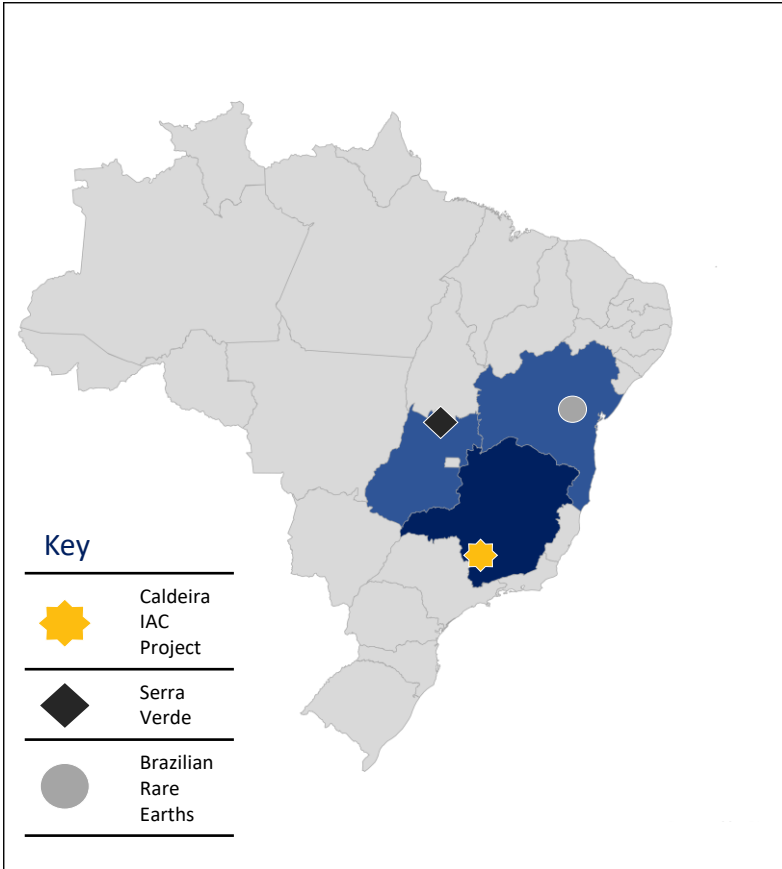
Significant share price appreciation following the transformative acquisition / date of the **Tier-1 Caldeira Project**. Heightened volume following the confirmation of Caldeira as an Ionic Adsorption Clay Deposit, re-commencement of drilling and execution of the definitive acquisition agreement.



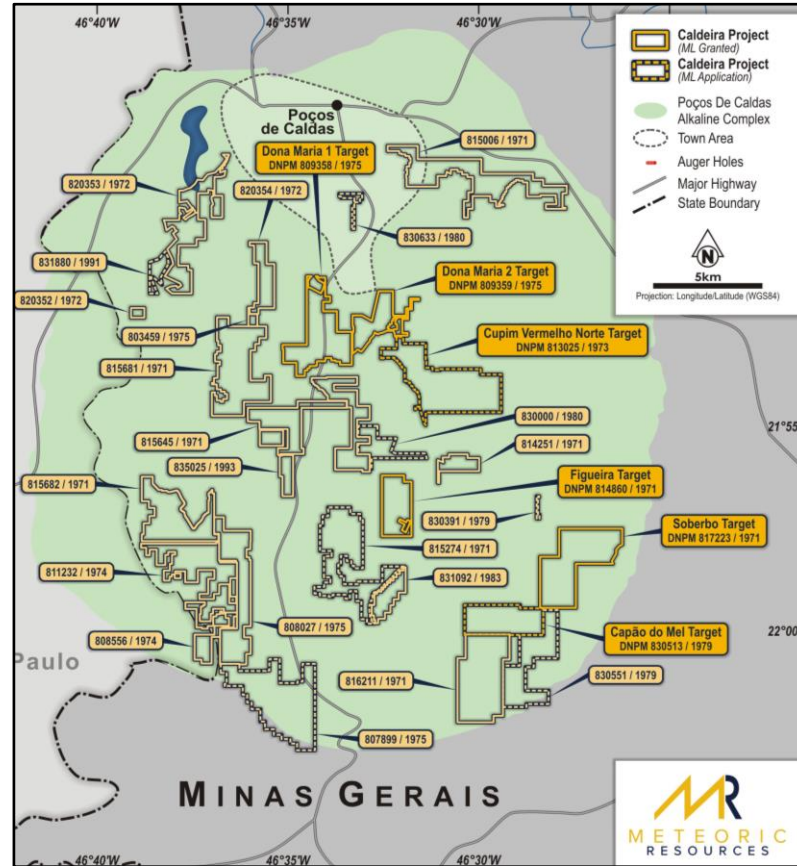
IONIC ADSORPTION CLAY - BRAZILIAN LANDSCAPE

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

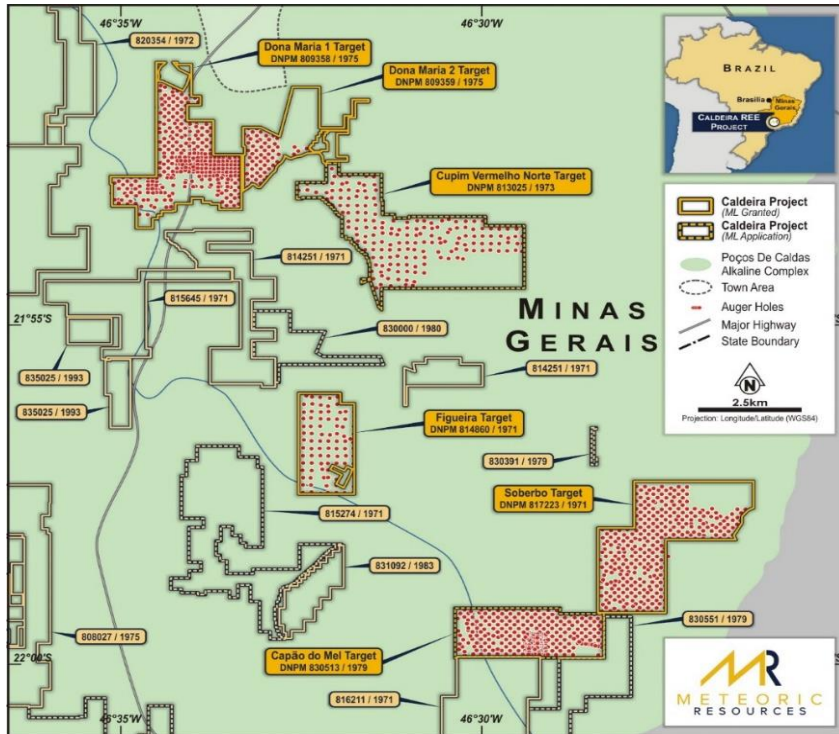
Mature Jurisdiction

- 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

HISTORIC EXPLORATION

JOGMEC successfully explored project between 2016 and 2019

Drilling Collar Plan – 1311 Holes



Significant mineralisation is evident across 6 prospects, where there has been extensive drilling. Each red dot is a hole collar

Historic Exploration (ASX: 16/12/22)

- The Poços de Caldas Intrusive Complex covers an area of approximately 800km², constituting the largest occurrence of alkaline rocks in South America
- Rare Earth Elements were documented within the basement alkaline rocks as long ago as the 1950's
- The discovery of extensive REE within the regolith clay zone was originally made by Alvaro Fochi Chief Geologist at the Togni Group
- The Japan Organisation for Metals and Energy Security ("JOGMEC") conducted extensive drilling and metallurgy work on Caldeira between 2016 to 2019
 - Shallow Auger holes for 13,037m (Av depth = 10m)
 - Of the 1,311 holes drilled, over 85% finish with grades in excess of 1000 ppm TREO
- The drilling showed elevated REE grades are common from surface or immediately under a thin layer of topsoil.
- The prospective zone of the project stretches across 20km and is open in all directions and at depth.

Deposit Characteristics (ASX: 20/12/22)

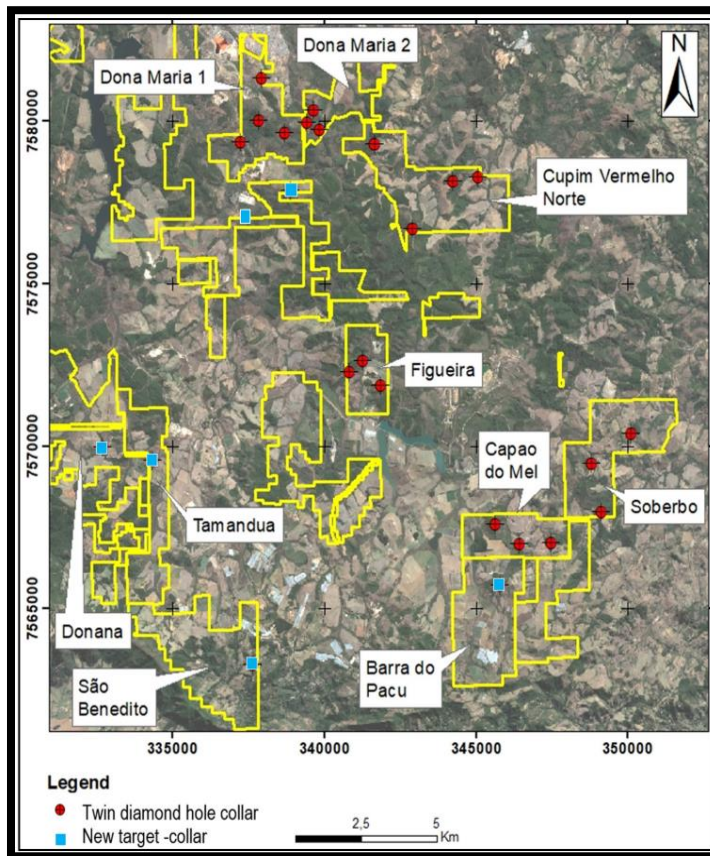
- The maiden resource for the Caldeira Project will be available in early Q2, 2023.
- A selection of drilling results across six licenses returned ultra-high grade intersections from surface:
 - 20m @ 5,918 ppm TREO ending in 2,239 ppm TREO
 - 15m @ 7,551 ppm TREO ending in 7,915 ppm TREO
 - 15m @ 7,042 ppm TREO ending in 3,425 ppm TREO
 - 12m @ 8,367 ppm TREO ending in 5,829 ppm TREO
 - 19m @ 6,895 ppm TREO ending in 7,840 ppm TREO
 - 20m @ 6,779 ppm TREO ending in 4,652 ppm TREO
 - 20m @ 8,924 ppm TREO ending in 9,945 ppm TREO
- Head grade of the composite sample for metallurgical testwork collected from 44 holes, over 140 samples (200 kg), was 4,917ppm TREO including 25.5% Magnet REE.
- Enriched HREO basket with strongly enriched Magnet REO's – Tb₂O₃, Dy₂O₃, Nd₂O₃ and Pr₂O₃ - averaging greater than 22% of TREO.
- No drilling has been conducted below 20m depth and deposit is open at depth.

CALDEIRA GRADES, DRILLING INTERCEPTS AND PEERS

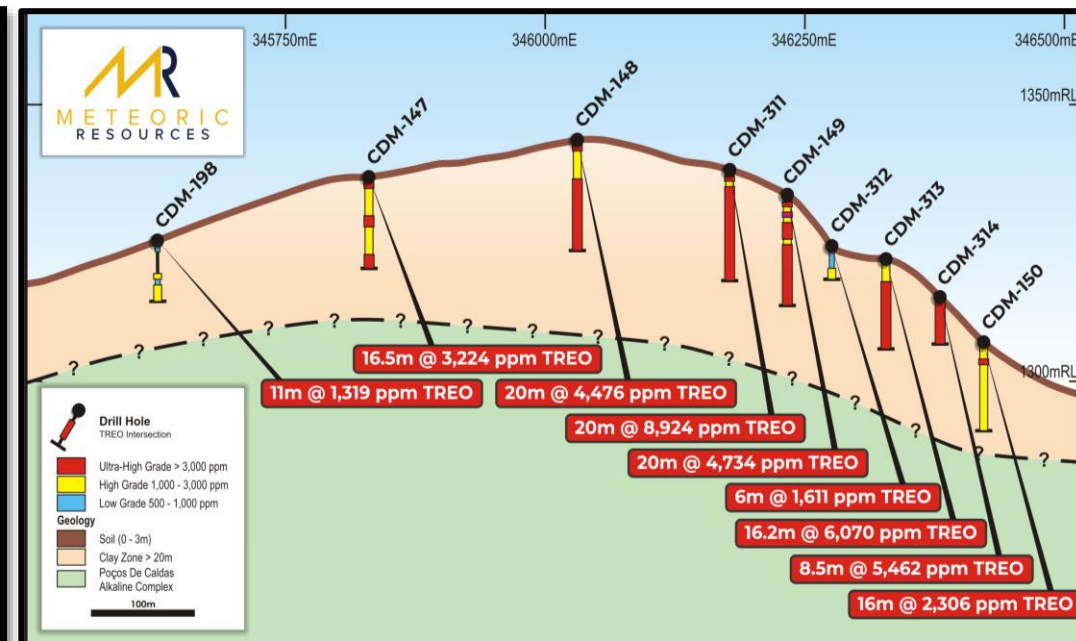
Outstanding grades, wide continuous intercepts and open at depth

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

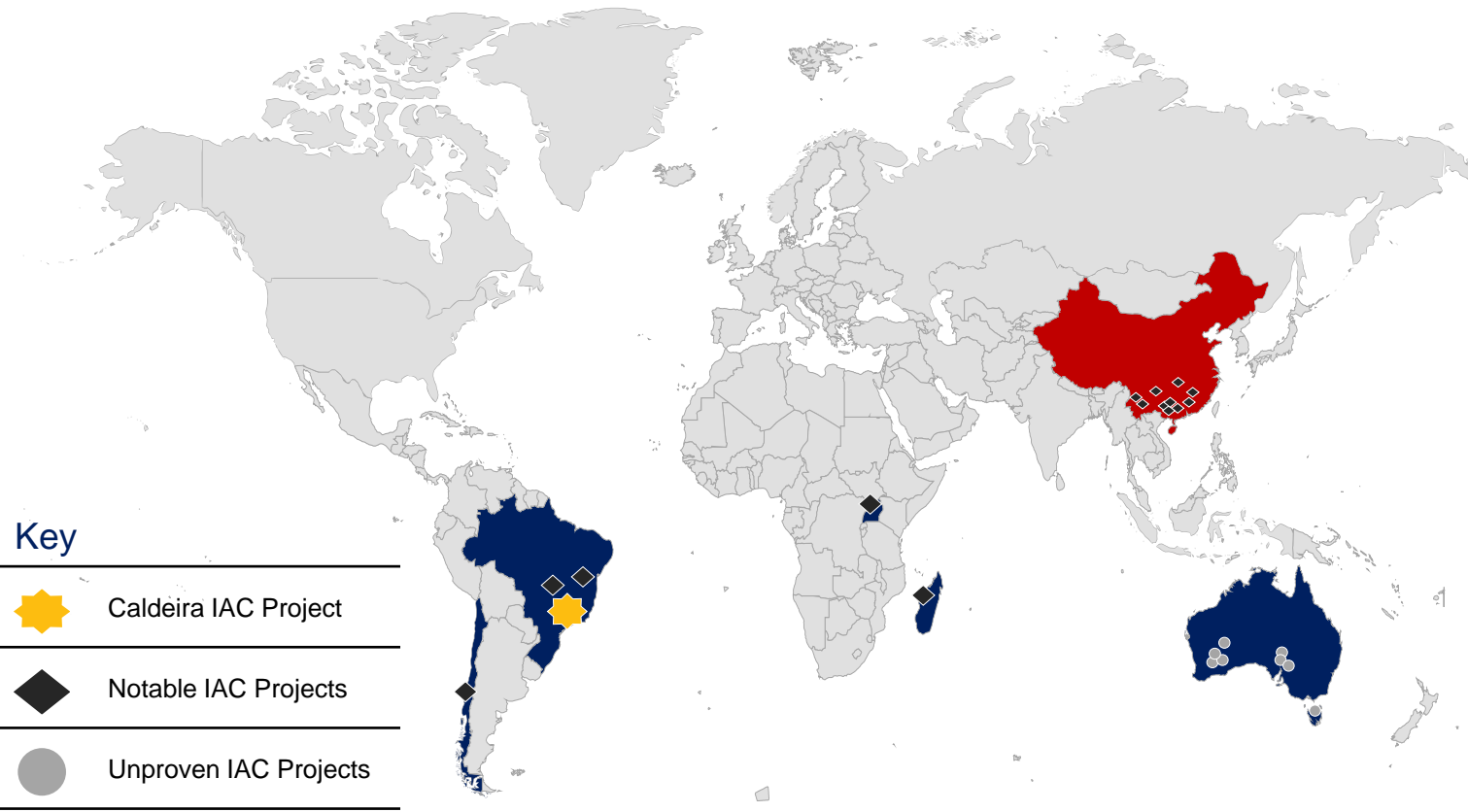


	Ionic Clay-hosted REE	Hard Rock-hosted REE
Location	<ul style="list-style-type: none"> Predominantly mined in China, with small deposits found in Myanmar However, global clay-hosted REE stocks are depleting 	<ul style="list-style-type: none"> Majority of production based in China, with some projects under consideration in Australia, United States, and Africa
Payability	<ul style="list-style-type: none"> 70% - 80% payability as mixed rare earth elements Contains both light and heavy REEs 	<ul style="list-style-type: none"> 35% - 40% payability as a mineral concentrate 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"> 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	<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 Progressive rehabilitation of landscape – 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 desorbable REE from clay in ammonium sulphate followed by conventional REE separation No radioactive waste streams 	<ul style="list-style-type: none"> 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

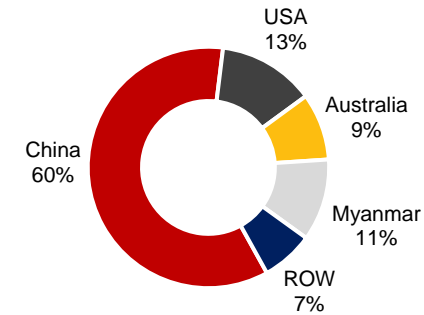
GLOBALY SIGNIFICANT IAC DEPOSITS & INFRASTRUCTURE

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

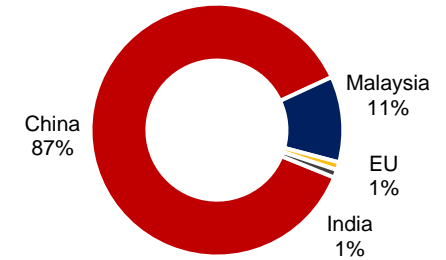


Illustrative Global Supply Chain Breakdown

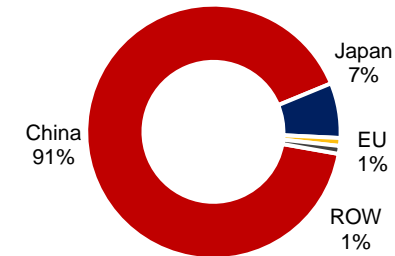
REE Production



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



MILESTONE	2023											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Caldeira Purchase Completion	Due Diligence & Deal Completion											
Drilling – Phase 1		Phase 1 - Diamond										
Resource Development		JORC 2012 Resource										
Metallurgy Study						ANSTO Facility						
Exploration – Resource Infill						Infill Drilling – Air Core & Diamond					→	
Exploration – Resource Growth										Extension Drilling		→
Exploration – Geophysics						ID Basement						
Exploration – New Areas								New Zones				→
Scoping Study									PEA			→
Environmental						Appointment			Baseline Studies			→

Key: Already Started Planned Works



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

