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Maiden Barra do Pacu Resource adds strategic high-grade rare earths

Meteoric Resources NL (ASX: MEI) (**Meteoric** or the **Company**) is pleased to announce the maiden Mineral Resource Estimate (**MRE**) for the Barra do Pacu (**BDP**) licence at its 100%-owned Caldeira Rare Earth Element Ionic Clay Project (**Caldeira Project**).

Highlights

- **Maiden MRE** adds **389Mt at 2,204ppm TREO**[1] (1,000ppm cut-off grade) including:
  - 77Mt of **Indicated Resource** at a grade of **2,917ppm TREO** (1,000ppm cut-off grade)
  - High-grade **Indicated Resource** area of **32Mt at 4,130ppm TREO** (3,000ppm cut-off)
  - Increases volumes **of critical rare earths recently subject** to Chinese Export Control (Table 1)
- **Global Caldeira MRE** grows to **1.5Bt @ 2,359ppm** TREO containing critical rare earth oxides:
  - 195kt of Yttrium oxide
  - 195kt of Praseodymium oxide and 554kt of Neodymium oxide (light Magnetic)
  - 65kt of Samarium oxide
  - 28kt of Gadolinium oxide
  - 6kt of Terbium oxide and 32kt of Dysprosium oxide (heavy Magnetic)
  - 2kt of Lutetium oxide
- **Global Measured** and **Indicated** MRE grow to **666Mt @ 2,685 ppm TREO** including 22.5% MREO[2]
- BDP is a **continuation of the high-grade zone** at Capão do Mel (**CDM**) and will be integrated into the upcoming Caldeira Project Pre-Feasibility Study (**PFS)**

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Managing Director, Stuart Gale commented:

"Barra do Pacu is immediately south of the Capão do Mel resource and with this update we can now include it in the upcoming Pre-Feasibility Study. Geologically it represents the southern extension of the high-grade Capão do Mel orebody across a licence boundary into the Barra do Pacu licence. This resource estimate effectively doubles the Indicated Resource located within 1,000m of the proposed processing plant site. The combined Measured and Indicated Resource for Capão do Mel and Barra do Pacu is in excess of 150Mt at greater than 3,000ppm TREO including greater than 20% MREO. This represents an obvious starter area for future mining at the Caldeira Project to drive strong economic returns and a rapid capital payback.

In addition, Barra do Pacu adds to our capability to supply rare earths which are subject to the Chinese export controls implemented on 4 April 2025 and reinforces Caldeira's capacity to provide a low cost, alternative global supply of these strategic rare earths."

[1] **TREO**: Total Rare Earth Oxides - Y_2O_3, 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
[2] **MREO**: Magnetic Rare Earth Oxides - Pr_6O_{11}, Nd_2O_3, Tb_4O_7, Dy_2O_3

The maiden MRE at the BDP Mining Licence (No. 816211/1971) totals 389Mt at 2,204ppm TREO (1,000ppm cut-off grade), with 432ppm MREO (**Table 2**). High-grade resources in the Indicated category total 77Mt at 2,917ppm TREO, with 545ppm MREO for a MREO/TREO ratio of 18.7% (**Tables 1** and **2**).

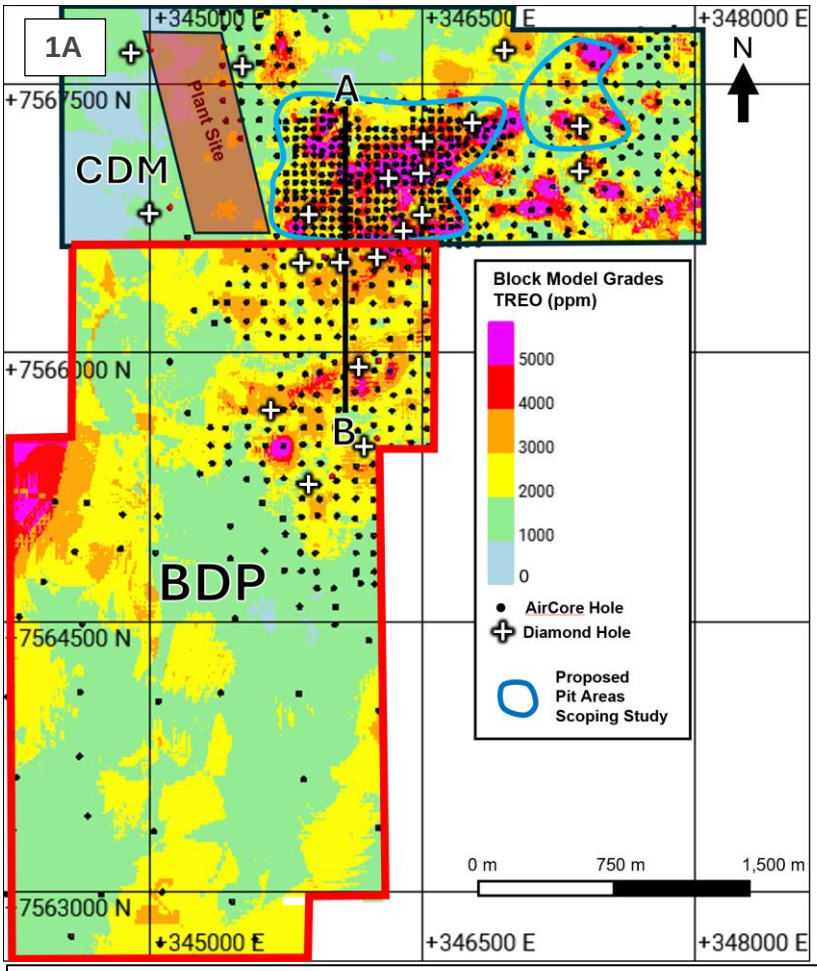
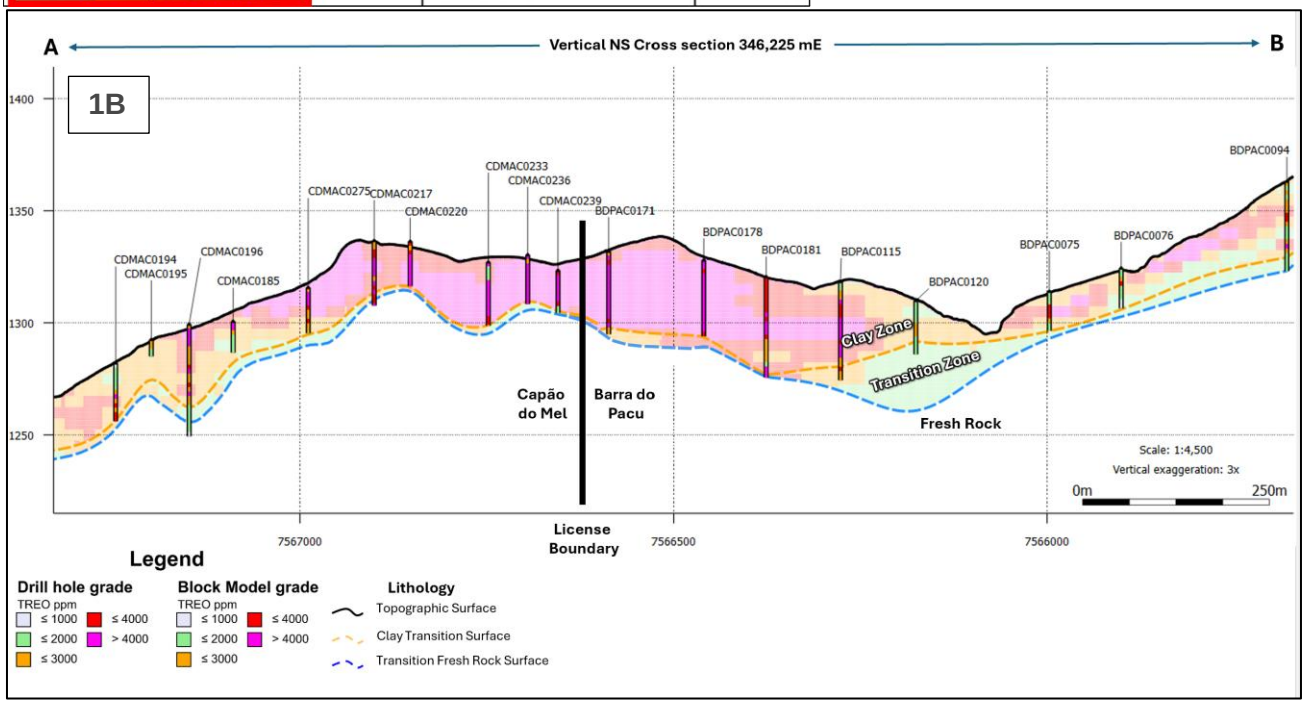


Figure 1A *a plan view highlighting the grade distribution in the block model and the approximate location of infrastructure and planned open pits at Capão do Mel from the scoping study. Also included are all aircore and diamond drill collars. The location of the section shown in Figure 1B below is also indicated.*

Figure 1B *Section 346,225mE - North-South section (A-B) extending south through CDM starter pit and into high-grade resources in the north of BDP, showing high-grade mineralisation (>4,000ppm TREO) in drill holes and block model, plus depth of clay mineralisation. The high-grade mineralisation begins from surface and increases in thickness to the south in BDP where drill intercepts of greater than 30m true thickness can be noted in aircore holes BPPAC0171, 0178, 0181and 0115.*



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On 4 April 2025, China announced new export controls on certain medium and heavy rare earth-related items. **Table 1** below highlights the rare earths subject to these controls and the contained oxide tonnages within Meteoric's Global Mineral Resource. These volumes support the Caldeira Project's capacity to provide an alternative low cost, sustainable supply of these critical materials.

Table 1: *Global Mineral Resource by Rare Earth Element showing tonnage of contained oxides per location.*

Element	Oxide	CDM	FIG	SOB	DM1	DM2	CVN	BDP	Totals
Yttrium	Y_2O_3	16,605	31,415	30,168	28,383	13,217	35,393	40,263	195,443
Lanthanum	La2O3	128,823	156,135	216,180	138,223	75,465	194,169	328,354	1,237,350
Cerium	CeO2	123,735	165,985	172,629	140,064	71,399	185,858	287,836	1,147,508
Praseodymium	Pr6O11	19,144	23,961	36,600	24,152	12,600	34,737	43,833	195,027
Neodymium	Nd2O3	52,145	66,764	104,866	72,225	37,499	104,807	116,054	554,360
Samarium	Sm2O3	5,968	7,854	12,046	8,851	4,371	12,749	13,178	65,018
Europium	Eu2O3	1,513	2,082	3,045	2,289	1,096	3,195	3,388	16,608
Gadolinium	Gd2O3	4,042	5,567	8,048	5,997	2,887	8,572	8,983	44,096
Terbium	Tb4O7	554	847	1,058	840	399	1,124	1,295	6,117
Dysprosium	Dy2O3	2,803	4,677	5,268	4,494	2,114	5,908	6,793	32,057
Holmium	Ho2O3	498	892	921	850	391	1,068	1,225	5,844
Erbium	Er2O3	1,316	2,546	2,426	2,358	1,087	2,977	3,232	15,942
Thulium	Tm2O3	170	349	313	317	143	388	422	2,101
Ytterbium	Yb2O3	1,020	2,185	1,836	1,935	874	2,387	2,576	12,814
Lutetium	Lu2O3	142	307	207	272	124	328	365	1,746
Total Tonnes		**358,478**	**471,564**	**595,614**	**431,250**	**223,666**	**593,660**	**857,798**	**3,532,028**

The 1.5Bt of Ionic Absorption Clay (**IAC**) Mineral Resources, at industry leading grades, highlights the significance of the Caldeira Project and its capacity to provide an alternative supply chain for global rare earth markets. The Project also contains significant upside exploration potential to define higher grade mineralisation, and mineralisation with enriched MREO content, which supports the scalability of future processing capacity.

The updated BDP Mineral Resource Estimate incorporates 6,867m of Aircore (**AC**) and Diamond (**DD**) drilling in 231 holes (**Figure 5** and **Table 3**). **Figures 1A** and **1B** above show a significant portion of the BDP high grade Indicate Resource occurs in the north of the licence, contiguous with the Capão do Mel starter Pit where operations are planned to commence.

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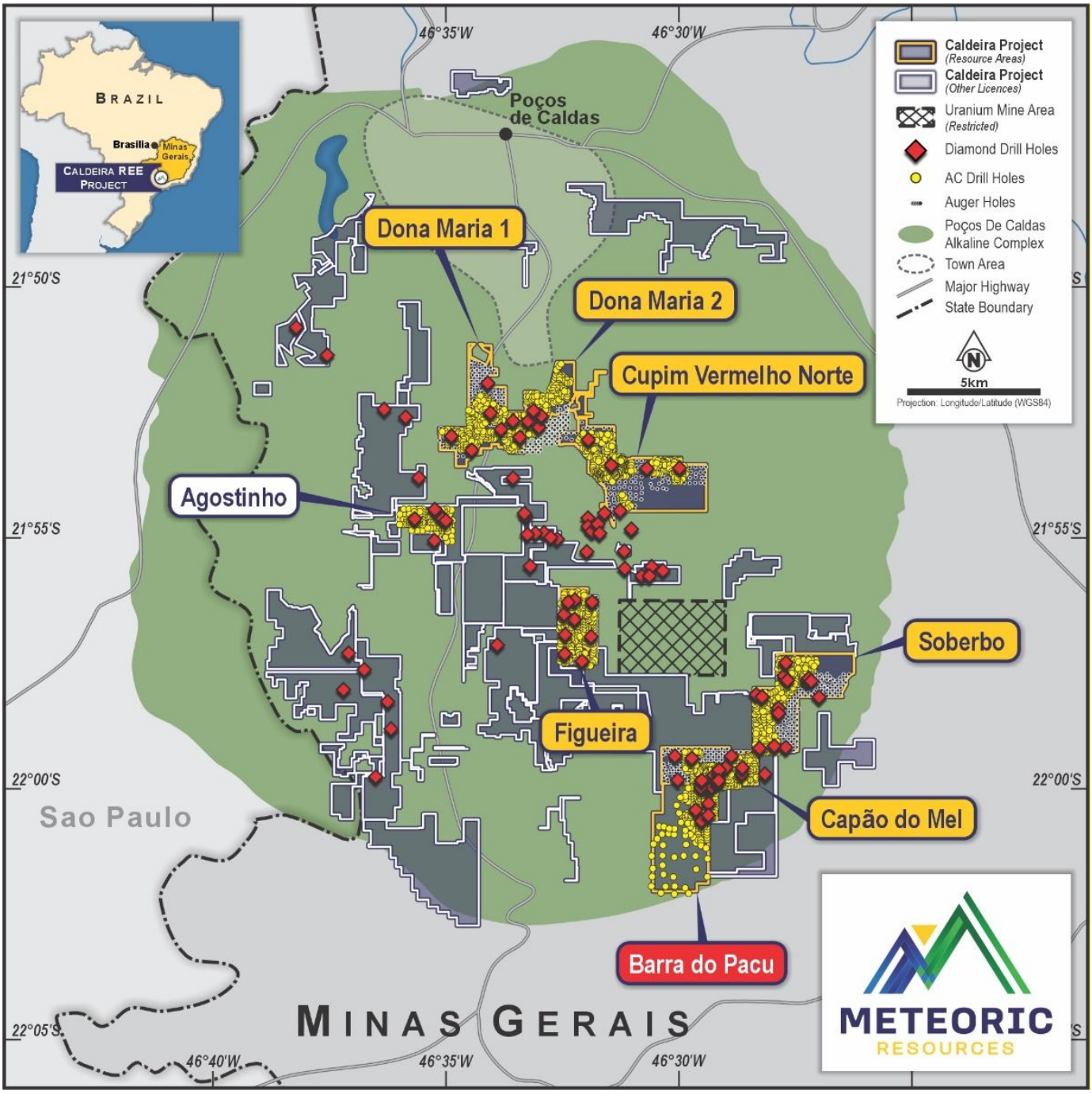

Figure 2: *Location map of mineral resources of Caldeira REE Project highlighting Barra do Pacu in the south.*

The Global MRE for the Caldeira Project increases to 1.5Bt at 2,359ppm TREO, including Magnet REO grades of 526ppm which comprise 22.3% of the TREO basket (1,000 ppm TREO cut-off grade). Measured and Indicated Resources increase to 666Mt at 2,685ppm TREO and 605ppm MREO, for a MREO/TREO ratio of 22.5% (**Table 2**). This updated MRE represents a 35% increase in tonnes relative to the 12 March 2025 update.

Table 2: *Caldeira Project MRE by licence at 1,000ppm TREO cut-off. Differences may occur due to rounding. The new figures for Bara do Pacu licence announced in this release are highlighted in green.*

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%
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%**

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The Caldeira Project continues to prove its Tier 1 status as one of the highest-grade IAC rare earth deposits in the world, with a combination of large tonnage, high-grade and excellent recoveries (**Figure 3**). Importantly, the outstanding inventory of high-grade material in the Measured and Indicated categories (**Figure 4**) continues to grow to support the development of the Caldeira Project.

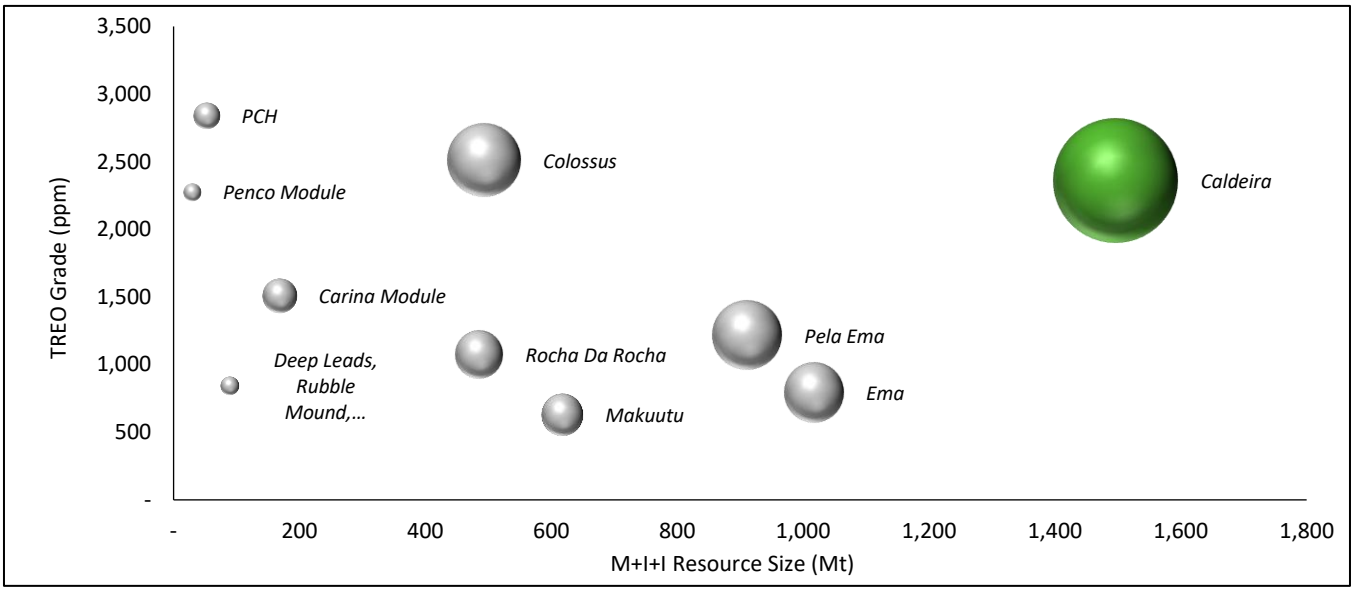

Figure 3: *Graph of tonnage v TREO grade for total Resources (M+I+I) of worldwide Ionic Absorption Clay deposits (MEI peers). The size of the sphere is related to contained metal i.e. tonnes x grade. Full source data is provided in Appendix 1.*

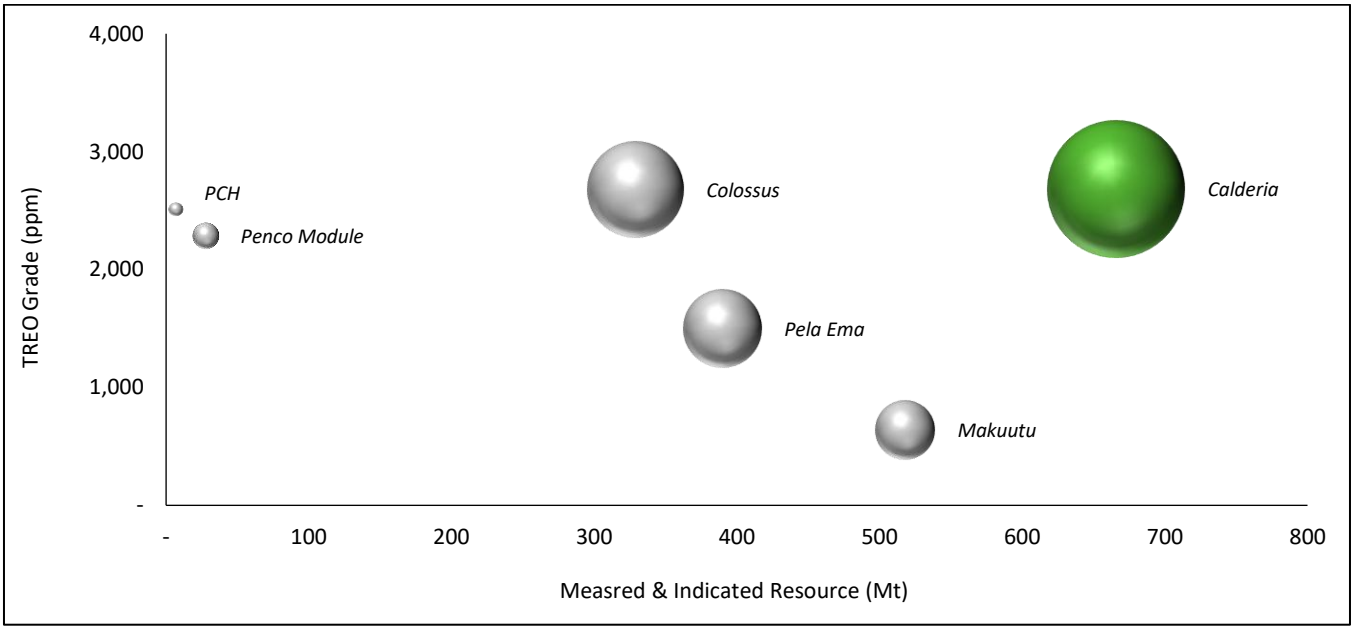

Figure 4*: Graph of tonnage v TREO grade for reported Measured and Indicated Resources of Ionic Adsorption Clay deposits (MEI peers). The size of the sphere is related to contained metal i.e. tonnes x grade. Full source data is provided in Appendix 1.*

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Information required per ASX Listing Rule 5.8.1

Barra do Pacu MRE Detail

The maiden BDP MRE totals 389Mt at 2,204ppm (1,000ppm cut-off grade), with 432ppm MREO for an MRE/TREO ratio of 19.6% (**Table 3**). The resource estimation was completed by BNA Consulting and incorporated results from DD and AC drilling programs completed in 2024 (**Figure 5** and **Table 3**).

Table 3: *Barra do Pacu MRE reported at a 1,000ppm TREO cut-off grade.*

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 %
Barra do Pacu	Indicated	Clay	77	2,917	143	376	4	21	545	18.7%
Total	**Indicated**		**77**	**2,917**	**143**	**376**	**4**	**21**	**545**	**18.7%**
Barra do Pacu	Inferred	Clay	190	2,153	112	296	3	18	429	19.9%
Barra do Pacu	Inferred	Transition	122	1,837	95	253	3	15	365	19.9%
Total	**Inferred**		**313**	**2,029**	**105**	**279**	**3**	**16**	**404**	**19.9%**
Total	**Indicated + Inferred**		**389**	**2,204**	**113**	**298**	**3**	**17**	**432**	**19.6%**

Drilling Techniques and Hole Spacing

A total of 231 drill holes for 6,867m were used to define the Barra do Pacu MRE, which included seven DD and 224 AC drill holes (**Table 4**). Given the substantial geographic extent and generally shallow, flat lying geometry of the mineralisation, the chosen spacing and orientation is considered to be sufficient to establish geology and grade continuity. Most drill sites required minimal to no site preparation. On particularly steep sites, the area was levelled with a backhoe loader. Holes generally stopped at 'blade refusal' when the rotating bit was unable to cut the ground any deeper. This generally occurred in the transition zones (below clay zone and above fresh rock). On occasions a face sampling hammer was used to penetrate through the remaining transition zone and into fresh rock.

Table 4: *Barra do Pacu MRE drill hole statistics.*

Hole Type	Number Holes	Number Samples	Total drilled (m)	Maximum depth (m)	Average depth (m)
Diamond	7	329	327	73.3	46.7
Aircore	224	3,313	6,540	50	29.2
Totals	231	3,642	6,867		

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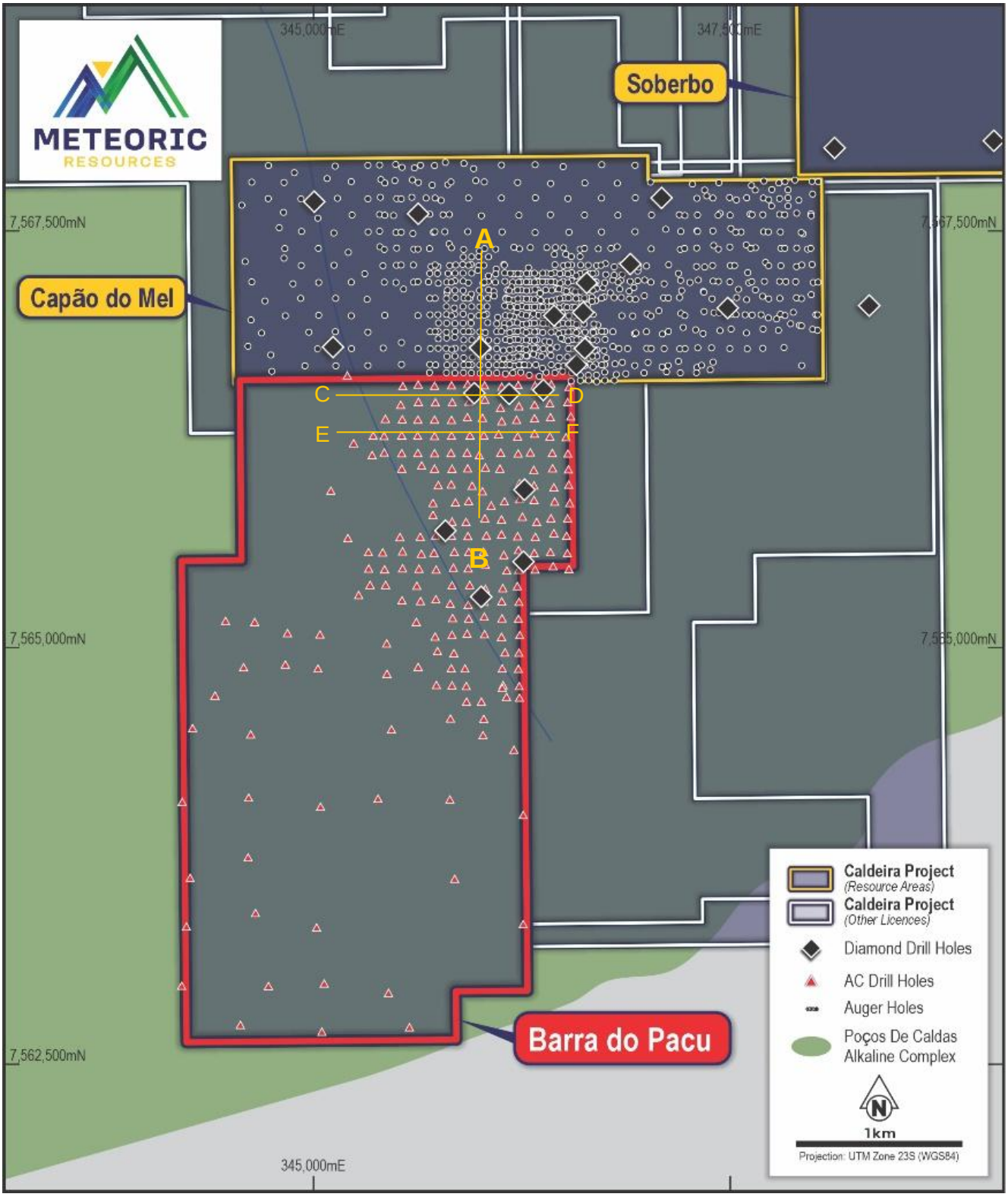

Figure 5: *Barra do Pacu drill hole location plan showing location of Sections 346,225mE (A-B), 7,566,400mN (C-D) 7,566,275mN.(E-F).*

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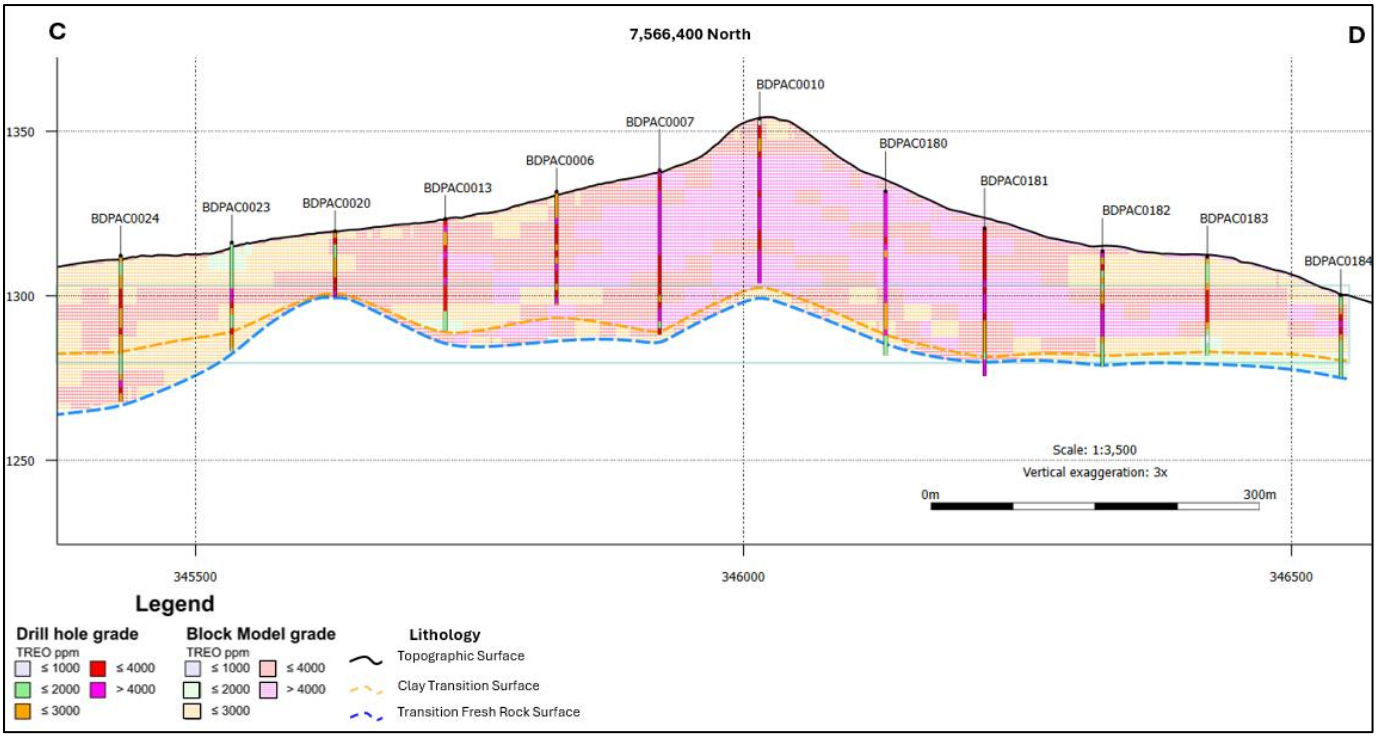

Figure 6: *BDP Section C-D (7 566 400 mN) showing high-grade mineralisation (>3,000ppm TREO) beginning from surface. Refer to Figure 1 for location map*

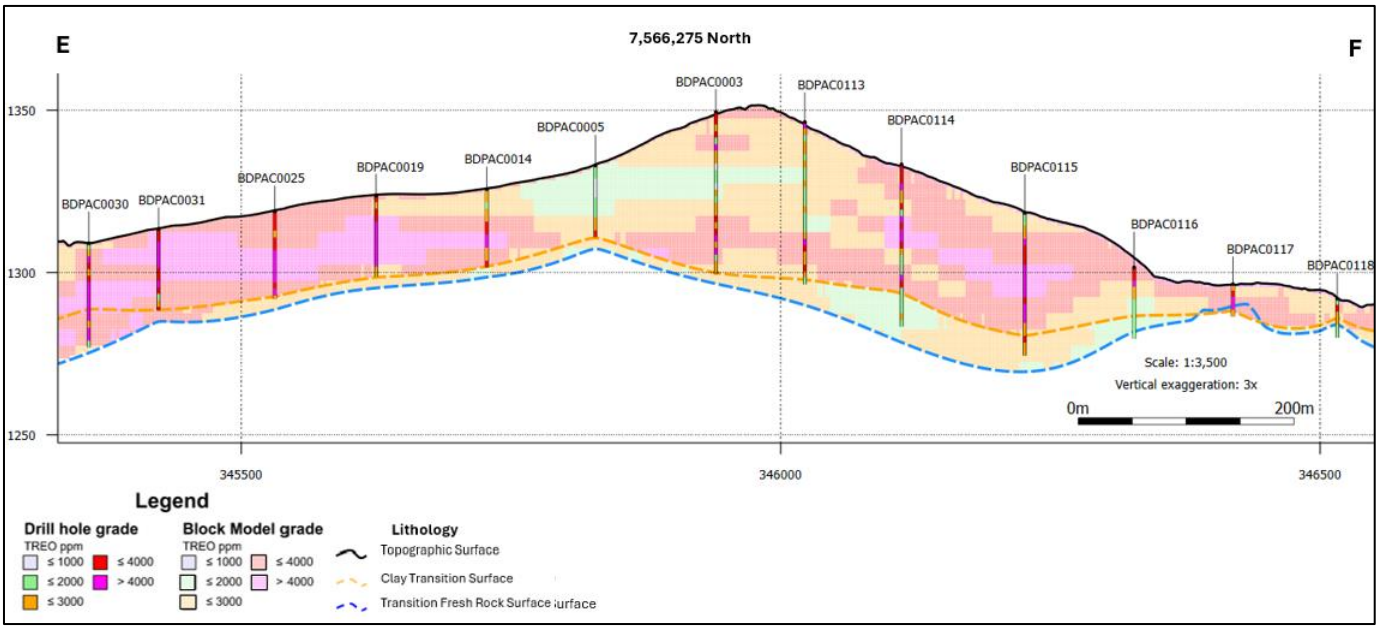

Figure 7: *BDP – Section E-F (7 566 275 mN) showing high-grade mineralisation (>3,000ppm TREO) beginning from surface. Refer to Figure 1 for location*

Diamond drilling:

- Completed using a conventional wireline diamond drill rig (Mach 1200).
- All holes drilled vertically using PQ diameter core to the transition zone (85mm diameter), reducing to HQ diameter core below this (63.5mm diameter).
- Depth of clay varies between 8.1m to 48.3m.
- Maximum depth drilled of 73.3m, with all holes drilled vertically.
- No regular spacing, with hole placement designed to test specific geological characteristics.

AC drilling:

- Completed using a HANJIN 8D Multipurpose Track Mounted Drill Rig, configured to drill 3-inch AC holes.
- Average drill hole depth was 29.2m (proxy for depth of clay).
- Maximum depth drilled was 50m, with all holes drilled vertically.
- Spacing of AC holes was 100m x 100m in zones of strongest anomalism in soil sampling, stepping out to 400m x 400m to give maximum coverage over the Licence.

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Geology and Geological Interpretation

The Cretaceous (80 Ma) Alkaline Complex of Poços de Caldas in Brazil hosts deposits of REE, bauxite, white clay for ceramics, uranium, zirconium and leucite. The Poços de Caldas Intrusive Complex covers an area of approximately 800km^2. The main rock types found are intrusive and volcanic alkaline rocks of the nepheline syenite system, comprising phonolites and foidolites (syenites). Primary mineralisation includes uranium, zirconium and REE that are confined to the intrusives emplaced during the magmatic event. Post intrusion, intense weathering of the region has resulted in an extensive clay regolith developed above the syenites.

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)CO_3F and has very low levels of uranium and thorium 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**). This thick profile hosts the ionic clay REE mineralisation.

Sampling and Sub-sampling Techniques

Diamond cores: Sample lengths for diamond drilling were determined by geological boundaries with a maximum sample length of 1m applied. In the saprolite zone the core was halved using a metal spatula and placed in plastic bags, and for fresh rock the core was halved using a brick saw then placed into plastic bags. Field duplicates consisted of quarter core, with two of the quarters sent to the lab.

Aircore material: Two-metre composite samples were collected from the cyclone of the rig in plastic buckets which were weighed. The sample (> 6kg) was passed through a single tier riffle splitter generating a 50/50 split, with one half bagged and submitted to the laboratory, and the other half bagged and stored as a duplicate at the core facility in Poços de Caldas. If a sample was <6kg the entire sample was bagged and submitted for assay. Given the grain size of the mineralisation is extremely fine (clays) and shows little variability, the practice of submitting 50% of original sample for analysis was deemed appropriate. Meteoric QAQC protocols demand a duplicate sample every 20 samples and a blank and standard sample every 30 samples.

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Sample Analysis Method

Diamond and AC samples: Samples were analysed by ALS Laboratories in Vespasiano (MG), following sample preparation at ALS sample prep facility in Pocos de Caldas that included:

- Drying at 60°C.
- Crushing fresh rock to sub 2mm.
- Disaggregating saprolite with hammers.
- Passing through a riffle splitter (800g sub-sample).
- Pulverization of 800g sample to 90% passing 75um, monitored by sieving.
- Aliquot selection from pulp packet.

The aliquot obtained was sent to ALS Lima for analysis by ME-MS81, consisting REE and trace elements analysis by ICP-MS for 32 elements by fusion with lithium borate as shown below with detection limits (**Table 5**):

Table 5: *ICP-MS method results for REE and trace elements (ppm) via ME-MS81.*

Code	Analytes and 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

Estimation Methodology

The resource estimations are based on the block model interpolated by the Ordinary Kriging (**OK**) method using Micromine software. OK was selected as the method for grade interpolation as the sampling data has a log-normal distribution represented by a single generation.

A discretised block model was created in the sub-blocking process using wireframes of several surfaces: topography, base of soil, base of clay, and base of transition. Mineralisation begins from near surface (0.5m – 2.0m soil coverage). Where there was no information from diamond or AC 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.

Initially, the model was filled with blocks measuring 25 (X) by 25 (Y) by 5 (Z) metres, which were divided into sub-units of smaller size, with a factor for size subdivision of 10 by 10 by 5 in contact with the surrounding three-dimensional wireframes. The grade estimation was performed in four consecutive passes (rounds) using different criteria for: search radius, number of composite samples allowed, and number of holes the samples must come from. The radii and the orientation of the search ellipses were determined using standard variograms (refer to JORC Table 1 for additional information).

Parameters applied to 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.

The block model was validated in several ways: by running an 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.

Cut-off grades, including basis for the selected Cut-off Grade

The selection of the TREO cut-off grade (1,000ppm) used for reporting was based on the experience of the Competent Person (**Table 6** and **Figure 8**). This cut-off grade was selected based on a peer review of publicly available information from more advanced projects with comparable mineralisation styles (i.e., clay-hosted rare earth mineralisation) and comparable conceptual processing methods. Material above this cut-off generates a head feed grade of over 2,272ppm TREO, and in the opinion of the Competent Person, meets the conditions for reporting of a Mineral Resource with reasonable prospects of eventual economic extraction.

Table 6: *Bara do Pacu MRE classifications reported by cut-off grade.*

Cut-off ppm TREO	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
1,000	Indicated	Clay	77	2,917	143	376	4	21	545	18.7%
	Inferred	Clay	190	2,153	112	296	3	18	429	19.9%
	Inferred	Transition	122	1,837	95	253	3	15	365	19.9%
TOTAL	Indicated + Inferred		389	2,204	113	298	3	17	432	19.6%
2,000	Indicated	Clay	56	3,436	171	450	5	25	651	18.9%
	Inferred	Clay	94	2,788	158	415	4	23	600	21.5%
	Inferred	Transition	37	2,784	161	420	4	21	606	21.8%
TOTAL	Indicated + Inferred		187	2,983	163	427	4	23	617	20.7%
3,000	Indicated	Clay	32	4,130	215	565	6	29	815	19.7%
	Inferred	Clay	26	3,709	236	621	6	33	895	24.1%
	Inferred	Transition	14	3,444	208	535	5	24	772	22.4%
TOTAL	Indicated + Inferred		72	3,846	221	580	6	29	837	21.7%
4,000	Indicated	Clay	13	5,171	285	747	7	35	1,074	20.8%
	Inferred	Clay	7	4,775	324	848	8	42	1,223	25.6%
	Inferred	Transition	1	4,510	266	697	6	28	997	22.1%
TOTAL	Indicated + Inferred		20	5,011	297	777	8	37	1,118	22.3%

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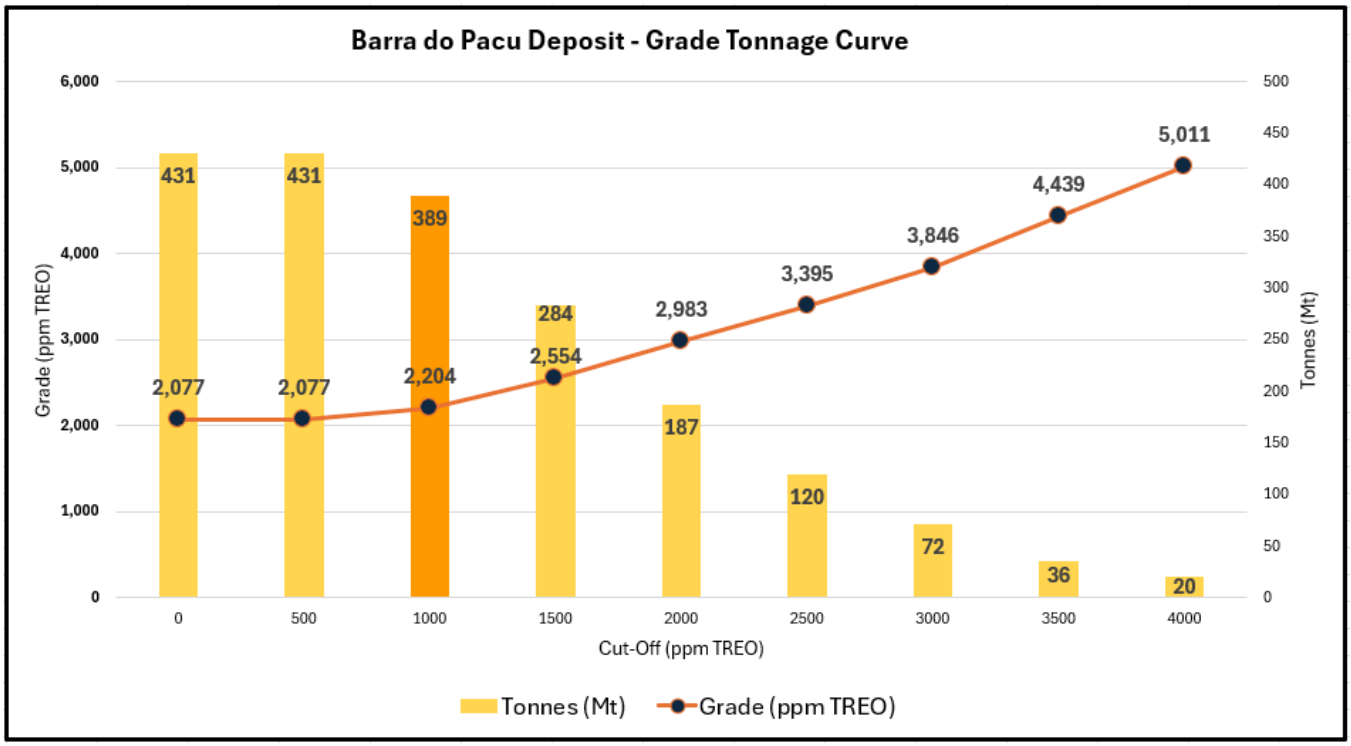

Figure 8: *Barra do Pacu grade x tonnage graph at various cut-off grades.*

Criteria used for Classification

Mineral Resources for Barra do Pacu have been classified as Indicated and Inferred (**Figure 9**).

The Competent Persons are satisfied that the classification is appropriate based on the current level of confidence in the data, drill hole spacing, geological continuity, variography, bulk density, and licencing data available for the project.

Mining and metallurgical methods and material modifying factors

No specific mining or metallurgical methods or parameters were incorporated into the modelling process.

Proposed Further Work

The Company is in the final stages of completing its Pre-Feasibility Study (PFS). High-grade resources from Bara do Pacu (BDP) which are reported above will be included in the Mining and Processing Schedule and will make a material positive difference to the recovered REOs and the financial case for the Project.

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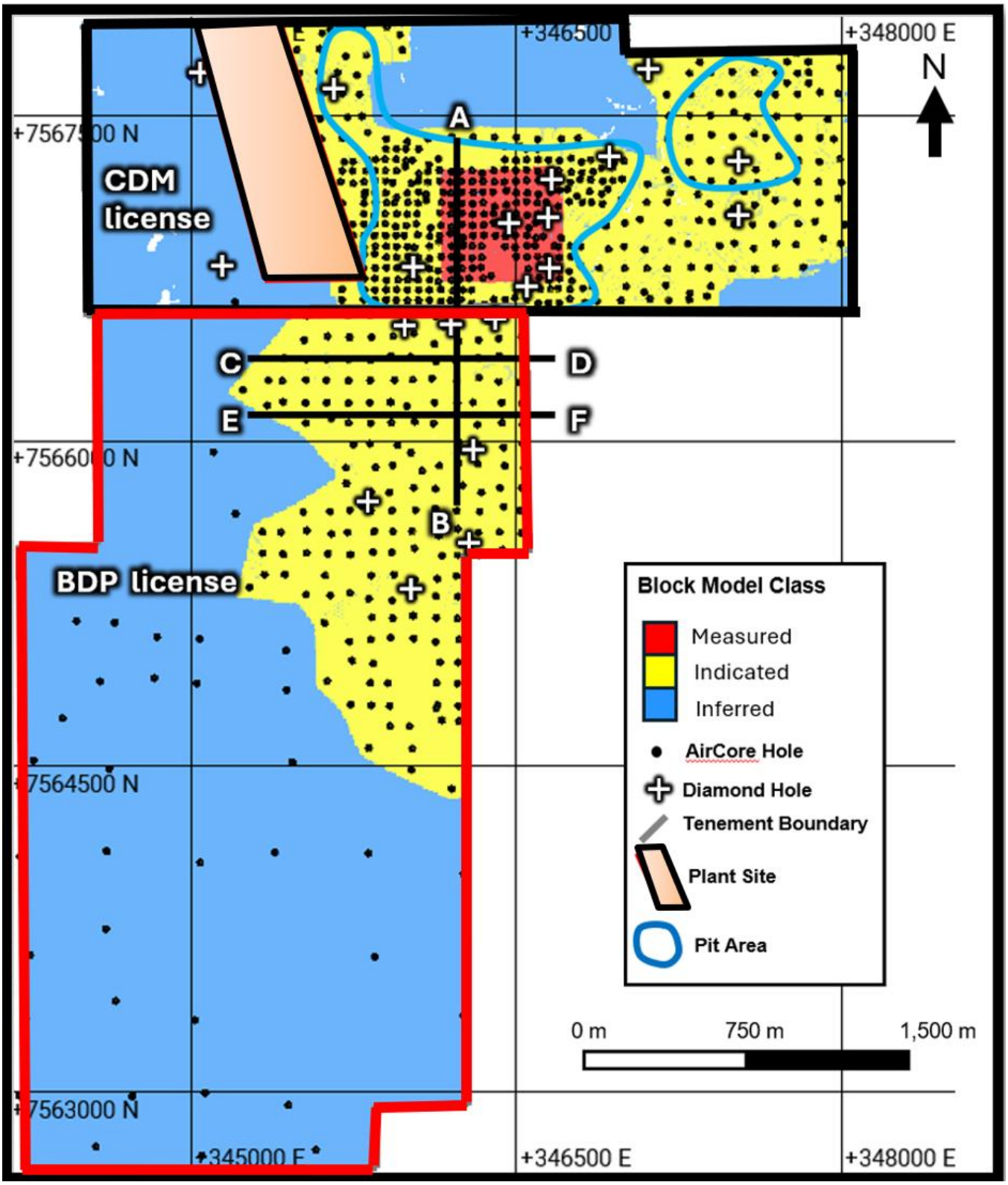

Figure 9: *Barra do Pacu: Plan view showing distribution of Measured, Indicated and Inferred resources at Capão do Mel (CDM) and Barra do Pacu (BDP) licences. Note the high-grade Indicated resources in the north of BDP is contiguous with high-grade Measured & Indicated resources in the CDM starter Pit, suggesting this material can contribute significantly to the high-grade (>4,000ppm TREO) early production profile.*

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

For further information, please contact:

Stuart Gale
Managing Director
Meteoric Resources NL
E sgale@meteoric.com.au
T +61 437 900 175

Michael Vaughan
Investor and Media Relations
Fivemark Partners
E michael.vaughan@fivemark.com.au
T + 61 422 602 720

Competent Person Statements

Dr Marcelo J De Carvalho

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

Dr. Beck Nader

The information in this report that relates to Mineral Resources at Dona Maria 1 & 2 (DM 1 & DM 2) and Cupim Vermelho Norte (CVN) 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 at Bara do Pacu BDP 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 release that relates to Mineral Resource Estimates at the Soberbo, Capão do Mel, and Figueira prospects was prepared by BNA Mining Solutions and released on the ASX platform on: 13 May 2024, 12 June 2024, and 4 August 2024 respectively. 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.

All references to the scoping study and its outcomes in this release relate to the ASX announcement dated 22 October 2024 titled Caldeira's Scoping Study Confirms Exceptional Financials. Please refer to the ASX announcement for full details and supporting information. 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.

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 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.

This announcement includes exploration results, estimates of Mineral Resources and scoping study results. The Company has previously reported these results and estimates in ASX announcements dated 16 December 2022, 1 May 2023, 27 June 2023, 24 July 2023, 31 August 2023, 27 September 2023, 8 December 2023, 14 December 2023, 30 January 2024, 29 February 2024, 14 May 2024 and 13 June 2024, 8 July 2024, 5 August 2024, 22 October 2024, 12 December 2024, 5 February 2025 and 12 March 2025. The Company confirms that it is not aware of any new information or data that materially affects the information included in previous announcements (as may be cross referenced in the body of this announcement) and that all material assumptions and technical parameters underpinning the exploration results and Mineral Resource estimates continue to apply and have not materially changed.

All references to the scoping study and its outcomes in this release relate to the ASX announcement dated 22 October 2024 titled Caldeira's Scoping Study Confirms Exceptional Financials. Please refer to the ASX announcement for full details and supporting information.

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Appendix 1: Reference data

Table 7: *Source data for Figure 3 (Bubble Plot), showing IAC Deposits with reported Measured + Indicated + Inferred Resources (Mt) x TREO Grade (ppm).*

Company	Project	Classification	Million Tonne (Mt)	Grade (ppm)	Cut-Off (ppm)	MREO (ppm)	Bubble Size	Reference
Serra Verde	Pela Ema	Measured, Indicated + Inferred	911	1,214	NSR	242	111	Minedocs August 2016
Aclara	Carina Module	Inferred	168	1,510	NSR	346	25	Aclara Resources Inc. 12 December 2023
Aclara	Penco Module	Measured, Indicated + Inferred	29	2,275	NSR	351	7	Aclara Resources Inc. 12 December 2023
Brazilian Critical Minerals	Ema	Inferred	1,017	793	500	216	81	Brazilian Critical Minerals Ltd 22 April 2024
Brazilian Rare Earths	Rocha Da Rocha	Inferred	485	1,074	200	309	52	Brazilian Rare Earths Ltd 19 December 2023
Appia	PCH	Indicated + Inferred	53	2,841	NSR	587	15	Appia Rare Earths & Uranium Corp 1 March 2023
Viridis	Colossus	Measured, Indicated + Inferred	493	2,508	1,000	601	124	Viridis Mining & Minerals Ltd 22 January 2025
Ionic Rare Earths	Makuutu	Indicated + Inferred	617	630	200	152	39	Ionic Rare Earths Limited 15 May 2024
Abx Group	Deep Leads, Rubble Mound, Wind Break	Measured, Indicated + Inferred	89	844	350	220	8	ABx Group 2 May 2024
Meteoric Resources	**Caldeira**	**Measured, Indicated + Inferred**	**1,497**	**2,359**	**1,000**	**526**	**353**	***This announcement***

Table 8: *Source data for Figure 4 (Bubble Plot), showing IAC Deposits with reported Measured + Indicated Resources (Mt) x TREO Grade (ppm).*

Company	Project	Classification	Million Tonne (Mt)	Grade (ppm)	Cut- Off (ppm)	MREO (ppm)	Bubble Size	Reference
Serra Verde	Pela Ema	Measured + Indicated	390	1,500	NSR	0	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	2,164	1000	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
Meteoric Resources	**Caldeira (Global)**	**Measured + Indicated**	**666**	**2,655**	**1000**	**605**	**179**	***This announcement***
Meteoric Resources	CDM	Measured + Indicated	85	3,035	1000	666	26	*MEI ASX 13 June 2024*
Meteoric Resources	BdP	Indicated	77	2,917	1000	545	22	*This announcement*
Meteoric Resources	SOB	Indicated	86	2,730	1000	669	23	*MEI ASX 14 May 2024*
Meteoric Resources	FIG	Indicated	138	2,844	1000	582	39	*MEI ASX 5 August 2024*
Meteoric Resources	CVN	Measured + Indicated	116	2,647	1000	679	31	*MEI ASX 12 March 2025*
Meteoric Resources	DM1 + DM2	Indicated	164	2,269	1000	536	37	*MEI ASX 12 March 2025*

Appendix 2: Caldeira REE Project licence details

Licence	Prospect	Status	Licence Holder	Area (Ha)
815645/1971	Agostinho	Mining Licence	Companha Geral de Minas	366.0
816211/1971	Barra do Pacú	Mining Licence	Mineracao Perdizes Ltda	796.5
830513/1979	Capão do Mel	Mining Application	Mineracao Monte Carmelo Ltda	457.8
833655/1996	Capão do Mel Norte	Mining Application	Meteoric Caldeira Mineracao Ltda	249.1
833656/1996	Capão do Mel Norte II	Mining Application	Meteoric Caldeira Mineracao Ltda	82.8
830443/2018	Capão do Mel Norte III	Exploration Licence	Fertimax Fertilizantes Organicos Ltda	79.2
830461/2018	Capão do Mel Norte IV	Exploration Application	Fertimax Fertilizantes Orgânicos Ltda	50.9
814251/1971	Cercado	Mining Licence	Mineracao Perdizes Ltda	124.3
832193/2012	Cercado	Exploration Licence	Varginha Mineração e Loteamentos Ltda	12.5
830391/1979	Cercado II	Mining Application	Mineracao Perdizes Ltda	7.3
815682/1971	Cipó	Mining Licence	Companha Geral de Minas	575.3
835025/1993	Cipó II	Mining Licence	Mineracao Perdizes Ltda	100.5
835022/1993	Cipó III	Mining Licence	Mineracao Perdizes Ltda	73.5
825972/1972	Cipó Leste	Mining Licence	RAJ Mineiros Ltda	377.4
815681/1971	Coqueirinho	Mining Licence	Mineracao Zelandia Ltda	766.5
803459/1975	Coqueirinho II	Mining Licence	Mineracao Perdizes Ltda	24.0
813025/1973	Cupim Vermelho Norte	Mining Application	Mineracao Perdizes Ltda	943.7
830000/1980	Cupim Vermelho Sul	Mining Application	Mineracao Perdizes Ltda	203.8
831686/2012	Cupim Vermelho Sul	Exploration Licence	Varginha Mineração e Loteamentos Ltda	6.5
809358/1975	Dona Maria I	Mining Licence	Companha Geral de Minas	617.2
809359/1975	Dona Maria II	Mining Licence	Companha Geral de Minas	317.4
811232/1974	Donana	Mining Licence	Mineracao Perdizes Ltda	524.4
820354/1972	Fazenda Ademar Silva	Mining Licence	Mineracao Zelandia Ltda	216.5
830633/1980	Fazenda Ademar Silva II	Mining Application	Mineracao Zelandia Ltda	35.3
820353/1972	Fazenda Limoeiro	Mining Licence	Mineracao Zelandia Ltda	529.7
831880/1991	Fazenda Limoeiro	Mining Application	Mineracao Zelandia Ltda	84.8
814860/1971	Figueira	Mining Licence	Mineracao Zelandia Ltda	341.7
837368/1993	Figueira Oeste	Mining Application	RAJ Mineiros Ltda	340.0
832252/2001	Figueira Oeste	Mining Application	Varginha Mineração e Loteamentos Ltda	52.0
831269/1992	Figueira Sul	Mining Application	Varginha Mineração e Loteamentos Ltda	442.2
832572/2003	Figueira Sul	Mining Application	Varginha Mineração e Loteamentos Ltda	204.5
815006/1971	Galinha	Mining Licence	Mineracao Perdizes Ltda	717.5
834743/1995	Pedra Branca	Mining Application	Meteoric Caldeira Mineracao Ltda	283.2
804222/1975	Pião	Mining Application	Mineracao Perdizes Ltda	403.6
815274/1971	Pinheiro	Mining Application	Companha Geral de Minas	739.7
831092/1983	Pinheiro II	Mining Application	Mineracao Perdizes Ltda	171.4
002349/1967	Pinheiro Leste	Mining Licence	Varginha Mineração e Loteamentos Ltda	74.0
830551/1979	Pitangueira	Mining Application	Togni S/A Materias Refratarios	528.9
820352/1972	Santa Alina	Mining Licence	Mineracao Zelandia Ltda	26.4
817223/1971	Soberbo	Mining Licence	Mineracao Daniel Togni Loureiro Ltda	772.7
830444/2018	Soberbo Norte	Exploration Licence	Fertimax Fertilizantes Organicos Ltda	248.3
833551/1993	Soberbo Norte	Mining Application	Varginha Mineração e Loteamentos Ltda	98.9

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Licence	Prospect	Status	Licence Holder	Area (Ha)
833553/1993	Soberbo Norte	Mining Application	Varginha Mineração e Loteamentos Ltda	98.1
833657/1996	Soberbo Norte	Mining Application	Meteoric Caldeira Mineracao Ltda	68.3
808027/1975	Tamanduá	Mining Licence	Companha Geral de Minas	600.8
808556/1974	Tatú	Mining Licence	Mineracao Perdizes Ltda	204.1
830955/2006	Exploration Target	Exploration Application	Varginha Mineração e Loteamentos Ltda	1993.5
831598/1988	Exploration Target	Mining Application	RAJ Mineiros Ltda	930.9
833176/2008	Exploration Target	Exploration Application	Varginha Mineração e Loteamentos Ltda	634.0
830416/2001	Exploration Target	Mining Application	Varginha Mineração e Loteamentos Ltda	166.2
815237/1971	Exploration Target	Mining Application	RAJ Mineiros Ltda	132.0
833486/1996	Exploration Target	Mining Application	Meteoric Caldeira Mineracao Ltda	79.4
803457/1975	Exploration Target	Mining Licence	RAJ Mineiros Ltda	60.6
832799/2002	Exploration Target	Exploration Application	RAJ Mineiros Ltda	38.4
832889/2005	Exploration Target	Mining Application	RAJ Mineiros Ltda	27.8
832350/2006	Exploration Target	Exploration Licence	RAJ Mineiros Ltda	27.1
2757/1967	Exploration Target	Mining Licence	RAJ Mineiros Ltda	20.1
832146/2002	Exploration Target	Mining Application	Varginha Mineração e Loteamentos Ltda	18.9
832671/2005	Exploration Target	Exploration Licence	RAJ Mineiros Ltda	16.9
832351/2006	Exploration Target	Exploration Licence	RAJ Mineiros Ltda	16.8
832714/2016	Exploration Target	Exploration Licence	RAJ Mineiros Ltda	13.6
830824/2006	Exploration Target	Exploration Licence	RAJ Mineiros Ltda	13.2
5649/1963	Exploration Target	Mining Licence	RAJ Mineiros Ltda	12.4
833914/2007	Exploration Target	Mining Licence	RAJ Mineiros Ltda	7.0
832800/2002	Exploration Target	Exploration Licence	RAJ Mineiros Ltda	6.9
830722/2002	Exploration Target	Mining Application	RAJ Mineiros Ltda	5.6
830697/2003	Exploration Target	Mining Application	Varginha Mineração e Loteamentos Ltda	5.4
832342/2024	Exploration Target	Exploration Licence	Meteoric Caldeira Mineracao Ltda	3.8
832344/2024	Exploration Target	Exploration Application	Meteoric Caldeira Mineracao Ltda	3.8
832346/2024	Exploration Target	Exploration Application	Meteoric Caldeira Mineracao Ltda	3.7
832341/2024	Exploration Target	Exploration Licence	Meteoric Caldeira Mineracao Ltda	3.5
832343/2024	Exploration Target	Exploration Licence	Meteoric Caldeira Mineracao Ltda	2.6
831250/2008	Exploration Target	Mining Application	RAJ Mineiros Ltda	2.5
832340/2024	Exploration Target	Exploration Licence	Meteoric Caldeira Mineracao Ltda	2.0
832339/2024	Exploration Target	Exploration Licence	Meteoric Caldeira Mineracao Ltda	1.9
832347/2024	Exploration Target	Exploration Application	Meteoric Caldeira Mineracao Ltda	1.0
832345/2024	Exploration Target	Exploration Application	Meteoric Caldeira Mineracao Ltda	0.9
				18,291.6

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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 resource was sampled using: a diamond drill machine and an aircore drill machine. • **Diamond drill holes** ○ The intact drill cores are collected in plastic core trays with depth markers recording the depth at the end of each drill run (blocks). ○ 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 drill holes** ○ Two (2) meter 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 Poços de Caldas.
Drilling techniques	• **Diamond Core** ○ 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** ○ 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. ○ Most drill sites require minimal to no site preparation. On particularly steep sites, the area is levelled with a backhoe loader. ○ 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	• **Diamond drill hole recovery** ○ 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** ○ 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	• **Diamond drilling** ○ 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 meter by meter). Parameters logged include: grainsize, texture and colour, which can help to identify the parent rock before weathering. ○ All drill holes are photographed and stored at Core facility in Poços de Caldas. • **Aircore drilling** ○ 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. ○ 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. ○ The chip trays of all drilled holes have a digital photographic record and are retained at a Core facility in Poços de Caldas.
Sub-sampling techniques and sample preparation	• **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	• **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

Criteria	Commentary

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 compared to DD results. The apparent Bias is not considered significant.
- 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

- **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**
  - 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

- Aircore drilling was done at 100m x 100m in areas of TREO anomalism in Soil sampling. 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:
  - Diamond samples were collected at 1.00m composites, respecting the geological contacts.
  - Aircore samples were collected at 2.00m composites.

Orientation of data in relation to geological structure

- The mineralisation is flat lying and occurs within the saprolite/clay zone of a deeply developed regolith (reflecting topography and weathering). Vertical sampling from all sampling methods is considered most appropriate.

Sample security

- **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

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Criteria	Commentary
	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 2 (Licence 816211/1971). • Given the rich history of mining and current mining activity in the Poços de Caldas there appears to be no impediments to obtaining a Licence 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 deposit is recognized as an Ionic Adsorption Clay, 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	• Drill hole information for all Aircore holes was reported in a previous ASX Release on 12 December 2024.
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.
Diagrams	• Reported in the body of the text.
Balanced reporting	• Significant Intercepts for all Aircore drill holes were reported in a previous ASX Release on 12 December 2024.
Other substantive exploration data	• Metallurgical work 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 sulphate solution [(NH4)2SO4)] in weakly acidic conditions [pH 4]. Average recovery of the low temperature magnet REE Pr + Nd was 58%. desorption was achieved using a standard ammonium sulphate 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). • A maiden Inferred resource was published to the ASX on May 1st 2023. • Subsequent updated resources were published to the ASX for Soberbo, Capão do Mel and Figueira deposits on 13 May 2024,12 June 2024, and 04 August 2024 respectively. Updated resources were published to the ASX for Dona Maria 1 & 2 and Cupim Vermelho Norte deposits on 12 March 2025.
Further work	• Proposed work is discussed in the body of the text.

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Section 3: Estimation and 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 database was 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	• The resource estimation is based on 6,867m of Diamond and Aircore drilling. • 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. • 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 and Aircore drilling from surface and into the fresh rock.
Dimensions	• The Mineral Resource at Barra do Pacu has the following dimensions: ○ 1,900m x 4,000m in N-S direction. • The top of the rare earth element mineralization is 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 analysed 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.

Search Ellipse parameters by pass.

Pass	Search Ellipse (size factor)	Min. No. Composites	Max. No. Composites	Min. No. Drill Holes
01	0.667	4	3	3
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 for Barra do Pacu.

Element	Barra do Pacu		
	X	Y	Z
La (ppm)	230	220	20
Ce (ppm)	230	230	20
Pr (ppm)	230	220	20
Nd (ppm)	230	220	20
Sm (ppm)	230	220	20
Eu (ppm)	230	220	20
Gd (ppm)	230	220	20
Tb (ppm)	230	220	20
Dy (ppm)	230	180	20
Ho (ppm)	230	180	20
Er (ppm)	230	220	20
Tm (ppm)	230	180	20
Yb (ppm)	230	220	20

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Lu (ppm)	230	180	20
Y (ppm)	230	220	20
Th (ppm)	230	230	30
U (ppm)	240	240	20

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

Element (ppm)	Barra do Pacu
La	12
Ce	48
Pr	12
Nd	12
Sm	12
Eu	12
Gd	12
Tb	12
Dy	12
Ho	12
Er	12
Tm	0
Yb	0
Lu	12
Y	12
Th	108
U	144

- The block models were 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

- No specific mining method is assumed other than potentially the use of open pit mining methods.

Metallurgical factors or assumptions

- Historic metallurgy data from Auger samples has been completed and reported to ASX:MEI 20/12/2023.
- Head grade of the composite sample for test work collected from 44 holes, over 140 samples (200 kg) was 4,917ppm TREO including 25.5% Magnet REE.
- Initial metallurgical test work showed excellent recoveries by desorption of Rare Earth Elements (REE) by using ammonium sulphate solution [(NH4)2SO4)] in weakly acidic conditions [pH 4]
- Average recovery of the low temperature magnet REE Pr + Nd was 58%
- Average recovery of high temperature magnet REE, Tb +Dy was 43%.
- The results show that excellent REE desorption was achieved using a standard ammonium sulphate solution at pH 4 and crucially confirms that the high-grade Caldeira Project is an Ionic (Adsorption) Clay REE deposit.

Environmental factors or assumptions

There are two Environmental areas within the municipality of Caldas which encroach upon the current resources at Soberbo, Capao do Mel, and Barra do Pacu deposits, 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 Barra do Pacu resource is 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 licences). Importantly, for Meteoric's current program no infill drilling has been performed inside the APA, nor are there current plans to conduct any exploration activities inside the APA. Additionally, the 'Base Case' development scenario contemplated in MEI's current Scoping Study 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, a proposal of measures necessary to mitigate any possible impact on ecosystems and seeking authorization from the municipality of Caldas and the APA Management Council.

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

Criteria	Commentary
	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 Indicated and Inferred (within the Buffer Zone).
Bulk density	• Dry bulk densities are quoted in the resource. • 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 deposits have been classified as 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.

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