Pre-Feasibility Study confirms Caldeira as a globally strategic, long-life rare earths project with significant growth potential

Backed by over $30M of investment in extensive resource drilling, metallurgical testwork and environmental programs, the PFS confirms strong operational and financial performance across market cycles

HIGHLIGHTS

Maiden Ore Reserve underpins confidence in recovering high value magnetic rare earth oxides

- Probable Ore Reserve of 103Mt @ 4,091ppm TREO for 421kt of contained TREO based on extensive exploration programs delivering 71,000m of drilling and 45,000 samples
    - Measured Resources are defined by a maximum of 50m x 50m drill spacing
    - Indicated Resources are defined by a maximum of 100m x 100m drill spacing

Optimised plan delivers higher annual production at lower capital intensity compared to Scoping Study

- Total Rare Earth Oxide (**TREO**[1]) of ~271kt, a 40% increase over the Life of Mine (**LOM**)
- Plant throughput increased by 20% to 6Mtpa (dry)
- Pre-production capital cost of US$443M, a 10% increase, inclusive of US$86M in contingency
- Higher average annual TREO production of 13,584t LOM
    - Average NdPr Oxide production of 4,228t per year (84,572t LOM)
    - Average DyTb Oxide production of 130t per year (2,600t LOM)
- Operating costs of US$8.91/kg TREO for the first five years
- NdPr Oxide operating cost of US$21.80/kg (with DyTb by-product credits at consensus pricing)

Essential testwork and piloting completed to support process design, flowsheet and PFS estimates

- ANSTO continuous 15-day pilot program has de-risked the process flowsheet
- ANSTO testing confirms world class LOM recoveries of 71% Magnetic Rare Earth Oxides (**Magnetic REO**[2]) and 55% TREO using an ammonium sulfate wash at pH 4.5 – 5.0
- Less than 2% impurities in mixed rare earth carbonate (**MREC**)
- Successfully piloted de-watering technologies inclusive of reagents and clay management
- Planned piloting testwork expected to identify significant opportunity for future cost improvements

Outstanding financial metrics based on broker consensus rare earth pricing

- Undiscounted free cashflow of US$2.0 billion post-tax using consensus pricing
- NPV_8 pre-tax of US$821 million at consensus pricing and US$2.0 billion using forecast pricing
- Internal rate of return (IRR) of 28% pre-tax
- Payback of less than three years
- Breakeven NdPr price of US$48/kg over life of Project

The PFS life of mine ore feed contains approximately 89% Measured & Indicated Resources and 11% Inferred Mineral Resources. An Inferred Mineral Resource has a lower level of geological confidence than an Ore Reserve or a Measured or Indicated Mineral Resource and there is no certainty that further exploration work will result in the conversion of the Inferred mineralisation into an Ore Reserve or that the production target itself will be realised.

[1] All references to Oxides are based on the contained level of those Oxides within the MREC product, noting the TREO contains La_2O_3 + CeO_2 +Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3

[2] Magnetic Rare Earth Oxides (Magnetic REO) = Pr_6O_{11} + Nd_2O_3 +Tb_4O_7 + Dy_2O_3

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Strong sustainability credentials and local government support

- 100% of Caldeira energy requirements to be sourced from renewable energy sources
- MoU signed with the State of Minas Gerais designates Caldeira as a priority state project
- Environmental studies are continuing to support permitting process
- Permitting on track to allow construction to commence in 2026
- Social programs implemented focussing on underprivileged youth, individual technical skills development, local business readiness, and indigenous communities

Project rapidly advancing and systematically de-risked

- Establishment of a scalable 25kg/hour pilot plant at Poços de Caldas is underway:
  - Continuous production of an MREC product using preferred flowsheet
  - Opportunity to optimise flowsheet and test downstream rare earth separation at a pilot scale
- Commence targeted cost reduction and optimisation initiatives including:
  - Geotechnical field work to support mine and plant design (commenced May 2025)
  - Additional piloting to optimise reagent consumption and moisture content of spent clays
  - Mine scheduling review targeting mining efficiencies
  - Inclusion of recent near mine discoveries

*MP Materials and US Department of Defense (**DoD**) Public-Private Partnership to accelerate REE magnet independence highlights demand for alternative and additional REE supply*

- Setting of US$110/kg NdPr floor price commitment for 10 years as part of a magnet offtake agreement with MP Materials
- Expansion of MP Materials magnet making capacity to 10kt per annum
- DoD commit to purchase 100% of MP Materials' magnet making for defence consumption
- US Government financial support through convertible instruments and loans

Economic Outcomes at a US$110/kg price threshold

- Undiscounted free cashflow of US$2.8 billion post tax
- NPV_8 pre-tax of US$1.3 billion
- IRR of 36% pre-tax & 28% post-tax
- Payback period of 2.5 years

Meteoric Managing Director and CEO, Stuart Gale, commented:

"The PFS completion represents a significant step forward for Meteoric and the Caldeira Project. With an investment of more than $30M over the past two-and-a-half years on resource development, process testwork and environmental programs, we have an excellent understanding of the Project and where we can further optimise the asset as we move into the final piloting and studies phase.

Our drilling programs have confirmed the world-class scale and high-grade ionic absorption rare earths mineralisation at the Project. The volume of close-spaced drilling supports the maiden Ore Reserve with significant scope for this to grow and support future mine life or production expansions.

Our confidence in the PFS and process more broadly is based on the enormous effort devoted to testing and refining the process and flowsheet. In particular, the work conducted at ANSTO to confirm recoveries, quality of the initial MREC product and materials handling have supported the engineering effort lead by Ausenco. We will continue to fine tune and further optimise our processes to lower our operational costs.

Optimisation of the processing plant design increased capacity by 20% to 6Mtpa. This delivers an improved return on capital investment, levering both the size of the Caldeira Project resource and economies of scale. The PFS metallurgical testwork program has validated our original process flowsheet and we will now use this flowsheet to construct a pilot plant at site to assist in fine tuning the process and provide MREC for qualification

with our customers.

Detailed bottom-up operating and capital cost estimates provide a higher degree of confidence than earlier studies and confirm the Caldeira Project is firmly positioned as a low-cost producer of rare earths and competitive through any price cycle. The exceptional economics are achieved by simple free-dig mining, high-grade ionic clay ore, excellent Magnetic REO recoveries, a fast leach reaction time of 30 minutes with a simple ammonium sulfate flowsheet and low-cost renewable energy. These characteristics combine to make a compelling case for Caldeira Project to be a sustainable global supplier of rare earths products.

The Caldeira Project PFS arrives at an opportune time as the US and other western economies seek to establish responsible and reliable rare earths supply chains. It was very encouraging to see the MP Material and US DoD agreement which solidifies the US Government's commitment to support the acceleration of magnet production capacity. The Calderia Project resource, scale and location make it an ideal asset to supply these developments.

Our priorities are clear – establishment of the on-site pilot plant; commence targeted improvement initiatives; progress permitting towards the issue of a Construction License in 2026; and concluding strategic discussions about project funding, offtake and potential downstream opportunities."

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Introduction

Meteoric Resources NL (**ASX: MEI: Meteoric** or the **Company**) is pleased to present the Pre-Feasibility Study (**PFS**) outcomes for its Caldeira Rare Earth Ionic Clay Project (**Caldeira Project** or **Project**), located in the state of Minas Gerais in Brazil.

The PFS builds on the outcomes previously outlined in the Scoping Study and the Updated Scoping Study completed in July 2024 and October 2024 respectively.

Meteoric engaged leading global engineering group Ausenco Pty Ltd (**Ausenco**) to support co-ordination of the PFS workstreams and assist with process flowsheet development. The Australian Nuclear Science and Technology Organisation (**ANSTO**) completed pilot scale metallurgical testwork as part of the PFS. Detailed bottom-up cost estimates performed by Ausenco based on the confirmed flowsheet have been completed in the PFS to an estimated accuracy of +/- 25%.

Key PFS Outcomes and Assumptions

The PFS confirms the robust technical and economic viability for development of a mining and processing operation to produce a MREC product at the Caldeira Project. Further, potential remains to expand the Project and move downstream into the production of separated rare earth element (**REE**) oxides at later dates.

Since the completion of the Caldeira Project Scoping Study in July 2024, a substantial 12-month work program has been completed to de-risk mining and processing elements and deliver more robust cost estimates built on vendor pricing. This has included:

- Significant diamond (**DD**) and aircore (**AC**) drill programs which now total >57,000m, producing 31,000 samples for chemical assay in addition to 14,000m of historical auger drilling and sampling
- Delivered an updated global Mineral Resource Estimate of 1.5Bt @ 2,359ppm TREO with:
  - Measured Resources defined by a maximum of 50m x 50m drill spacing
  - Indicated Resources defined by a maximum of 100m x 100m drill spacing
  - Inferred Resources defined by a maximum of 400m x 400m drill spacing
- Substantial metallurgical testwork with ANSTO and other consultants, including a 15-day continuous piloting program
- Detailed test work on settling the clays, dewatering technology and materials handling
- Scrubbing solutions vendor testing

A summary of the physical and financial evaluation of the Project utilising a Processing Plant with a 6.0Mtpa throughput rate is shown in Table 1 and 2, respectively. Additional details are set out below in the PFS Executive Summary.

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Table 1: Production Outcomes and Assumptions

Key Production Outcomes	Unit	Updated Scoping Study		Pre-Feasibility Study	
		Years 1-5	LOM	Years 1-5	LOM
Ore Mined	kt	23,004	98,000	**26,523**	**128,989**
Strip Ratio	waste:ore	0.08	0.21	**0.52**	**0.38**
Average TREO Feed Grade	ppm	4,591	3,724	**4,515**	**3,701**
TREO Recovery	%	53	53	**54**	**55**
Magnetic REO Recovery	%	73	73	**73**	**71**
Average annual production[2] (REO)	t	11,453	9,685	**12,382**	**13,584**
Production (REO)	t	57,258	193,584	**61,912**	**271,687**
NdPr % (in TREO concentrate)	%	32	33	**31**	**31**

The calculations in Table 2a are based on three sets of TREO pricing assumptions:

1. The spot price;
2. A broker consensus price[3]; and
3. An average forecast price[4] by independent market analysts Adamus Intelligence and Project Blue.

The financial outcomes assessed in the PFS highlight the robust nature of the Caldeira Project, at current spot prices, and highlight significant upside in higher pricing environments. The key financial outcomes based on the three pricing assumptions are presented below.

Table 2a: Key Financial Outcomes and Assumptions

Cashflow, Cost & Earnings Metrics	Unit	Years 1-5			LOM		
		Spot	Consensus	Forecast	Spot	Consensus	Forecast
Annual Average							
Revenue	US$M	210	284	330	245	315	485
EBITDA	US$M	79	147	189	86	150	305
Operating Cashflow	US$M	60	104	132	58	100	203
Total							
Revenue	US$M	1,050	1,422	1,650	4,927	6,330	9,756
EBITDA	US$M	397	737	944	1,707	2,987	6,111
Net profit After Tax (NPAT)	US$M	186	410	546	710	1,561	3,625
Cumulative post tax cashflow excluding construction cost	US$M	298	522	659	1,165	1,994	4,058
Annual operating cost	US$M	110			133		
Annual operating cost	US$/kg TREO	8.91			9.78		
Annual AISC[5]	US$/kg TREO	11.16	11.69	12.01	12.62	13.07	14.18
NdPr average pricing	US$/kg NdPr	67	91	107	67	86	135
NdPr average operating cost (net of DyTb by-product credits)	US$/kg NdPr	20.58			21.80		

[2] Includes ramp up in Years 1 and 2.

[3] Consensus reflecting the long term real available pricing expectations from multiple brokers as of May 2025, source Macquarie Bank.

[4] Forecast is calculated as the average between Adamas Intelligence & Project Blue long term pricing reported at Q1, 2025.

[5] ASIC will vary based on royalty costs changing under differing pricing scenarios.

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Table 2b: Key Financial Outcomes and Assumptions continued.

Financial Outputs	Unit	LOM			
		Spot	Consensus	US$110/kg NdPr	Forecast
Annual Revenue	US$M	245	315	385	485
Annual EBITDA	US$M	86	150	213	305
Annual Operating Cashflow	US$M	58	100	143	203
Annual operating costs (ex-royalties)	US$M	133			
Annual operating costs (ex-royalties)	US$/kg TREO	9.78			
Annual AISC (including royalties)	US$/Kg TREO	12.62	13.07	13.53	14.18
Basket price[6] TREO	US$/kg TREO	26	33	41	51
NdPr Average pricing	US$/kg NdPr	67	86	110	135
Payability	%	70			
NdPr Gross operating cost	US$/kg NdPr	31			
NdPr Net Operating costs[7]	US$/kg NdPr	22			
Capex inclusive of 25% contingency	US$M	443			
Cumulative post tax cashflow (excluding construction cost)	US$M	1,165	1,994	2,842	4,058
Pre-tax NPV_8	US$M	251	821	1,347	1,985
Post-tax NPV_8	US$M	109	488	835	1,256
Pre-tax IRR	%	15	28	36	39
Post-tax IRR	%	11	21	28	31
Payback period	years	6.1	2.9	2.5	2.8

Table 2b. above, includes the financial outputs inclusive of a US$110/kg NdPr floor price reflected in the recent announcement by MP Materials and DOD. Meteoric has assumed consensus pricing for all other rare earth elements in it's REE basket in this comparison.

Project Overview

The Project comprises 77 Mining and Exploration Licences (with total landholdings over 18,292 hectares) located between the cities of Caldas, Poços de Caldas, and Andrades in the southwest region of the state of Minas Gerais in Brazil (Figure 1). Caldeira is located 254km from the city of Sao Paulo and approximately 350km from the port of Santos.

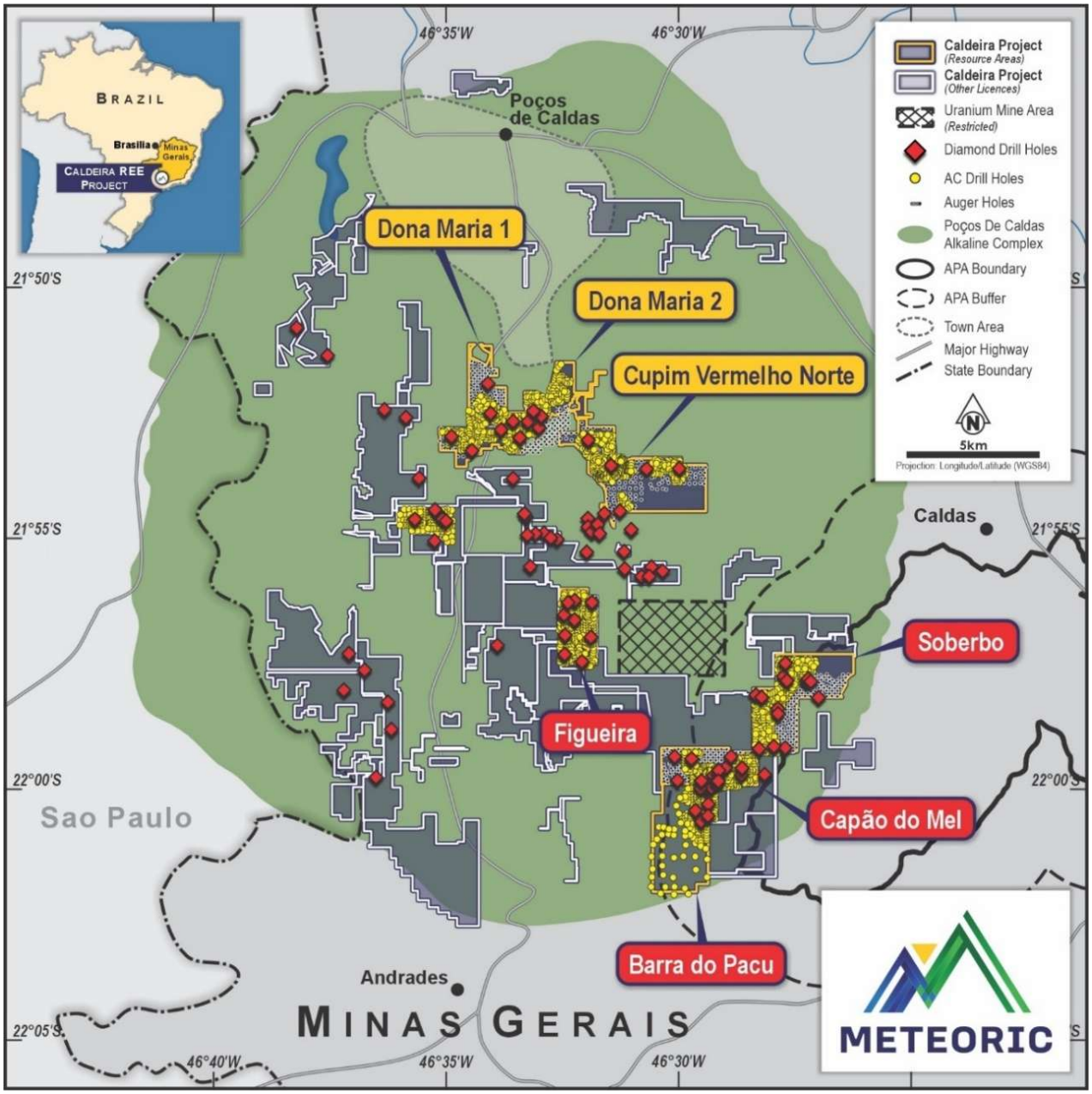
The Alkaline Intrusive Complex of the Poços de Caldas area is one of the most important economic and geological terrains in Brazil. To date, only a small number of the 77 licences held by Meteoric have been explored, creating considerable geological upside.

Rare earths mineralisation at Caldeira is enriched in magnet rare earths of dysprosium and terbium (DyTb) and neodymium and praseodymium (NdPr). The mineralisation is hosted in weathered clays which have significant cost and operating advantages relative to hard rock rare earths deposits.

[6] The basket price of TREO refers to the weighted average price of the individual REE contained in a specific mineral concentrate or product, based on their relative proportions and current market prices

[7] Operating costs net of DyTb credits at consensus pricing per kilogram of NdPr produced

Figure 1: Caldeira Project Licences (four southern licenses included in the PFS highlighted in red).



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A Mineral Resource Estimate (**MRE**) for the Caldeira Project was first reported in May 2023. The MRE has grown significantly with subsequent drilling programs totalling ~57,000m completed by Meteoric and was last updated on 15 April 2025 (Table 3). At its current scale of 1.5 billion tonnes, the Project is one of the largest known ionic absorption clay rare earth deposits globally.

Table 3: Caldeira Global Mineral Resource

Licence	JORC Category	Material Type	Tonnes Mt	TREO ppm	Pr_6O_{11} ppm	Nd_2O_3 ppm	Tb_4O_7 ppm	Dy_2O_3 ppm	Magnetic REO ppm	Magnetic REO /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	**Indicated**		**629**	**2,668**	**148**	**422**	**5**	**24**	**599**	**22.4%**
Total	**Measured + Indicated**		**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	**Inferred**		**832**	**2,097**	**115**	**325**	**4**	**19**	**462**	**22.0%**
Total	**Measured + Indicated + Inferred**		**1,497**	**2,359**	**130**	**370**	**4**	**21**	**526**	**22.3%**

Approximately 40% of the MRE is in the higher confidence Measured and Indicated JORC categories, positioning the Caldeira Project as the largest inventory of REO of ionic absorption clay deposits in the world (Figure 2).

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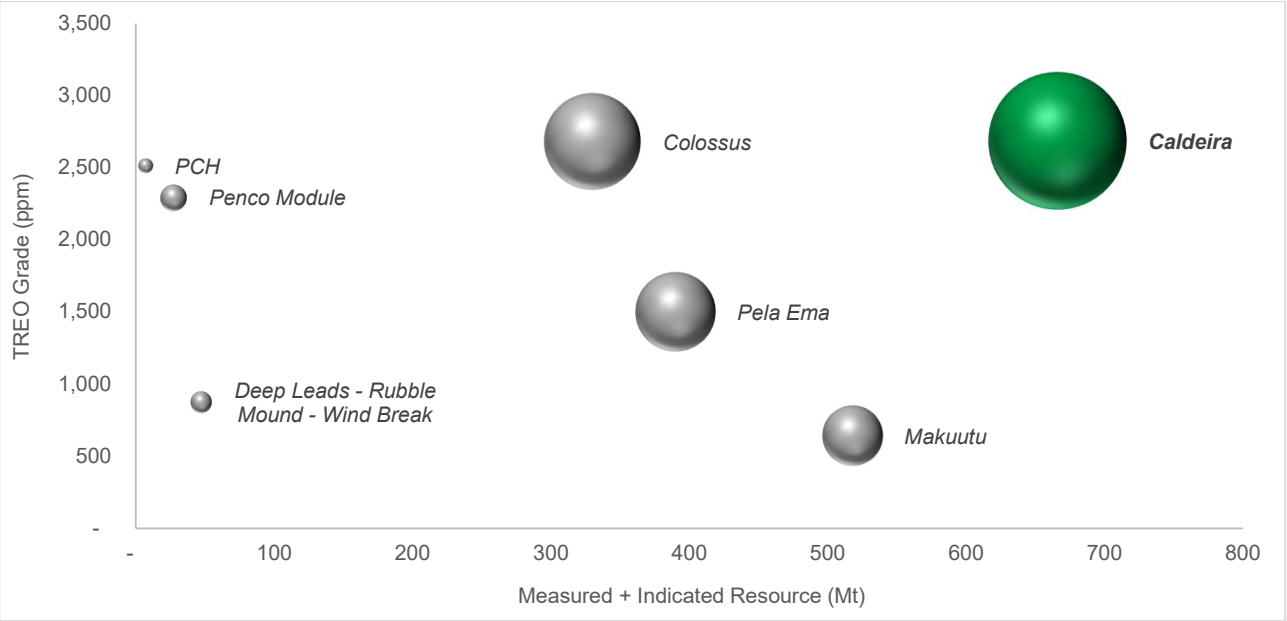
Figure 2: Graph of tonnage v TREO grade for reported Measured and Indicated Resources of Ionic Adsorption Clay deposits. The size of the sphere is related to contained metal (Refer Appendix 2).



Infrastructure and Utilities

The Caldeira Project is favourably located close to existing infrastructure and utilities which supports cost outcomes and future operational logistics. A summary of key infrastructure and utilities aspects of the Project is included in Table 4.

A satellite plan view of the planned Southern Operation of the Caldeira Project area including the process plant site, the location of key infrastructure and four licence areas considered in the PFS is shown in Figure 3.

Table 4: Caldeira Project Infrastructure and Utilities

Item	Summary
Accommodation	• Various accommodation options available in the nearby towns of Caldas and Poços de Caldas. • No camp is required either for operations or the ~1,200 person construction workforce.
Water	• Water will be supplied to the facilities from an existing nearby dam, approximately 400m from the Caldeira Project plant site.
Power	• 100% of Meteoric's energy requirements will be sourced from renewable energy (hydro, solar and wind), an option provided by the grid operator, CEMIG. • Power will be connected to the site via a ~2.5km overhead power line to a local 138kV network connection at the nearby substation. • The connected load is estimated at 20MW, with Plant average demand at ~13MW.
Road Access	• The proposed main access road is shown in Figure 3. Approximately ~3km of new unsealed road will need to be constructed to connect the plant site with the existing public road network. • By road the Project site is ~447km from the capital Belo Horizonte and 254km from the city of São Paulo on good quality sealed roads. • The Project site is ~31km to the south of the city of Poços de Caldas.
Port	• All required facilities exist. • During construction and operations containerized cargo is expected to enter and leave Brazil at Santos port near the city of Sao Paulo. Itaguaí (in Rio state) was identified as an alternate port that may suit breakbulk cargo if required.
Telecommunications	• There is mobile phone and Starlink reception on site for communications prior to plant commissioning.

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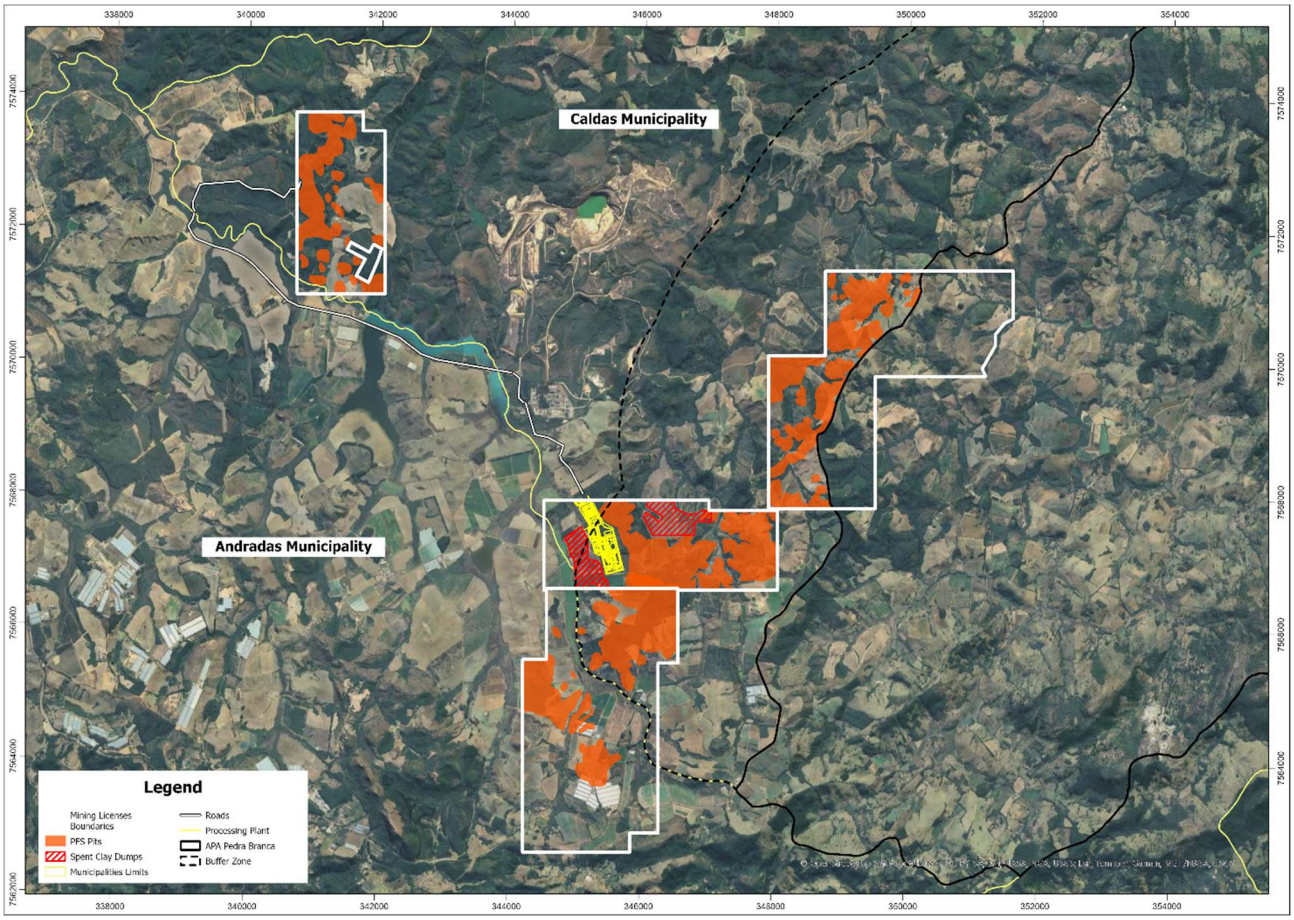
	• Meteoric has a preference for fibre optic connection via the grid connected power supply OHL as the backbone for operations.
Fuel Storage	• The fuel storage facility will be in the Mine Infrastructure Area with sufficient diesel storage to support mining operations for ~7 days.
Fleet & Vehicles	• A list of plant vehicles and mobile equipment fleet necessary to support operations was developed during the PFS and will be leased initially to minimise capital expenditure.
Waste	• Domestic and industrial waste will be processed at a WSF on site before disposal. • Classification and segregation of materials will be performed at the Classification Shed at the WSF.

Figure 3: Caldeira Project – Plan View of PFS Licences and Mine Infrastructure.



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Government Support

Meteoric has received strong support from the governments of Minas Gerais and Brazil for the Caldeira Project.

A Memorandum of Understanding was agreed with the state of Minas Gerais in August 2023 which designates the Caldeira Project as a priority state project. This status confers government assistance for the Project in terms of permitting and assistance during the implementation and operations phases.

The Project was one of six ventures named in the Brazil Climate and Ecological Transformation Investment Platform (**BIP**). Led by Brazil's government and the Brazilian Development Bank (**BNDES**), BIP plans to help scale energy transition investment from both public and private sectors, mobilise capital at scale, and ensure effective resource deployment to further the Brazilian government's climate transition plans across key sectors.

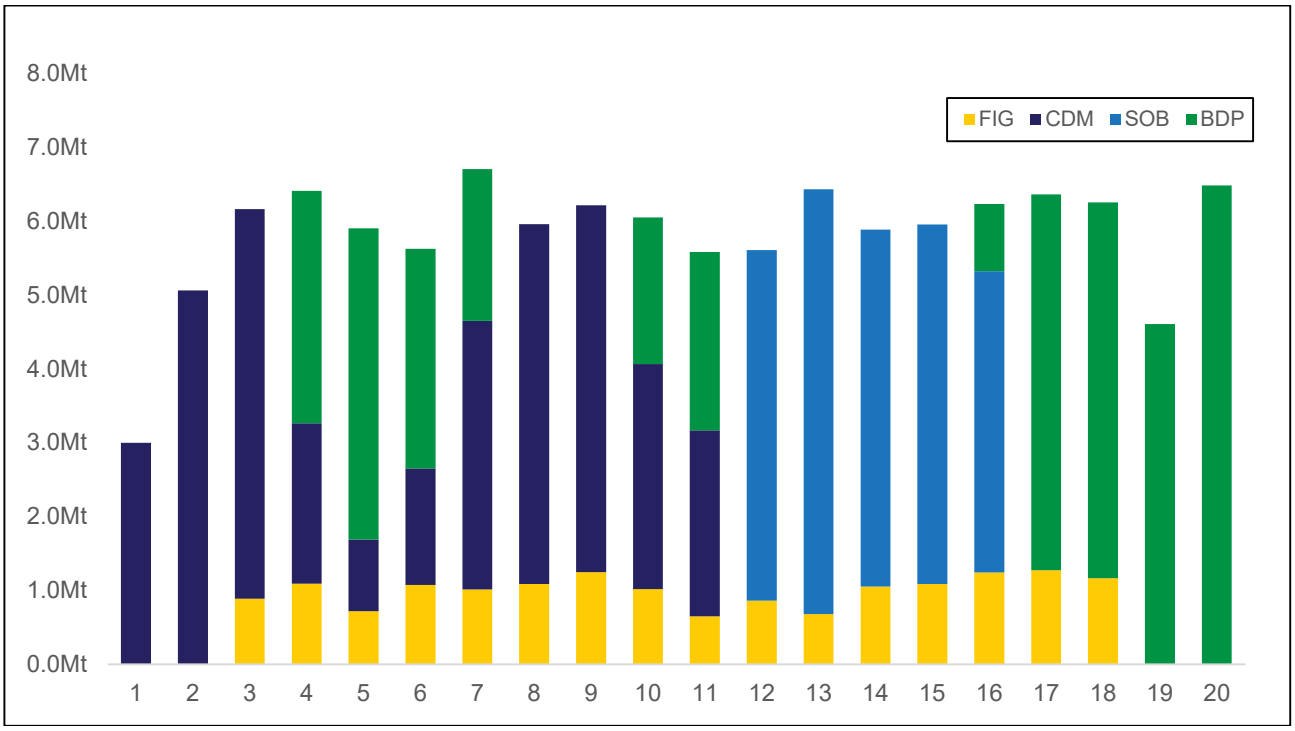
Mining Methods and Assumptions

Economics of the Caldeira Project benefit from exclusively mining soft clay material. This means there is no requirement for blasting, with ore to be extracted through conventional excavation and hauled to the processing plant on dedicated haul roads.

The Mine Plan has been designed to prioritise high-grade ore with excellent metallurgical recoveries. This approach will accelerate the payback period and deliver higher financial returns over the life of the Project. It will also allow expansion opportunities to be funded through operational cash flow.

Mining activities will initially commence at the Capão do Mel (**CDM**) deposit, which is located closest to the planned processing plant site, before expanding to the Figueira (**FIG**), Barra do Pacu (**BDP**) and Soberbo (**SOB**) licences.

Figure 4: Total Ore Mined by Deposit



The Project benefits from a low LOM strip ratio of 0.38 (waste:ore). Waste material will be used for construction purposes (roads, bunds, etc) and the remainder will be stored using ex-pit and predominantly in-pit dumps. The plan is to only use ex-pit dumps in the first two years of mining before backfilling can commence in completed sections of the open pits using waste and spent clay rejects from the plant. There is no requirement for the construction of a tailings dam.

Topsoil will be stockpiled in accessible areas near the mine to be used for rehabilitation once a section of the pit has been backfilled and contoured to final landform. The processing plant capacity will be 6.0Mtpa and the monthly requirement for material movement will on average 0.5M bank cubic metres (**BCM**) per month.

Average mining costs of US$2.54/kg TREO recovered are based on the first five years of operations using an owner-mining fleet.

Table 5: Pit Design Inventory by Deposit and by Resource Classification

	Caldeira Project										
	Measured			Indicated			Inferred			Waste	Total
Deposit	Mt	TREO (ppm)	Cont. REO (kt)	Mt	TREO (ppm)	Cont. REO (kt)	Mt	TREO (ppm)	Cont. REO (kt)	Mt	Mt
CDM	7	4,682	32	30	3,756	114	-	-	-	23	60
FIG	-	-	-	16	4,951	80	-	-	-	11	27
SOB	-	-	-	24	3,735	91	-	-	-	11	36
BDP	-	-	-	25	4,130	105	14	3,628	51	16	55
Total	7	4,682	32	96	4,050	390	14	3,628	51	61	178

Maiden Ore Reserve

Meteoric estimates a Maiden JORC Ore Reserve of 103Mt at 4,091ppm TREO from four licenses. These Ore Reserves represent 27% of the currently defined Measured and Indicated MRE for these four deposits. The Ore Reserves for the Project have been estimated as at 24 April 2025 in accordance with the JORC Code (2012) and summarised by Deposit in Table 6 below.

Table 6: Caldeira JORC Ore Reserves

Classification	Tonnes (Mt)	TREO ppm	Pr_6O_{11} ppm	Nd_2O_3 ppm	Cont. REO kt
Capão do Mel (CDM)					
Proved	-	-	-	-	-
Probable	37.1	3,925	243	667	146
Total	**37.1**	**3,925**	**243**	**667**	**146**
Figueira (FIG)					
Proved	-	-	-	-	-
Probable	16.1	4,951	450	938	75
Total	**16.1**	**4,951**	**450**	**938**	**75**
Soberbo (SOB)					
Proved	-	-	-	-	-
Probable	24.3	3,735	256	736	91
Total	**24.3**	**3,735**	**256**	**736**	**91**
Barra do Pacu (BDP)					
Proved	-	-	-	-	-
Probable	25.5	4,130	234	621	105
Total	**25.5**	**4,130**	**234**	**621**	**105**
Total Caldeira Project					
Proved	-	-	-	-	-
Probable	103.0	4,091	276	714	416
Total	**103.0**	**4,091**	**276**	**714**	**416**

1. *Ore Reserve estimates are not precise calculations, being dependent on the underlying Mineral Resource and based on limited information in respect to modifying factors. The totals contained in the above table have been rounded to reflect the relative uncertainty of the estimate.*
2. *Only material that is CLAY and has a resource classification of Measured or Indicated have been included.*
3. *Measured and Indicated have been converted to Probable only.*
4. *Ore Reserves are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The Joint Ore Reserves Committee Code – JORC 2012 Edition).*

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Processing

Meteoric has been conducting metallurgical testwork on the Project since 2023, building on work completed by SGS-Geosol for JOGMEC on a 200kg composite sample from CDM deposit in 2019.

In 2023, ANSTO was commissioned to execute the test work program for Meteoric. The objective of the testwork was to develop an optimal flowsheet for the extraction of REE through leaching, impurity removal, and the precipitation of rare earth minerals.

Testwork results confirmed that rare earth minerals at the Caldeira Project can be extracted using a low acidity ammonium sulfate solution within a 30 minute leach reaction time. This method will result in an average processing cost of US$6.37 per tonne during the first five years of operations.

A continuous pilot program was also conducted at ANSTO using a 2.5 tonne composite sample from CDM (representative of the CDM starter pit). The campaign successfully validated and de-risked the process flowsheet, achieving a comparable MREO recovery to the LOM average rate of 71% and producing a high-quality MREC with less than 2% impurities. Further piloting is scheduled to take place in Brazil in the December quarter 2025.

The Caldeira Project processing plant is designed to process 6.0Mtpa dry feed to produce ~24,000 tonnes per annum of dry MREC product. The processing plant will operate 24 hours per day at 750tph (dry) for 8,000 hours per year (assumes 91% utilisation).

The feed grades and recoveries used in the PFS design are based on composites from the CDM, FIG and SOB deposits and Meteoric supplied data derived from an average of the batch tests completed by ANSTO. The impurities contained in the feed ore are based on the CDM master composite.

A combination of vendor and ANSTO batch and piloting test work data was used as the basis for the plant design development. Design factors have been applied to determine equipment sizing.

Table 7: Mining and Processing Summary

	Unit	LOM
Mining		
Life of Mine	Years	20
Total ROM Feed	Tonnes (M)	128,989
Total Waste	Tonnes (M)	48,581
Processing		
TREO	Tonnes	271,687
NdPr oxides	Tonnes	84,572
Dy oxide	Tonnes	2,143
Tb oxide	Tonnes	457

The extraction of the rare earths from the REE-bearing ionic clays in the Caldeira Project deposits occurs through an ion exchange mechanism between ammonium sulfate (liquid phase) and the rare earths which are Ionically attached to the outside surface of the clay (solid phase) mineral. The desorption process uses ammonium sulfate ($(NH_4)_2SO_4$) as the leaching agent under mildly acidic conditions (pH 4.5 -5.0).

Following leaching, the slurry is transferred to the residue dewatering circuit to further extract REE from residue. This is followed by separation and washing of REE sulfates contained in the pregnant leach solution (**PLS**) from the barren leach solids. The final residue with an appropriate sulfate level will be de-watered and sent for in-pit tailings disposal. The counter current decantation (**CCD**) thickener circuit will provide washing of the leached residue to maximise recovery of REE to PLS through counter current washing and additional extraction.

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Figure 5: Process Flowsheet

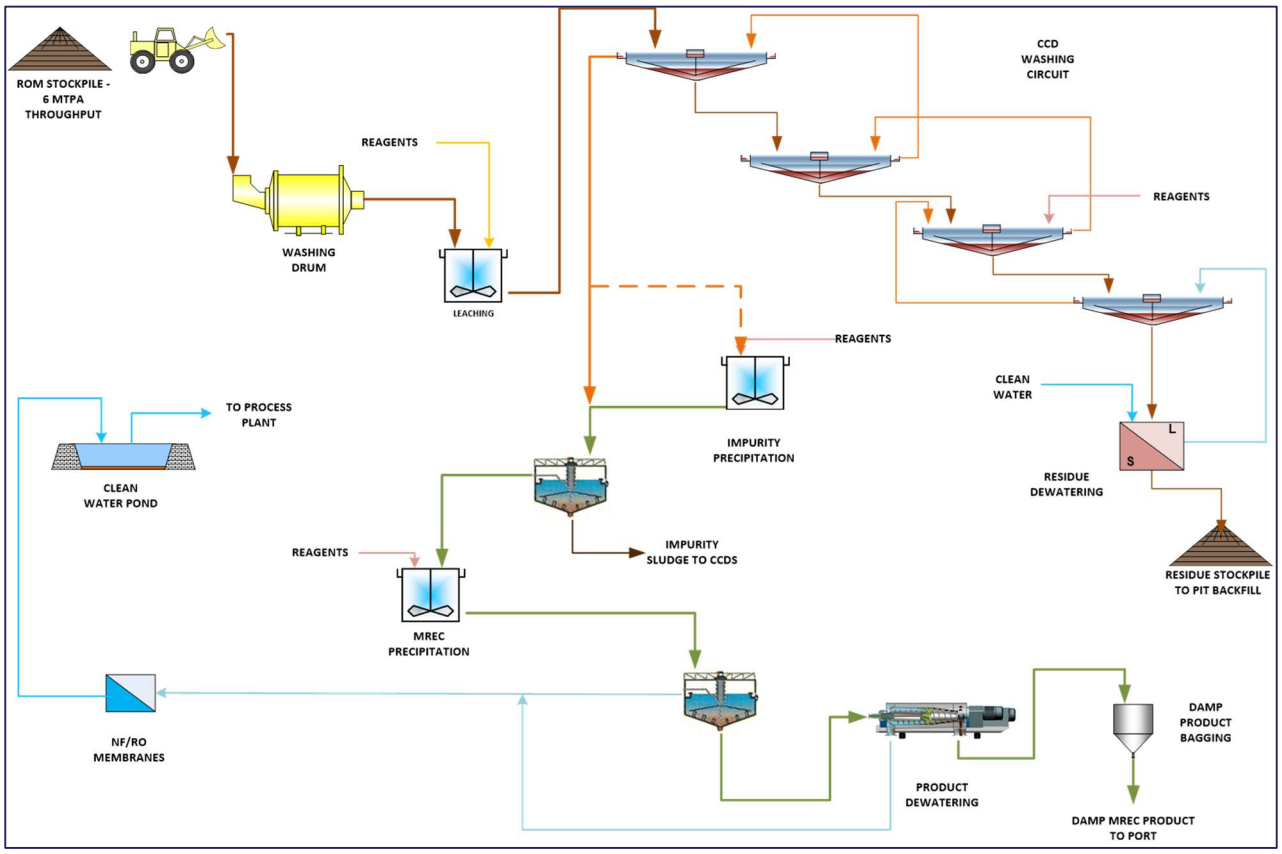

Figure 6: Plant Layout

Permitting

Brazil has a clearly defined three stage Environmental permitting process for Class 6 mineral projects. Meteoric is progressing through the permitting process which aligns with the current development timeline. The Project is currently in the Preliminary License (**LP**) phase in satisfying right to mine requirements in Brazil:

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1. **Preliminary License (LP)**

The LP is designed to evaluate project social and environmental feasibility and establish basic preliminary conditions. The principal document supporting the LP was the Environmental Impact Study (**EIS**) which was completed by ALGER and submitted to State Bureau of Environment and Sustainable Development (**SEMAD**) in May 2024.

EIS results evidence the strong Project socio-environmental feasibility and reaffirm Meteoric's strong commitment to sustainable practices, supporting local communities and preserving the Project environment.

Apart from the procurement of third-party specialist environmental advice to complete the licencing process, no further costs are associated with the LP and Meteoric anticipates SEMAD will grant the LP in 2025.

There are two Environmental areas within the municipality of Caldas which encroach upon the current resources at Soberbo, Capão do Mel, and Barra do Pacu (Figure 1), being:

(i) Environmental Protection Area (**APA**) Ecological Sanctuary of Serra da Pedra Branca (established by Municipal Law of Caldas/MG nº 1.973/2006) and

(ii) a 3km strip surrounding the APA (**Buffer Zone**).

Part of the SOB deposit is within the APA whilst the majority of SOB, 80% of BDP and all of the CDM starter deposit are within the Buffer Zone.

Article 51 of Law of Caldas/MG nº 1.973/2006 stipulates that mining activity is currently not permitted within the APA (other than for existing activity with operating licenses). The current PFS development scenario and LP application do not propose any activity inside the APA area.

Mining activity within the Buffer Zone is permitted and may be undertaken upon completion of an Environmental Impact Assessment (**EIA**), a proposal of measures necessary to mitigate any possible impact on ecosystems, a Certificate of Regularity for Land Use and Occupation from the municipality of Caldas Municipal Environmental Council (**CODEMA**), and authorisation of the APA Management Council (outstanding).

Meteoric has conducted extensive research and consultation from mid-2023 with the objective of seeking and obtaining permission to conduct mining activities in the Buffer Zone and is confident of obtaining favourable consideration from the relevant authorities. That confidence is based upon: Environmental Impact Statement (**EIS**) and relevant flora and fauna and ethnographic studies completed over the area, ongoing dialogue and consultation with multiple stakeholders including favourable feedback from a Social Diagnosis and Stakeholder Survey of the Caldeira Project conducted by EcoDue Ambiental in December 2023, and specifically by reason of the terms of a written Protocol of Intent entered into between the Government of Minas Gerais and Meteoric Brazil.

As such Meteoric considers there are reasonable prospects for eventual economic extraction to justify the Mineral Classifications of Measured and Indicated Resources (within the Buffer Zone), and the subsequent Probable Reserves. A majority of the LP milestones have been achieved already, including:

- Multiple environmental baseline surveys and social mapping surveys
- Submission of the EIS
- Mandatory public hearing in Caldas City chaired by SEMAD
- Certificate of Regularity for Land Use and Occupation from CODEMA
- Considerable landholder engagement to support required consents and royalty agreements for future mining areas

2. **Installation License (LI)**

In parallel with the LP process, Meteoric is already making advances towards satisfying future LI requirements including the completion of additional environmental studies (Environmental Control Plan – PCA), securing required landowner consents and having the ANM specify rare earths on tenement titles.

Upon issue of the LI, the Company is entitled to commence Project construction, installation of equipment, and start mining.

Meteoric anticipates the LI grant will occur in 2026.

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3. **Operating License (LO)**

Meteoric will require an LO to commence the Project operation. This is a short, audit style process during which SEMAD confirms Project compliance with LI obligations. Meteoric can continue with all Project testing and commissioning activities whilst this process is ongoing.

Pricing Assumptions and Forecast Methodology

The economic model has been developed using spot pricing, broker consensus pricing, and forecast data from two highly regarded independent market analysts, Project Blue and Adamas Intelligence. While their forecasts differ materially, both are considered credible and reflect the inherent uncertainty in today's REO market environment. In light of this, Meteoric has chosen to present an average of both sets of projections as one set of the potential forward pricing scenarios. The Company believes this approach offers investors a more balanced and transparent view of potential market scenarios and provides a robust foundation for long-term financial modelling and strategic planning.

These forecasts are underpinned by comprehensive analysis of global supply and demand trends. On the demand side, projections reflect anticipated growth in key sectors such as electric vehicle drivetrains, wind turbines, energy transition technologies, robotics, and defence. Supply assumptions incorporate current global production levels and publicly announced future projects, offering a well-rounded view of the evolving market.

Meteoric's financial modelling incorporates the current spot price carried forward and two sets of TREO forecast pricing scenarios to assess project resilience and value under varying market conditions.

Operating Costs

The robustness of PFS operating cost estimates relative to the Scoping Study have evolved significantly. Whereas parts of the Scoping Study relied on a certain assumptions and cost benchmarking, the PFS operating cost estimates are based on bottom-up, first principles methodology and vendor pricing based on a process flowsheet refined with extensive piloting.

The estimated costs were formulated by general area and are reflective of the effort required to process a nominal 6Mtpa (dry) of ore and nominal production of 13,500tpa of TREO.

Table 8: Operating Costs Breakdown

Operating Costs (Real LOM)	Annual Cost (US$M) Year 1-5	Unit Cost (US$/kg TREO) Year 1-5	Annual Cost (US$M) LOM	Unit Cost (US$/kg TREO) LOM
Mining	31	2.54	39	2.89
Processing	79	6.37	94	6.89
Total operating costs	**110**	**8.91**	**133**	**9.78**

Total operating costs per kilogram of TREO varies, based on the grade of ore being mined and pit location. Over the first five years the cost of TREO is US$8.91/kg based on an average ore grade of 4,500ppm and US$9.78/kg LOM based on average ore grades of 3,700ppm.

Increases in operating cost estimates relative to the Scoping Study have arisen from increased waste ore due partially to the strip ratio rising from 0.21 to 0.38 in the PFS. Previous estimates excluded low recovery blocks and backfill costs which were underestimated in the Scoping Study. De-risking metallurgical testwork, together with an improved process flow, has reduced initial capital costs however additional flocculant requirements to settle and dewater spent clays have contributed to an increase in processing costs.

These revised estimates have arisen out of additional refinements to the mining and process flowsheet, significantly de-risking the project while continuing to outline a technically robust operating cost model.

The total operating cost for NdPr remains at a highly attractive level of US$21.80/kg net of DyTb by-product credits at consensus pricing. Total operating costs continue to confirm the Caldeira Project as a highly competitive project.

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Figure 7: Operating cost per kilogram of NdPr against Spot, Consensus & Forecast Pricing

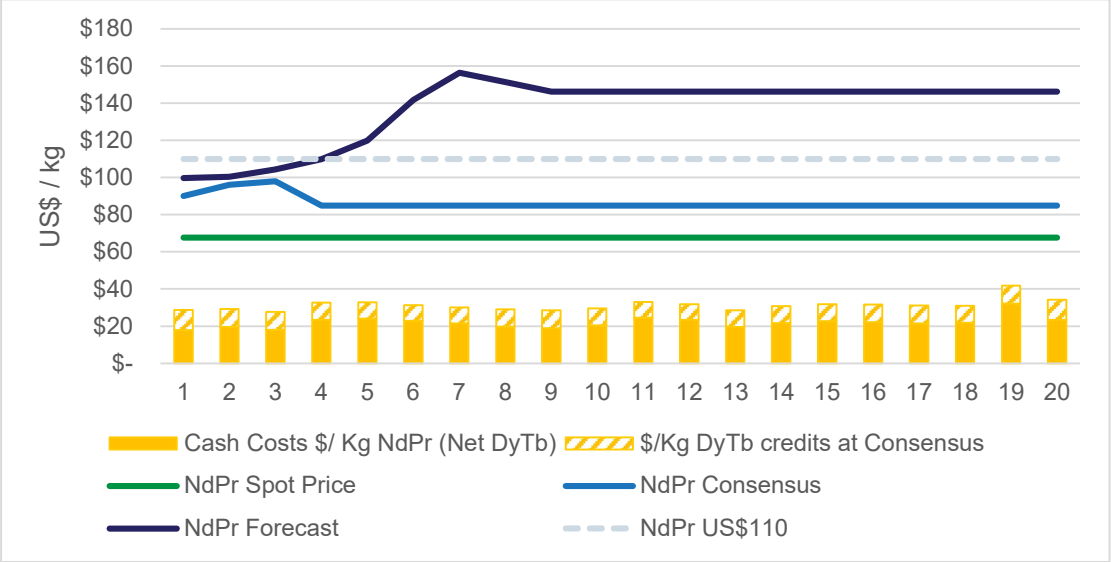
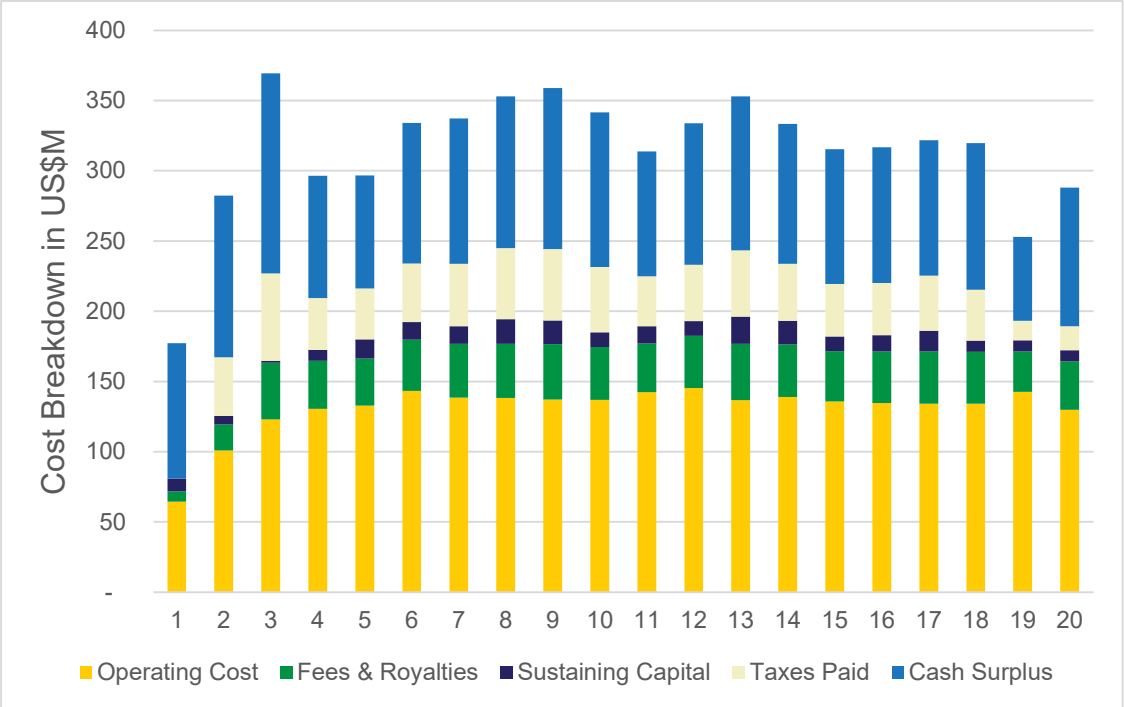


Figure 8: Annual Operational Costs and Cash Surplus based on Consensus pricing



Mining costs include expenditure relating to the return of spent clay to pits or dump areas, while general and administrative (**G&A**) costs have been included within the overall processing costs. It is important to note that tax calculations involve complex variables that can only be accurately determined during actual operations. Consequently, the actual after-tax results may vary from these preliminary estimates.

Fees and royalties include contracted royalties paid for Mining Rights (4.75%), Federal Government Royalties (CFEM 2%), State Government minerals tax (US$0.39 per tonne) and fees payable to landholders (US$1 per tonne of ore extracted). Royalties are calculated based on the value of products extracted or sold and will vary depending on the market prices.

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Capital Costs

Capital costs reflect more detailed estimates based on the adoption of an agreed work breakdown structure that incorporates further detailed design and up-to-date budget quotes from reputable Brazilian contractors.

The estimated capital cost reflects the modifications to the processing plant to a 6Mtpa base case operation along with optimised process plant flowsheet mine schedule, for a total cost of US$443M inclusive of a ~25% contingency of US$86M. An addition to the cost estimates relative to the Scoping Study is the inclusion of a pre-operational mining fleet with an estimated cost of approximately US$12M. All additional capital requirements pertaining to this owner-operated mining fleet will be captured under sustaining capital.

The Caldeira Project retains a low capital intensity supportive of future project development and highly competitive against alternative global rare earth projects at this stage of development.

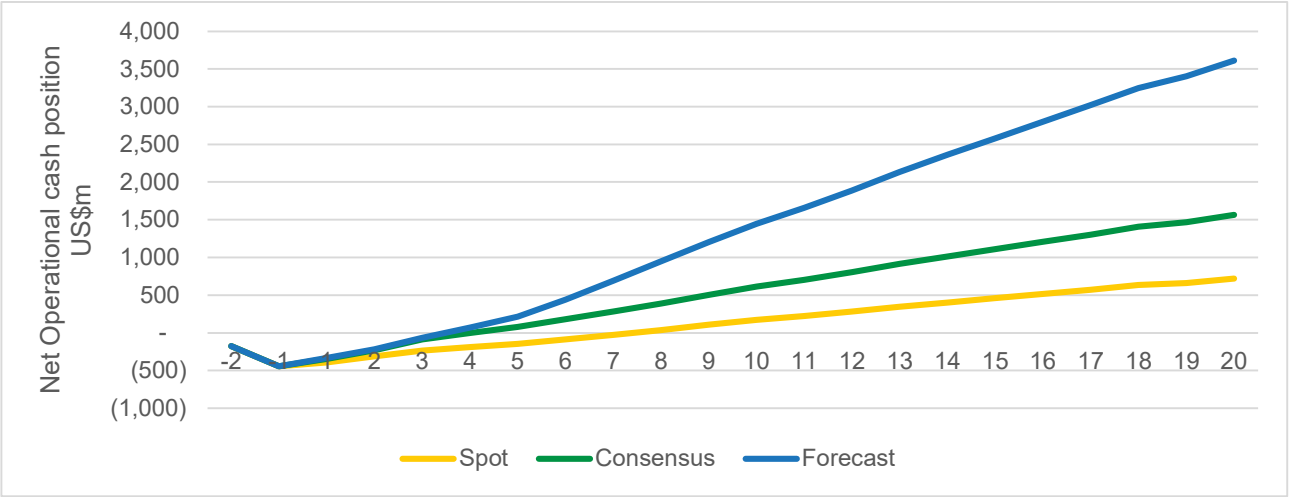
Table 9: Summary of Capital Expenditure

Description	Cost (US$M)	Contingency (US$M)	Total (US$M)
Mining	24	3	28
Plant Direct	259	65	323
Plant Indirect	74	18	92
Total	**357**	**86**	**443**

Cashflows

Figure 8 below presents the Project's cumulative cash flow generation based on forecast, consensus, and spot pricing scenarios. The Project is projected to have a payback period of less than three years under both forecast and consensus pricing assumptions.

Figure 8: Cumulative Operational Cash Profile



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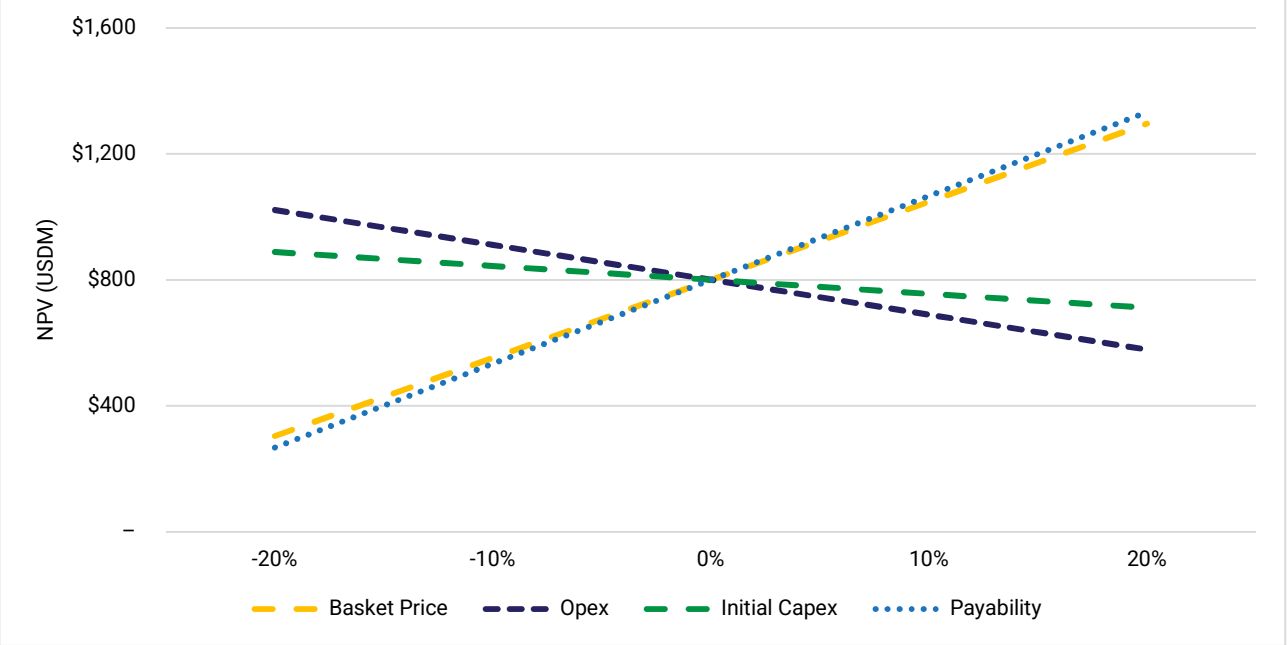
Sensitivity Analysis

A sensitivity analysis was performed for the Project, highlighting its resilience to variations in capital costs, operating costs, payability and rare earth pricing. The Project exhibits moderate sensitivity to fluctuations in operating costs and greater sensitivity to changes in the rare earth basket price.

Figure 9: Pre-Tax NPV Sensitivity Analysis at Consensus



Funding

Meteoric is continuing to advance funding discussions with various groups to support the estimated US$443M (including US$86M contingency) pre-production capital requirements of the Project. The technical and economic fundamentals provide a strong platform for Meteoric to source traditional project financing. This view is supported by the fact that the United States Export-Import (**EXIM**) Bank which has already provided a US$250M letter of interest.

Typical project development financing would involve a combination of debt and equity. Meteoric has formed the view there is a reasonable basis to believe requisite future funding for Project development will be available when required. The grounds which support this reasonable basis include:

- The Project is world-class by the nature of its simple mining and processing, high grades, low operating costs and capital intensity. The PFS release provides a strong platform for Meteoric to advance outcomes with potential financiers.
- Global debt and equity finance availability for rare earths projects remains positive. Recent examples of significant funding being made available for rare earths exploration and development projects includes Arafura Rare Earths, Brazilian Rare Earths, Australian Strategic Materials and Iluka Resources.
- Meteoric has also commenced early-stage discussions with a number of potential strategic partners which have interest in supporting the Project through off-take prepayments, equity investments or a combination thereof.
- Meteoric has a current market capitalisation of approximately A$351M and no debt. The Company has a simple corporate and capital structure. Meteoric also owns 100% of the Project.
- These are all factors expected to be highly attractive to potential financiers.
- Collectively, the Meteoric Board and Management team hold extensive experience in financing resources industry projects and ASX-listed resources companies.
- The publication of the PFS is expected to lead into more formal engagement with funding partners and downstream offtake partners together with the evaluation and appointment of our preferred debt

and legal advisors.

- The Brazil federal government has strongly supported the Caldeira Project, making it one of six ventures under the BIP, and Meteoric was selected as a priority company to join the Brazilian government committee at the Futuro Minerals Forum in Saudi Arabia in January 2025.

Forward Work Program

The Meteoric Board has endorsed the PFS outcomes and approved the commencement of target workstreams to improve and optimise Project Development.

Activities to support the establishment of a 25kg/hour pilot plant in Poços de Caldas are underway. An operational readiness plan has been implemented, and long lead items have already ordered to ensure timely commissioning and execution.

The pilot plant aims to validate the technical, environmental, and commercial viability of the Caldeira Project by producing MREC for testwork and offtake agreements. It will also support stakeholder engagement, future ore testing, workforce training, and overall project de-risking ahead of full-scale development. The pilot plant also affords the opportunity to test downstream rare earth separation.

Work programs will further de-risk the Project's cost estimates, metallurgical flowsheet and operating plan, while also providing a control budget for execution of the Project.

ASX Listing Rule 5.9 Disclosures – Caldeira Project

Material Assumptions and Outcomes

The PFS was completed with the following material assumptions:

- Ore to be extracted through conventional excavation and trucked to the processing plant. No requirement for blasting.
- Topsoil will be stockpiled in accessible piles near the mining area so it can be used for rehabilitation once a section of the pit has been backfilled and contoured to final landform.
- The processing plant capacity will be 6.0Mtpa and the monthly requirement for material movement will on average 0.5M bank cubic metres (bcm) per month.
- The Mine Plan has been designed to prioritise high-grade ore with excellent metallurgical recoveries. This approach will accelerate the payback period and deliver higher financial returns over the life of the Project. It will also allow expansion opportunities to be funded through operational cash flow.
- Overall metallurgical recovery is ~55% TREO. Individual oxide elemental recoveries have been applied.
- These recovery factors have been statistically validated against randomised diagnostic leach tests conducted on a wide range of ore samples, confirming their reliability across the mine plan.
- Average mining costs of US$2.54/kg TREO are based on the first five years of operations using a fully owned mining fleet.
- Mining economics are based on a cash flow model applied to individual mining blocks. Blocks are included in the ore reserve where Revenue minus cost >$0. Revenue is based on individual REO values published by the Shanghai Metal Market multiplied by individual oxide recoveries. These values reflect gross spot prices, inclusive of VAT. A payability factor of 70% is applied to the separated oxide prices to determine the final MREC pricing. Costs include mining and processing costs.
- The economic model is denominated in US dollars (**USD**), with local cost estimates converted from Brazilian Reals (**BRL**) using an assumed exchange rate of 6.0 BRL/USD. The exchange rate assumption is based on December 2024 rates.
- Transportation charges for MREC to Santos Port, Brazil (CIF) are estimated from budget pricing provided by logistics contractors. Transport charges ex-Brazil to the customer have been reflected within the estimated payability factor.

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- Treatment and refining charges are not directly applicable, as the product is an intermediate feedstock for separation facilities rather than a fully refined REO product.
- No smelter penalties are expected, as the MREC has been confirmed to meet industry purity requirements through ANSTO metallurgical test work.
- Mining activities will initially commence at the Capão do Mel (**CDM**) deposit, which is located closest to the planned processing plant site, before expanding to the Figueira (**FIG**), Barra do Pacu (**BDP**) and Soberbo (**SOB**) licences.
- Total ore mined by deposit is depicted in Figure 4 and key production outcomes and assumptions are set out in Table 2 above.

Criteria for Classification

The Mineral Reserve is classified as a Probable Ore Reserve only using the guidelines of the JORC Code (2012 Edition). Measured and Indicated have been converted to Probable only. The Ore Reserve consists of 100% Probable Ore Reserves.

The Competent Person is satisfied that the stated Ore Reserve classification reflects the outcome of technical and economic studies. The confidence in the Ore Reserves is reflected by the classifications shown above. In general, the project's geology is well understood and confidence in the Mineral Resource interpretation is good.

Mining Method & Assumptions

The proposed mining method and assumptions are set out above on page 10.

Processing Method and Assumptions

The processing method and assumptions are set out above on page 12.

Basis for Cut-off Grades

The economic cut-off grades for the project were determined on a block by block value basis and are determined by calculating net revenue from recovered REO less processing and selling costs on a block-by-block (diluted) basis. Only clay material has been included. There will be variations in the equivalent TREO cut-off grade as the quantity of each oxide element varies between the resource blocks as follows:

	Resource Cut-Off (TREO ppm)	
Deposit	**Lowest**	**Highest**
CDM	1,895	4,310
FIG	2,130	3,872
SOB	2,047	2,860
BDP	2,000	4,500

Estimated operating costs for Mining are shown below.

Operating Costs (Real LOM)	Annual Cost (US$M) Year 1-5	Unit Cost (US$/kg TREO) Year 1-5	Annual Cost (US$M)	Unit Cost (US$/kg TREO)
Mining	31	2.54	39	2.89
Processing	79	6.37	94	6.89
Total operating costs	**110**	**8.91**	**133**	**9.78**

Costs are inclusive of the processing of lower grade stockpiles from year 6.

Estimation Methodology

The study carried out as part of the Caldeira Project's maiden Ore Reserve is to a Pre-Feasibility Study level. The relative accuracy of the estimate is reflected in the reporting of the Ore Reserve as per the guidelines regarding modifying factors, study levels and Competent Persons contained in the JORC Code (2012). These

Ore Reserves represent 27% of the currently defined Measured and Indicated MRE for these four deposits. The Ore Reserves for the Project have been estimated as at 24 April 2025 in accordance with the JORC Code.

Material Modifying Factors

The following Modifying Factors were considered in relation to the development of the Caldeira Ore Reserve:

Existing Infrastructure and Site Accessibility

The Caldeira Project is strategically located in Caldas, Minas Gerais, a well-established mining and industrial region with significant infrastructure.

- The PFS area which includes: Capao do Mel, Soberbo, Figueira, and Barra do Pacu licenses, spans 2,369 hectares (23.7km²), providing ample land for mine development, processing infrastructure, and future expansions. The regions of Caldas and Poços de Caldas are home to existing bauxite, alumina, clay, and chemical processing plants, ensuring access to an experienced mining and industrial workforce.
- The proposed pits and processing facility are well-connected via a network of paved roads and private gravel roads, facilitating efficient ore transport.

Power Supply

- The Caldeira Project will utilise 100% renewable energy from hydroelectric, solar, and wind power available through the existing grid infrastructure in Minas Gerais.
- The project is located within 3km of high-capacity power transmission lines, ensuring a stable and reliable energy supply for mining and processing operations.

Water Supply and Management

The Caldeira Project will incorporate advanced water recycling technologies, including ultrafiltration and reverse osmosis (RO) systems, to minimise freshwater consumption and ensure minimal industrial effluent discharge.

- The ore beneficiation process is designed for high water efficiency, with >75% of process water recirculated within the plant.
- Additional hydrogeological studies are planned to optimise water sourcing and management strategies further.

Ore Transport and Logistics

- Ore will be transported by trucks via internal haul roads (dominantly), existing gazetted roads, and private gravel roads to the central processing facility at Capao do Mel.
- The Project benefits from proximity to major highways, facilitating the transport of MREC products to export hubs.
- Brazil's well-developed port infrastructure, including Santos (São Paulo), provides efficient access to global markets.

Labour and Accommodation

- Caldas municipality (~14,000 people) and the neighbouring city of Poços de Caldas (~175,000 people) have a long history of mining and possess a large, skilled workforce which reduces the need to attract significant numbers from outside the region. Additionally, the Company has started supporting the development of relevant skills in the Caldas population.
- No on-site accommodation is required, as the city of Caldas along with surrounding cities including Poços de Caldas and Andrades provides sufficient housing, amenities, and services for workers.
- The project is expected to create significant employment opportunities, benefiting the local economy of Caldas (and Andrades and Pocos de Caldas) and strengthening community support.

Future Considerations

- The existing infrastructure significantly de-risks the Project, reducing capital expenditures for building new roads, power lines, or water supply networks.

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- The processing facility location was carefully selected to ensure minimal environmental impact and logistical efficiency to the deposits.
- Additional investment in site infrastructure will focus on enhancing water management, optimising ore transport logistics, and expanding processing capacity in future project phases.

Environmental

- Brazil has a clearly defined three stage Environmental permitting process for Class 6 mineral projects. Meteoric is progressing through the permitting process which aligns with the current development timeline. The Project is currently in the Preliminary License (LP) phase in satisfying right to mine requirements in Brazil. Further information in relation to the environmental permitting process is set out on page 14 above.

ASX Listing Rule 5.16 Requirements

The material assumptions that the production target for the Project is based on are detailed in the body of this announcement and the Executive Summary which is included in Appendix 1.

The production target is based on 89% Measured & Indicated Resources and 11% Inferred Mineral Resources that have been prepared by Competent Persons in accordance with the requirements of the JORC Code (2012). Refer also to the Cautionary Statement regarding Inferred Mineral Resources on page 1.

This release has been approved by the Board of Meteoric Resources NL.

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METEORIC

APPENDIX 1 – CALDEIRA RARE EARTHS PRE-FEASIBILITY STUDY

EXECUTIVE SUMMARY

July 2025

Studies Manager:

Ausenco

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Executive Summary

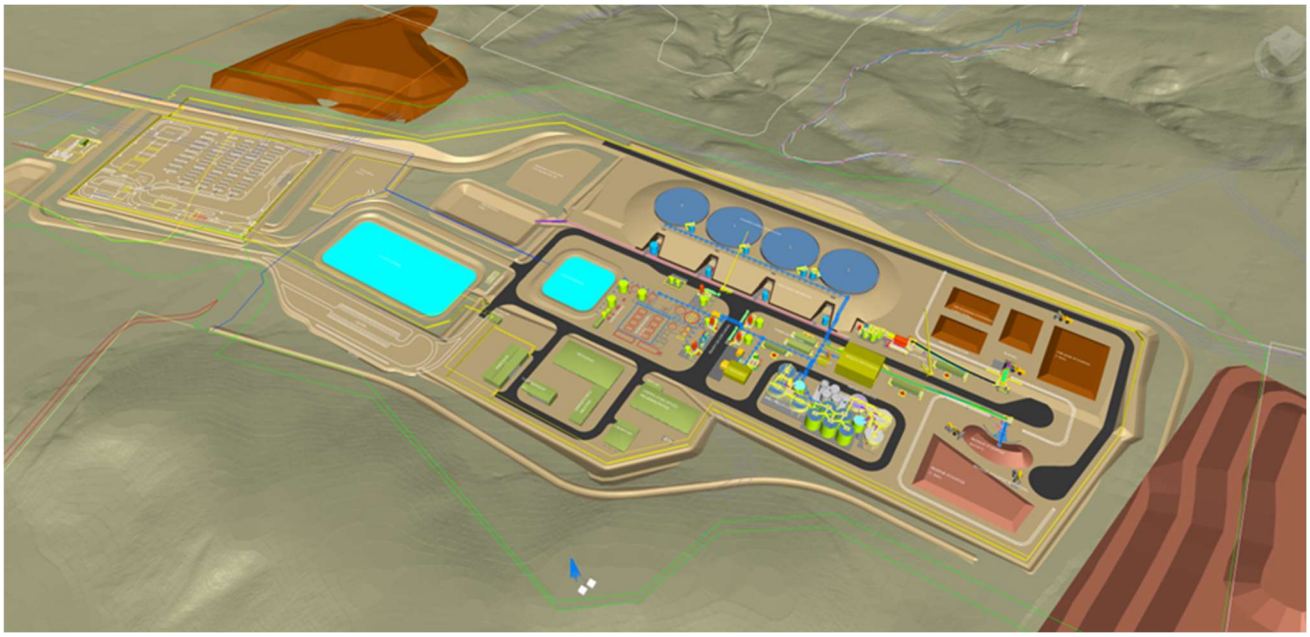

Figure 1: Schematic drawing of Processing Plant Layout at Capao do Mel.

Introduction

Meteoric Resources NL (**Meteoric,** or **Company**) is an ASX-listed rare earth exploration and development company and the owner of the Caldeira Project (**Project** or **Caldeira Project**) in the Brazilian state of Minas Gerais. The Project is located between the cities of Caldas, Poços de Caldas and Andrades, in the southern region of Minas Gerais.

A Scoping Study completed in May 2024, then subsequently updated in October 2024, recommended the completion of a Pre-Feasibility Study (**PFS**) into the Project.

The Project is being developed to mine and process rare earth rich ionic clays at a rate of 6 million tonnes per annum (**Mtpa**) to produce a mixed rare earth carbonate (**MREC**). Since acquiring the Caldeira Project in March 2023, Meteoric has undertaken an extensive program of exploration, resource development drilling, resource estimation, metallurgical characterisation of ore, process design testwork, material handling study, mine scheduling and design, and other related technical studies. This work has significantly enhanced the Company's understanding of the Project's scale, quality and strategic potential. With its long mine life and cost advantages, the Caldeira Project has the potential to disrupt the global rare earth industry by emerging as a major low-cost supplier of rare earth element (**REE**) products.

While the Project is currently modelled with a 20-year mine life, the scale of the existing Mineral Resource base has the potential to support a significantly extended operational life, subject to the receipt of all necessary additional approvals.

Importantly, the Project's Mineral Resource contains higher confidence classification of Measured and Indicated Resource of 666Mt at 2,685ppm TREO. This places the Caldeira Project as one of the highest-grade ionic absorption clay rare earths deposits in the world.

The ore body is shallow, commencing at surface in some areas, and consists of free dig clays with a low mining strip ratio. Combined with high grades, excellent REE recoveries, and a simple ammonium sulfate (**AMSUL**) wash flowsheet to treat the ionic clays, results in an inherently low operating cost compared to hard rock REE deposits. This flowsheet has been validated by extensive testwork carried out at the Australian Nuclear Science and Technology Organisation (**ANSTO**).

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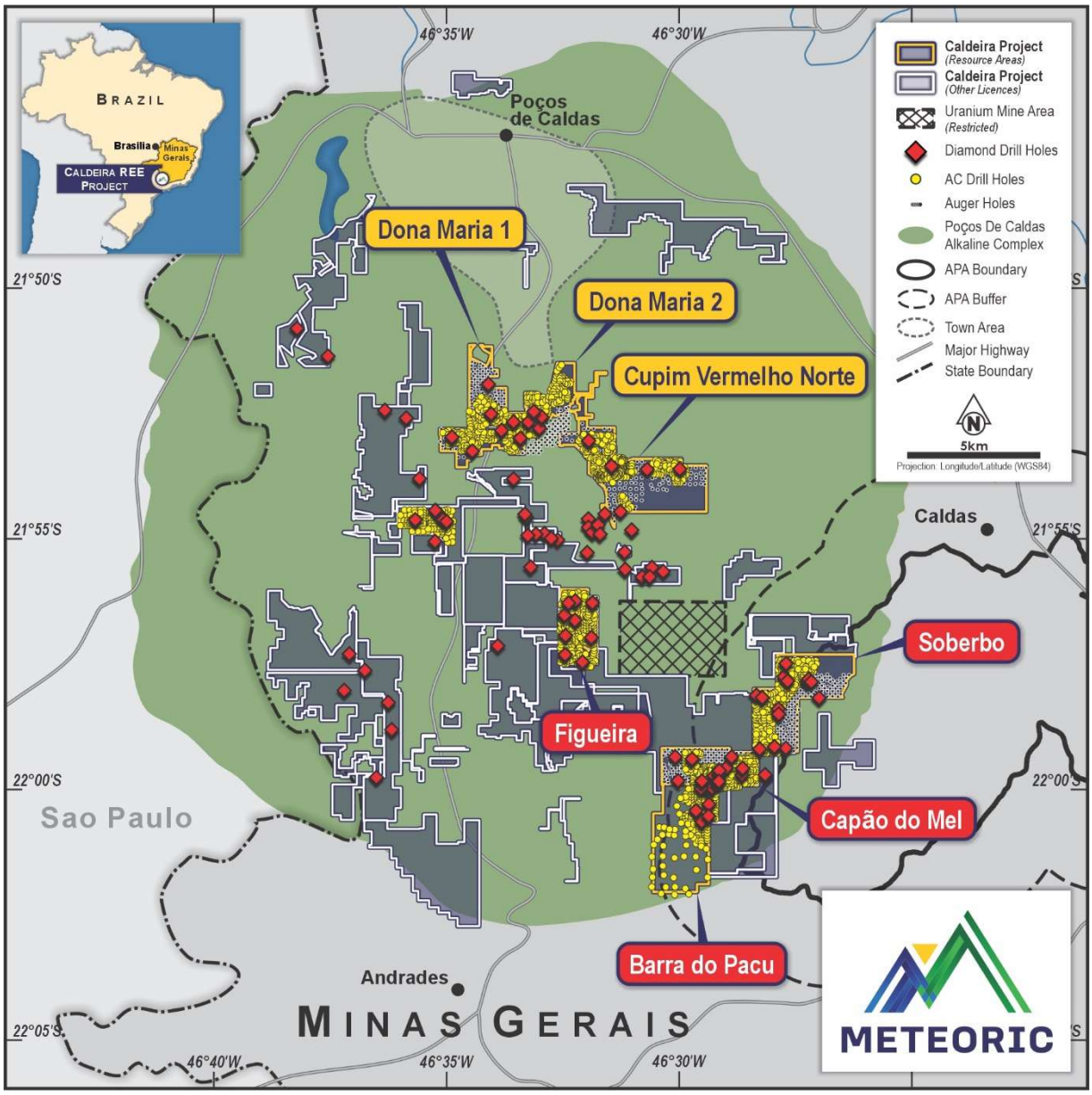

Figure 2: Caldeira Project Licences (four southern licenses included in the PFS highlighted in red).

Geology and Resource

The key geological feature of the Project area is the Mesozoic Poços de Caldas Alkaline Complex (**PCAC**) which was intruded into the metamorphosed Paleoproterozoic rocks of the Brazilian shield. The intrusion of the PCAC and the associated volcanic equivalents were emplaced approximately 80 million years ago. The event is related to the final stages of the breakup of the Gondwana Continent and the formation of the Atlantic Ocean during the late Cretaceous. Initial volcanism is followed by collapse, leading to the formation of a major geomorphologic feature, comprising a large circular volcanic/intrusive edifice of over 800km^2 that rises approximately 600-800m above the metamorphic basement.

The main rock types found are intrusive and volcanic alkaline rocks of the nepheline syenite system, comprising phonolites and foidolites (syenites). High rainfalls and the unique potassium enriched chemistry of the intrusives that lack any primary quartz has led to the formation of a deep regolith profile. Within the regolith profile, clays and partially weathered rock (transition) have been identified up to 200m below the current land surface.

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The geological interpretation of Meteoric's exploration drilling subdivides the regolith into three main zones:

- A soil layer 0 – 2m thick;
- A clay zone 5 – 70m thick comprising illite, montmorillonite, halloysite and gibbsite as the main clay species; and
- A transition zone defined by the appearance of visible weathered rock fragments which gradually increase with proximity to fresh rock in a zone that can vary between 5 – 120m thick.

Primary uranium and REE deposits have been known within the area since the 1950s and are characterised by late stage sulphidic breccias containing uranium oxides and bastnaesite with accessory monazite and xenotime as the major REE ore minerals. However, away from the higher-grade U-REE deposits, the dominant REE mineral in the source rock (syenite) beneath the clay zone is bastnaesite, a major source of REE worldwide. Bastnaesite is the primary REE mineral at well-known deposits such as Mountain Pass (USA) and Bayan Obo (Asia). Bastnaesite is a REE carbonate-fluoride mineral (REE)CO_3F which has very low levels of uranium and thorium in its mineralogical structure. Concentration of REE within ion adsorption deposits has been proposed to be a dominantly supergene process, where easily degradable REE-minerals break down and release REE that are then adsorbed onto clay mineral surfaces.

The target REE mineralisation for Meteoric occurs below the soil layer within the clay zone (Table 1). This is where REE grades and leaching recoveries are highest due to the ionic adsorption nature of the bonds between the REE and the clay minerals. The target ionic clay REE mineralisation (defined by >40% recovery of REE using a standard AMSUL wash at pH 4) is confined to the soil, clay, and weakly weathered transition layers. A total of 65% to 90% of these highly weathered zones are composed of minerals in a clay fraction (granulometry <2µm). Mineralisation ranges from 2ppm to 56,000ppm REE. Mineralisation is present throughout the vertical profile, but it is not distributed homogenously.

Table 1: Depth of Mineralised Clays at key Caldeira Project deposits.

Tenement	Mineralised Clay Depth – Variable (m)	Average Depth (m)
Capão do Mel	4 - 50	23.4
Figueira	4 - 62.5	28.2
Soberbo	1.5 - 77.4	16.9
Barra do Pacu	8 - 50	29.2

Exploration

Since signing an agreement to acquire the Caldeira Project in December 2022, Meteoric has completed an extensive amount of work including:

- Check assaying of historic samples;
- Soil sampling;
- Hyperspectral analysis of clays;
- Geophysical surveys;
- LIDAR topography surveys;
- 3D geologic modelling;
- Aircore and diamond drilling; and
- Resource estimation.

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In December 2022, a resampling program of auger drill holes from JOGMEC's 2016-2019 drilling program was undertaken. A total of 398 samples were submitted to ALS laboratory in Belo Horizonte (MG), being a combination of 296 pulp samples plus 102 re-samples of coarse reject from the auger drilling. There was no statistically significant bias between the original results and check assays, with >95% of check assays within 10% of original result. This excellent correlation provides confidence in the previous work.

Meteoric completed 93 diamond drill holes between March 2023 and February 2024 for 4,186m. The objective of the program was to:

- Test the tenor and depth of clay mineralisation below the highest-grade anomalies defined in regional soil sampling program of JOGMEC (described above),
- In-fill drill and test the depth of clay mineralisation on six licenses where JOGMEC had defined non-JORC resources, to enable a maiden JORC Resource Estimate, and
- Collect samples for metallurgical characterization testwork of the mineralisation.

Meteoric purchased its own multi-purpose drill rig in May 2023. The rig was configured to drill Aircore (**AC**) holes. Since commissioning in August 2023 the Company has drilled >57,000m of AC across eight licenses, producing ~31,000 samples for assay (Table 2).

Table 2: Drilling statistics for Resource areas.

Target	Auger		Aircore		Diamond		Samples
	Holes	Metres	Holes	Metres	Holes	Metres	
Capão do Mel	337	3,461	492	12,397	14	428	10,726
Soberbo	323	2,987	323	5,514	14	374	6,483
Figueira	92	950	292	8,587	9	582	6,755
Barra do Pacú	-	-	224	6,540	7	327	3,612
Cupim Vermelho Norte	185	1,849	430	12,077	5	148	7,176
Dona Maria 1	316	3,160	271	6,144	7	180	6,527
Dona Maria 2	143	1,303	170	3,687	4	86	3,254

After only two years of drilling the Company has defined a global Mineral Resource of 1.5Bt at 2,359ppm TREO at a 1,000ppm cut-off grade, including Magnetic Rare Earths Oxide (**MREO**) grades of 526ppm (22.3% of the TREO basket). Measured and Indicated Mineral Resources total 666Mt at 2,685ppm TREO and 605ppm MREO (22.3% of the TREO basket).

A subset of the global Mineral Resource from four southern licences – Capão do Mel (**CDM**), Barra do Pacu (**BDP**), Soberbo (**SOB**) and Figueira (**FIG**) – were included in the PFS and are shown in Table 3. This forms the basis of the maiden Ore Reserve for the Caldeira Project.

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Table 3: Mineral Resource Estimate for licences considered in PFS.

Licence	JORC Category	Material Type	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	Measured	Clay	11	3,888	222	586	6	28	842	21.7%
Total	**Measured**		**11**	**3,888**	**222**	**586**	**6**	**28**	**842**	**21.7%**
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%
Total	**Indicated**		**374**	**2,846**	**153**	**423**	**5**	**25**	**606**	**21.3%**
Total	**Measured + Indicated**		**385**	**2,875**	**155**	**428**	**5**	**25**	**613**	**21.3%**
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%
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%
Total	**Inferred**		**546**	**2,120**	**113**	**307**	**3**	**18**	**441**	**20.8%**
Total	**Measured + Indicated + Inferred**		**931**	**2,432**	**130**	**357**	**4**	**21**	**512**	**21.0%**

Mining

Project Ore Reserves of 103Mt at 4,091ppm TREO are estimated at 24 April 2025, in accordance with the JORC Code (2012). Meteoric determined suitable modifying factors to apply in the Ore Reserve estimation process following a review of site data including environmental and metallurgical characteristics, the available Resource estimate, and flow sheet and mine design studies completed as part of this PFS. The modifying factors have been applied exclusively to Measured and Indicated Resources at CDM, BDP, SOB, and FIG. Measured and Indicated Resource have been converted to Probable Reserves considering confidence levels in geotechnical, material handling and some metallurgical parameters.

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The Proved and Probable JORC Ore Reserves estimates for the Project are summarised in Table 4.

Table 4: Caldeira Ore Reserve.

Classification	Tonnes (Mt)	TREO ppm	Pr_6O_{11} ppm	Nd_2O_3 ppm	Cont. REO kt
Capão do Mel					
Proved	-	-	-	-	-
Probable	37.1	3,925	243	667	146
Total	**37.1**	**3,925**	**243**	**667**	**146**
Figueira					
Proved	-	-	-	-	-
Probable	16.1	4,951	450	938	75
Total	**16.1**	**4,951**	**450**	**938**	**75**
Soberbo					
Proved	-	-	-	-	-
Probable	24.3	3,735	256	736	91
Total	**24.3**	**3,735**	**256**	**736**	**91**
Barra do Pacu					
Proved	-	-	-	-	-
Probable	25.5	4,130	234	621	105
Total	**25.5**	**4,130**	**234**	**621**	**105**
Total Caldeira Project					
Proved	-	-	-	-	-
Probable	103.0	4,091	276	714	416
Total	**103.0**	**4,091**	**276**	**714**	**416**

Notes to the Ore Reserve:

1. *Ore Reserve estimates are not precise calculations, being dependent on the underlying Mineral Resource and based on limited information in respect to modifying factors. The totals contained in the above table have been rounded to reflect the relative uncertainty of the estimate.*
2. *Only clay material with a resource classification of Measured or Indicated have been included.*
3. *Measured and Indicated have been converted to Probable only.*
4. *Ore Reserves are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The Joint Ore Reserves Committee Code – JORC 2012 Edition).*

Optimised Resources

Initially, only Measured and Indicated resource classifications were used for optimisation and final pit design of the four deposits. An additional optimisation was done on Inferred Resources at BDP to increase the Mine Life beyond 20 years.

Geotechnical Parameters

Geotechnical inputs for pit optimisation and design remain outstanding at the time of this report. The overall slope angle used in the optimisation was 30º based on observations of a nearby mine operation, and the value Brazilian Mining consultant BNA provided for the Scoping Study.

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Net Return

The optimisations were run using a cashflow methodology. A block will be selected to be processed when:

- ***(Total REO x Recovery x Basket Price) – Ore costs > $0.***

This means there will be variations in the TREO cut-off grade within the mining model as the grade of each oxide element varies in a block.

Table 5 shows the range of TREO grades that are close to Net Value = $0.

Table 5: TREO Cut-Off Grades by Deposit (variable).

	Cut-Off (TREO ppm)	
Deposit	**Lowest**	**Highest**
CDM	1,895	4,310
FIG	2,130	3,872
SOB	2,047	2,860
BDP	2,000	4,500

Pit Designs

From the selected shells of each stage of development and final optimisation shells, pit designs were completed for the four deposits using the parameters contained in Table 6.

Table 6: Pit Design Parameters.

Item	Value
Inter-ramp Angle	35 degrees
Default Berm	3m width (every 5m vertical)
Default Batter Angle	50 degrees
Bench Height	5m
Ramp Width	10m
Ramp Gradient	1:10

Total pit inventory of Project resources by Resource Classification is shown in Table 7.

Table 7: Resource Inventory within the final Pit Designs by Resource Classification.

	Caldeira Project										
	Measured			Indicated			Inferred			Waste	Total
Deposit	Mt	TREO (ppm)	Cont. REO (kt)	Mt	TREO (ppm)	Cont. REO (kt)	Mt	TREO (ppm)	Cont. REO (kt)	Mt	Mt
CDM	7	4,682	32	30	3,756	114	-	-	-	23	60
FIG	-	-	-	16	4,951	80	-	-	-	11	27
SOB	-	-	-	24	3,735	91	-	-	-	11	36
BDP	-	-	-	25	4,130	105	14	3,628	51	16	55
TOTAL	**7**	**4,682**	**32**	**96**	**4,050**	**390**	**14**	**3,628**	**51**	**61**	**178**

Figures 3 - 6 show stages and final pit designs of the four deposits. For clarity, as ramp access to the larger pits will change over time the ramps are not shown.

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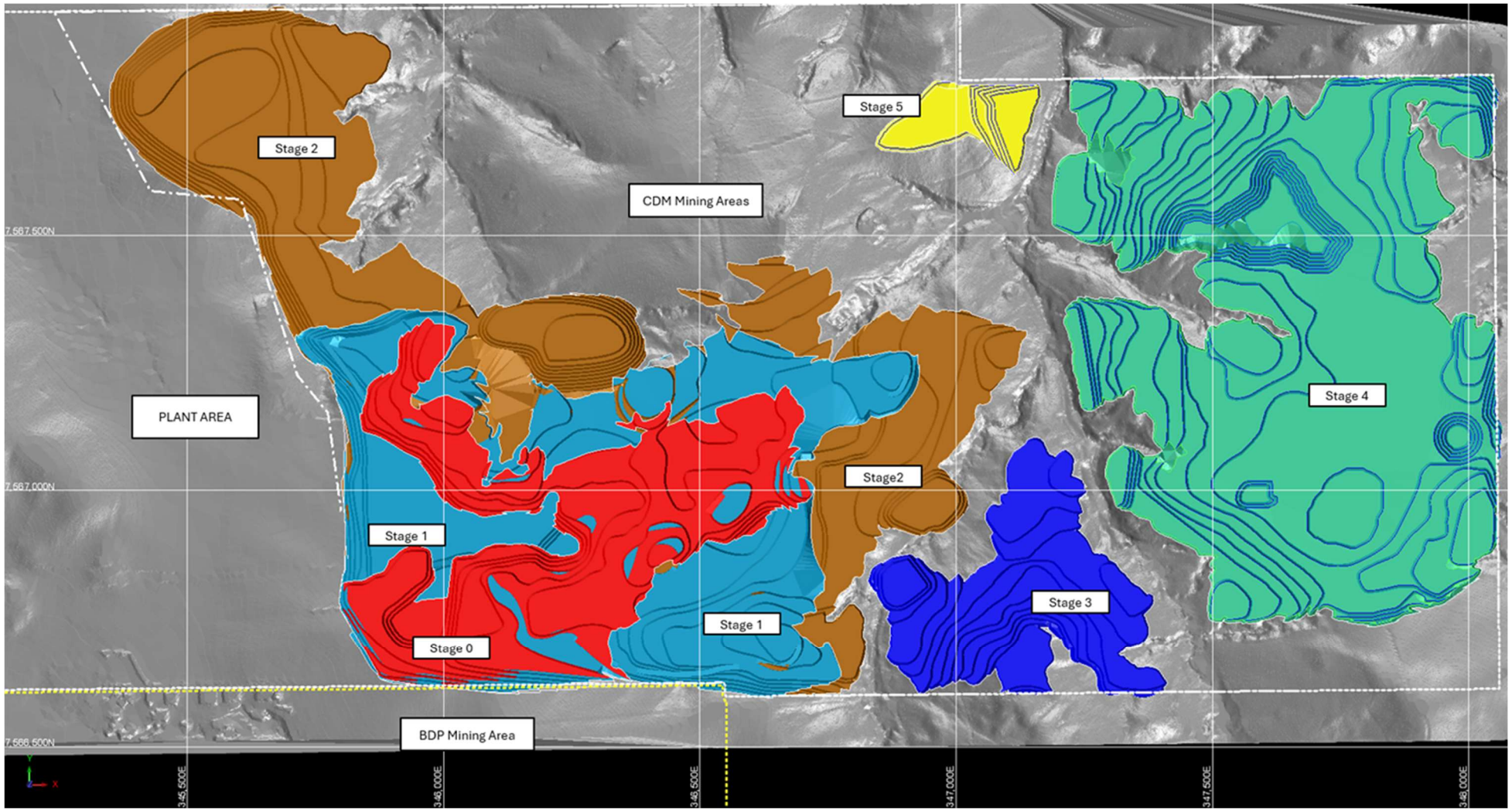

Figure 3: CDM staged and final pit designs.

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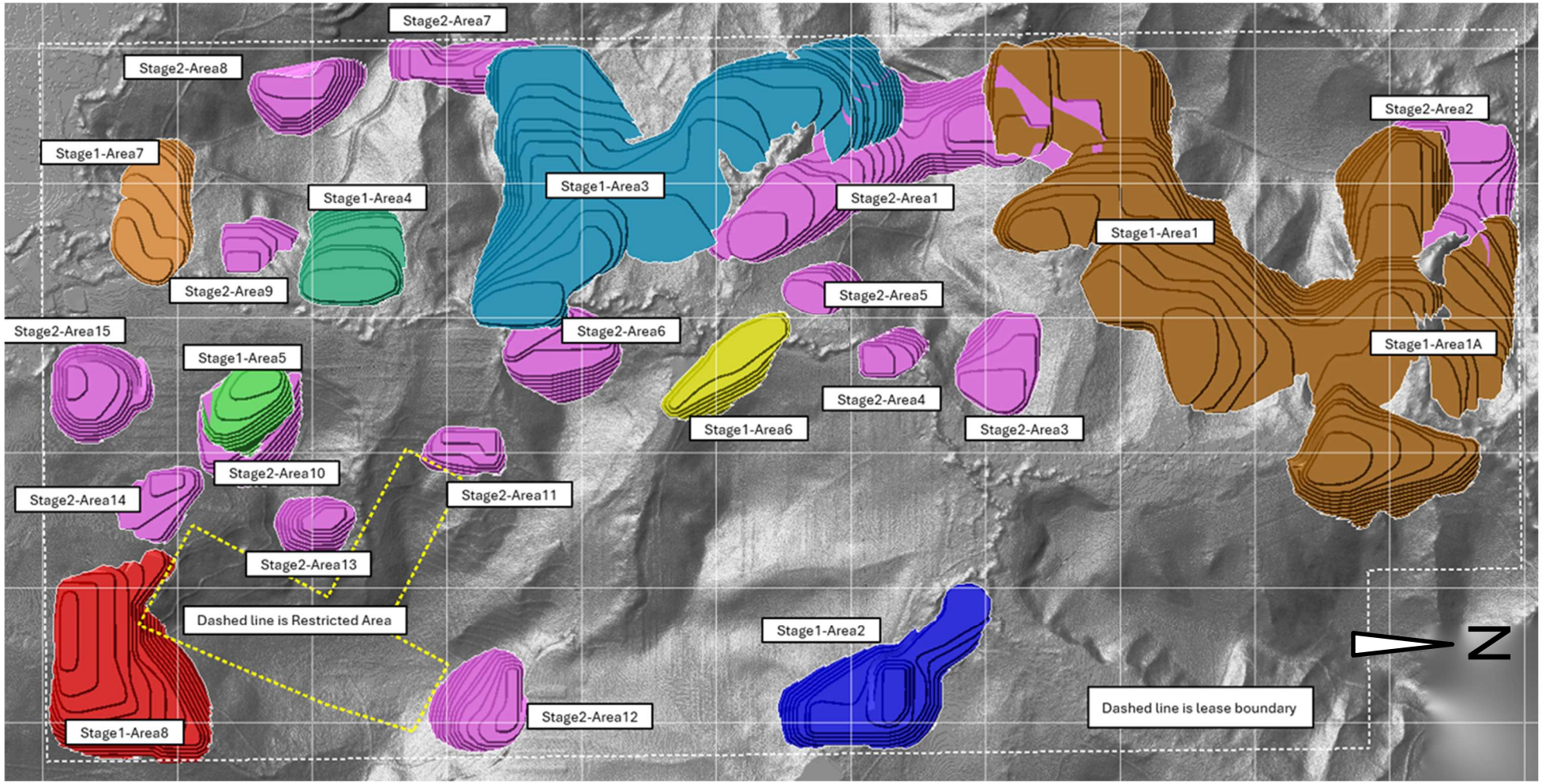

Figure 4: Figueira staged and final pit designs (image has been rotated from North/South to West/East).

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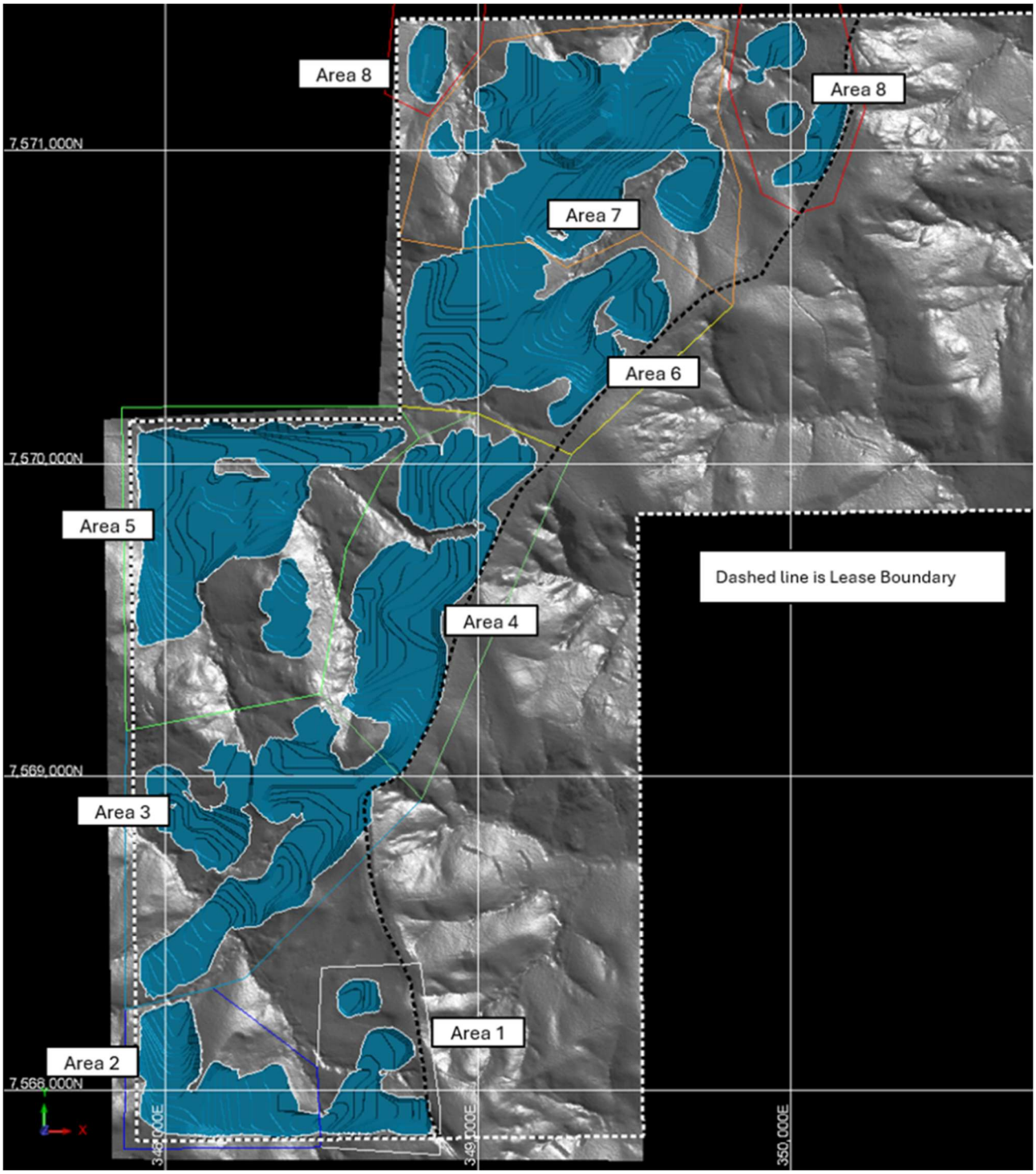

Figure 5: Soberbo final pit designs.

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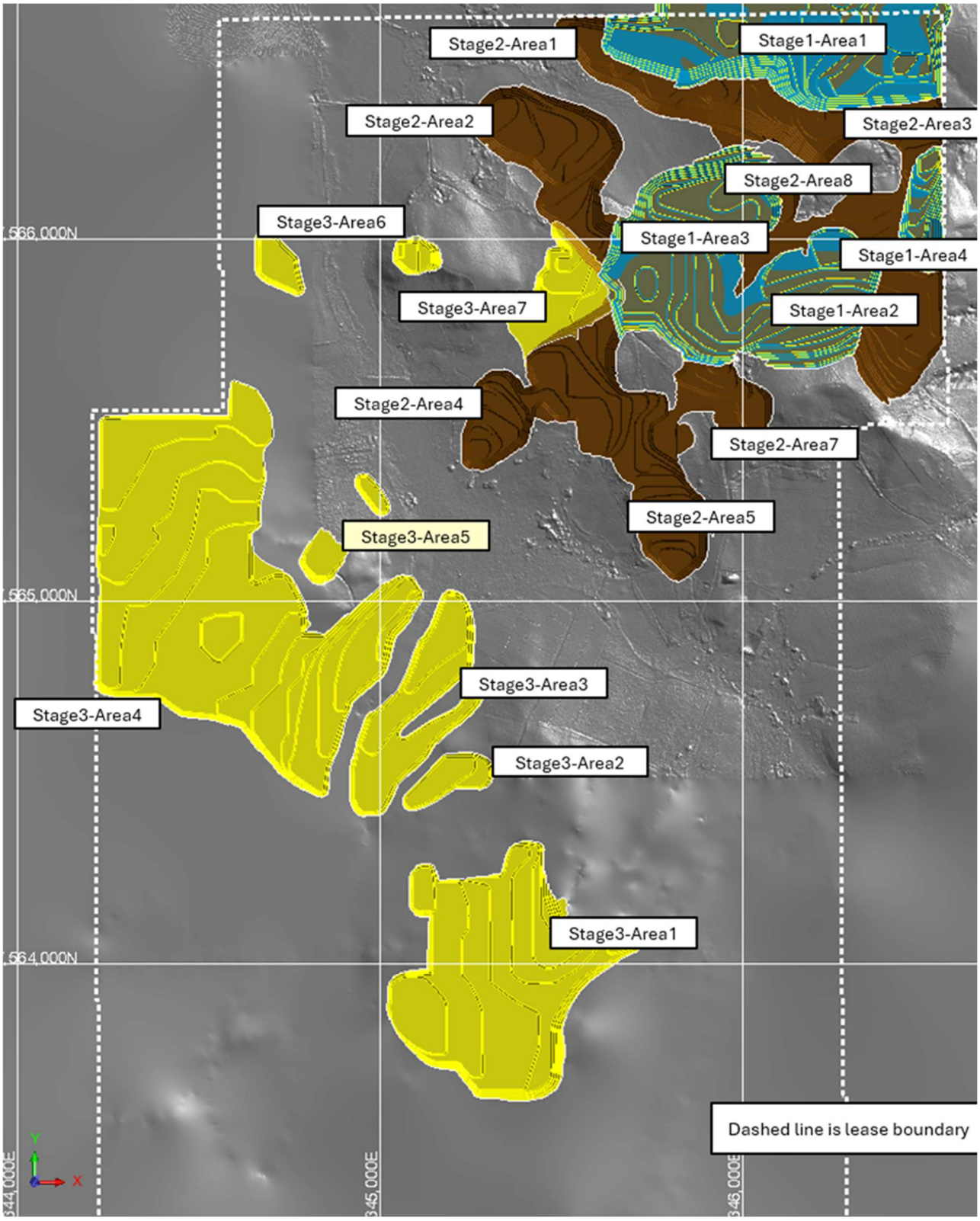

Figure 6: BDP staged and final Pit Designs (designs based on inferred inventory are highlighted in yellow)

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Mining Method

Mining activities will commence in CDM, which is located closest to the process plant, and then expand to include FIG, SOB and BDP.

The proposed mining activities in all four areas will be conducted in the form of a conventional open pit load and haul operation. Drill and blast activities are not anticipated as the material to be mined is free-diggable soil and clays.

Ore will be hauled direct from the CDM and BDP pit to the process plant located on the western end of the CDM tenement. Once mining commences in FIG and SOB, ore will be hauled to the process plant using dedicated haul roads to be constructed by Meteoric.

Waste material will be used for construction purposes (roads, bunds, etc) with the remainder to be stored using ex-pit and predominantly in-pit dumps. The plan is to only use ex-pit dumps in the first two years of mining before backfilling can commence in mined out sections of the open pits, using waste and spent clay rejects from the plant. Topsoil will be stockpiled in accessible piles near the mining area for rehabilitation use once a section of the pit has been backfilled and contoured to final landform.

The process plant capacity will be 6.0Mtpa and the monthly requirement for material movement will be on average 0.5M BCM per month.

Spent clays from the process plant will initially be stored in ex-pit storage facilities until sufficient space is available in the open pits for the material to be returned and deposited in accordance with the Project's final landform design.

Mining and Processing Schedules

With the completion of the staged and final pit designs a detailed life-of-mine (**LOM**) yearly production schedule was completed using MineSched software with the following assumptions:

- Plant throughput of 6.0Mtpa with a ramp-up of 3.0Mt in Year 1 and 5.0Mt in Year 2.
- Targeted recovered oxide output of 13,500tpa in the first 10 years.
- Plant feed has been broken down into TREO grade bins (all >$0 net value) to enable priority on grade bins to enable blending and smooth plant feed:
    - Low grade: <2,500ppm
    - Medium grade: 2,500ppm to 3,500ppm
    - High grade: 3,500ppm to 4,500ppm
    - Very high grade: >4,500ppm
- Transport of ore from FIG to the CDM plant site constrained to 1.0Mtpa due to local road access restrictions. Minimum mining block size (x, y, z) = 10m x 10m x 5m.
- Bench height = 5m.
- Terraced mining with vertical lag distances of up to 100m.

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Life of Mine (LOM) Schedule

LOM mining and production schedule features are documented in Table 8 below.

Table 8: LOM Mining and Production Statistics.

LOM	Details
Mine Life	20 years
Total material mined	177MT
Total ore to be mined	117Mt @ 4,036ppm TREO (high grade) 12Mt @ 2,000ppm TREO (low grade)
Overall Strip Ratio	0.38:1
Contained REO mined	742kt (includes 51kt Inferred)
Total Plant Feed	129Mt at 3,701ppm TREO over 20 years
Recovered REO output	272kt
LOM: average TREO recovery	55%
Overall Nd-Pr to TREO in Process Plant product	0.31:1
Mining Activities	Year 1 – CDM Year 3 – FIG Year 4 – BDP Year 12 – SOB
Mining total movement	9.0Mtpa (Average)
ROM stockpiles	Will be used to manage grade blending as well as maintaining plant feed rates during the wet season. A nominal 800,000t stockpile is located at CDM for this purpose. From Year 6 onwards an additional ~800ktpa of low grade material initially mined as waste and stockpiled is processed by the plant. The above figures are inclusive of the processing of stockpiled low grade material.

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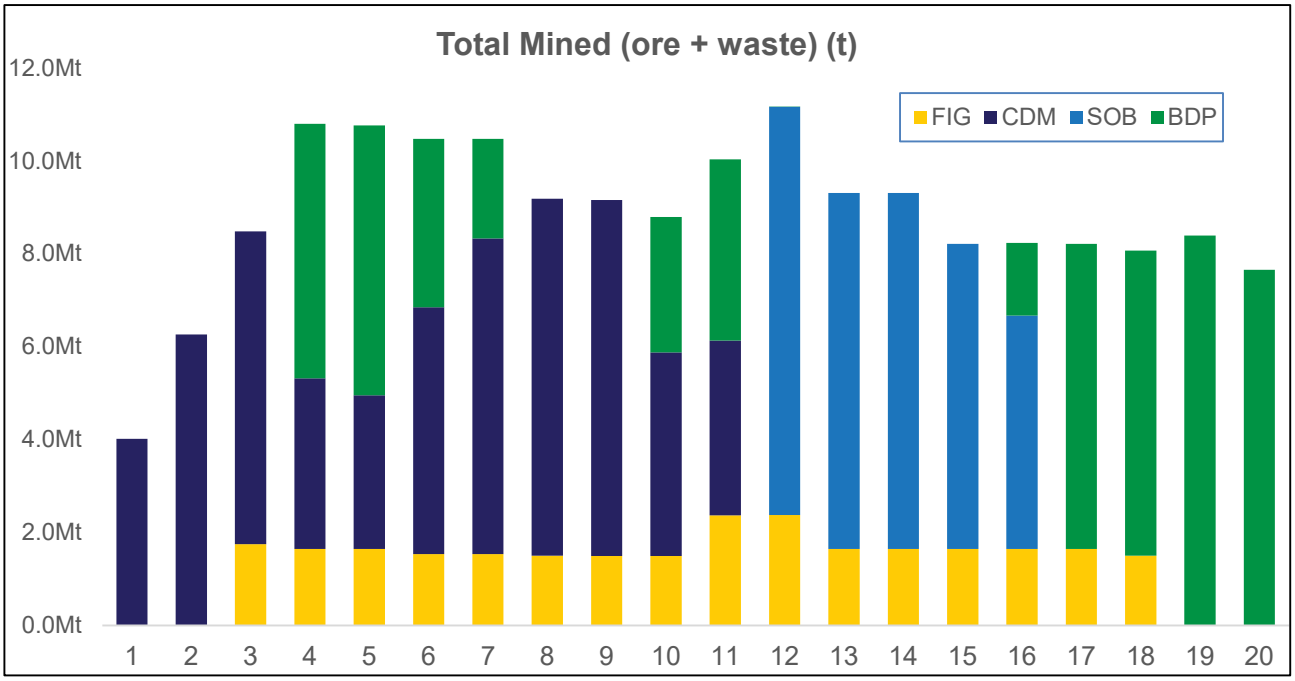

Figure 7: Total material mined (ore + waste).

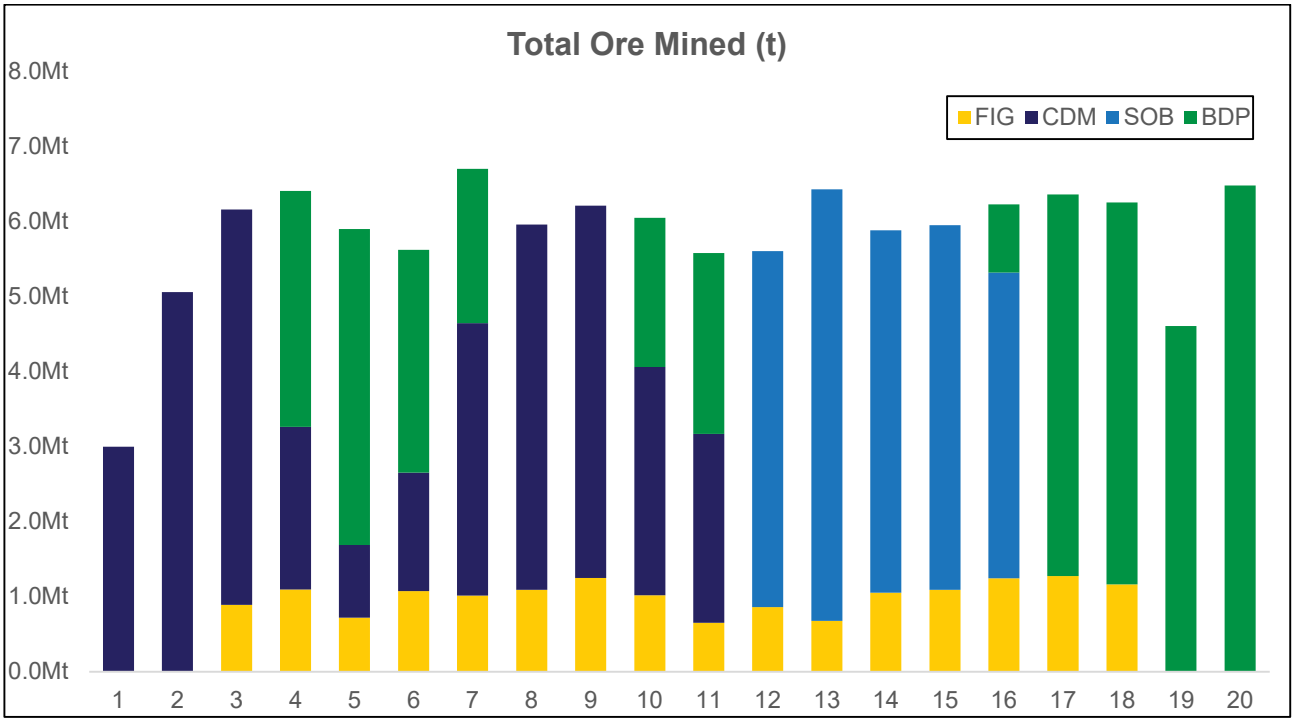

Figure 8: Total ore tonnes mined by deposit.

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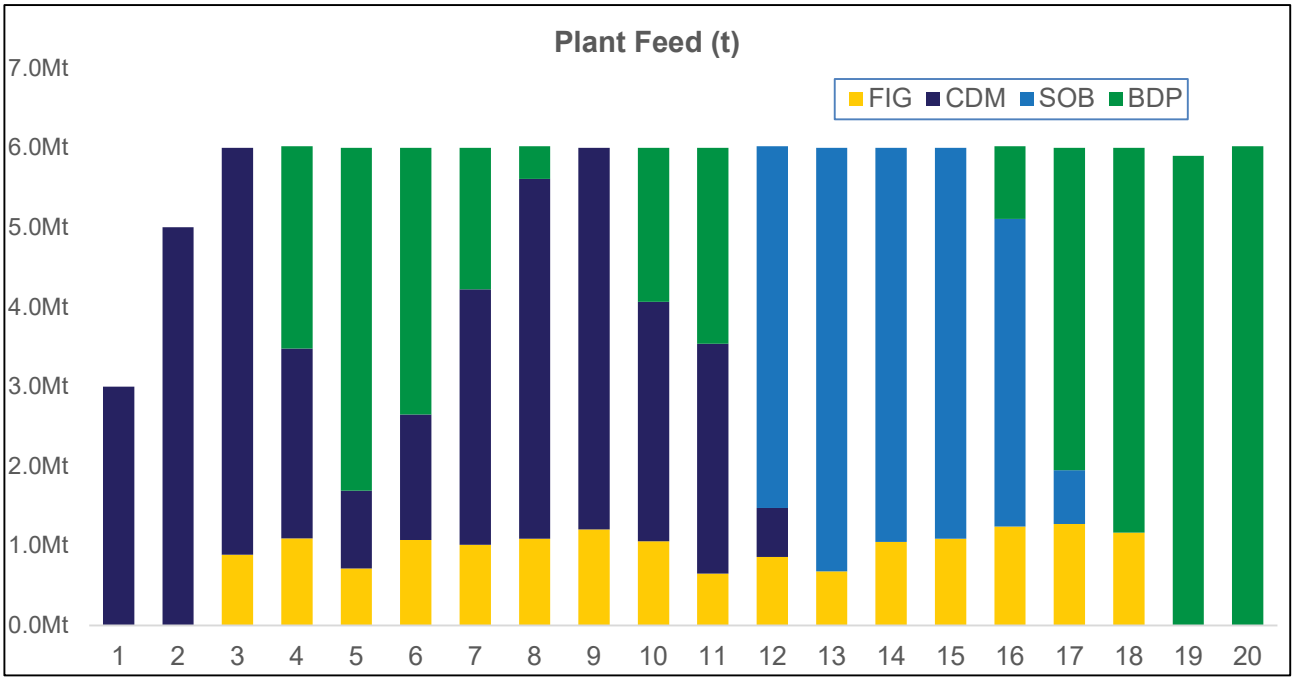

Figure 9: Processing plant - annual feed tonnes by deposit.

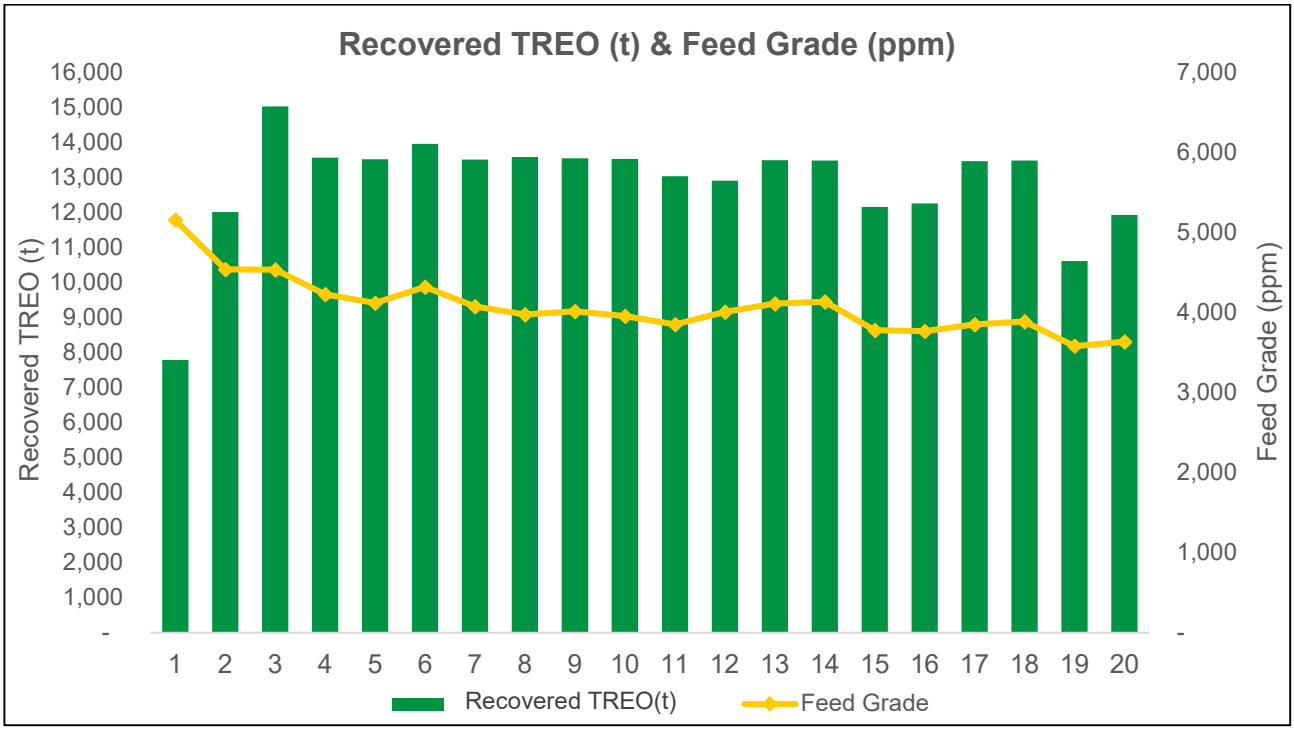

Figure 10: Recovered REO tonnes by year.

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Metallurgy

Testwork Background and Objectives

The Project is characterised by shallow, weathered clay-hosted REE mineralisation amenable to simple surface mining and ambient temperature leaching. Given the nature of ionic clays, the REE are loosely adsorbed onto clay minerals and can be desorbed under weakly acidic (pH 4.5 - 5) conditions, ambient temperature and pressure with rapid desorption (<30 minutes) kinetics with an AMSUL lixiviant.

The primary objective of the ANSTO designed testwork program was to develop a processing route that maximises recovery of magnet REE while producing a marketable MREC product with acceptable impurity levels. Particular emphasis was placed on:

- Desorption efficiency under varied reagent regimes
- Impurity precipitation (especially Al, Fe, U, and Zn)
- Pilot-scale validation and refining of operational parameters
- Characterisation of metallurgical variability across prospects

A systematic program of mineralogical, chemical, and metallurgical testwork was undertaken to characterise mineralisation, focusing initially on the CDM prospect and subsequently expanding to other tenements including FIG, Dona Maria 1 and 2, Cupim Vermelho Norte (**CVN**), BDP and SOB.

Composite Overview

A total of four composites from diamond core were generated for the PFS, with the table below summarising recoveries:

Table 9: Summary of Composite Recoveries.

Tenement	Result
CDM	• Initial focus of development and pilot-scale tests • 72% MREO recovery to MREC
FIG	• High REE grades • 71% Magnetic REO recovery to MREC
SOB	• 67% Magnetic REO recovery to MREC
BDP	• Contiguous to CDM southern boundary • 72% MREO recovery to MREC

A continuous pilot-scale program was conducted at ANSTO using a 2.5-tonne sample representative of the CDM starter pit. The campaign successfully validated and de-risked the process flowsheet, achieving MREO recovery of 69% and producing a high-quality MREC product with less than 2% impurities.

Additional pilot testing is scheduled to take place in Brazil during the December quarter of 2025.

Mineralogy and Element Deportment

Detailed QEMSCAN and XRD work revealed that clays constituted ~27% of CDM and 25–30% of SOB and FIG samples. Kaolinite is the major clay mineral in the samples, K-feldspar ~33% and muscovite ~28% are also major mineral phases. Minor concentrations of smectites, biotite/annite and Fe-oxide/hydroxide were also

detected along with trace concentrations of Mn-oxide/hydroxide, organic material, rutile/anatase, albite, quartz, zircon, ilmenite, monazite, cerianite, cerite and crandallite group minerals. The degree of weathering and clay composition had a direct correlation with REE recoverability.

In addition, about 80% of La and Nd from CDM were inferred to be desorpable based on assay-to-QEMSCAN reconciliation.

Desorption Testing and Reagent Optimisation

Desorption testing was the cornerstone of the process development work, given the ionic clay nature of the Caldeira Project deposits. The objective was to determine the most effective reagent systems and operating conditions to liberate loosely bound REE from the clay surface, without requiring high-temperature, or highly acidic treatment. The testing program was designed to evaluate various reagent types, concentrations, pH targets, solid-liquid ratios, and desorption durations, primarily using the CDM composite.

Three reagent systems were trialled extensively:

- Ammonium sulfate (AMSUL): A common ionic clay lixiviant with high selectivity for REE
- Magnesium sulfate (MS): A potential alternative with similar ionic exchange potential
- Sodium chloride (NaCl): Tested as a benchmark

Testing was carried out under fixed conditions of 40 wt% slurry density and pH 4.5, with reagent molarities ranging from 0.2M to 1.5M. Initial desorption tests established baseline recoveries:

- AMSUL (0.22M) yielded 78% TREY-Ce recovery from CDM
- MS (0.4M) achieved a slightly lower but consistent 75% TREY-Ce
- NaCl (1.5M) was significantly less effective at just 54% recovery

In all cases, Ce recovery remained persistently low (3–7%), attributed to its stable +4 oxidation state and partial association with cerianite, which is not ion-exchangeable.

Kinetic testing confirmed that desorption reached 95% of its equilibrium extraction within the first 15 minutes of contact time. This rapid response indicates a favourable process dynamic for continuous operation. Nonetheless, a 30-minute contact time was adopted as standard to ensure robustness across ore types and potential scaling factors.

Based on the totality of results, AMSUL was selected as the preferred primary desorption reagent due to its superior selectivity, availability, and established use in ionic clay REE operations. MS remains a viable fallback or blending option, especially where sulfate build-up or magnesium precipitation is manageable. NaCl was ruled out due to poor efficiency and high sodium load implications.

Impurity Removal

Following desorption, the leach liquor contains dissolved impurities including Al, Fe, Zn which must be removed prior to MREC precipitation. Two impurity removal approaches were tested:

- pH adjustment using MgO or ammonium bicarbonate
- Direct addition to slurry vs. treatment of filtered liquor

The best performance was obtained by treating filtered liquor. This condition effectively precipitated Al and Fe whilst minimising REE losses <1-2% at the optimum pH target.

MREC Precipitation and Product Quality

The final step in the flowsheet involves precipitation of REE as an MREC product using ammonium bicarbonate

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at the target pH. Across all tests, >99.5% of REE were successfully precipitated from purified liquor. The quality of the resulting MREC was excellent with total impurities <2%.

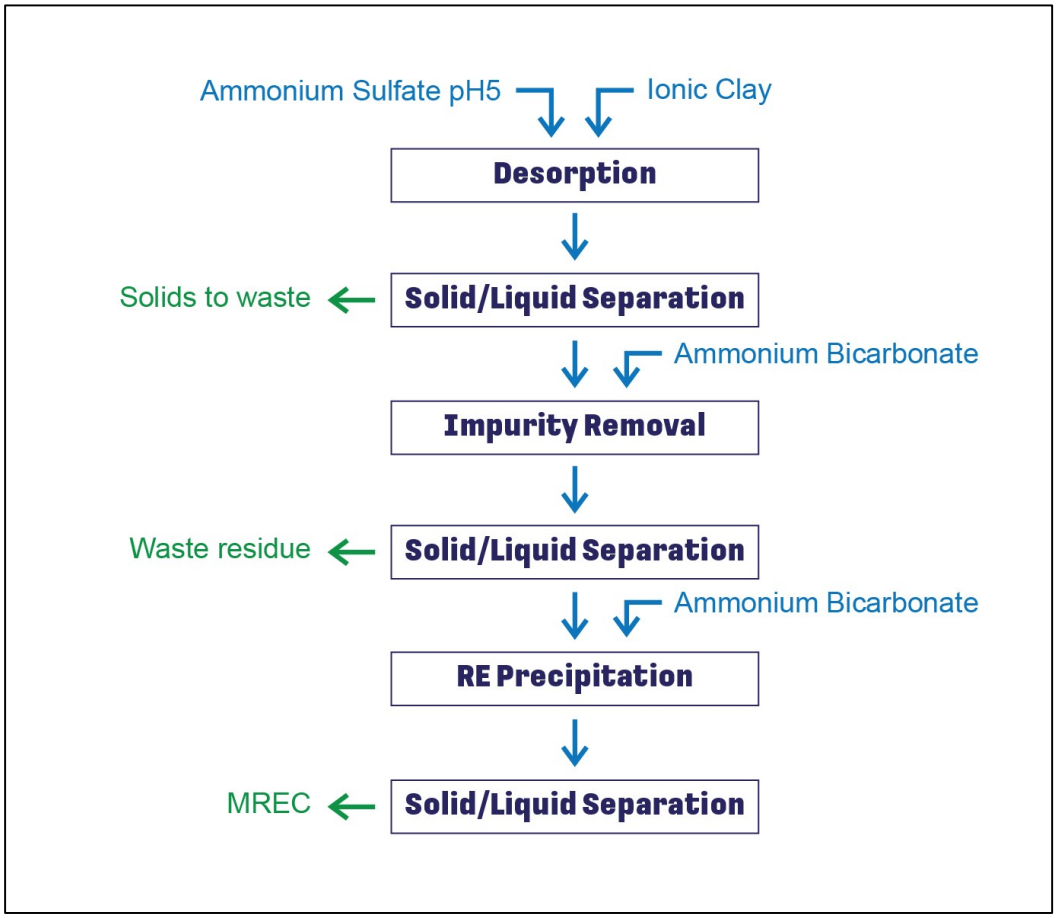

Figure 11: Overall Process Block Flow Diagram.

Processing

The Caldeira Project process plant is designed to process 6Mtpa dry feed to produce approximately 24,000tpa dry MREC product cake. It will operate 8,000 hours/year, 24 hours/day at 750tph (dry). The feed grades and recovery used in the PFS design are based on the CDM master composite and an average of the batch tests completed by ANSTO for SOB and FIG. The impurities contained in the feed ore are also based on the CDM master composite.

A combination of vendor and ANSTO batch and piloting test work data was used as the basis for the plant design development. Design factors have been applied to determine equipment sizing. In general, the Caldeira Project plant will be running with no standby equipment.

Process Overview

The feed preparation circuit rejects +10mm oversized low-grade material from the ROM before subsequent processing by washing in a drum scrubber. Scrubbed material will feed the leaching circuit. Two large CAT 922 loaders (or equivalent) will be required to reclaim ore from the ROM stockpile area and feed the plant.

The extraction of the rare earths from the REE-bearing ionic clays occurs through an ion exchange mechanism between ammonium sulfate (liquid phase) and the lanthanide (solid phase) present in the mineral. The desorption process uses ammonium sulfate ($(NH_4)_2SO_4$) as the leaching agent under mildly acidic conditions.

Following leaching, slurry is transferred to the residue dewatering circuit to further extract REE from residue.

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This is followed by separation and washing of REE sulfates contained in the pregnant leach solution (**PLS**) from the barren leach solids. The final residue with an appropriate sulfate level will be de-watered and sent for in-pit tailings disposal. The counter current decantation (**CCD**) thickener circuit will provide washing of the leached residue to maximise recovery of REE to PLS through counter current washing and additional extraction.

The PLS (CCD1 overflow) will be cleaned in dynamic bed clarifiers (**DBC**) before being transferred to the MREC circuit to recover REE from the clean PLS solution and produce a MREC product cake for sale.

The REE deficient MREC barren solution will also be clarified in DBC before transfer to the water recovery system (**WRS**). The MREC produced in the DBC will be dewatered in two centrifuges in a series configuration. The MREC cake will require repulp washing to remove any impurities such as soluble sulfates in the liquid phase to meet product specifications. The repulped cake will be dewatered in the secondary centrifuge. The washed cake is then transferred by a belt feeder to the automated packaging system for bagging.

The WRS is used to process MREC barren solution to produce clean water for the upstream plant and to recover ammonium sulfate. Additionally, this circuit will remove manganese, silica and calcium before the reverse osmosis (**RO**) membrane circuits. The RO permeate will be the main source of clean water for the plant and will be used to wash the leached ore residue before discharging to final residue.

It was found that running a partial WRS circuit consisting of RO pretreatment and one stage of RO membranes, processing a minimum 2250m^3/h of MREC barren solution, would meet the environmental discharge requirement, given the use of clay lining. Any run-off from the mined-out clay lined pit will be returned to the plant, or treated, prior to discharge to the environment. It was found the natural bleed from the residue moisture is insufficient to remove the buildup of impurities in the circuit.

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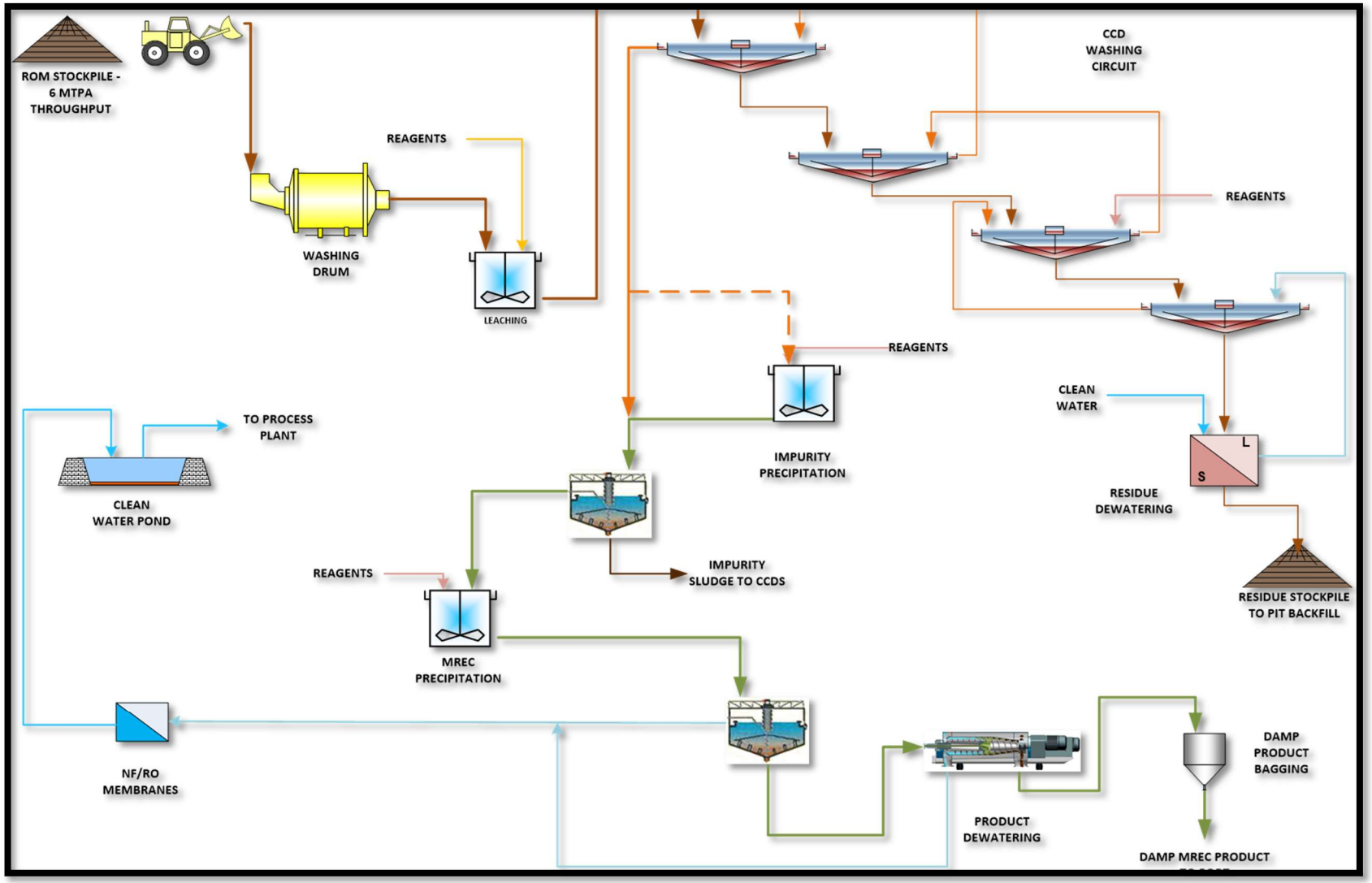

Figure 12: Process Flowsheet.

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Infrastructure and Site Access

Local Area

The Caldeira Project is located between the cities of Caldas, Poços de Caldas, and Andrades, in the state of Minas Gerais, in the southeast region of Brazil. The PFS areas are located in the Municipality of Caldas, which has a population of approximately 14,000. The regional service hub is Poços de Caldas, a city located approximately 30km from the Caldeira Project site, with a population of around 175,000. The area benefits from high quality road and rail connections to major cities such as Belo Horizonte (464km), Brasília (910km), São Paulo (270km) and Santos Port (342km). Historically, the Caldas area has been a centre for clay mining for brick production and refractory clays. For more than 70 years, companies such as Alcoa, Mineracao Curimbaba, Togni Refractories Ltda, and Companhia Brasileira de Alumínio (**CBA**) have operated in the area, providing generational employment opportunities.

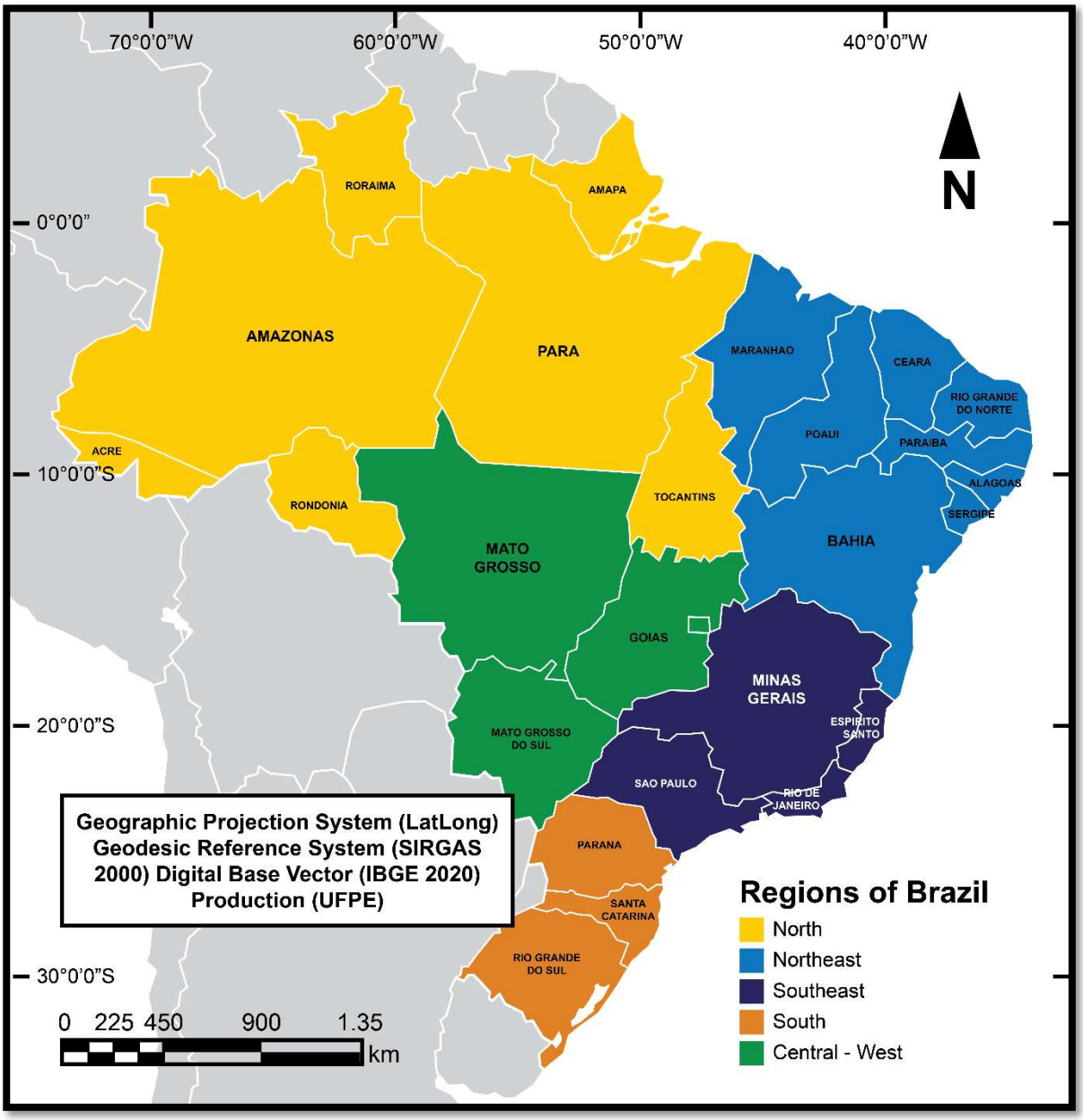

Figure 13: Regional Map of Brazil

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Existing Infrastructure

The long history of established mining activities in and around the Caldeira Project support a broad and well-established network of service industries. This will greatly assist the Project's construction and operations. The Project is located near significant existing infrastructure and is relatively well serviced. On-site infrastructure such as offices, warehouses and maintenance facilities have been designed to support both the process plant and mining operations.

Table 10: Summary of Utilities and Infrastructure.

Item	Status
Accommodation	• Various accommodation options available in the nearby towns of Caldas and Poços de Caldas. • No camp is required either for operations or the ~1,200 person construction workforce.
Water	• Water will be supplied to the facilities from an existing nearby dam, approximately 400 metres from the Caldeira plant site.
Power	• 100% of Meteoric's energy requirements will be sourced from renewable energy (hydro, solar and wind), an option provided by the grid operator Companhia Energética de Minas Gerais (CEMIG), the largest energy company in Brazil. • Power will be connected to the site via a ~2.5km overhead power line to a local 138kV network connection at the nearby substation. • The connected load is estimated at 20MW, with Plant average demand at ~13MW. The general route for the overhead line is shown in Figure 14 (pink easement).
Road Access	• The proposed main access road is also shown in Figure 14. Approximately ~3km of new unsealed road will need to be constructed to connect the plant site with the existing public road network. • By road the Project site is ~447km from the capital Belo Horizonte and 254km from the city of São Paulo on good quality sealed roads. • The Project site is ~31km to the south of the city of Poços de Caldas.
Port	• All required facilities exist. • During construction and operations containerized cargo is expected to enter and leave Brazil at Santos port near the city of Sao Paulo. Itaguaí (in Rio state) was identified as an alternate port that may suit breakbulk cargo if required.
Telecommunications	• There is mobile phone and Starlink reception on site for communications prior to plant commissioning. • Meteoric has a preference for fibre optic connection via the grid connected power supply OHL as the backbone for operations.
Fuel Storage	• The fuel storage facility will be in the Mine Infrastructure Area (MIA) with sufficient diesel storage to support mining operations for ~7 days.
Fleet & Vehicles	• A list of plant vehicles and mobile equipment fleet necessary to support operations was developed during the PFS and will be leased initially to minimise capital expenditure.
Waste	• Domestic and industrial waste will be processed at a Waste Sorting Facility (WSF) on site before disposal. • Classification and segregation of materials will be performed at the Classification Shed at the WSF.

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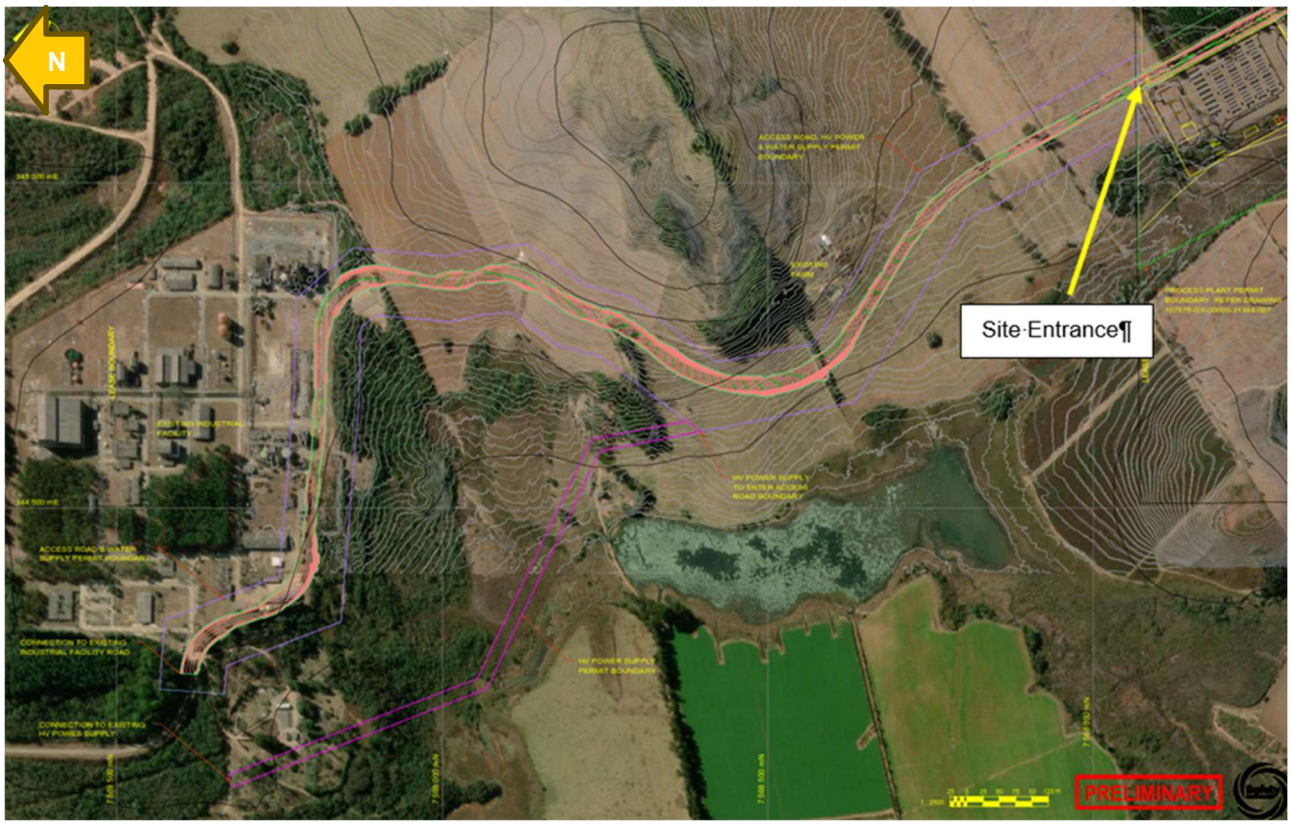

Figure 14: Grid power overhead line route (pink easement) and main access road

Government Support

The Brazil federal government has shown strong support for the Caldeira Project. Most recently:

- The Caldeira Project was included in the Brazilian Platform for Investments in Climate and Ecological Transformation (**BIP**) which was recently announced at the fourth meeting of the G20. The BIP seeks to expand investments in ecological transformation towards the de-carbonisation of the economy, sustainable use of resources and quality of life improvement. The Caldeira Project was the only mining project of the six ventures listed.
- In June 2025 Meteoric was included in Brazilian Financial Agency for Studies and Project (**Finep**) and the National Bank for Economic and Social Development (**BNDES**) Strategic Minerals funding program. The funding program totals BRL 5 billion and is a Brazilian State initiative designed to support Strategic Minerals Projects to expanding production capacity and encouraging research, development and innovation.
- Meteoric was selected as a priority company (the only REE project) and invited to join the Brazilian government committee at the Futuro Minerals Forum held in Saudi Arabia, January 2025.
- In August 2023, a Memorandum of Understanding was executed with the State of Minas Gerais, formally designating the Caldeira Project as a priority state initiative. This designation provides the Project with enhanced government support, particularly in relation to permitting processes and facilitation during both the implementation and operational phases.

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Environmental and Community

Background

On 17 March 2023 Meteoric entered into a Development and Implementation Agreement for the Caldeira Project (**Togni Agreement**) with the various parties (**Togni Parties**) which own the mining tenements required for the Caldeira Project. In summary, the Togni Agreement:

- Granted Meteoric exclusive rights to REE on all mining tenements required for the Caldeira Project (**Mining Tenements**);
- Requires the Mining Tenements to be transferred, leased or assigned to Meteoric; and
- Established royalties payable to the Togni Parties.

When combined, the Mining Tenements comprise an area of approximately 11,271 hectares. Meteoric has subsequently acquired the right to additional mining tenements making a total area of 18,292 hectares available to Meteoric for Caldeira Project mining activities.

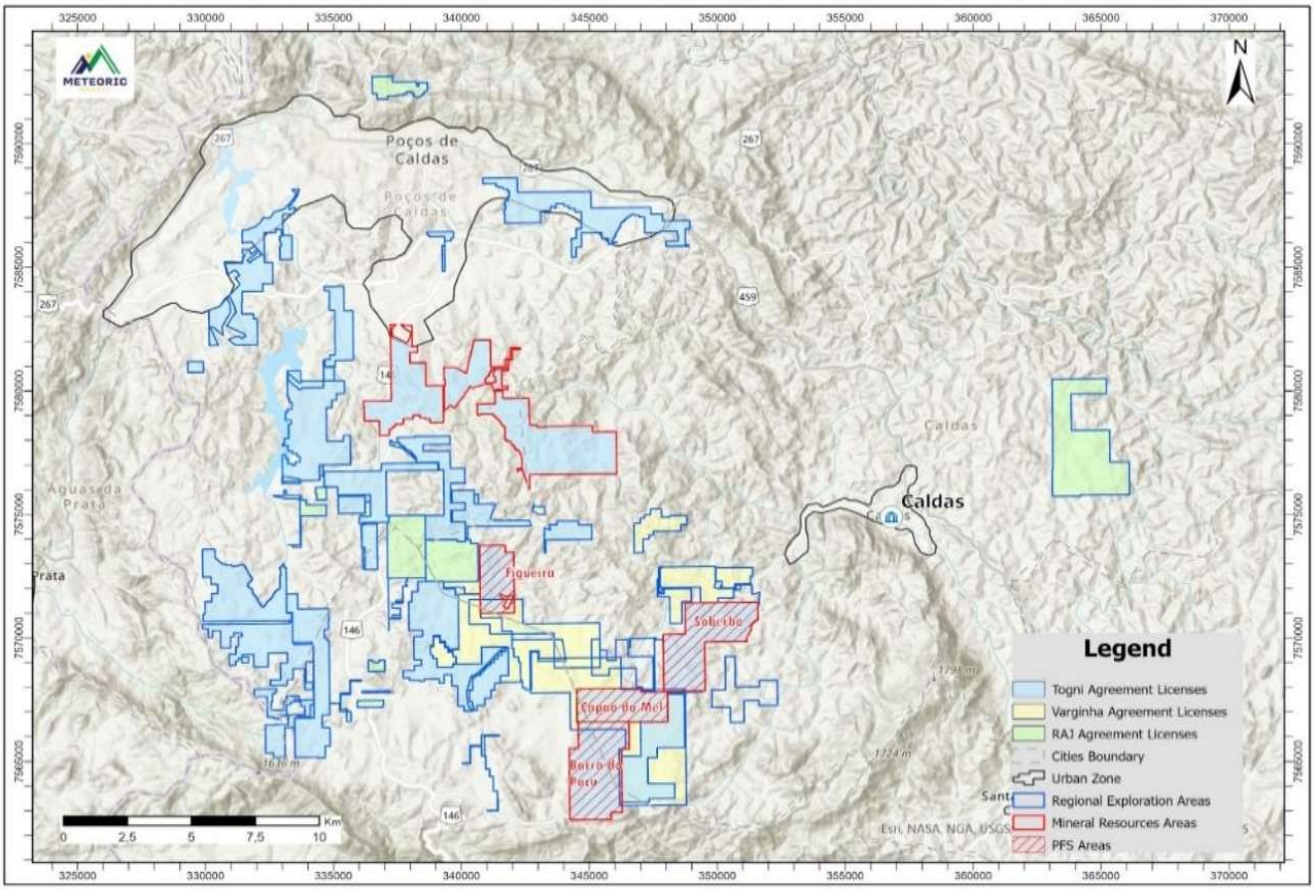

Figure 15: Map of Caldeira Tenements and Licenses

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Tenure – Mineral Rights

Under Brazilian law, a party may only engage in construction and mining activities upon a Mining Licence approved by, and registered with, the ANM. The Mining Tenements do not currently list REE on the title documents. To have REE specified on the register, the licence holder must communicate to the ANM:

- Details of the new substance to be added to the register (i.e. REE);
- A re-evaluation of the reserves and resource relating to the REE on each tenement (**RRR**); and
- A Preliminary Economic Assessment (**PAE)**.

Meteoric requires full surface rights to all impacted areas within the following four key Mining Tenements, as well as additional minor areas for infrastructure to comply with the PFS mine schedule:

Table 11: Mining Licences which comprise the PFS areas.

Tenement	Status
Capão do Mel	Mining Licence Application (Clay)
Soberbo	Mining Licence (Clay)
Figueira	Mining Licence (Clay)
Bara do Pacu	Mining Licence (Clay)

The CDM, BDP and SOB tenements are contiguous, with FIG approximately 5km away.

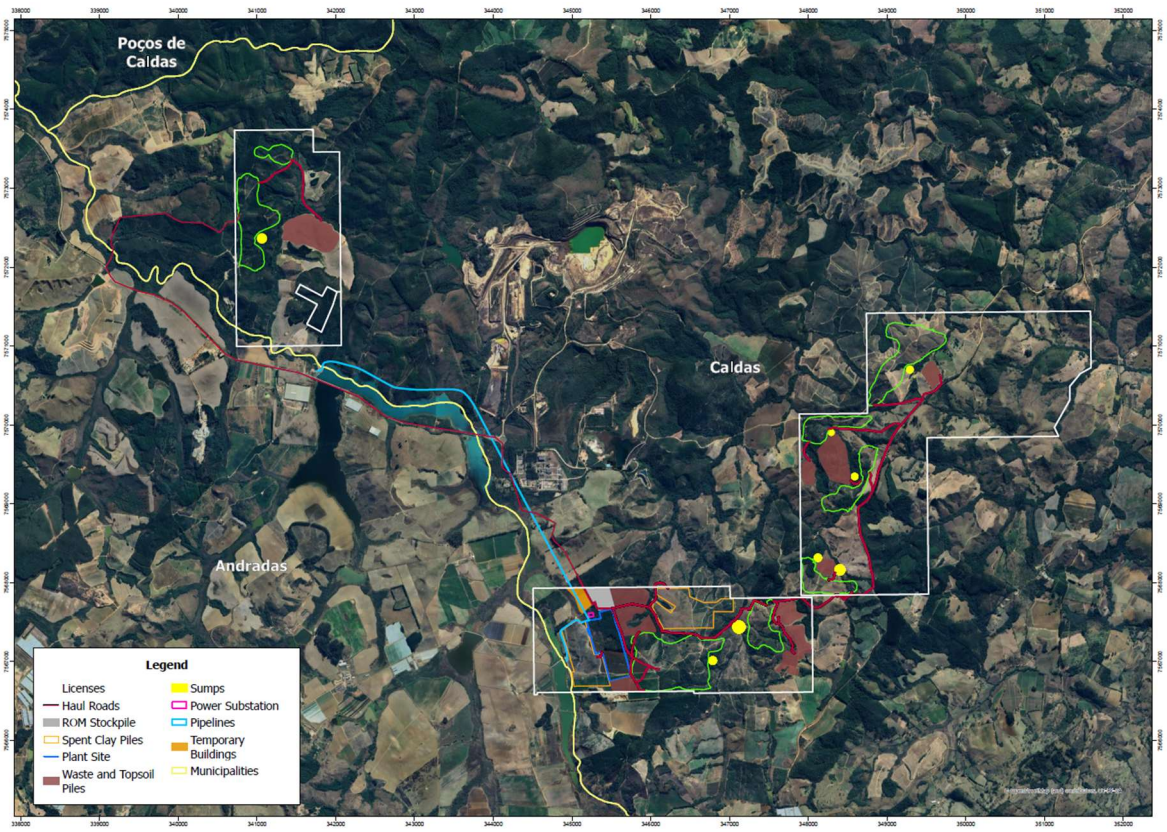

Figure 16: Caldeira Project (EIA) plan view – Layout of proposed pits, process plant, infrastructure and three licenses included in the Preliminary Licence (LP) application of May 2024.

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Brazil Legal Framework

Brazil is a democratic federation which operates under a civil law system and has the world's eighth largest economy. Brazil is governed under a three-tiered administrative structure divided into federal, state and municipal bodies. The federal government has broad and exclusive powers over mining activities under the Federal Constitution (**Constitution**).

Brazilian law permits foreign investment and ownership in mining projects. Meteoric operates the Caldeira Project via its Brazilian subsidiary Meteoric Caldeira Mineração Ltda **(Meteoric Brazil**).

Ownership of Mineral Resources

Under Brazilian laws, mineral resources are owned by the federal government and separate from the land upon which they are located. As legal owner, the government is:

- Empowered to grant mineral rights for exploration and mining of mineral deposits; and
- Entitled to receive a share in the results of mining, in the form of royalties.

Mineral rights & security of tenure

Landowners hold surface rights and are entitled to be compensated for the impact of mining activities conducted upon their land. Miners, such as Meteoric, are:

- Granted various rights to engage in mining activities; and
- Entitled to ownership of all product from mining activities.

Granted mineral rights permit exploration and mining of specified resources but do not transfer land ownership. All transfers, assignments and other interests created in respect of mineral rights must be registered with the National Mining Agency (Agência Nacional de Mineração or **ANM**). The ANM is the federal body responsible for the management of mining activity in Brazil including the grant of rights, title administration and collection of certain licence fees.

Right to mine requirements

To commence construction activities at the Caldeira Project, Meteoric must acquire the following two rights:

Installation Licence (LI)	Issued by the state of Minas Gerais Secretariat for the Environment and Sustainable Development (**SEMAD**)
Mining Licence	Issued by the ANM which must have REE specified on the licence document together with an approved Mine Economic Plan (**PAE**).

To commence mining activities, Meteoric will also require an Operating Licence (**LO**) issued by SEMAD.

Meteoric is in the process of securing all required governmental, regulatory and landowner consents to obtain approvals to commence construction and mining activities at the Caldeira Project.

Current Status

All documentation required for the ANM to specify REE on the SOB, FIG and CDM tenement registers has been submitted. Meteoric anticipates ANM approval will be granted for SOB and FIG in late 2025 and for CDM in the June quarter 2026.

Meteoric is finalising all documentation required by the ANM to add REE to the BDP licence document.

The remaining Mining Tenements are not currently required under the scope of the PFS mine schedule. Meteoric intends to submit the necessary documentation to the ANM to include REE as a specified commodity on the relevant licence titles. Following confirmation from the ANM that REE has been incorporated into the tenement titles, these tenements will be promptly transferred, leased, or assigned to Meteoric Brazil, with the corresponding interests duly registered with the ANM.

Surface Land Access & Ownership

Meteoric requires the consent in the form of right of way, or easement, agreements with all landowners affected by the Project. These agreements are needed to facilitate Project activities, including:

- Mineral extraction areas (pit);
- Industrial plant, piles and manoeuvring areas;
- Ancillary needs such as office, accommodation and restaurant facilities; and
- Ingress and egress to the Caldeira Project.

Meteoric must agree the following with each landowner affected by Caldeira Project activities:

Table 12: Land Access Requirements.

Activities	Requirement
Non-Mining	Landowner Agreement - with each impacted landowner to provide adequate compensation for land use: e.g. Easement Agreement
Mining	Royalty Agreement – with each landowner upon whose land mining occurs. Under Brazil law, royalty rights are prescribed by statute. For Rare Earths, Meteoric must pay a minimum of 1% of gross revenue. Note: Meteoric may need to enter into separate Landowner and Royalty Agreements with certain landowners.

Meteoric is in the process of securing all required agreements and has made considerable progress. Upon execution, each relevant document is submitted to the ANM for the Meteoric interest to be registered on the tenement title. Each Landowner Agreement is also submitted to the local Municipal Notary Public responsible for registering interests on land registers.

The Company is not obligated to make compensation payments to landowners until their land is directly impacted by Project activities. Such impacts will not occur until Meteoric has secured all necessary rights to mine REE and has commenced on-ground operations at the Project site.

In the event that access negotiations with a landowner are unsuccessful, Meteoric is entitled to initiate legal proceedings to obtain a court order permitting access to the relevant property. Should the matter proceed to trial, the legal process may extend over several years.

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Environmental Approvals

The Constitution mandates protection of the environment to:

- Ensure and preserve people's quality of life for present and future generations; and
- Facilitate sound management of natural resources.

All mining activities in Brazil are subject to mandatory licensing requirements within a framework of federal, state and municipal laws and regulations.

Responsibility for the grant of environmental approvals in Minas Gerais lies with SEMAD which must act in accordance with applicable laws and regulations. SEMAD has classified the Caldeira Project as a Class 6 Project given its size, location and potential for environmental impact. The process for obtaining required environmental approvals for Class 6 Projects occurs in three stages.

Table 13: Class 6 Projects – Required Environmental Licences,

Stage	Licence	Purpose
Stage 1	Preliminary Licence (LP)	• Evaluate project social and environmental feasibility. • Establish basic preliminary conditions to be met.
Stage 2	Installation Licence (LI)	• Authorise commencement of construction and installation of equipment. • Review detailed project design and associated social and environmental control measures.
Stage 3	Operating Licence (LO)	• Authorise commencement of mining operations. • Define control methods and operating conditions.

Stage 1 – Preliminary Licence (LP)

Meteoric commenced the LP application process in respect of the SOB, FIG and CDM tenements in September 2023. The BDP tenement does not form part of the current LP application. Upon LP issue, Meteoric will apply for the BDP tenement to be incorporated into the Caldeira Project via an Expansion Licence (see below).

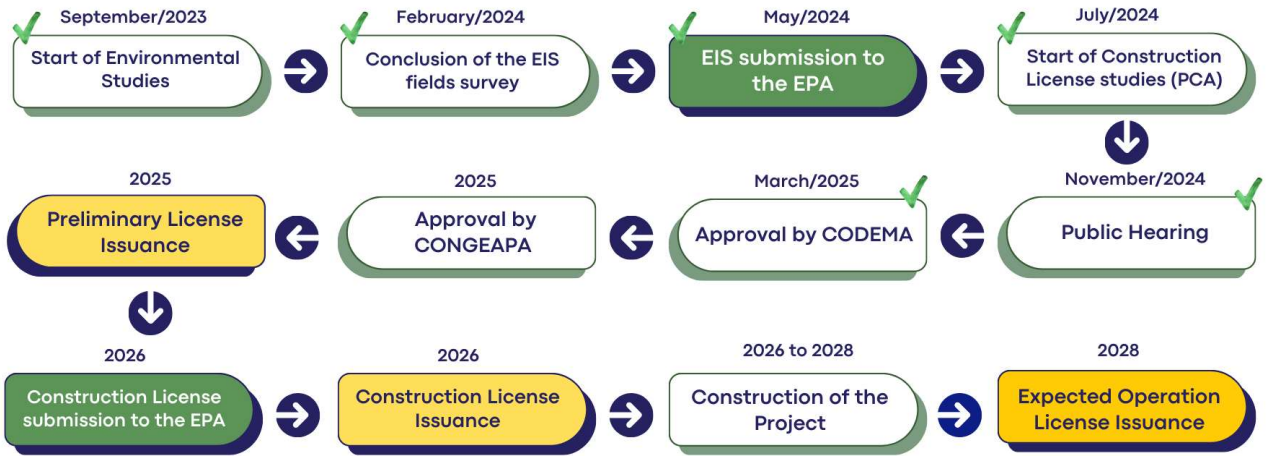

Figure 17: Meteoric Licensing Process – Current Status

Meteoric has already achieved several notable project milestones including:

- Environmental Impact Statement (**EIS**) - Submitted
- Public Hearing (Caldas City) – Conducted by SEMAD (November 2024)
- Certificate of Regularity for Land Use and Occupation from Municipal Environmental Council (**CODEMA**) - Obtained (March 2025)
- EPA Site Inspection – Technical visit complete (March 2025)

During this LP stage, Meteoric is also making advances towards satisfying LI requirements including completion of additional environmental studies and securing required landowner consents.

Environmental Impact Statement

The EIS is the principal document supporting the application for the LP. As required by Brazilian law, Meteoric engaged an independent consultant company, Alger Consultoria Socioambiental (**ALGER**) to complete the EIS. Additional studies were provided by CERN Consultoria, also from Belo Horizonte.

The environmental field studies within the areas affected by the Project (EIS area) were initiated in September 2023. The EIS addressed all required SEMAD terms of reference, including:

- Air quality
- Surface water quality
- Groundwater quality
- Noise and vibration
- Natural springs mapping
- Mapping of caves
- Fauna survey
- Flora survey

The baseline data was gathered from September 2023 to January 2024, with results used to:

- Assess the potential socioenvironmental impacts generated by the Project.
- Design programs to mitigate or compensate negative impacts, and to maximize positive impacts.
- Design socioenvironmental controls and monitoring programs.
- Provide a reference point during the construction, operation, and closure stages of the Project with the aim of assessing the efficacy of environmental controls/programs implemented during the mine life and establishing if additional corrective measures are necessary.

The EIS concluded the proposed mitigation of environmental impacts including:

- management of water resources
- preservation of biodiversity
- control of air quality, and
- rehabilitation of degraded areas (including the backfill of pits and the re-shaping of the land)

Based on technical and legal analyses, the EIS concluded the implementation and operation of the Project in the municipality of Caldas will bring many benefits to the local community including significant opportunities for socio-economic development including job creation, training programs, material growth in Municipal taxes and financial support and associated contributions to the social and economic well-being of the Caldas region.

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The EIS was finalised and submitted to the state EPA in May 2024. and includes an Environmental Impact Report (**EIR**). A copy of the full EIS submission and summary report (**RIMA**) can be found at: https://encr.pw/projetocaldeira.

Save for procuring certain specialist environmental advice to complete the licencing process, no further costs are associated with the LP. Meteoric anticipates SEMAD will grant the LP in late 2025.

Stage 2 – Installation Licence (LI)

Following LP grant, Meteoric will apply to SEMAD for an LI. This involves the preparation and submission of a detailed Environmental Control Plan (**PCA**). LI grant is scheduled to occur in 2026, at which time Meteoric will be entitled to commence construction activities and must assume various environmental obligations including:

- Environmental Compensation obligations; and
- Payment of the Environmental Compensation Fee to SEMAD. Under Brazilian law, each mining company must compensate the state government with a payment equivalent to 0.5% of Project capital cost. Payment obligations are generally negotiated to be paid in multiple tranches over a period.

Stage 3 – Operating Licence (LO)

Upon completion of construction, Meteoric will deliver a final construction report to SEMAD, confirming construction has been completed in accordance with LI requirements. Upon receipt of this report, SEMAD will inspect the Project to verify compliance with licence requirements. This is generally a short formulaic process, given:

- Meteoric must deliver bi-annual progress reports to SEMAD during the LI term; and
- SEMAD conducts regular inspections throughout the construction phase.

Meteoric is permitted to carry out equipment testing and commissioning of the process plant, pending LO grant. The LO will specify which Mining Tenements are available for immediate mining at the Project. The initial LO term is 10 years and can be renewed for multiple successive periods.

Expansion Licence

Meteoric may, at any time after receiving the LO, apply to SEMAD to issue Operating Licences for additional Mining Licences via an Expansion Licence. Given Meteoric will hold an existing LO this is a straightforward and expedited process which involves the preparation and submission of an EIS. The process can be completed within 1-2 years. The BDP licence will be incorporated into the Caldeira Project via an Expansion Licence. The grant of an Expansion Licence will require Meteoric to assume additional Environmental Compensation obligations in the manner prescribed for LI grant.

Meteoric's entitlement to request, and be granted, multiple Expansion Licences will enable mining operations to continue with the initial facilities on an indefinite basis.

Environmental Compensation

There are five applicable categories of environmental obligations to be assumed by Meteoric to enable activities associated with the Caldeira Project:

- Atlantic Forest Biome
- Endangered Species
- Environmental Preservation (APP)
- Mineral Compensation

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- Legal Reserve

The nature of each form of compensation is defined by various Brazilian laws. The nature and scope of required compensation for each category will be approval by SEMAD. The assumption of the compensation occurs upon grant of the LI and any Expansion Licence.

Atlantic Forest Biome

The Caldeira Project is located within an area defined under Brazilian law as the Atlantic Forest Biome (**Atlantic Forest**). Any Meteoric activity which involves the clearance of Atlantic Forest vegetation will require the Company to compensate the state of Minas Gerais by replanting an area, equivalent to twice that cleared, within the same Biome. Meteoric is in the process of finalising the optimal way to comply with this obligation.

Endangered Species

Under Brazilian law, any activity involving the clearing of tree species classified as 'endangered' will require Meteoric to plant an identical amount of species cleared within the same biome. Meteoric has conducted extensive survey and mapping of Project areas and identified the quantum and location of tree species likely to be impacted. Meteoric is confident any obligations arising will not be significant.

Environmental Preservation – APP

Brazil law dictates any land designated as a permanent Environmental Preservation Area (**APP**) shall be protected. Certain areas within the Caldeira Project area fall within an APP. Mining activities are permitted within APP areas provided adequate compensation is made by replanting an equivalent area of that impacted by mining activities with similar vegetation within an APP zone.

Meteoric has conducted extensive survey and mapping of Project areas and identified the nature and scope of APP land likely to be impacted. Meteoric is confident any APP obligations arising will be minor in nature and its obligations will be easily satisfied.

Mineral Compensation

Meteoric must compensate the Minas Gerais state for any activities occurring within a forested area. This compensation involves Meteoric acquiring an equivalent area of land within an 'Official Conservation Unit' - an area of land subject to strict environmental protection. Upon acquisition, the area is donated to Minas Gerais state.

Meteoric has identified the areas likely to be affected by the Caldeira Project and identified a parcel of land inside an Official Conservation Unit which should satisfy all its mineral compensation obligations to be assumed.

Legal Reserve

Each rural property in Minas Gerais is legally required to retain a forested area, equivalent of 20% of the property area as a 'legal reserve'. This area must be registered with the Municipal Notary Public. Where a mining project impacts a legal reserve, the landowner must relocate the legal reserve impacted within the same rural property or in another rural property located within the same biome and notify the Municipal Notary Public. As part of securing landowner consent, Meteoric will assume landowner legal reserve responsibilities for land affected by the Project's activities.

Meteoric is in the process of identifying appropriate land to discharge legal reserve obligations. Given the high cost of acquiring land in the Caldeira Project region, Meteoric is seeking to acquire acceptable land elsewhere in the biome and intends to satisfy its legal reserve obligations in relation to the CDM, FIG and SOB tenements by September 2025.

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Liability

Environmental liability is strict under Brazilian law and Meteoric will be subject to strict liability for any environmental violations and any environmental damage created by Caldeira Project activities. Liability can be civil (damages, remedial acts and indemnification); administrative (fines, remedial acts and sanctions); and criminal (criminal penalties). Meteoric is implementing comprehensive environmental management measures to mitigate potential environmental risks associated with the Project.

Implementation Plan

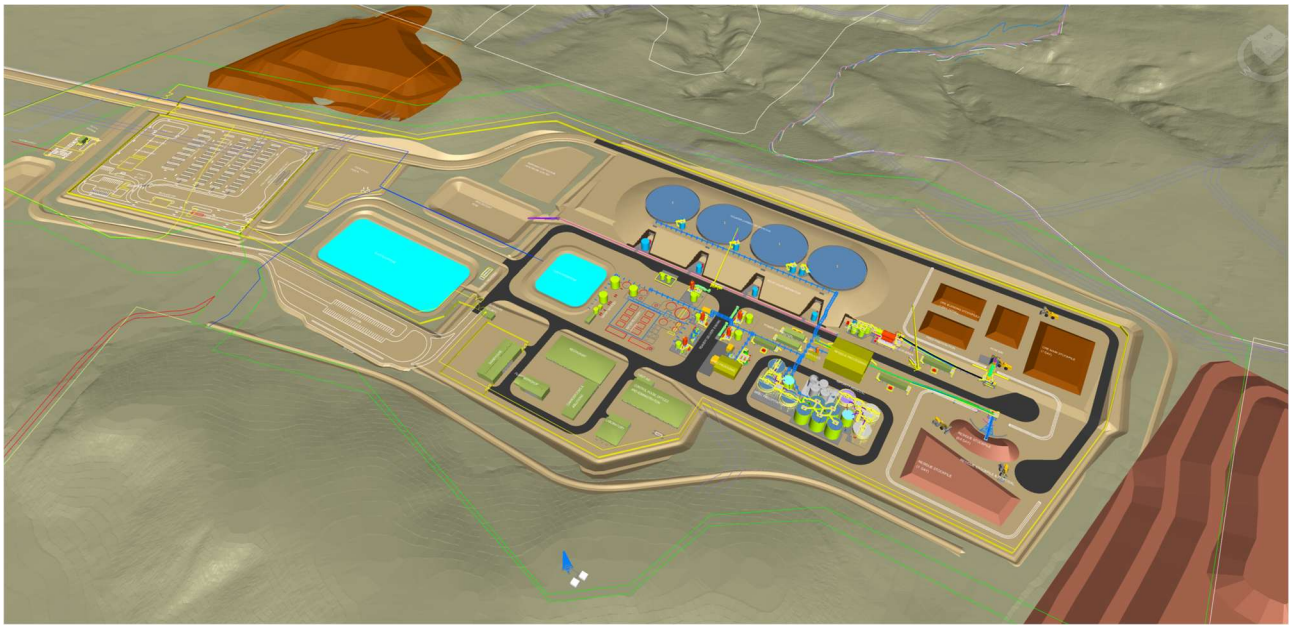

Figure 18 Drawing of Process Plant layout at CDM.

Project Development

A Definitive Feasibility Study (**DFS**) is now planned to be completed to support a potential Financial Investment Decision (**FID**). This will produce a AACE Class 3 estimate (+/-15% accuracy) to support FID and provide a control budget for Project execution. This is intended to be completed around three months prior to FID.

During the period of DFS preparation, Meteoric plans to commission and operate a pilot plant in Poços do Caldas to deliver significant Project benefits including to produce MREC in support of offtake agreements and providing a focal point for stakeholder engagement.

Following the DFS, it is proposed to undertake a Front End Engineering Design (**FEED**) phase – essentially a limited notice to proceed which will permit the selected engineering consultant to prepare and issue long lead tenders and early works contracts in the time prior to FID.

A Project schedule has been developed to achieve the Meteoric goal of first product to market in 2028. This includes the issue of a licence to construct (LI) in 2026. followed by ~24 months of construction prior to plant commissioning.

This Project Execution Plan is based on an Engineering Procurement Construction Management (**EPCM**) strategy where these services are contracted to experienced consultants operating under Meteoric's direction. Procurement will target global tier 1 equipment suppliers with a strong preference for those operating in Brazil. Fabrication and Construction will be undertaken by experienced Brazilian contractors.

The proposed execution strategy is the dominant strategy for mid-tier mining projects in Brazil, with 92% of mining projects completed in Brazil in the last five years undertaken on this basis. Undertaking an EPC strategy is estimated to negatively impact project schedule by 6 – 8 months and no full EPC contractors have

been identified who are prepared to provide a fixed lump sum price for work following DFS completion.

Capital Cost Estimate

Basis of Estimate

- The Capital estimate is an Ausenco Class 4 Pre-Feasibility Study Capital Cost Estimate with a nominal accuracy of +/- 25%, as defined by Ausenco's standard guidelines and in accordance with the American Association of Cost Engineering (**AACE**).
- Ausenco developed the estimates adopting an agreed work breakdown structure (**WBS**).
- Ausenco's strategy was to source budget pricing for major mechanical equipment with costs from recent in-house pricing for minor mechanical equipment.
- Pricing for earthworks, concrete, structural steel, platework, mechanical installation and off plot piping is based on budget enquiry submissions from reputable Brazilian fabricators and contractors.
- High voltage electrical was also costed based on budget enquiry submissions from reputable Brazilian contractors.
- Costs for process plant piping and process plant E&I were factored based on in-house data.
- Architectural buildings costed based on similar type buildings from other recent projects or similar detailed budget quotes in the region.
- Indirect costs include project implementation costs, field indirect, spares, first fills and contingency are factored based on in-house data.

CAPEX Results

The total cost of capital is summarised in the tables below. The total estimated cost for the Caldeira Project Process Plant CAPEX is US$415.5 million, including direct, indirect, and contingency costs.

The total estimated cost for Mine CAPEX is US$16.4M, including the mine contingency cost. This excludes Mining Fleet CAPEX which has been estimated at a capital cost of US$11.6M at the start of operations. Subsequent capital requirements have been captured under sustaining capital.

Total estimated initial CAPEX of US$443.4 million.

Table 14: Summary CAPEX (Process Plant).

Description	CAPEX Total with Taxes (R$)	CAPEX Total with Taxes (USD)
Process Plant Direct Cost	1,552,654,165	$258,775,694
Process Plant Indirect Cost	441,562,559	$73,593,760
Process Plant Contingency	498,554,181	$83,092,363
TOTAL WITH CONTINGENCY	**2,492,770,905**	**$415,461,817**

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Table 15: Summary – Mine Costs (Excluding Mining Fleet).

Description	CAPEX Total with Taxes (R$)	CAPEX Total with Taxes (USD)
Mining Cost	50,641,350	8,440,225
Mine Industrial Area	27,871,023	4,645,171
Mine Cost	78,512,373	13,085,396
Mine Contingency	19,628,093	3,271,349
TOTAL WITH CONTINGENCY	**98,140,466**	**16,356,744**

Operating Cost Estimate

Table 16 summarises the annual operating costs for the process plant based on design throughput and grade (and therefore differs slightly from the financial model which uses yearly production grades). Mining comprises 30.5% of operating costs. Labour, maintenance and general expense costs are considered a fixed cost and are not impacted by the variations in throughput. These amount to 15.5% of total costs. Process Plant variable costs make up for 54% of the total operating costs at the full nameplate capacity. Reagents and consumable costs are in turn the largest portion of this at 42% of total operating costs.

Table 16: Design Operating Cost Metrics.

Cost Centre	Costs		
	USD M/y Standard Year	USD/dry t ROM	USD/kg TREO Product
Nominal Quantities per annum		6Mt	15,000t
Fixed Costs			
Labour	5.42	0.90	0.36
Maintenance	7.97	1.33	0.53
General Expenses	6.26	1.04	0.42
Sub-total (Fixed Costs)	**19.64**	**3.27**	**1.31**
Variable Costs			
Power	5.79	0.97	0.39
Reagents & Operating Consumables	53.59	8.93	3.57
Product Transportation (CIF Santos, Brazil)	9.01	1.50	0.60
Sub-total (Variable Costs)	**68.38**	**11.40**	**4.56**
Process Plant Sub-total	**88.02**	**14.67**	**5.87**
Mine Operating Expense	**38.58**	**6.43**	**2.57**
STANDARD YEARLY COSTS AND RATES	**126.60**	**21.10**	**8.44**

The above rates per dry tonne of ROM Ore and per kilogram of TREO are nominal annual rates from the cost modelling and scheduling performed by Ausenco. These rates have been utilised as inputs to the financial model to generate the annual costs and LOM costs summarised in the Financial Summary section. These annualised costs exclude the transportation and processing of low grade stockpiles.

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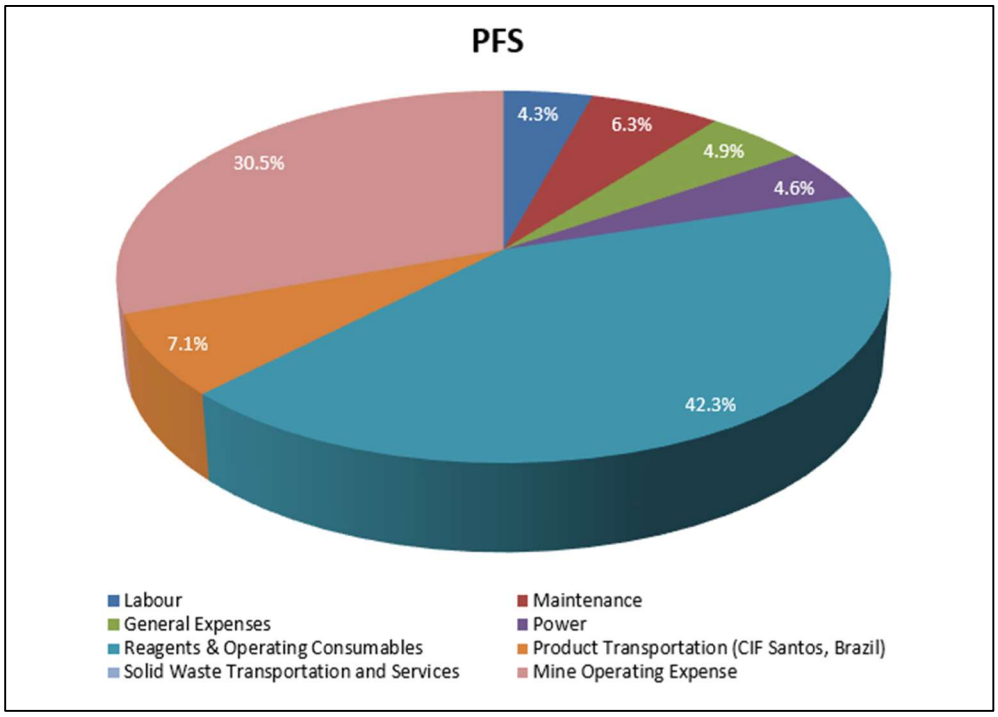

Figure 19: Distribution of Processing Plant Operating Costs

Table 17: Total Mining Costs Per Annum

Mining Cost	Cost per year (US$/y)
6Mtpa	38,580,000

This equates to US$6.43/dry tonne ROM feed or US$2.57/dry tonne moved. These costs assume:

- An average of 15Mt (dry) moved per year (6Mt ore, 3Mt waste, 6Mt spent clay returned to the pits).
- 20% moisture for all movements.
- US$1/L diesel.
- No equipment fleet costs (included within capital and sustaining capital).
- No contingency.
- No re-handling of materials (i.e. wet season stockpiles or spent clay).
- Use of 80 tonne (PC 800) excavator and Scania (10 x 4) tippers (40t capacity) as basis of main fleet. Support equipment allowed includes D8 dozers, G14 graders, Volvo35 water carts, Volvo EC480 scratch back excavators.
- No drilling or blasting of hard ground.
- Maximum annualised operating hours of 5,500 hours.(SMU 6,050 hours).
- Dewatering and haul road maintenance included.

Grade control / sampling, survey, geology, mine planning and management costs are included in Process Plant labour.

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Reagents and Consumables Costs

The cost of reagents and consumables were derived from first principles using the consumption rates with prices quoted by suppliers for reagents delivered to site.

The ore specification was incorporated in the Metsim mass balance, based on the CDM tenement. The consumption of reagents varies as the ore feed grade varies. The consumption rate is based on the pilot campaign test work. Annual consumption of reagents used in the WRS circuit is calculated based on vendor proposal estimated dosage following vendor testwork.

The reagent and consumable rates were obtained from quotes received from alternative suppliers and benchmarking with rates from the Ausenco database.

The cost of power used is US$60.34/MW hr directed by Meteoric based on a CMU proposal for estimated power costs in the free energy market.

Operational Readiness

Operational Readiness is:

- The practice of establishing the people, processes and systems necessary to operate and maintain a new asset;
- The preparation work necessary for an organisation to assume full operational ownership and maintainability of the new asset, safely and sustainably; and
- The positioning of people, processes and systems associated with the key functional areas to allow sustained operation of the new asset upon project completion.

During the PFS, Operational Readiness has been considered through the development of:

- A high-level operational and maintenance philosophy;
- A high-level Operational Readiness philosophy that supports this; and
- Budget allowances in subsequent study phases and the capital estimate to allow further development.

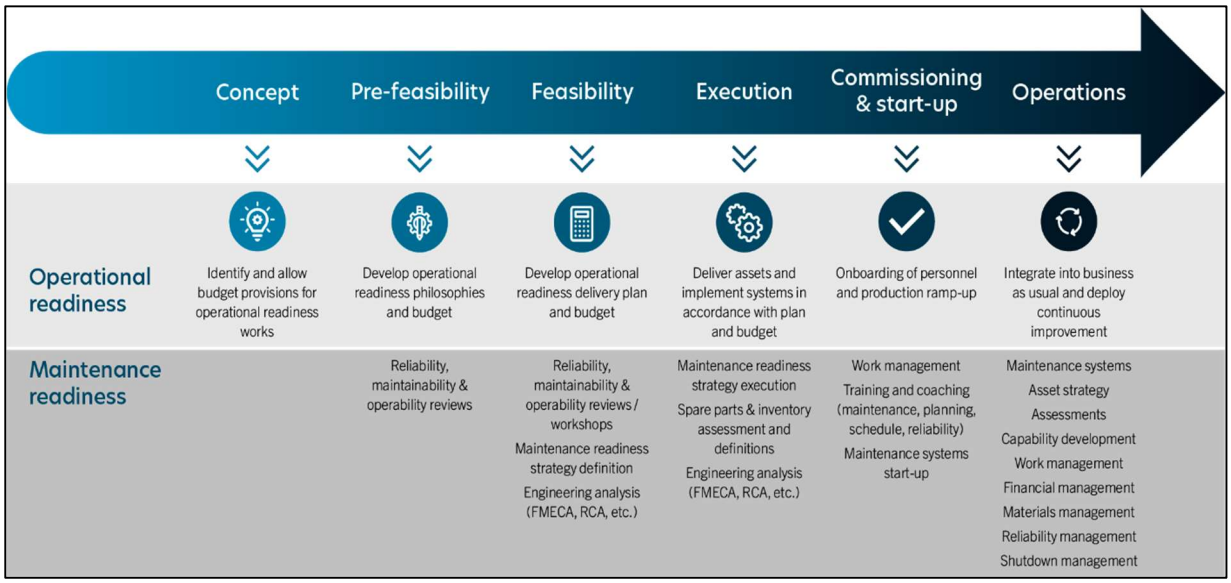

Figure 20: Operational Readiness (OR) Roadmap

During the execution phase, the initial components of the Operational Readiness Plan will be led by the Meteoric team, supported by specialist consultants. Twelve months prior to ore commissioning, the formation of the Operations team will commence with the appointment of the Operations Director. This team will progressively expand in preparation for wet commissioning, assuming responsibility for the implementation of the Operational Readiness Plan.

By the time wet commissioning begins, the Operations team will be fully staffed, with a primary focus on training and supporting the Project commissioning team. Upon commencement of ore commissioning, the Operations team will take full operational control, with the Project commissioning team continuing to provide technical support as needed.

Financial and Commercial Analysis

The PFS economic evaluation presents the Net Present Value (**NPV**), applying an 8% discount rate over a 20-year period, and using three different price books (as illustrated in Figure 21). This methodology evaluates the capital and operating strategy to confirm that the NPV remains positive, even at historically low spot prices.

Ausenco has compiled the operating costs used in the modeling of the LOM economic model. This model provides annual pre-tax and post-tax NPV calculations, based on an 8% discount rate, along with cash flow projections and payback period estimations. Additionally, the model includes sensitivity analyses for key project drivers such as operating costs, capital costs, and REE pricing.

It is important to note that tax calculations involve complex variables that can only be accurately determined during actual operations. Consequently, the actual after-tax results may vary from these preliminary estimates.

Pricing Assumptions and Forecast Methodology

The economic model has been developed using spot pricing, broker consensus pricing, and forecast data from two highly regarded independent market analysts, Project Blue and Adamas Intelligence. The use of three forward pricing scenarios has been done to assess project resilience and value under varying market conditions.

Consensus pricing reflects the long-term real available pricing expectations sourced from Macquarie Bank in May 2025 and compiled and summarised by them using data collected from multiple brokers.

Forecast pricing uses an average of Project Blue and Adamus Intelligence projections, as of the March quarter 2025. While their forecasts differ materially, both are considered credible and reflect the inherent uncertainty in today's REO market environment. The Company believes this approach offers investors a more balanced and transparent view of potential market scenarios and provides a robust foundation for long-term financial modelling and strategic planning.

The market analysts' forecasts are underpinned by comprehensive analysis of global supply and demand trends. On the demand side, projections reflect anticipated growth in key sectors such as electric vehicle drivetrains, wind turbines, energy transition technologies, robotics, and defence. Supply assumptions incorporate current global production levels and publicly announced future projects, offering a well-rounded view of the evolving market landscape.

Importantly, the 10-year forecast horizon is a deliberate and strategic choice, reflecting the timeframe over which market analysts have the highest confidence in data quality, project visibility, and policy direction. This period aligns with typical investment and development cycles, allowing for meaningful insights into medium-term market dynamics while avoiding the speculative nature of longer-term projections. The methodology balances near-term certainty with long-term strategic relevance, providing a robust foundation for financial modelling and decision-making.

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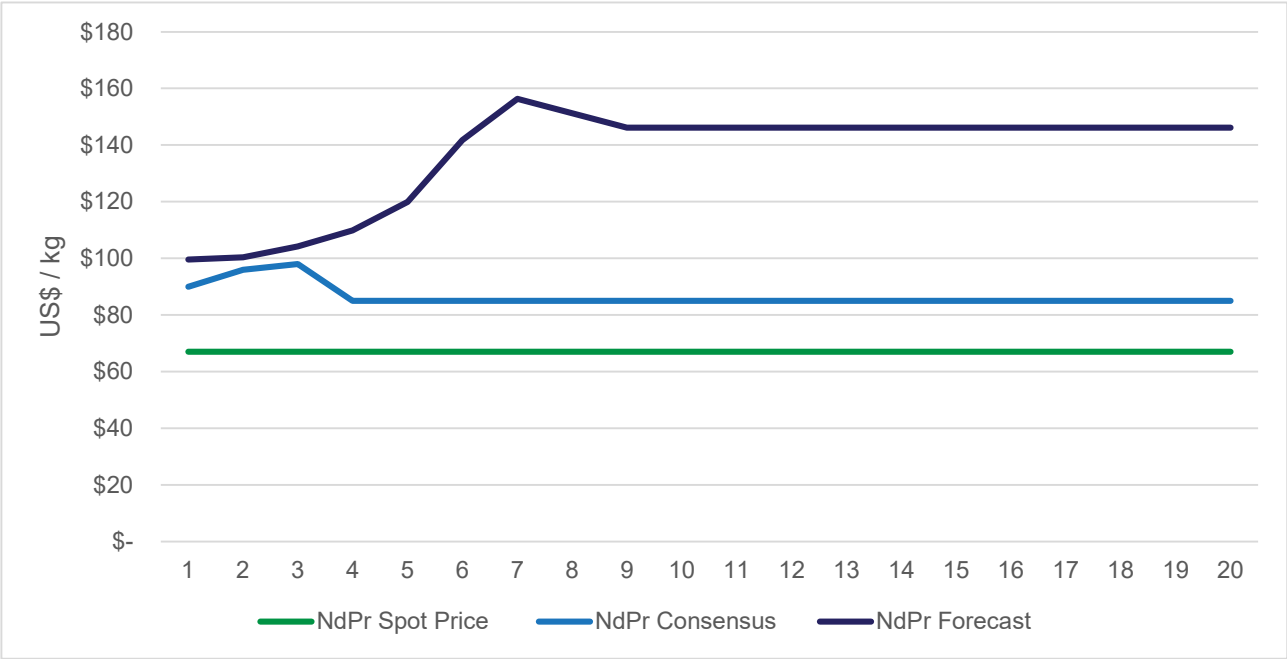

Figure 21: Pricing assumptions over the Project LOM

Financial Summary

Financial Model Metrics

Table 18: Executive Summary

Executive Summary				
Financial	**Unit**	**Spot**	**Consensus**	**Forecast**
Total Revenue	US$M	4,927	**6,330**	9,756
EBITDA	US$M	1,707	**2,987**	6,111
Cumulative post tax cashflow excluding construction cost	US$M	1,165	**1,994**	4,058
Pre-tax NPV_8	US$M	251	**821**	1,985
Post-Tax NPV_8	US$M	109	**488**	1,256
Physicals				
Life of Mine	Years	20		
Total ROM Feed	Tonnes (M)	128,989		
Total Waste	Tonnes (M)	48,581		
Production				
TREO	Tonnes	271,687		
Neodymium Praseodymium (NdPr)	Tonnes	84,572		
Dysprosium (Dy)	Tonnes	2,143		
Terbium (Tb)	Tonnes	457		

Table 19: Key Production Outcomes

Key Production Outcomes	Unit	Pre-Feasibility Study	
		Years 1-5	LOM
Ore Mined	kt	26,523	128,989
Strip Ratio	waste:ore	0.52	0.38
Average TREO Feed Grade	ppm	4,515	3,701
TREO Recovery	%	54	55
MREO Recovery	%	73	71
Average annual production[1] (TREO)	t	12,382	13,584
Production (TREO)	t	61,912	271,687
NdPr % (in TREO concentrate)	%	31	31

[1] Includes ramp up in Years 1 and 2

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Table 20: Cashflow, Cost & Earnings Metrics

Cashflow, Cost & Earnings Metrics	Unit	Years 1-5			LOM		
		Spot	Consensus[2]	Forecast[3]	Spot	Consensus	Forecast
Annual Average							
Revenue	US$M	210	**284**	330	245	**315**	485
EBITDA	US$M	79	**147**	189	86	**150**	305
Operating Cashflow	US$M	60	**104**	132	58	**100**	203
Total							
Revenue	US$M	1,050	**1,422**	1,650	4,927	**6,330**	9,756
EBITDA	US$M	397	**737**	944	1,707	**2,987**	6,111
Net profit After Tax (NPAT)	US$M	186	**410**	546	710	**1,561**	3,625
Cumulative post tax cashflow excluding construction cost	US$M	298	**522**	659	1,165	**1,994**	4,058
Annual operating cost	US$M	**110**			**133**		
Annual operating cost	US$/kg TREO	**8.91**			**9.78**		
Annual AISC[44]	US$/kg TREO	11,16	**11.69**	12.01	12.62	**13.07**	14.18
NdPr Average pricing	US$/kg NdPr	67	**91**	107	67	**86**	135
NdPr average operating cost (net of DyTb by-product credits)	US$/kg NdPr	20.58			21.80		

[2] Consensus reflecting the long term real available pricing expectations from multiple brokers as of May 2025, source Macquarie Bank.
[3] Forecast is calculated as the average between Adamas Intelligence & Project Blue long term pricing reported at Q1, 2025.
[4] AISC vary, as royalty costs vary under differing pricing scenarios

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Table 21: Financial Outputs

Financial Outputs	Unit	Spot	LOM		
			Consensus	US$110/Kg NdPr	Forecast
Annual Revenue	US$M	245	315	385	485
Annual EBITDA	US$M	86	150	213	305
Annual Operating Cashflow	US$M	58	100	143	203
Annual operating costs (ex-royalties)	US$M	133			
Annual operating costs (ex-royalties)	US$/kg TREO	9.78			
Annual AISC (including royalties)	US$/Kg TREO	12.62	13.07	13.53	14.18
Basket price[5] TREO	US$/kg TREO	26	33	41	51
NdPr Average pricing	US$/kg NdPr	67	86	110	135
Payability		70			
NdPr Gross operating cost		31			
NdPr Net Operating costs[6]	US$/kg NdPr	22			
Capex inclusive of 25% contingency		443			
Cumulative post tax cashflow (excluding construction cost)	US$M	1,165	1,994	2,842	4,058
Pre-tax NPV_8	US$M	251	821	1,347	1,985
Post-tax NPV_8	US$M	109	488	835	1,256
Pre-tax IRR	%	15	28	36	39
Post-tax IRR	%	11	21	28	31
Payback period	years	6.1	2.9	2.5	2.8

Table 21 above includes the financial outputs inclusive of a US$110/kg NdPr floor price reflected in the recent announcement by MP Materials and DOD. Meteoric has assumed consensus pricing for all other rare earth elements in it's REE basket in this comparison.

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[5] The basket price of TREO refers to the weighted average price of the individual REE contained in a specific mineral concentrate or product, based on their relative proportions and current market prices

[6] Operating costs net of DyTb credits at consensus pricing per kilogram of NdPr produced

Operating Costs, Royalties, Sustaining Capital and Taxes

Figure 22 below provides a detailed breakdown of annual costs, including the surplus free cash annually for the Caldeira Project. Operating costs have been developed by general area using a bottom-up, first principles approach. The estimated costs reflect the effort required to process a nominal 6Mtpa of ore and produce a nominal 13,500tpa of TREO.

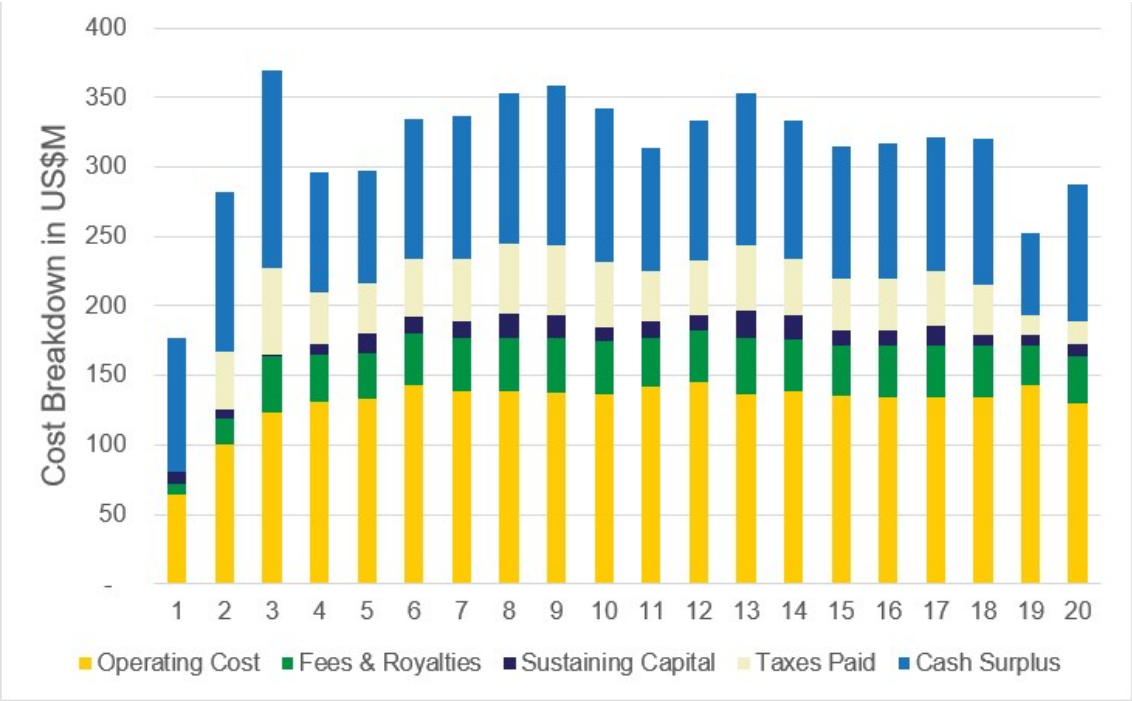

Figure 22: Annual operational costs and cash surplus based on consensus pricing.

Mining costs for the project include expenditures associated with the responsible return of spent clay to either mined-out pits or designated waste dump areas, in line with environmental and operational best practices.

General and administrative (**G&A**) expenses have been incorporated within the broader processing cost framework to provide a more accurate reflection of total operating costs.

It is important to note that key financial metrics – specifically royalties, taxation, and surplus cash flow – are all sensitive to changes in the achieved sale price of MREC. As the MREC sale price fluctuates, it directly impacts revenue generation. This, in turn, affects the calculation of royalties (which are typically based on gross sales), the level of taxable income, and ultimately the amount of surplus cash available for reinvestment or distribution.

Taxation, in particular, involves a range of complex variables, including jurisdictional rules, allowable deductions, and timing of revenue recognition. These factors can only be accurately assessed once the project is in operation and actual financial performance data becomes available. As such, while preliminary financial models provide a useful guide, actual after-tax outcomes may vary depending on market conditions and final realised pricing.

This sensitivity to MREC pricing highlights the importance of ongoing market engagement and pricing strategy with significant potential upside in a strengthening rare earth market.

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Table 22: Operating Cost Breakdown

Operating Costs (Real LOM)	Annual Cost (US$M) Year 1-5	Unit Cost (US$/kg TREO) Year 1-5	Annual Cost (US$M) LOM	Unit Cost (US$/kg TREO) LOM
Mining	31	2.54	39	2.89
Processing	79	6.37	94	6.89
Total operating costs	**110**	**8.91**	**133**	**9.78**

Total operating costs per kilogram of TREO varies, based on the grade of ore being mined. Over the first five years the cost per kg of TREO is US$8.91/kg based on an average ore grade of 4,500ppm and LOM is US$9.78/kg based on average ore grades of 3,700ppm.

Fees and royalties include contracted royalties paid for Mining Rights (4.75%), Federal Government Royalties (CFEM 2%), State Government minerals tax (US$0.39 per tonne) and fees payable to landholders (US$1 per tonne of ore extracted). Royalties are calculated based on the value of products extracted or sold and will vary depending on the market prices.

Mining operations will utilise an owner mining fleet, with sustaining capital allocated to increase equipment as the mine scheduling expands over time. Owner-mining fleet replacement is currently based on OEM recommendations, and during peak operational years, approximately US$6M per annum is planned for fleet replacement and upgrades.

The corporate tax rate in Brazil is 34%, not including any tax incentives or reduction initiatives for industrial development in specific regions. Meteoric will work with government and taxation authorities to explore potential incentives as it progresses with the Project's development.

Cashflows

The Caldeira Project cumulative cashflow utilising both consensus and forecast pricing scenarios result in a project pay-back of less than three years. Total after tax cash flows generated from the project (inclusive of construction costs) are US$1,551M at consensus pricing, US$3,615M at forecast pricing and US$722M using constant spot pricing.

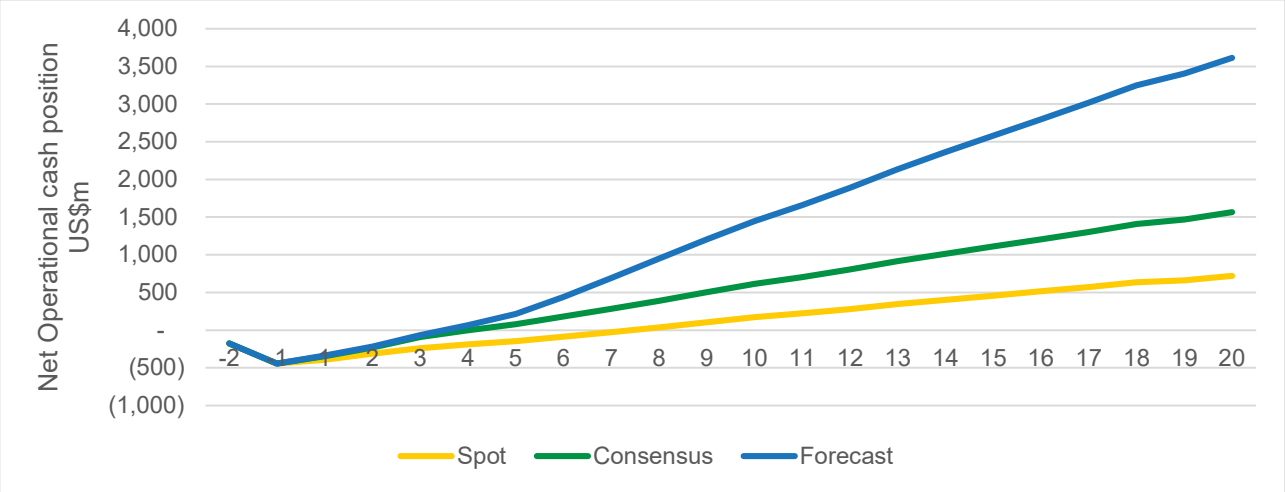

Figure 23: Comparison of accumulated cashflows at varying price points.

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Capital Expenditure

The estimated capital cost was derived by factoring from a priced mechanical equipment list to generate a AACE Class 4 estimate (nominal accuracy +/- 25% before contingency).

The estimated capital cost for the 6Mtpa base case processing plant and mining operations is US$443M inclusive of a 24% contingency.

Table 23: Summary Breakdown of Capital Expenditures

Description	Cost (US$M)	Contingency (US$M)	Total (US$M)
Mining	24	3	28
Plant Direct	259	65	323
Plant Indirect	74	18	92
Total	**357**	**86**	**443**

Sensitivity Analysis

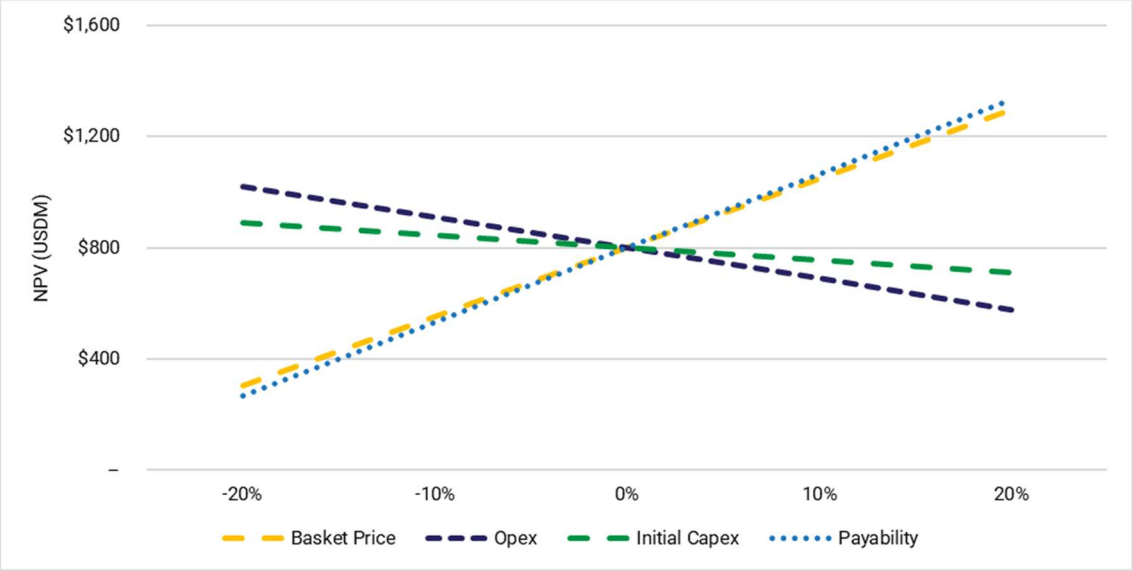

Figure 24: Pre-tax sensitivity analysis at consensus.

A comprehensive sensitivity analysis was conducted for the Project, demonstrating its strong resilience across a range of key variables, including capital expenditure, operating costs, and rare earth pricing. The results indicate that while the Project shows moderate sensitivity to changes in operating costs, it is significantly more responsive to movements in the rare earth basket price.

This heightened sensitivity to pricing presents a compelling upside opportunity for shareholders. As rare earth prices – particularly for magnet-critical elements such as Nd, Pr, Dy, and Tb – are forecast to strengthen in the near term due to accelerating demand from electric vehicles, wind energy, and advanced technologies, even modest price increases could have a material positive impact on project economics.

The analysis underscores the Project's leverage to price growth, with higher realised prices translating directly into improved margins, stronger cash flows, and enhanced returns. This dynamic, positions the Project to benefit disproportionately from favourable market conditions, offering shareholders exposure to a sector with strong structural tailwinds and significant long-term value potential.

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Pre-Tax NPV Sensitivity To Discount Rate

Basket Price (US$/kg REO)

Discount Rate	(20.0%)	(10.0%)	–	10.0%	20.0%
4.0%	$626	$993	$1,360	$1,728	$2,095
6.0%	$456	$756	$1,055	$1,355	$1,655
8.0%	$326	$573	$821	$1,069	$1,317
10.0%	$224	$432	$640	$848	$1,056
12.0%	$145	$321	$497	$674	$850

Pre-Tax IRR Sensitivity To Discount Rate

Basket Price (US$/kg REO)

Discount Rate	(20.0%)	(10.0%)	–	10.0%	20.0%
4.0%	17.5%	23.2%	28.2%	32.9%	37.3%
6.0%	17.5%	23.2%	28.2%	32.9%	37.3%
8.0%	17.5%	23.2%	28.2%	32.9%	37.3%
10.0%	17.5%	23.2%	28.2%	32.9%	37.3%
12.0%	17.5%	23.2%	28.2%	32.9%	37.3%

Pre-Tax Payback Sensitivity To Discount Rate

Basket Price (US$/kg REO)

Discount Rate	(20.0%)	(10.0%)	–	10.0%	20.0%
4.0%	5.1	3.6	2.9	2.6	2.4
6.0%	5.1	3.6	2.9	2.6	2.4
8.0%	5.1	3.6	2.9	2.6	2.4
10.0%	5.1	3.6	2.9	2.6	2.4
12.0%	5.1	3.6	2.9	2.6	2.4

Pre-Tax NPV Sensitivity To Opex

Basket Price (US$/kg REO)

Opex	(20.0%)	(10.0%)	–	10.0%	20.0%
(20.0%)	$547	$795	$1,043	$1,291	$1,539
(10.0%)	$436	$684	$932	$1,180	$1,428
–	$326	$573	$821	$1,069	$1,317
10.0%	$215	$463	$711	$959	$1,207
20.0%	$104	$352	$600	$848	$1,096

Pre-Tax IRR Sensitivity To Opex

Basket Price (US$/kg REO)

Opex	(20.0%)	(10.0%)	–	10.0%	20.0%
(20.0%)	22.4%	27.5%	32.2%	36.6%	40.7%
(10.0%)	20.0%	25.4%	30.2%	34.8%	39.0%
–	17.5%	23.2%	28.2%	32.9%	37.3%
10.0%	14.7%	20.8%	26.1%	31.0%	35.4%
20.0%	11.5%	18.3%	23.9%	28.9%	33.6%

Pre-Tax Payback Sensitivity To Opex

Basket Price (US$/kg REO)

Opex	(20.0%)	(10.0%)	–	10.0%	20.0%
(20.0%)	3.8	3.0	2.7	2.4	2.2
(10.0%)	4.3	3.3	2.8	2.5	2.3
–	5.1	3.6	2.9	2.6	2.4
10.0%	5.9	4.1	3.1	2.7	2.5
20.0%	7.1	4.8	3.4	2.8	2.6

Pre-Tax NPV Sensitivity To Capex

Basket Price (US$/kg REO)

Initial Capex	(20.0%)	(10.0%)	–	10.0%	20.0%
(20.0%)	$414	$662	$910	$1,158	$1,406
(10.0%)	$370	$618	$866	$1,114	$1,362
–	$326	$573	$821	$1,069	$1,317
10.0%	$281	$529	$777	$1,025	$1,273
20.0%	$237	$485	$733	$981	$1,229

Pre-Tax IRR Sensitivity To Capex

Basket Price (US$/kg REO)

Initial Capex	(20.0%)	(10.0%)	–	10.0%	20.0%
(20.0%)	22.2%	28.7%	34.5%	39.9%	44.9%
(10.0%)	19.6%	25.7%	31.1%	36.0%	40.7%
–	17.5%	23.2%	28.2%	32.9%	37.3%
10.0%	15.6%	21.0%	25.8%	30.2%	34.3%
20.0%	14.0%	19.2%	23.8%	27.9%	31.8%

Pre-Tax Payback Sensitivity To Capex

Basket Price (US$/kg REO)

Initial Capex	(20.0%)	(10.0%)	–	10.0%	20.0%
(20.0%)	3.7	2.8	2.5	2.2	2.1
(10.0%)	4.4	3.2	2.7	2.4	2.2
–	5.1	3.6	2.9	2.6	2.4
10.0%	5.6	4.1	3.2	2.8	2.6
20.0%	6.2	4.6	3.6	3.0	2.7

Pre-Tax NPV Sensitivity To FX

Basket Price (US$/kg REO)

FX	(20.0%)	(10.0%)	–	10.0%	20.0%
4.518	$321	$569	$817	$1,065	$1,313
5.083	$323	$571	$819	$1,067	$1,315
5.647	$326	$573	$821	$1,069	$1,317
6.212	$327	$575	$823	$1,071	$1,319
6.777	$329	$577	$825	$1,073	$1,321

Pre-Tax IRR Sensitivity To FX

Basket Price (US$/kg REO)

FX	(20.0%)	(10.0%)	–	10.0%	20.0%
4.518	17.4%	23.1%	28.1%	32.8%	37.2%
5.083	17.4%	23.1%	28.2%	32.8%	37.2%
5.647	17.5%	23.2%	28.2%	32.9%	37.3%
6.212	17.5%	23.2%	28.3%	32.9%	37.3%
6.777	17.6%	23.2%	28.3%	32.9%	37.3%

Pre-Tax Payback Sensitivity To FX

Basket Price (US$/kg REO)

FX	(20.0%)	(10.0%)	–	10.0%	20.0%
4.518	5.1	3.6	2.9	2.6	2.4
5.083	5.1	3.6	2.9	2.6	2.4
5.647	5.1	3.6	2.9	2.6	2.4
6.212	5.0	3.6	2.9	2.6	2.4
6.777	5.0	3.6	2.9	2.6	2.4

Pre-Tax NPV Sensitivity To FX

Basket Price (US$/kg REO)

Δ Payability	(20.0%)	(10.0%)	–	10.0%	20.0%
56.0%	($101)	$94	$289	$483	$678
63.0%	$112	$334	$555	$776	$998
70.0%	$326	$573	$821	$1,069	$1,317
77.0%	$539	$813	$1,088	$1,362	$1,637
84.0%	$752	$1,053	$1,354	$1,655	$1,957

Pre-Tax IRR Sensitivity To FX

Basket Price (US$/kg REO)

Δ Payability	(20.0%)	(10.0%)	–	10.0%	20.0%
56.0%	3.8%	11.1%	16.6%	21.2%	25.4%
63.0%	11.7%	17.7%	22.8%	27.4%	31.6%
70.0%	17.5%	23.2%	28.2%	32.9%	37.3%
77.0%	22.4%	28.1%	33.2%	38.0%	42.5%
84.0%	26.8%	32.6%	37.9%	42.8%	47.5%

Pre-Tax Payback Sensitivity To FX

Basket Price (US$/kg REO)

Δ Payability	(20.0%)	(10.0%)	–	10.0%	20.0%
56.0%	11.9	7.2	5.3	4.0	3.3
63.0%	7.0	5.0	3.7	3.0	2.7
70.0%	5.1	3.6	2.9	2.6	2.4
77.0%	3.8	2.9	2.6	2.4	2.2
84.0%	3.1	2.6	2.4	2.2	2.0

Figure 25: Sensitivity tables

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APPENDIX 2 – Peer Comparison Source Data Information

Company	Project	Classification	Resource (Mt)	Grade (ppm)	Cut-Off (ppm)	Magnetic REO (ppm)	Bubble Size	Reference
Serra Verde	Pela Ema	Measured + Indicated	390	1,500	NSR	220	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	2,680	1,000	659	71	Viridis Mining & Minerals Ltd 22 January 2025
Ionic Rare Earths	Makuutu	Indicated	518	640	200	152	33	Ionic Rare Earths Limited 15 May 2024
Aclara	Penco Module	Measured + Indicated	28	2,292	NSR	523	6	Aclara Resources Inc. 12 December 2023
Abx Group	Deep Leads – Rubble Mound – Wind Break	Measured + Indicated	47	873	350	229	4	ABx Group 2 May 2024
Meteoric Resources	**Caldeira (Global)**	**Measured + Indicated**	**666**	**2,685**	**1,000**	**605**	**179**	***This announcement***

Dr. Beck Nader
The information in this report 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.

Dr. Volodymyr Myadzel
The information in this report 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 information in this announcement 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.

Mr Steve O'Grady
The information in this report that relates to Ore Reserve is based on information compiled by Mr Steve O'Grady, a Competent Person who is a Member of Australasian Institute of Mining and Metallurgy. Mr Steve O'Grady is a consultant for Intermine Engineering Consultants. 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'. Mr Steve O'Grady consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Mr Tony Hadley
The information in this announcement that relates to the metallurgical results were compiled by Tony Hadley who is a permanent employee of Meteoric resources and is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr. Hadley has sufficient experience that is relevant to the metallurgical testwork which was undertaken to qualify as a Competent Person as defined in the 2012 JORC Code. Mr. Hadley consents to the inclusion in this announcement of the matters based on the information in the form and context in which it appears.

Some statements in this document may be forward-looking statements. Such statements include, but are not limited to, statements with regard to capacity, future production and grades, projections for sales growth, estimated revenues and reserves, targets for cost savings, the construction cost of new projects, projected capital expenditures, the timing of new projects, future cash flow and debt levels, the outlook for minerals prices, the outlook for economic recovery and trends in the trading environment and may be (but are not necessarily)

identified by the use of phrases such as "will", "expect", "anticipate", "believe" and "envisage".

By their nature, forward-looking statements involve risk and uncertainty because they relate to events and depend on circumstances that will occur in the future and may be outside Meteoric's control. Actual results and developments may differ materially from those expressed or implied in such statements because of a number of factors, including levels of demand and market prices, the ability to produce and transport products profitably, the impact of foreign currency exchange rates on market prices and operating costs, operational problems, political uncertainty and economic conditions in relevant areas of the world, the actions of competitors, activities by governmental authorities such as changes in taxation or regulation.

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APPENDIX 3: JORC Table 1

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)

Criteria	Commentary
Sampling techniques	• The resources were sampled using: a powered auger drill machine (open hole), a diamond drill machine and an Aircore drill machine. • **Auger (AUG) drill holes** o Each drill site was cleaned, removing leaves and roots from the surface. Tarps were placed on either side of the hole and samples of soil and saprolite where collected every 1m of advance, logged, photographed with subsequent bagging of the sample in plastic bags. • **Diamond (DD) drill holes** o The intact drill cores are collected in plastic core trays with depth markers recording the depth at the end of each drill run (blocks). o Samples were collected at 1m intervals. In the saprolite zone the core is halved with a metal spatula and bagged in plastic bags, the fresh rock was halved by a powered saw and bagged. • **Aircore (AC) drill holes** o Two (2) metre composite samples are collected from the cyclone of the rig in plastic buckets. The material from the plastic buckets is passed through a single tier, riffle splitter which generates a 50/50 split. One half is bagged and numbered for submission to the laboratory, and the other half bagged and given the same number, then stored as a duplicate at the core facility in Pocos de Caldas.
Drilling techniques	• **Powered Auger** o Powered auger drilling employed a motorised post hole digger with a 4 inch diameter. All holes were drilled vertical. The maximum depth achievable was 20m, providing the hole did not encounter fragments of rocks/boulders within the weathered profile and/or excessive water. Final depths were recorded according to the length of rods in the hole. • **Diamond Core** o Diamond drilling employed a conventional wireline diamond drill rig (Mach 1200). All holes were drilled vertical using PQ diameter core through soils and clays (85mm core diameter), reducing to HQ through transition material and fresh rock (63.5mm core diameter). The maximum depth drilled was 48.1m. The final depth was recorded using the length of the rods in the hole. • **Aircore** o Drilling was completed using a HANJIN 8D Multipurpose Track Mounted Drill Rig, configured to drill 3-inch Aircore holes. The rig is supported by an Atlas Copco XRHS800 compressor which supplies sufficient air to keep the sample dry down to the current deepest depth of 73m. All holes are drilled vertical. o Most drill sites require minimal to no site preparation. On particularly steep sites, the area is levelled with a backhoe loader. o Drilling is stopped at 'blade refusal' when the rotating bit is unable to cut the ground any further. This generally occurs in the transition zones (below clay zone and above fresh rock). On occasions a face sampling hammer is used once 'blade refusal' is reached to penetrate through the remaining transition zone and into the fresh rock.
Drill sample recovery	• **Auger sample recovery** o Estimated visually based on the amount of sample recovered per 1m interval drilled. Recoveries were generally in a range from 75% - 100%. If estimates dropped below 75% recovery in a 1m interval, the field crew aborted the drill hole and redrilled the hole. • **Diamond drill hole recovery** o Calculated after each run, comparing length of core recovery vs. drill depth. Overall core recoveries are 92.5%, achieving 95% in the saprolite target horizon, 89% in the transition zone and 92.5% in fresh rock. • **Aircore recovery** o Every 2m composite sample is collected in plastic buckets and weighed. Each sample averages approximately 12kg. This is considered acceptable given the hole diameter and specific density of the material.
Logging	• **Auger drilling**, o Material is described in a drilling bulletin every 1m and photographed. The description is made according to the tactile-visual characteristics, such as material (soil, colluvium, saprolite, rock fragments); material color; predominant particle size; presence of moisture; indicator minerals; extra observations. • **Diamond drilling** o Geology description is made in a core facility, focused on the soil (humic) horizon, saprolite, transition zone and fresh rock boundaries. The geology depth is honored and described with downhole depth (not metre by metre). Parameters logged include: grainsize, texture and colour, which can help to identify the parent rock before weathering. o All drill holes are photographed and stored at Core facility in Pocos de Caldas. • **Aircore drilling** o The material is logged at the drill rig by a geologist. Logging focused on soil (humic) horizon, saprolite/clay zones and transition boundaries. Other parameters recorded includes: grainsize, texture and colour, which can help to identify the parent rock before weathering. o Logging is done on 2m intervals due to the nature of the drilling with 2m composite samples collected in a bucket and presented for sampling and logging. o The chip trays of all drilled holes have a digital photographic record and are retained at a Core facility in Pocos de Caldas.
Sub-sampling techniques and sample preparation	• **Auger material** o Samples are weighed and if the samples are wet, they are dried for several days on rubber mats. After drying the samples are screened (5mm). Homogenization occurs by agitation in bags, followed by screening to <3mm. Fragments of rock or hardened clay that are retained in the sieves are fragmented with a 10kg manual disintegrator and a 1kg hammer, until 100% of the sample passes through the screening. The sample is homogenized again by agitation in bags. Finally, the sample is Split in a Jones 12 channel splitter, where 500g is

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Criteria	Commentary

sent to the lab (SGS_geosol laboratory in Vespasiano – Minas Gerais).
  - Remaining samples are placed in 20-liter plastic buckets, clearly labelled by Hole ID and depth, and stored in shed facility in Pocos de Caldas.
- **Diamond cores**
  - In the saprolite zone the core is halved with a metal spatula and bagged in plastic bags
  - The fresh rock was halved by a powered saw and bagged into a plastic bag with a unique sequential number of samples and sent to ALS laboratory in Vespasiano – Minas Gerais.
  - Field duplicates consist of quarter core, with both quarters sent to the lab.
- **Aircore material**
  - Samples are weighed at the Rig. When the sample > 6kg it passes through a single tier Riffle splitter generating a 50/50 split, one for ALS Laboratory and a duplicate which is retained in core facility. Samples are bagged in plastic bags with unique tag for the interval.
  - Given the grainsize if the mineralisation is extremely fine (clays) and shows little variability, the practice of submitting 50% of original sample for analysis is deemed appropriate.
  - Field Duplicates are routinely submitted and results analysed by examining the correlation between original and duplicate samples. More than 90% of duplicates show <20% variance.

Quality of assay data and laboratory tests

- **Auger samples** were analysed at SGS Geosol laboratory in batches of 43 samples, 37 of which belong to exploration intervals and 6 are QA/QC samples (duplicate, blank and standards).
  - The sample preparation method employed was PRP102_E: the samples are dried at 100°C, crushed to 75% less than 3 mm, homogenized and passed through a Jones riffle splitter (250g to 300g). This aliquot was then pulverized in a steel mill to the point at which over 95% had a size of 150 microns.

Determination by fusion with Lithium Metaborate – ICP MS (IMS95A)							
Ce	0,1 – 10000	Co	0,5 – 10000	Cs	0,05 – 1000	Cu	5 – 10000
Dy	0,05 – 1000	Er	0,05 – 1000	Eu	0,05 – 1000	Ga	0,1 – 10000
Gd	0,05 – 1000	Hf	0,05 – 500	Ho	0,05 – 1000	La	0,1 – 10000
Lu	0,05 – 1000	Mo	2 – 10000	Nb	0,05 – 1000	Nd	0,1 – 10000
Ni	5 – 10000	Pr	0,05 – 1000	Rb	0,2 – 10000	Sm	0,1 – 1000
Sn	0,3 – 1000	Ta	0,05 – 10000	Tb	0,05 – 1000	Th	0,1 – 10000
Tl	0,5 – 1000	Tm	0,05 – 1000	U	0,05 – 10000	W	0,1 – 10000
Y	0,05 – 10000	Yb	0,1 - 1000				

  - Analysis followed by IMS95A to determine the Rare Earth Elements. With this method, samples are melted with lithium metaborate and read using the ICP-MS method, the limits or which are shown below.

- **Diamond and Aircore** samples are analysed by ALS Laboratories (accredited) in Batches up to 72 samples. Upon arriving at ALS Vespasiano samples receive additional preparation (drying, crushing, splitting, and pulverising):
  - dried at 60°C
  - the fresh rock is crushed to sub 2mm
  - the saprolite is disaggregated with hammers
  - Riffle split 800g sub-sample
  - 800 g pulverized to 90% passing 75um, monitored by sieving.
  - Aliquot selection from pulp packet

The aliquot obtained from the physical preparation process at Vespasiano is sent to ALS Lima or analysis by ME-MS81 – which consists of analysis of Rare Earths and Trace Elements by ICP-MS for 32 elements by fusion with lithium borate as seen below (with detection limits):

Code	Analytes & Ranges (ppm)							
ME-MS81	Ba	0.5 - 10000	Gd	0.05 - 1000	Rb	0.2 - 10000	Ti	0.01 - 10%
	Ce	0.1 - 10000	Hf	0.5 - 10000	Sc	0.5 - 500	Tm	0.01 - 1000
	Cr	5 - 10000	Ho	0.01 - 10000	Sm	0.03 - 1000	U	0.05 - 1000
	Cs	0.01 - 10000	La	0.1 - 10000	Sn	0.5 - 10000	V	5 - 10000
	Dy	0.05 - 1000	Lu	0.01 - 10000	Sr	0.1 - 10000	W	0.5 - 10000
	Er	0.03 - 1000	Nb	0.05 - 2500	Ta	0.1 - 2500	Y	0.1 - 10000
	Eu	0.02 - 1000	Nd	0.1 - 10000	Tb	0.01 - 1000	Yb	0.03 - 1000
	Ga	0.1 - 10000	Pr	0.02 - 10000	Th	0.05 - 1000	Zr	1 - 10000

- MEI QAQC protocols demand duplicate sample every 20 samples, and a blank and standard sample in each 30 samples. In addition, ALS inserted their own internal reference check samples as well as conducting repeat analysis. Results show: 94.94% of Standards are within tolerance limits, 99.96% of Blanks are within tolerance limits, and only 4.92% of Duplicate samples showed >30% variation for the Original result.

Verification of sampling and assaying

- Given the nature of the ionic clay mineralisation visual checks are not appropriate for verification of mineralised intercepts.
- MEI completed several rounds of Twin Hole drilling:-
  - DD drill holes twinning historic Auger holes
    - A total of 32 DD holes were drilled to twin historic Auger holes and confirm the reported widths and grades across the 6 resource areas (February 2023 - January 2024). Results confirmed the width and general nature of high-grade TREO mineralization, showing a slight (14%) Positive Bias in Auger results compared to DD results. The apparent Bias is not considered significant.
  - AC holes twinning existing DD holes
    - A total of 17 AC holes were drilled at Soberbo, Capão do Mel and Figueira deposits to twin existing DD drill holes and assess AC as a sampling method (March 2023 – March 2024). Results confirmed the width and general nature of high-grade TREO mineralization, showing a slight (20%) Negative Bias in AC results

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Criteria	Commentary
	compared to DD results. The apparent Bias is not considered significant. • For historic Auger holes, collar co-ordinates are recorded, and holes were logged and photographed at the drill site prior to information being transferred into Excel Spreadsheets back at the office. Drilling data is kept in Excel Spreadsheets in a well organised structure of file folders on a local network and in the 'Cloud'. The original paper logging sheets were not retained. • For all drilling conducted by MEI (DD and AC), data is recorded into MX Deposit tables (collar, survey, geology, sample) using tablets/laptops at the Aircore Rig or in the Core Shed. Files are forwarded via email by Geologists to Database manager for uploading into the Database. The data is stored in MX Deposit database (Sequent). Data validation is turned ON during the import of data avoiding errors. • Raw assays are received as Elemental data (ppm) from ALS laboratories. The Elemental data is converted to Element Oxide data using the following conversion factors:

Element Oxide	Oxide Factor	Element Oxide	Oxide Factor
CeO_2	1.2284	Pr_6O_{11}	1.2082
Dy_2O_3	1.1477	Sm_2O_3	1.1596
Er_2O_3	1.1435	Tb_4O_7	1.1762
Eu_2O_3	1.1579	ThO2	1.1379
Gd_2O_3	1.1526	Tm_2O_3	1.1421
Ho_2O_3	1.1455	U_3O_8	1.1793
La_2O_3	1.1728	Y_2O_3	1.2699
Lu_2O_3	1.1728	Yb_2O_3	1.1387
Nd_2O_3	1.1664		

Location of data points	• **Auger drill collars** ○ All holes were picked up by Nortear Topografia e Projectos Ltda., planialtimetric topographic surveyors. The GPS South Galaxy G1 RTK GNSS was used, capable of carrying out data surveys and kinematic locations in real time (RTK-Real Time Kinematic), consisting of two GNSS receivers, a BASE and a ROVER. The horizontal accuracy, in RTK, is 8mm + 1ppm, and vertical 15mm + 1ppm. ○ The coordinates were provided in the following formats: Sirgas 2000 datum, and UTM WGS 84 datum - georeferenced to spindle 23S. • **Diamond and Aircore collars** ○ The survey was made by MEI personal using a GPS CHCNAV i73 RTK GNSS capable of carrying out data surveys and kinematic locations in real time (RTK-Real Time Kinematic), consisting of two GNSS receivers, a BASE and a ROVER. The horizontal accuracy, in RTK, is 8mm +/- 1mm, and vertical 15mm +/- 1mm. • **Topography imaging survey** Capao do Mel, Soberbo, Figueira ○ A detailed imaging and topographic survey was done by GeoSense Engenharia e Geotecnologia Ltda. The survey was done using a DJI Matrice 300 RTK drone with vertical accuracy with 0.1metre and horizontal accuracy of 0.3metre using visual system. Using the GPS system the vertical accuracy is 0.5metre and horizontal accuracy is 1.5metre. Using the RTK system the vertical accuracy is 0.1metre and horizontal accuracy is 0.1metre. ○ A on board LiDAR Alpha Air 450 sensor was used which has a range of 450 metres, accuracy of 15mm, acquisition tax of 240,000 points per second (first pass), 480,000 points per second (second pass) and 720,000 points per second (third pass), equipped with a Sony A5100 camera with 26 Mega Pixels and an integrated GNSS receptor (L1L2). ○ For the base points it was used a GPS CHCNAV i73 RTK GNSS capable of carrying out data surveys and kinematic locations in real time (RTK-Real Time Kinematic), consisting of two GNSS receivers, a BASE and a ROVER. The horizontal accuracy, in RTK, is 8mm +/- 1mm, and vertical 15mm +/- 1mm. Barra do Pacu ○ A detailed imaging and topographic survey was done by Topografia Pedro Ernestto Ltda. The survey was done using a DJI Matrice 350 RTK drone with vertical accuracy with 0.1meter and horizontal accuracy of 0.15meter using visual system. ○ An onboard Zenmuse L2 LiDAR sensor was used which has a range of 450 meters, accuracy of 15mm, acquisition tax of 240,000 points per second and multiple return of1,200,000 points per second, equipped with a CMOS sensor camera with 20 Mega Pixels and an integrated GNSS receptor (L1L2). ○ For the base points it was used a GPS CHCNAV i73 RTK GNSS capable of carrying out data surveys and kinematic locations in real time (RTK-Real Time Kinematic), consisting of two GNSS receivers, a BASE and a ROVER. The horizontal accuracy, in RTK, is 8mm +/- 1mm, and vertical 15mm +/- 1mm.
Data spacing and distribution	• Hole spacing for Auger holes varies across the prospect scale from a maximum of: 200m by 200m, infill drilled to 100m by 100m, with tighter spacing of 50m by 50m in the closest space areas. Aircore drilling was done at a nominal 100m x 100m, infill drilled to 50m x 50m in areas of high grade in the 2023 Inferred Resource. Diamond holes had no regular spacing but were designed to target specific geologic characteristics (i.e. grade, density). • Given the substantial geographic extent and generally shallow, flat lying geometry of the mineralisation, the spacing and orientation are considered sufficient to establish geologic and grade continuity. • Sample compositing: ○ Auger samples were collected at 1.0m composites. ○ Diamond samples were collected at 1.00m composites, respecting the geological contacts. ○ Aircore samples were collected at 2.00m composites.
Orientation of data in	• The mineralisation is flat lying and occurs within the saprolite/clay zone of a deeply developed regolith (reflecting

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Criteria	Commentary
relation to geological structure	topography and weathering). Vertical sampling from all sampling methods is considered most appropriate.
Sample security	• **Auger samples:** ○ Samples were removed from the field by Company staff and transported back to a facility in Poços de Caldas. From here the samples are packed in plastic bags and transported to SGS-Geosol in Belo by a commercial Transport Company. ○ The remaining sample is stored in 20 litre plastic buckets, labelled with the name of the target, hole name and sampled intervals. Samples are securely locked up in the storage shed. • **Diamond samples:** ○ Samples are removed from the field by MEI staff and transported back to a Core shad to be logged and sampled. All samples for submission to the lab are packed in plastic bags (in batches) and sent to the lab where it is processed as reported above. The transport of samples from Poços de Caldas to ALS laboratory in Vespasiano was undertaken by a commercial Transport Company. • **Aircore samples:** ○ Samples are split and bagged in the field and transported back to a Core shed. All samples for submission to the lab are packed in plastic bags (in batches) and despatched to ALS laboratory in Vespasiano using a commercial Transport Company.
Audits or reviews	• MEI conducted a review of assay results as part of its Due Diligence prior to acquiring the project. Approximately 5% of all stored coarse rejects from auger drilling were resampled and submitted to two (2) labs: SGS Geosol and ALS Laboratories. Results verified the existing assay results, returning values +/-10% of the original grades, well within margins of error for the grade of mineralisation reported. (see ASX:MEI 13/03/23 for a more detailed discussion) • A site visit was carried out by Volodymyr Myadzel from BNA Mining Solutions on 19-20 February 2024 to: inspect drilling and sampling procedures, verify survey methods, inspect the storage shed, verification of geological records, review of QAQC procedures and review of geologic model.

Section 2 Reporting of Exploration Results (Criteria in this section apply to all succeeding sections)

Criteria	Commentary
Mineral tenement and land tenure status	• Listed in Appendix 4. • Given the rich history of mining and current mining activity in the Poços de Caldas there appears to be no impediments to obtaining a License to operate in the area.
Exploration done by other parties	• The Caldeira Project has had significant exploration in the form of surface geochem across 30 granted mining concessions, plus: geologic mapping, topographic surveys, and powered auger (1,396 holes for 12,963 samples). • MEI performed Due Diligence on historic exploration and are satisfied the data is accurate and correct (refer ASX Release 13 March 2023 for a discussion).
Geology	• The Alkaline Complex of Poços de Caldas represents in Brazil one of the most important geological terrains which hosts deposits of bauxite, clay, uranium, zirconium, rare earths and leucite. The different types of mineralization are products of a history of post-magmatic alteration and weathering, in the last stages of its evolution (Schorscher & Shea, 1992; Ulbrich et al., 2005). • The dominant REE mineral in the source rock (syenite) beneath the clay zone is Bastnaesite, a major source of REE worldwide. Bastnaesite is a REE carbonate-fluoride mineral (REE)CO3F and has very low levels of U and Th in its structure. Due to the chemistry of the underling intrusives and the intense weathering of the region, a thick profile comprising soil, clay and saprolite (regolith) has formed (Figures 1, 6, and 7), and these are the hosts to the ionic clay REE mineralization. • The deposits are recognized as Ionic Adsorption Clays, where the Rare Earth Elements ions are trapped by the surface or between the layers of the clays and these REE are easily leached with a moderate acid substance.
Drill hole Information	• Information for all Auger holes was reported in a previous ASX Release on 01 May 2023 “Caldeira REE Project Maiden Mineral Resource”. • Information for Soberbo drill holes was reported in a previous ASX Release on 13 May 2024, “150% Increase in Soberbo Mining Licence Mineral Resource”. • Information for Capao do Mel drill holes was reported in a previous ASX Release on 12 June 2024, “Capao do Mel Resource Update Doubles Caldeira M&I Resources”. • Information for Figueira drill holes was reported in a previous ASX Release on 04 August 2024, “Updated Figueira Mineral Resources Estimate”. • Information for Barra do Pacu drill holes was reported in a previous ASX Release on 14 April 2025, “Barra do Pacu Resource Adds Strategic High-Grade Rare Earths”.
Data aggregation methods	• Mineralised Intercepts are reported with a minimum of 4m width, lower cut-off 1,000ppm TREO, with a maximum of 2m internal dilution. • High-Grade Intercepts reported as “including” are reported with a minimum of 2m width, lower cut-off 3,000 ppm TREO, with a maximum of 1m internal dilution. • Extreme High-Grade Intercepts reported as “with” are reported with a minimum of 2m width, lower cut-off 10,000 ppm TREO, with a maximum of 1m internal dilution. • No Metal Equivalents are used.
Mineralisation widths and intercept lengths	• All holes are vertical and mineralisation is developed in a flat lying clay and transition zone within the regolith. As such, reported widths are considered to equal true widths.

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Criteria	Commentary
Diagrams	• Reported in the body of the text.
Balanced reporting	• Significant Intercepts for all Auger drill holes were reported in a previous ASX Release on 01 May 2023 "Caldeira REE Project Maiden Mineral Resource". • Significant Intercepts for Soberbo drill holes was reported in a previous ASX Release on 13 May 2024, "150% Increase in Soberbo Mining Licence Mineral Resource". • Significant Intercepts for Capao do Mel drill holes was reported in a previous ASX Release on 12 June 2024, "Capao do Mel Resource Update Doubles Caldeira M&I Resources". • Significant Intercepts for Figueira drill holes was reported in a previous ASX Release on 04 August 2024, "Updated Figueira Mineral Resources Estimate". • Significant Intercepts for Barra do Pacu drill holes was reported in a previous ASX Release on 14 April 2025, "Barra do Pacu Resource Adds Strategic High-Grade Rare Earths".
Other substantive exploration data	• Preliminary metallurgical testwork was carried out on samples split from a 200kg composite sample, which in turn was composed of a selection of 184 samples from 41 holes (100 x100m grid) across the Capo do Mel Target. Head grade of the composite sample was 4,917ppm TREO. Results showed excellent recoveries by desorption of Rare Earth Elements (REE) using ammonium sulfate solution [(NH4)2SO4)] in weakly acidic conditions [pH 4]. Average recovery of the Pr + Nd was 58%. Desorption was achieved using a standard ammonium sulfate solution at pH 4 and confirms the Caldeira Project is an Ionic (Adsorption) Clay REE deposit (for further discussion refer ASX Release 20 December 2023).
Further work	• Proposed work is discussed in the body of the text.

Section 3 Estimation & Reporting of Mineral Resources (Criteria in this section apply to all succeeding sections.)

Criteria	Commentary
Database integrity	• All data was imported into Micromine Software. The databases were validated using specific processes to verify the existence of the errors listed below: ○ The drill hole's name is present in the collar file but is missing from the analytical database; ○ The drill hole's name is present in the analytical database, but is absent in the collar file; ○ The drill hole's name appears repeated in the analytical database and in the collar file; ○ The drill hole's name does not appear in the collar file and in the analytical database; ○ One or more coordinate notes are absent from the collar file; ○ FROM or TO are not present in the analytical database; ○ FROM > TO in the analytical database; ○ Sampling intervals are not continuous in the analytical database (there are gaps between the logs); ○ Sampling intervals overlap in the analytical database; ○ The first sample does not correspond to 0 m in the analytical database; ○ The hole total depth is shallower than the depth of the last sample. • Random checks of the original data as received from SGS-Geosol and ALS laboratories was compared with the provided database and no errors were found.
Site visits	• A site visit was carried out by Volodymyr Myadzel from BNA Mining Solutions on 19-20 February 2024 to: inspect drilling and sampling procedures, verify survey methods, inspect the storage shed, verification of geological records, review of QAQC procedures and review of geologic model.
Geological interpretation	• Confidence in the geological interpretation of the rare earth mineralization in clay and saprolite is very high as drilling activities used a regular and relatively close-spaced drill spacing. • Where there is no information from Diamond or Aircore drill holes (which drill to transition/fresh rock), and mineralisation was present at the end of Auger drill holes (in areas of known deep weathering), the mineralisation was assumed to extend 2m below the hole. • Factors affecting rare earth mineralisation in saprolite rocks include the degree of weathering of primary rocks and variations in mineralization. These were detailed in Diamond, Aircore, and Auger drilling from surface and into the fresh rock.
Dimensions	• The Mineral Resources have the following dimensions: ○ Soberbo - 2,600m x 3,800m in NE-SW direction ○ Capao do Mel - 2,600m x 3,800m in NE-SW direction ○ Figueira - 2,600m x 1,200m in N-S direction ○ Barra do Pacu - 1,900m x 4,000m in N-S direction. • The top of the rare earth element mineralization is generally the topographic surface.
Estimation and modelling techniques	• The results are based on a block model interpolated by Ordinary Kriging (OK) method, using Micromine software. Ordinary Kriging was selected as the method for grade interpolation as the sample data has a log-normal distribution represented by a single generation. • All analyzed elements were interpolated to the empty block model using Ordinary Kriging (OK) and IDW3 (Inverse Distance Weighting with inverse power 3) methods. The IDW3 method was used for control and comparison. • The grade estimation was performed in four consecutive passes (rounds) using different sizes of search radius, criteria of number of composite samples, and number of holes.

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Criteria	Commentary

Search Ellipse parameters by Pass (all Deposits).

Pass	Search Ellipse (size factor)	Min. No. Composites	Max. No. Composites	Min. No. Drill Holes
01	0.667	4	3	2
02	1	2	3	2
03	2	2	3	1
04	100	1	3	1

- Column 'Min No. Composites' is the minimum number of composites required for each of the estimation passes. Column 'Max No. Composites' is the maximum number of samples allowed for each of the four sectors of the ellipsoid used for the elements' estimation process.
- The Block Model created in the process of discretization of the wireframes using the sub-blocking process. Initially, the model was filled with blocks measuring 25 (X) by 25 (Y) by 5 (Z) meters, which were divided into subunits of smaller size, with a factor for size subdivision of 10 by 10 by 5 in contact with the surrounding three-dimensional wireframes.
- The radii and the orientation of search ellipse were determined using standard variograms. The limitations presented by each sector of a search ellipse were: the maximum number of points in the sector and the minimum total number of points in the interpolation that varies depending on the size of the ellipse, from 3 to 1. Thus, the maximum total number of samples involved in the interpolation was 12 samples.

Radii of Search Ellipsoid by element.

Element	SOB			CDM			FIG			BDP		
	X	Y	Z	X	Y	Z	X	Y	Z	X	Y	Z
La (ppm)	130	90	15	130	90	15	210	125	20	230	220	20
Ce (ppm)	130	90	15	130	90	15	150	110	20	230	230	20
Pr (ppm)	130	90	15	130	90	15	210	125	20	230	220	20
Nd (ppm)	130	90	15	130	90	15	210	125	20	230	220	20
Sm (ppm)	130	90	15	130	90	15	210	125	20	230	220	20
Eu (ppm)	130	90	15	130	90	15	210	125	20	230	220	20
Gd (ppm)	130	90	15	130	90	15	210	125	20	230	220	20
Tb (ppm)	130	90	15	130	90	15	210	125	20	230	220	20
Dy (ppm)	130	90	15	130	90	15	210	125	20	230	180	20
Ho (ppm)	130	90	15	130	90	15	210	125	20	230	180	20
Er (ppm)	130	90	15	130	90	15	210	125	20	230	220	20
Tm (ppm)	130	90	15	130	90	15	210	125	20	230	180	20
Yb (ppm)	130	90	15	130	90	15	210	125	20	230	220	20
Lu (ppm)	130	90	15	130	90	15	210	125	20	230	180	20
Y (ppm)	130	90	15	130	90	15	210	125	20	230	220	20
Th (ppm)	125	85	10	125	85	10	180	180	30	230	230	30
U (ppm)	125	85	10	125	85	10	180	140	20	240	240	20

Orientation of Azimuth of the search ellipsoid for every element (Dip = 0, Plunge = 0 for all elements in all Deposits).

Element (ppm)	SOB	CDM	FIG	BDP
La	42	42	138	12
Ce	42	42	102	48
Pr	42	42	138	12
Nd	42	42	138	12
Sm	42	42	138	12
Eu	42	42	138	12
Gd	42	42	138	12
Tb	42	42	138	12
Dy	42	42	138	12
Ho	42	42	138	12
Er	42	42	138	12
Tm	42	42	138	0
Yb	42	42	138	0
Lu	42	42	138	12
Y	42	42	138	12
Th	144	144	108	108
U	144	144	132	144

- The block model was validated in several ways: by running and Inverse Distance Weighted interpolation and comparing the results, and by comparing the means and standard deviations of the block grades to the composite data set.

Moisture	• All estimations are reported as a dry tonnage.
Cut-off parameters	• Cut-off grades for TREO were used to prepare the reported resource estimates. The selection of the cut-off was based on the experience of the Competent Person, plus a peer review of publicly available information from more advanced projects with comparable mineralisation styles (i.e clay and transition zone hosted rare earth mineralisation) and comparable conceptual processing methods. • The chosen cut-off grade of 1,000 ppm TREO is consistent with this.
Mining factors or assumptions	• The selected mining method will be open cut utilising truck and excavator in free digging the clay material. No drill and blast will be required.

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Criteria	Commentary
Metallurgical factors or assumptions	• The Caldeira Project is an ionic adsorption clay-hosted rare earth deposit, a mineralisation style that allows for low-cost, simple metallurgical processing. The proposed metallurgical process involves leaching with ammonium sulfate (AMSUL) at pH 5, followed by impurity removal using ammonium bicarbonate (BICARB) to produce a Mixed Rare Earth Carbonate (MREC). This process is highly appropriate for the mineralisation type, as ionic adsorption clay deposits allow for selective rare earth extraction at ambient temperature and pressure without complex beneficiation techniques such as flotation or roasting. • The metallurgical process incorporates a suite of well-established and mature unit operations, including scrubbing, desorption, counter-current decantation (CCD), pressure filtration, reverse osmosis, nanofiltration, and other dewatering technologies. These technologies are widely used across various mineral processing and chemical industries and are considered proven in terms of operational reliability and scalability. However, while these individual components are mature, their integration into a single flowsheet tailored specifically for rare earth ionic clay deposits is considered novel. To date, there are no known commercial operations outside of China that have successfully achieved design throughput and recovery targets for such deposits. The innovative sequencing and configuration of these unit operations in the proposed flowsheet represent a unique approach to processing ionic clays, designed to optimise recovery and manage the specific challenges associated with these ore types. • Extensive metallurgical test work has been conducted by the Australian Nuclear Science and Technology Organisation (ANSTO) to characterise the metallurgical response across all tenements included in the PFS. Representative bulk composite samples were prepared for each tenement ensuring coverage of orebody variability. To date, 320 diagnostic leach tests and 32 bulk slurry leach tests have been completed by ANSTO. Additionally, a 2.5-tonne composite sample, derived from 154 air core drill holes and representative of the first five years of production from the CDM starter pit, was used in a 15-day continuous pilot plant trial at ANSTO. • Testwork covers the full range of domains/lithologies—soil, clay, transition, and hard rock—both laterally and at depth. • Individual rare earth oxide recoveries were determined from the testwork (below). This equates to global average recoveries of 55% TREO and 71% Magnetic REO. These recovery factors have been statistically validated against a broad set of randomised diagnostic leach tests, confirming their robustness and applicability across the mine plan.

Deposit	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Y
CDM	76	0.3	74	73	65	61	64	52	50	43	37	33	25	24	50
BDP	76	0.3	74	73	65	61	64	52	50	43	37	33	25	24	50
SOB	71	5	66	68	62	62	61	55	51	49	48	44	43	25	51
FIG	71	5	69	72	69	69	66	58	53	48	44	32	23	20	55

• All drill samples are assayed for deleterious elements and the distribution analysed throughout the resource. Mixed Rare Earth Carbonate (MREC) product was also assayed for deleterious elements. Feedback from potential off-take partners and customers has not identified any concerns regarding deleterious elements in the MREC. A detailed composition of the final MREC product, including impurity levels (2% by weight), was publicly released on 29 February 2024. This composition meets market expectations and specifications. Furthermore, the recent pilot plant campaign conducted at ANSTO successfully validated the quality of the MREC product, confirming that deleterious elements are effectively managed within the proposed flowsheet and do not pose a risk to product acceptance or downstream processing.
• A comprehensive bulk sampling and pilot-scale test program has been undertaken to validate the metallurgical performance and representativeness of the orebody. A 2.5-tonne bulk sample was compiled from 154 air core drill holes. This sample was selected to reflect the lithological and grade variability expected in the first five years of production. This sample was processed through a 15-day continuous pilot plant campaign at ANSTO and successfully demonstrated the operational viability of the proposed flowsheet and confirmed the consistency of metallurgical recovery and product quality.
• This pilot-scale validation provides a high level of confidence in the scalability of the process and the reliability of recovery assumptions used in the PFS.
• Detailed mineralogical and metallurgical studies of representative samples from the deposits confirm the presence of ion-adsorbed rare earth elements (REEs) within a clay matrix. Mineralogical characteristics include a dominance of kaolinite-hosted ion-adsorbed REEs and the absence of significant refractory REE minerals. The low acidity (pH 4.5 – 5) leach results and very low levels of deleterious elements such as Al, Fe, U in the leach liquor that need to be neutralised., support the ability to meet market specifications for MREC. Only those zones with demonstrated leachability and acceptable impurity profiles (appropriate mineralogy) have been included in the Ore Reserve estimate.

Environmental factors or assumptions	There are two Environmental areas within the municipality of Caldas which encroach upon the current resources at Soberbo, Capão do Mel, and Barra do Pacu (Figure 1), being: (i) Environmental Protection Area (**APA**) Ecological Sanctuary of Serra da Pedra Branca (established by Municipal Law of Caldas/MG nº 1.973/2006) and (ii) a three (3) kilometre strip surrounding the APA (**Buffer Zone**). Part of the Soberbo (**SB**) resource is within the APA whilst the remaining (larger) part of SB, the entire Capao do Mel (**CDM**) resource, and 80% of Barra do pacu (**BDP**) are within the Buffer Zone.

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Criteria	Commentary
	Article 51 of Law of Caldas/MG nº 1.973/2006 stipulates that mining activity is currently not permitted within the APA (other than for existing activity with operating licenses). The current PFS development scenario and Preliminary Environmental Permit (LP) application do not propose any activity inside the APA area. Mining activity within the Buffer Zone is permitted and may be undertaken upon completion of an Environmental Impact Assessment (**EIA**), a proposal of measures necessary to mitigate any possible impact on ecosystems, a Certificate of Regularity for Land Use and Occupation from the municipality of Caldas Municipal Environmental Council (**CODEMA**), and authorization of the APA Management Council (outstanding). Meteoric has conducted extensive research and consultation from mid-2023 with the object of seeking and obtaining permission to conduct activities in the Buffer Zone and is confident of obtaining favourable consideration from the relevant authorities. That confidence is based upon: Environmental Impact Statement (EIS) and relevant flora and fauna and ethnographic studies completed over the area, ongoing dialogue and consultation with multiple stakeholders including favourable feedback from a Social Diagnosis and Stakeholder Survey of the Caldeira REE Project conducted by EcoDue Ambiental in December 2023, and specifically by reason of the terms of a written Protocol of Intent entered into between the Government of Minas Gerais and Meteoric Brazil [See ASX Announcement "Cooperation Agreement Signed with Government of Minas Gerais and Invest Minas" - 11 August 2023]. As such we consider there are reasonable prospects for eventual economic extraction to justify the Mineral Classifications of Measured and Indicated Resources (within the Buffer Zone), and the subsequent Probable Reserves.
Bulk density	• Bulk Densities were calculated by ALS Laboratories analysing a bulk sample using method OA-GRA09a. Diamond drill hole intervals representative of the entire profile (clay, transition, fresh) were selected and the entire core was wrapped in plastic to maintain moisture and shipped to ALS. • Once received by ALS the core section is weighed (wet), unwrapped and dried at 105ºC for 12 hours, then weighed again (dry), before being covered in a paraffin wax coat and weighed in the presence of air. The sample is then weighed while it is suspended in water. The specific gravity is calculated using the following equation: $S.G. = \frac{A}{B - C - [(B - A) / D]}$ where: A = weight of sample in air, B = weight of waxed sample in air, C = weight of waxed sample suspended in water, and D = density of wax
Classification	• The Mineral Resources for the project have been classified as Measured, Indicated and Inferred. • The Competent Person is satisfied that the classification is appropriate based on: current drill hole spacing, geological continuity, variography, and bulk density data available for the project.
Audits or reviews	• As yet there have been no third-party audits or reviews of the mineral resource estimates.
Discussion of relative accuracy/ confidence	• The block model with interpolated grades was subject to visual and statistical verification. Histograms and probability graphs of the interpolated grades were built. Then, the interpolated grades of the block model were compared with the same histograms and probability graphs of the composite samples. The histograms and graphs of the interpolated grades and composite samples were similar, and the block model histograms were smoother than the composite histograms. The comparisons confirmed the validity and consistency of the built block model. • The mineral resource is a global resource estimate and locally resource estimates may vary in a negative or positive manner.

Section 4 Estimation and Reporting of Ore Reserves.

Criteria	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• The total Measured and Indicated Resources for Clay at the Capao do Mel, Soberbo, Figueira, and Barra do Pacu licences, used for the basis of conversion to the Reserve are 385 Mt at 2,875ppm TREO using a cut-off grade of 1,000 ppm. Total Inferred Resources for Clay are 321 Mt at 2,299ppm TREO. • Only Measured and Indicated Resources were considered for inclusion in the Ore Reserve. • These Mineral Resources are reported inclusive of the Ore Reserves.
Site visits	• The Mining Competent Person (CP) did not visit the site but relied upon the reports of staff and contractors who have visited the site.
Study status	• The current Pre-Feasibility Study has determined a mine plan that is technically achievable and economically viable, considering assessment of preliminary material-modifying factors including mining, processing, metallurgical recovery, infrastructure, environmental, legal, and financial parameters. These will require further ongoing assessment in future study phases. This level of study enables Mineral Resources to be converted to Ore Reserves.
Cut-off parameters	• The economic cut-off grade for the project was determined on a block value basis and is based on calculating net revenue from recovered REO less processing and selling costs on a block-by-block (diluted) basis. The cut-off grade will vary depending on the make up of the basket (as seen below).

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Criteria	Commentary

Variable TREO Cut-off Grades by Deposit

Deposit	Lowest	Highest
CDM	1,895	4,310
FG	2,130	3,872
SB	2,047	2,860
BDP	2,000	4,500

Mining factors or assumptions

- The following Modifying Factors were considered in relation to the development of the Caldeira Ore Reserve:
  - Selected mining method will be open cut utilising truck and excavator in free digging the clay material. No drill and blast will be required.
  - Backfilling of mined pits using the spent clay rejects will aid in progressive rehabilitation and reduce external waste storage requirements.
  - Pit design parameters are preliminary and based on existing slope configurations from nearby clay mining operations.
  - Resource models were regularised to a 10 x 10 x 5 block size to account for dilution. Ore loss of 5% was then applied to pit design inventory.
  - No additional dilution has been factored into the optimisation and reserve reporting.
- Site specific field geotechnical studies and off site testwork on spent clay samples has commenced and the results once available will be used to validate the pit design, stability of temporary waste dumps and backfilling of the pits, and material handling properties of spent clays.

Metallurgical factors and assumptions

- The Caldeira Project is an ionic adsorption clay-hosted rare earth deposit, a mineralisation style that allows for low-cost, simple metallurgical processing. The proposed metallurgical process involves leaching with ammonium sulfate (AMSUL) at pH 5, followed by impurity removal using ammonium bicarbonate (BICARB) to produce a Mixed Rare Earth Carbonate (MREC). This process is highly appropriate for the mineralisation type, as ionic adsorption clay deposits allow for selective rare earth extraction at ambient temperature and pressure without complex beneficiation techniques such as flotation or roasting.
- The metallurgical process incorporates a suite of well-established and mature unit operations, including scrubbing, desorption, counter-current decantation (CCD), pressure filtration, reverse osmosis, nanofiltration, and other dewatering technologies. These technologies are widely used across various mineral processing and chemical industries and are considered proven in terms of operational reliability and scalability. However, while these individual components are mature, their integration into a single flowsheet tailored specifically for rare earth ionic clay deposits is considered novel. To date, there are no known commercial operations outside of China that have successfully achieved design throughput and recovery targets for such deposits. The innovative sequencing and configuration of these unit operations in the proposed flowsheet represent a unique approach to processing ionic clays, designed to optimise recovery and manage the specific challenges associated with these ore types.
- Extensive metallurgical test work has been conducted by the Australian Nuclear Science and Technology Organisation (ANSTO) to characterise the metallurgical response across all tenements included in the PFS. Representative bulk composite samples were prepared for each tenement ensuring coverage of orebody variability. To date, 320 diagnostic leach tests and 32 bulk slurry leach tests have been completed by ANSTO. Additionally, a 2.5-tonne composite sample, derived from 154 air core drill holes and representative of the first five years of production from the CDM starter pit, was used in a 15-day continuous pilot plant trial at ANSTO.
- Testwork covers the full range of domains/lithologies—soil, clay, transition, and hard rock—both laterally and at depth.
- Individual rare earth oxide recoveries were determined from the testwork (below). This equates to global average recoveries of 55% TREO and 71% Magnetic REO. These recovery factors have been statistically validated against a broad set of randomised diagnostic leach tests, confirming their robustness and applicability across the mine plan.

Deposit	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	Y
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FIG	71	5	69	72	69	69	66	58	53	48	44	32	23	20	55

- All drill samples are assayed for deleterious elements and the distribution analysed throughout the resource. Mixed Rare Earth Carbonate (MREC) product was also assayed for deleterious elements. Feedback from potential off-take partners and customers has not identified any concerns regarding deleterious elements in the MREC. A detailed composition of the final MREC product, including impurity levels (2% by weight), was publicly released on 29 February 2024. This composition meets market expectations and specifications. Furthermore, the recent pilot plant campaign conducted at ANSTO successfully validated the quality of the MREC product, confirming that deleterious elements are

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	effectively managed within the proposed flowsheet and do not pose a risk to product acceptance or downstream processing • A comprehensive bulk sampling and pilot-scale test program has been undertaken to validate the metallurgical performance and representativeness of the orebody. A 2.5-tonne bulk sample was compiled from 154 air core drill holes. This sample was selected to reflect the lithological and grade variability expected in the first five years of production. This sample was processed through a 15-day continuous pilot plant campaign at ANSTO and successfully demonstrated the operational viability of the proposed flowsheet and confirmed the consistency of metallurgical recovery and product quality. • This pilot-scale validation provides a high level of confidence in the scalability of the process and the reliability of recovery assumptions used in the PFS. • Detailed mineralogical and metallurgical studies of representative samples from the deposits confirm the presence of ion-adsorbed rare earth elements (REEs) within a clay matrix. Mineralogical characteristics include a dominance of kaolinite-hosted ion-adsorbed REEs and the absence of significant refractory REE minerals. The low acidity (pH 4.5 – 5) leach results and very low levels of deleterious elements such as Al, Fe, U in the leach liquor that need to be neutralised., support the ability to meet market specifications for MREC. Only those zones with demonstrated leachability and acceptable impurity profiles (appropriate mineralogy) have been included in the Ore Reserve estimate. • Reagent consumption estimates in the PFS were revised based on pilot plant data, which more accurately reflects full-scale operations due to its continuous processing nature and incorporation of recycled process streams. This contrasts with the batch-style bench testwork used in the earlier scoping study, which, while appropriate for early-stage evaluation, does not capture the dynamic effects of recycling within a continuous circuit.

Environmental	• A comprehensive Environmental Impact Assessment (EIA) and Environmental Impact Report (RIMA) have been submitted to the Environmental Agency of Minas Gerais (FEAM) as part of the application for a Preliminary License (LP). The EIA/RIMA covers Capao do Mel, Soberbo, and Figueira licences and assessed potential impacts on air quality, water resources, biodiversity, noise, and socio-economic factors. The study includes 8 months of extensive environmental fieldwork, with surveys on flora, fauna, hydrology, air quality, and community engagement. Studies have determined:
	  ○ The processing facility will recycle water via ultrafiltration and reverse osmosis (RO) systems.
	  ○ The project will operate with 100% renewable energy sourced from existing hydro, solar, and wind power in Minas Gerais, significantly reducing its carbon footprint.
	  ○ Potential dust emissions from mining activities will be mitigated through water suppression methods, including recycled process water.
	• Waste Rock Characterisation: The mining process involves extracting ionic adsorption clay-hosted rare earths, which do not generate acid mine drainage or significant heavy metal contamination risks. Waste rock is primarily low-grade clays (kaolinite, smectite, illite), which are chemically inert and pose minimal environmental risk.
	• Residue Management: The spent residue is washed before backfilling, and the pit floor and walls covered with a compacted clay liner of material sourced from within the pit, to ensure groundwater contamination does not exceed environmentally acceptable levels. The progressive backfill approach reduces the need for permanent waste dumps and facilitates rapid site rehabilitation.
	• No tailings dams will be built. All spent ore will be dry-stacked on temporary piles and progressively backfilled and compacted into mined-out pits as voids become available (~24 months).

Infrastructure	• The Caldeira Project is strategically located in Caldas, Minas Gerais, a well-established mining and industrial region with significant infrastructure. The existing infrastructure significantly de-risks the project, reducing capital expenditures for building new roads, power lines, or water supply networks. • The PFS area spans 2,369 hectares (23.7 km²), providing ample land for mine development, processing infrastructure, and future expansions. The proposed pits and processing facility are well-connected via a network of paved roads and private gravel roads, facilitating efficient ore transport. • The regions of Caldas and Poços de Caldas are home to existing bauxite, alumina, clay, and chemical processing plants, ensuring access to an experienced mining and industrial workforce. Additionally, the Company has started supporting the development of relevant skills in the Caldas population. • The project is located within 3km of high-capacity power transmission lines, ensuring a stable and reliable energy supply for mining and processing operations. • Access to water is via a 1 km long pipeline to a nearby dam. This will provide >80% of water needs with supplementary water pumped from the operating pits.The ore beneficiation process is designed for high water efficiency, with >75% of process water recirculated within the plant. • Ore will be transported by trucks via internal haul roads (dominantly), existing gazetted roads, and private gravel roads to the central processing facility at Capao do Mel. • The project benefits from proximity to major highways, facilitating the transport of MREC products to export hubs. Brazil's well-developed port infrastructure, including Santos (São Paulo), provides efficient access to global markets. • The city of Caldas along with surrounding cities including Pocos de Caldas and Andrades provides sufficient housing, amenities, and services for workers.

Costs	• Mining costs have been built up from first principals and are based on an owner mining solution.
	• Conventional dig and haul equipment has been used (excavators with a fleet of rigid trucks) mining clay ore and waste. Additional allowances were made for clearing, topsoil removal, spent clay return, dewatering, fuel, hourly hire and haul road maintenance to determine the unit mining cost. The build-up of costs uses data sourced from equipment Owner Equipment Manufacturer's (OEM's).
	• Processing of Ore costs – Inclusive of processing, concentrate transport, and mine and general administration were determined based on PFS level buildup of OPEX for a 6.0 Mtpa plant by Ausenco.
	• Royalty charges are applied as follows:
	  ○ CFEM a federal royalty charge of 2.0% of Mineral Revenue
	  ○ TRFM a state royalty applied at an equivalent charge of US$0.39/tonne processed
	  ○ landowner royalty cost of US$1/tonne of ore .

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	○ royalty of 4.75% to the Togni Group on recovered REO
Revenue factors	*Sales revenue* • The project will produce an MREC product for sale, with pricing based on individual rare earth oxide values published by the Shanghai Metal Market. These values reflect gross spot prices, inclusive of VAT. A payability factor of 70% is applied to the separated oxide prices to determine the final MREC pricing. *Exchange Rates and Economic Model Inputs* • The economic model is denominated in US dollars (USD), with local cost estimates converted from Brazilian Reais (BRL) using an assumed exchange rate of 6.0 BRL/USD. The exchange rate assumption is based on December 2024 rates. • The project's exposure to foreign exchange risks will be further assessed in future study phases, considering potential hedging strategies. *Transportation and Treatment Charges* • Transportation charges for MREC exports (CIF Santos Port, Brazil) are estimated from budget pricing provided by logistics contractors. • Treatment and refining charges are not directly applicable, as the product is an intermediate feedstock for separation facilities rather than a fully refined REO product. • No smelter penalties are expected, as the MREC has been confirmed to meet industry purity requirements through ANSTO metallurgical test work. *Future Considerations* • Future feasibility studies will refine the revenue model based on: • Advanced marketing and offtake agreements, confirming final payability terms. • Updated market forecasts, reflecting shifts in supply-demand dynamics for critical REOs. • Potential government incentives, including tax exemptions and subsidies for critical mineral production. • The project is well-positioned to capitalise on the growing demand for high-value magnet REOs, with potential pricing and revenue generation upside.

Market assessment	*Market Demand and Supply Outlook*
	• The Caldeira Project is set to produce Mixed Rare Earth Carbonate (MREC), a high-value product rich in Neodymium (Nd), Praseodymium (Pr), Dysprosium (Dy), and Terbium (Tb)—essential elements for manufacturing permanent magnets used in electric vehicles (EVs), wind turbines, robotics, and advanced technologies.
	• With global demand for rare earth permanent magnets projected to grow at 8–10% annually over the next decade, the Caldeira Project is strategically positioned to meet the needs of rapidly expanding sectors such as clean energy, electric mobility, and defense.
	• Currently, global demand for rare earth oxides (REOs) exceeds 180,000 tonnes per year, and supply shortages—particularly for NdPr, Dy, and Tb—are expected by 2030, as industries seek to reduce reliance on Chinese supply chains. Today, China controls over 90% of global REO separation capacity, making supply diversification a top priority for governments and manufacturers worldwide.
	
	Competitive Landscape and Market Positioning
	• The Caldeira Project stands out as one of the few ionic clay-hosted rare earth projects outside China, offering a low-cost production model and a high-value Magnetic REO output.
	• Key competitors include:
	  ○ Serra Verde (Brazil) – The only other ionic adsorption clay operation outside China producing REE carbonate.
	  ○ Lynas Rare Earths (Australia/Malaysia) – A major REE producer from hard rock monazite deposits, which require more complex processing.
	
	Customer Landscape & Market Opportunity
	• The Caldeira Project is targeting a well-defined and rapidly growing market for Mixed Rare Earth Carbonate (MREC), with key customers including rare earth separation facilities, magnet manufacturers, and strategic industrial users across North America, Europe, Japan, and South Korea.
	• Demand for non-Chinese sources of rare earths continues to accelerate, driven by:
	  ○ Electric vehicle manufacturers (e.g., Tesla, BYD, Volkswagen, Stellantis)
	  ○ Wind turbine producers (e.g., Vestas, Siemens Gamesa, GE Renewables)
	  ○ Defense and aerospace sectors, which require secure supplies of Dysprosium (Dy) and Terbium (Tb) for high-performance magnet applications
	• Meteoric has already secured two non-binding Memoranda of Understanding (MOUs) with leading industry players: Ucore Rare Metals Inc. and Neo Performance Materials Inc. These MOUs reflect strong early-stage interest in the Caldeira Project's MREC product and support ongoing offtake discussions with other Tier-1 partners. Formal agreements are anticipated during the Feasibility Study phase.
	• The current market environment is highly favorable, supported by strategic policy initiatives in Western economies aimed at building resilient, domestic rare earth supply chains.
	
	Product Validation & Industry Alignment
	• The Caldeira Project's MREC product is undergoing rigorous testing to meet the commercial specifications required by leading separation facilities. Independent metallurgical analysis by ANSTO has confirmed that the product meets industry standards for purity and impurity thresholds.
	• Further customer qualification testing will be conducted during pilot plant operations, with early results indicating strong alignment with downstream processing requirements. The projected MREC composition is well-suited for efficient separation and refining into high-purity rare earth oxides.
	
	Strategic Outlook

- Looking ahead, the project's commercial strategy will focus on:
  - Securing binding offtake agreements with strategic partners
  - Refining pricing and demand forecasts as part of the Feasibility Study
  - Leveraging government-backed critical minerals policies to enhance project economics through funding, tax incentives, and trade facilitation
- With its unique position as a low-cost, high-value ionic clay-hosted REE project outside China, the Caldeira Project is poised to play a pivotal role in the global shift toward diversified, secure, and sustainable rare earth supply chains.

Economic

- Economic evaluation includes inputs and confidence levels which are supported by a technical pre-feasibility study.
- The Caldeira Project's economic analysis incorporated in pre-feasibility study is based on a detailed financial model incorporating capital expenditures (CAPEX), operating costs (OPEX), revenue projections, and financial assumptions.
- The Net Present Value (NPV) calculation uses a real, post-tax discount rate of 8% (NPV8), consistent with industry standards for mining projects in emerging markets.
- Inflation assumptions are not explicitly factored into the financial model, as all cost and revenue estimates are presented in real (constant) 2025 US dollars. Corporate tax is assumed at 34%, in line with Brazilian mining sector regulations.
- The economic study model analyses the outcome based at three different pricing scenarios. Spot price as at June 2025, broker consensus pricing and an average forecast price from two independent pricing agencies.
- A summary of the key financial metrics is shown below:

Financial Outputs	Unit	LOM		
		Spot	Consensus	Forecast
Pre-tax NPV_8	US$M	251	821	1,985
Post-tax NPV_8	US$M	109	488	1,256
Pre-tax IRR	%	15	28	39
Post-tax IRR	%	11	21	31
Payback period	years	6.1	2.9	2.8
Basket price[8] TREO	US$/kg TREO	26	33	51
NdPr Average pricing	US$/kg NdPr	67	86	135
Payability	%	70		
NdPr Gross Operating cost	US$/kg NdPr	31		
NdPr Net Operating costs[9]	US$/kg NdPr	22		
Capex inclusive of 25% contingency	US$M	443		

Sensitivity Analysis

- A sensitivity analysis was conducted on key financial variables, including:

[8] The basket price of TREO refers to the weighted average price of the individual REE contained in a specific mineral concentrate or product, based on their relative proportions and current market prices

[9] Operating costs net of DyTb credits at consensus pricing per kilogram of NdPr produced

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Pre-Tax NPV Sensitivity To Discount Rate

Discount Rate	Basket Price (US$/kg REO) (20.0%)	(10.0%)	–	10.0%	20.0%
4.0%	$626	$993	$1,360	$1,728	$2,095
6.0%	$456	$756	$1,055	$1,355	$1,655
8.0%	$326	$573	$821	$1,069	$1,317
10.0%	$224	$432	$640	$848	$1,056
12.0%	$145	$321	$497	$674	$850

Pre-Tax NPV Sensitivity To Opex

Opex	Basket Price (US$/kg REO) (20.0%)	(10.0%)	–	10.0%	20.0%
(20.0%)	$547	$795	$1,043	$1,291	$1,539
(10.0%)	$436	$684	$932	$1,180	$1,428
–	$326	$573	$821	$1,069	$1,317
10.0%	$215	$463	$711	$959	$1,207
20.0%	$104	$352	$600	$848	$1,096

Pre-Tax NPV Sensitivity To Capex

Initial Capex	Basket Price (US$/kg REO) (20.0%)	(10.0%)	–	10.0%	20.0%
(20.0%)	$414	$662	$910	$1,158	$1,406
(10.0%)	$370	$618	$866	$1,114	$1,362
–	$326	$573	$821	$1,069	$1,317
10.0%	$281	$529	$777	$1,025	$1,273
20.0%	$237	$485	$733	$981	$1,229

Pre-Tax NPV Sensitivity To FX

FX	Basket Price (US$/kg REO) (20.0%)	(10.0%)	–	10.0%	20.0%
4.518	$321	$569	$817	$1,065	$1,313
5.083	$323	$571	$819	$1,067	$1,315
5.647	$326	$573	$821	$1,069	$1,317
6.212	$327	$575	$823	$1,071	$1,319
6.777	$329	$577	$825	$1,073	$1,321

Pre-Tax NPV Sensitivity To FX

Δ Payability	Basket Price (US$/kg REO) (20.0%)	(10.0%)	–	10.0%	20.0%
56.0%	($101)	$94	$289	$483	$678
63.0%	$112	$334	$555	$776	$998
70.0%	$326	$573	$821	$1,069	$1,317
77.0%	$539	$813	$1,088	$1,362	$1,637
84.0%	$752	$1,053	$1,354	$1,655	$1,957

Future Considerations

- The economic analysis will be further refined to incorporate, updated cost estimates from vendor quotes and detailed engineering, potential tax incentives or government subsidies.
- Formalised offtake agreements improving payability terms.

Social

Stakeholder Survey & Communication

- Meteoric contracted a social diagnosis study following guidelines of the Social and Institutional Relationship Guide for the Mining Sector, from the Brazilian Mining Institute. From this the company developed an engagement strategy based on: specialized dialogue, active listening, transparency, and reporting regular information to the communities and institutions in the region where the Caldeira Project is being developed.
- Meteoric has identified and looked to establish a dialogue with the major stakeholders from the Caldas Municipality, including: governmental organisations, educational organisations, sporting groups, traditional and indigenous groups, economic and industrial groups.
- More than 50 meetings were conducted with local government leaders and registered municipal Organizations in 2024 to: introduce and explain the project, explain the proposed socio-economic benefits to Caldas and the surrounding region, clarify the licensing processes, and update stakeholders on the development status of the Caldeira Project. Additionally, Meteoric has developed a Caldeira Project Booklet (brochure) to communicate information contained in the Environmental Impact Study (EIS). Also, Meteoric have set up a WhatsApp channel named “Alô, Meteoric”, through which the community can reach out and contact the company to request information about its activities in any area.

Social Programs

- In 2024, Meteoric established partnerships and provided financial investments in existing Social Programs in the Caldas Municipality in the areas of: Education, Sports and Culture. Meteoric also established a partnership with an elderly care facility in Caldas, arranging: working bee, social events, and gifts at Christmas.
- In 2025 Meteoric will partner with up to 10 Municipal organisations to financially support selected social programs.

Engagement with Traditional Inhabitants and Indigenous Peoples

- The Company has dialogue with the three indigenous groups, and Barreirinhos Quilombo communities who live in four (4) different rural villages in the Caldas Municipality. Meteoric carries out specific

	dialogue with the leadership of these indigenous and traditional groups', respecting their communication style and desire for specific information about the Caldeira Project e.g. presentation of the 'Caldeira Project Booklet' (brochure) by the Company's Community Development co-ordinator at the villages. Meteoric has also implemented a Volunteer Program for employees, and its first engagement was in the Barreirinhos Quilombo Community.
Other	• No significant geological, seismic, or environmental risks have been identified that could materially impact project execution. The mineralisation does not contain uranium (U) or thorium (Th) at reportable levels in Brazil, eliminating the need for radiological monitoring and complex environmental handling. • Meteoric holds the rights to mine REEs on the PFS licenses through a Royalty and Development Agreement with Togni Refractories Ltda (the holder of the Mining Licences). • As part of the Installation Licence (LI) process Meteoric requires the consent of all Landowners who are directly affected by the project. The Company already has agreements with seven (7) landowners and continues to make progress on securing the remaining agreement. • Capao do Mel deposit is a Mining Licence application which needs to be granted prior to mining. The application is pending an Installation Licence (LI) from the EPA, which is expected in 2026. • All four (4) licences require the addition of REEs onto the licence document prior to mining. This requires: ANM to be notified of the new substance, a Resource Re-evaluation Report (RR) to be submitted, and a Preliminary Economic Assessment (PAE) to be completed. The RRR and PAE for CDM, SOB, and FG have been completed and are under examination by the ANM. The documents are currently being drafted for BDP and will be lodged in Q3 2025. • As part of the Preliminary Licence (LP) process Meteoric require approval of the Management Committee of the Pedra Branca APA (CONGEAPA) to mine inside the Buffer Zone of the APA. Meteoric has conducted extensive research and consultation from mid-2023 with the object of seeking and obtaining permission to conduct activities in the Buffer Zone and is confident of obtaining favourable consideration from the CONGEAPA.
Classification	• The Mineral Reserve is classified as a Probable Ore Reserve only using the guidelines of the JORC Code (2012 Edition). Measured and Indicated have been converted to Probable only.
Audits or reviews	• The MRE has undergone internal peer review and was prepared following the JORC Code (2012), ensuring compliance with industry best practices. • The Ore Reserve has not been independently audited or externally reviewed as is considered industry standard for the stage of development of the project.
Relative accuracy/ confidence	The estimates in this study relating to mining, processing and cost performance are underpinned by a PFS which has a confidence range of +25% to -25%.

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Appendix 4 - Caldeira REE Project - Licence details

License	Status	License Holder	Area (Ha)
808027/1975	MINING CONCESSION	COMPANHIA GERAL DE MINAS	600.76
809358/1975	MINING CONCESSION	COMPANHIA GERAL DE MINAS	617.23
809359/1975	MINING CONCESSION	COMPANHIA GERAL DE MINAS	317.36
815645/1971	MINING CONCESSION	COMPANHIA GERAL DE MINAS	366.02
815682/1971	MINING CONCESSION	COMPANHIA GERAL DE MINAS	575.26
817223/1971	MINING CONCESSION	MINERAÇÃO DANIEL TOGNI LOUREIRO LTDA	772.72
803459/1975	MINING CONCESSION	MINERAÇÃO PERDIZES LTDA	24.02
808556/1974	MINING CONCESSION	MINERAÇÃO PERDIZES LTDA	204.09
811232/1974	MINING CONCESSION	MINERAÇÃO PERDIZES LTDA	524.40
814251/1971	MINING CONCESSION	MINERAÇÃO PERDIZES LTDA	124.35
815006/1971	MINING CONCESSION	MINERAÇÃO PERDIZES LTDA	717.52
816211/1971	MINING CONCESSION	MINERAÇÃO PERDIZES LTDA	796.55
835022/1993	MINING CONCESSION	MINERAÇÃO PERDIZES LTDA	73.50
835025/1993	MINING CONCESSION	MINERAÇÃO PERDIZES LTDA	100.47
814860/1971	MINING CONCESSION	MINERAÇÃO ZELÂNDIA LTDA	341.73
815681/1971	MINING CONCESSION	MINERAÇÃO ZELÂNDIA LTDA	766.54
820352/1972	MINING CONCESSION	MINERAÇÃO ZELÂNDIA LTDA	26.40
820353/1972	MINING CONCESSION	MINERAÇÃO ZELÂNDIA LTDA	529.70
820354/1972	MINING CONCESSION	MINERAÇÃO ZELÂNDIA LTDA	216.49
2757/1967	MINING CONCESSION	RAJ MINERIOS LTDA	20.10
5649/1963	MINING CONCESSION	RAJ MINERIOS LTDA	12.41
803457/1975	MINING CONCESSION	RAJ MINERIOS LTDA	60.64
825972/1972	MINING CONCESSION	RAJ MINERIOS LTDA	377.42
833914/2007	MINING CONCESSION	RAJ MINERIOS LTDA	6.99
002.349/1967	MINING CONCESSION	VARGINHA MINERACAO E LOTEAMENTOS LTDA	74.01
830443/2018	EXPLORATION LICENSE	FERTIMAX FERTILIZANTES ORGANICOS LTDA	79.24
830444/2018	EXPLORATION LICENSE	FERTIMAX FERTILIZANTES ORGANICOS LTDA	248.34
830824/2006	EXPLORATION LICENSE	RAJ MINERIOS LTDA	13.24
832350/2006	EXPLORATION LICENSE	RAJ MINERIOS LTDA	27.14
832351/2006	EXPLORATION LICENSE	RAJ MINERIOS LTDA	16.77
832671/2005	EXPLORATION LICENSE	RAJ MINERIOS LTDA	16.91
832714/2016	EXPLORATION LICENSE	RAJ MINERIOS LTDA	13.61
832800/2002	EXPLORATION LICENSE	RAJ MINERIOS LTDA	6.94
831686/2012	EXPLORATION LICENSE	VARGINHA MINERACAO E LOTEAMENTOS LTDA	6.50
832193/2012	EXPLORATION LICENSE	VARGINHA MINERACAO E LOTEAMENTOS LTDA	12.46
807899/1975	MINING APPLICATION	COMPANHIA GERAL DE MINAS	948.92
815274/1971	MINING APPLICATION	COMPANHIA GERAL DE MINAS	739.73
833486/1996	MINING APPLICATION	MINAS RIO MINERADORA LTDA	79.38
833655/1996	MINING APPLICATION	MINAS RIO MINERADORA LTDA	249.11
833656/1996	MINING APPLICATION	MINAS RIO MINERADORA LTDA	82.77
833657/1996	MINING APPLICATION	MINAS RIO MINERADORA LTDA	68.25
834743/1995	MINING APPLICATION	MINAS RIO MINERADORA LTDA	283.19
830513/1979	MINING APPLICATION	MINERAÇÃO MONTE CARMELO LTDA	457.77
804222/1975	MINING APPLICATION	MINERAÇÃO PERDIZES LTDA	403.65
813025/1973	MINING APPLICATION	MINERAÇÃO PERDIZES LTDA	943.74
830000/1980	MINING APPLICATION	MINERAÇÃO PERDIZES LTDA	203.85
831092/1983	MINING APPLICATION	MINERAÇÃO PERDIZES LTDA	171.39
830391/1979	MINING APPLICATION	MINERAÇÃO PERDIZES LTDA.	7.30
830633/1980	MINING APPLICATION	MINERAÇÃO ZELÂNDIA LTDA	35.25
831880/1991	MINING APPLICATION	MINERAÇÃO ZELÂNDIA LTDA	84.75
815237/1971	MINING APPLICATION	RAJ MINERIOS LTDA	131.98
830722/2002	MINING APPLICATION	RAJ MINERIOS LTDA	5.60
831250/2008	MINING APPLICATION	RAJ MINERIOS LTDA	2.48
831598/1988	MINING APPLICATION	RAJ MINERIOS LTDA	930.90
832889/2005	MINING APPLICATION	RAJ MINERIOS LTDA	27.82
837368/1993	MINING APPLICATION	RAJ MINERIOS LTDA	340.04
830551/1979	MINING APPLICATION	TOGNI S/A MATERIAIS REFRATÃ RIOS	528.88
830416/2001	MINING APPLICATION	VARGINHA MINERACAO E LOTEAMENTOS LTDA	166.22
831269/1992	MINING APPLICATION	VARGINHA MINERACAO E LOTEAMENTOS LTDA	442.16
832146/2002	MINING APPLICATION	VARGINHA MINERACAO E LOTEAMENTOS LTDA	18.95
832252/2001	MINING APPLICATION	VARGINHA MINERACAO E LOTEAMENTOS LTDA	51.96
832572/2003	MINING APPLICATION	VARGINHA MINERACAO E LOTEAMENTOS LTDA	204.49
833551/1993	MINING APPLICATION	VARGINHA MINERACAO E LOTEAMENTOS LTDA	98.87
833553/1993	MINING APPLICATION	VARGINHA MINERACAO E LOTEAMENTOS LTDA	98.13
830.697/2003	MINING APPLICATION	VARGINHA MINERACAO E LOTEAMENTOS LTDA	5.38
830.461/2018	EXPLORATION APPLICATION	FERTIMAX FERTILIZANTES ORGANICOS LTDA	50.88
832799/2002	EXPLORATION APPLICATION	RAJ MINERIOS LTDA	38.35

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License	Status	License Holder	Area (Ha)
830955/2006	EXPLORATION APPLICATION	VARGINHA MINERACAO E LOTEAMENTOS LTDA	1993.50
833176/2008	EXPLORATION APPLICATION	VARGINHA MINERACAO E LOTEAMENTOS LTDA	634.00

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