METEORIC RESOURCES

24 July 2023

ASX ANNOUNCEMENT

Diamond Drilling Confirms Ultra High-Grade REEs Extend Significantly Beneath Resource

Highlights

- Assay results from 27 diamond cores at the Caldeira Project received
- 85% of historic drilling was completed to an average depth of less than 10 metres. Meteoric's new diamond drilling conclusively shows the clay zone and the High-Grade REE mineralisation extends significantly deeper, including to 36 metres at Capão do Mel and 56 metres at Figueira
- Assay highlights effectively commencing from surface include remarkable results of:
  - CDMDD001 - **31.2m** @ **3,769** ppm TREO[1] including 16.4m @ **5,537** ppm TREO
  - CDMDD002 - **18.5m** @ **3,808** ppm TREO, including 10.4m @ **5,000** ppm TREO
  - CDMDD004 - **16.4m** @ **5,967** ppm TREO, including 10.7m @ **7,243** ppm TREO
  - CDMDD005 - **5.4m** @ **8,200** ppm TREO
  - CDMDD006 - **36.0m** @ 2,881 ppm TREO, including 9.0m @ **4,228** ppm TREO
  - CDMDD007 - **33.0m** @ 2,102 ppm TREO
  - CVNDD001 - **19.2m** @ **5,825** ppm TREO
  - CVNDD002 - **20.6m** @ **4,111** ppm TREO, including 11.2m @ **5,538** ppm TREO
  - CVNDD003 - **31.8m** @ **3,243** ppm TREO, including 4.0m @ **16,074** ppm TREO
  - CVNDD004 - **27.4m** @ 2,914 ppm TREO, including 11.0m @ **5,066** ppm TREO
  - DM1DD002 - **33.6m** @ 2,715 ppm TREO
  - DM1DD003 - **9.9m** @ **4,741** ppm TREO
  - FGDD001 - **41.2m** @ 1,846 ppm TREO, including 3.6m @ **3,711** ppm TREO
  - FGDD002 - **58.3m** @ 2,449 ppm TREO, including 5.5m @ **4,834** ppm TREO
  - FGDD003 - **45.6m** @ **3,352** ppm TREO, including 11.7m @ **6,108** ppm TREO
  - SBDD002 - **26.1m** @ **3,348** ppm TREO, including 14.0m @ **4,365** ppm TREO
- The Company recently published its maiden Mineral Resource Estimate (**MRE**) for the Caldeira REE Project under JORC 2012 which stands at a World Class 409Mt @ 2,626 TREO at a 1,000ppm cut off[2] based solely on the historical drilling to an average depth of less than 10m. The new diamond drilling which extends mineralisation up to 56m at Figueira and 36m at Capão do Mel has enormous positive implications for any future resource estimate should the trend continue.

[1] TREO = $La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3$

[2] ASX:MEI 01/05/2023 - Caldeira REE Project Maiden Mineral Resource

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Meteoric Resources NL (**Meteoric** or the **Company**) (ASX: **MEI**) is pleased to announce results from 27 diamond drill holes where assays have now been received. These results represent the first new sampling of the project by Meteoric.

Executive Chairman, Dr Andrew Tunks said,

"This is groundbreaking work for the Company with the first real data to indicate that the high-grade rare earth mineralisation continues significantly deeper than the current Inferred Resource. The new assays clearly show there is significant extensions at depth at all prospects and indeed this is particularly clear at Capão do Mel, where the diamond drilling has extended the mineralisation to a depth of thirty-six (36) metres and at Figueira where we see REE mineralised zones down to sixty-seven (67) metres. In fact, the diamond drilling at all six resource areas has extended the maximum depths of mineralisation significantly. This has enormous positive implications for any future resource estimate should the trend continue in future drilling.

Equally significant has been the validation of the historic auger drilling results, with the Company's first diamond hole assays confirming the Caldeira Project's status as the ***World's highest grade Ionic Clay REE****. Assays also confirm that the high TREO grades reflect very high-grade Magnetic Rare Earth Oxide (MREO)[3] results with several thick intersections well over 1,500ppm MREO. The Caldeira Project is clearly significantly higher grade than any other IONIC clay REE yet documented. When coupled with the excellent metallurgical recoveries document by previous explorers[4] this is potentially a disruptive asset in the global rare earth market.*

The coming months will see an exciting time for the Company with considerable activity following on from these diamond results. An initial batch of composite samples for metallurgical testwork is now underway at ANSTO laboratories in Australia, looking to confirm very high REE recoveries previously reported. The Company owned and operated Aircore drill rig will be infill drilling at Capão do Mel, Sorberbo and Figueira to delineate Measured and Indicated Resources for optimisation and economic studies. In addition, the diamond drilling will continue testing both priority soil anomalies outside the defined resource areas as well as further testing within the resource to collect depth to basement and density data. Given today's exciting results, it is expected that this drilling will continue for the remainder of 2023 and form a crucial dataset for the next Mineral Resource Estimate.

Diamond Drilling Program

A total of 41 HQ Diamond (DD) drill holes for 1,313m have been drilled into the six (6) known deposits to 18 July 2023 (**Figure 1**). The collar table for all drilling is presented in **Appendix 1**. The initial proposed 1,250m program was designed to test the depth to the base of the clays below the Inferred Resource and support metallurgical characterisation and density testwork programs.

Due to the success of this program, drilling has been expanded to test seventeen (17) priority regional targets (soil anomalies) on licences outside the Company's existing REE resource areas. Updates on these targets will be reported as results are received and interpreted.

Upon completion of the regional drill program further resource diamond holes will be completed in the resource areas documenting the validity of historical auger drilling and providing solid geological logging of the transition from the regolith profile into the underlying unweathered intrusive basement.

[3] MREO = Pr_6O_{11} + Nd_2O_3 + Tb_4O_7 + Dy_2O_3

[4] ASX:MEI 20/12/23 Metallurgical Tests Confirm Caldeira as Ionic Adsorption Clay REE Deposit

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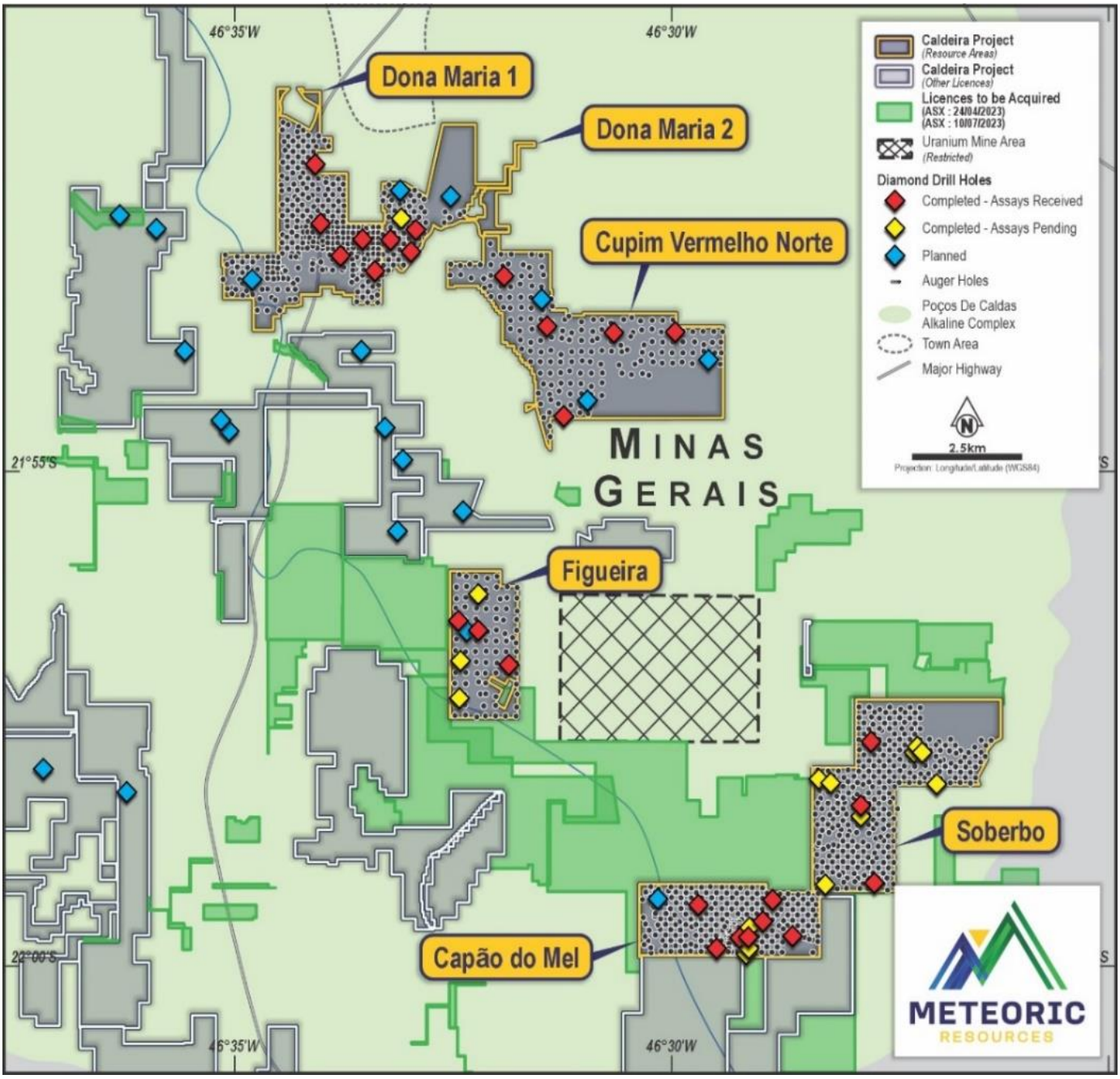

Figure 1: *DD Drill Hole Location Plan*

Diamond Drilling Results

Rare Earth mineralisation occurs in a thick saprolite (clay zone) and transition zone which has formed as a result of intense weathering of the underlying intrusive host rocks.

Table 1. *Mineralised Intercept Table*

Target	Hole	From (m)	To (m)	Length (m)	TREO (ppm)	MREO (ppm)	MREO as % of TREO
Capão da Mel	CDMDD001	0.0	31.2	31.2	3,760	923	24.6%
	including	*2.2*	*18.6*	*16.4*	*5,537*	*1,572*	*28.4%*
	CDMDD002	0.0	18.5	18.5	3,808	907	23.8%
	including	*6.0*	*16.4*	*10.4*	*5,000*	*1,405*	*28.1%*
	CDMDD004	0.0	16.4	16.4	5,967	1,736	29.1%
	including	*3.3*	*14.0*	*10.7*	*7,243*	*2,203*	*30.4%*
	CDMDD005	0.0	5.4	5.4	8,200	1,943	23.7%
	including	*0.7*	*5.4*	*4.7*	*8,794*	*2,025*	*23.0%*
	CDMDD006	0.0	36.0	36.0	2,881	519	18.0%
	including	*0.0*	*9.0*	*9.0*	*4,228*	*316*	*7.5%*
	and	*22.0*	*26.0*	*4.0*	*3,398*	*743*	*21.9%*
	CDMDD007	0.0	33.3	33.3	2,102	371	17.7%
	CDMDD008	0.0	36.8	36.8	1,600	276	17.2%
	including	*3.0*	*8.0*	*5.0*	*4,861*	*1,206*	*24.8%*
Cupim Vermelho	CVNDD001	0.0	19.2	19.2	5,825	1,403	24.1%
	including	*0.0*	*16.9*	*16.9*	*6,403*	*1,552*	*24.2%*
	CVNDD002	0.0	20.6	20.6	4,111	1,194	29.0%
	including	*5.0*	*16.2*	*11.2*	*5,538*	*1,795*	*32.4%*
	CVNDD003	0.6	32.4	31.8	3,243	699	21.6%
	including	*23.0*	*27.0*	*4.0*	*16,074*	*5,017*	*31.2%*
	CVNDD004	0.0	27.4	27.4	2,914	631	21.6%
	including	*9.0*	*20.0*	*11.0*	*5,066*	*1,669*	*32.9%*
	CVNDD005	0.4	19.8	19.4	1,556	282	18.1%
Don Maria I	DM1DD001	1.7	20.4	18.8	2,857	785	27.5%
	including	*4.8*	*14.0*	*9.2*	*4,079*	*1,341*	*32.9%*
	DM1DD002	1.0	34.6	33.6	2,715	580	21.4%
	including	*4.0*	*16.0*	*12.0*	*4,714*	*1,445*	*30.6%*
	DM1DD003	0.0	9.9	9.9	4,741	1,362	28.7%
	including	*3.0*	*9.9*	*6.9*	*5,714*	*1,764*	*30.9%*
	DM1DD004	0.3	13.4	13.0	2,229	474	21.2%
	DM1DD005	0.0	1.0	1.0	1,200	232	19.3%
Dona Maria II	DM2DD001	0.0	15.6	15.6	2,076	517	24.9%
	including	*3.0*	*6.0*	*3.0*	*3,453*	*883*	*25.6%*
	DM2DD002	0.0	5.0	5.0	2,690	616	22.9%
	including	*0.0*	*3.0*	*3.0*	*3,386*	*859*	*25.4%*
	DM2DD003	0.0	15.3	15.3	2,175	526	24.2%
	including	*0.0*	*4.0*	*4.0*	*3,626*	*1,069*	*29.5%*
	DM2DD004	0.0	15.6	15.6	2,331	521	22.3%
	including	*5.0*	*7.1*	*2.1*	*4,381*	*1,376*	*31.4%*
	and	*13.0*	*15.6*	*2.6*	*5,163*	*1,181*	*22.9%*
Figueira	FGDD001	0.0	42.2	42.2	1,846	286	15.5%
	including	*0.5*	*4.0*	*3.6*	*3,771*	*737*	*19.6%*
	FGDD002	9.0	67.3	58.3	2,449	423	17.3%
	including	*47.6*	*53.2*	*5.5*	*4,834*	*1,093*	*22.6%*
	FGDD003	0.0	45.6	45.6	3,352	643	19.2%
	including	*2.3*	*14.0*	*11.7*	*6,108*	*1,518*	*24.8%*
	and	*28.0*	*31.0*	*3.0*	*5,804*	*891*	*15.4%*
Soberbo	SBDD001	0.0	13.0	13.0	3,545	870	24.6%
	including	*9.0*	*13.0*	*4.0*	*5,497*	*1,372*	*25.0%*
	SBDD002	0.0	26.1	26.1	3,348	878	26.2%
	including	*11.0*	*25.0*	*14.0*	*4,365*	*1,282*	*29.4%*
	SBDD003	0.0	3.9	3.9	1,506	343	22.8%

**min 4m width, bottom cut-off 1000ppm TREO, max 2m internal dilution*
***including: min 2m width, bottom cut-off 3000 ppm TREO, max 1m internal dilution*

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Clay Zone & REE Mineralisation Extends Below the Current Resource

In Ionic Clay Adsorbed REE mineralisation the economic zone that can be leached with ammonium sulfate is confined to the clay zone of the regolith profile. Beneath the clay zone, in the partially weathered and fresh syenite (basement), a percentage of REE elements are possibly related to primary mineralisation and consequently may not be a target for the Company.

All Diamond Drill holes ended in fresh granite, penetrating below the base of Auger drilling and the current Inferred Resource to test the thickness of the clay zone and the depth to which REE mineralisation is present. **Table 2** shows the average depths of clay observed in historic Auger Drilling versus the average depths of clay observed in the current Diamond Drilling program.

Table 2. *Observed depth of mineralised Clay Zone (AUGER v DD Drilling).*

Target	No. AUGER holes	Ave. Depth Clay in AUGER	No. DD holes	Ave. Depth Clay in DD	Increased Depth of Clay (m)	Increased Depth of Clay (%)
Capão do Mel	337	10.27	11	26.81	16.54	+ 161 %
Soberbo	323	9.25	11	18.76	9.51	+ 103 %
Figueira	92	10.33	6	56.66	46.33	+ 448 %
Cupim Vermelho	185	9.99	5	23.87	13.98	+ 140 %
Dona Maria I	316	10.00	5	16.08	6.98	+ 70 %
Dona Maria II	143	9.11	4	15.03	5.92	+ 65 %
TOTAL	**1,396**	**9.83**	**42**	**26.20**	**16.38**	**+ 164 %**

The depth of the Clay Zone was observed to increase by an average of 164% across the 6 deposits, with the biggest increases coming at Figueira (448% increase), Capão do Mel (161% increase), and Cupim Vermelho Norte (140% increase).

Figures 2 - 4 (below) show a strong correlation with the block model from the current Inferred Resource in the upper part of the weathering profile (to a maximum of 20m depth), but also clearly show strong TREO grades (> 1000ppm) extending below the block model, confirming both an increase in the depth of clay and an increase in the depth of mineralisation below the current resource.

Remaining assay results from ALS (Belo Horizonte) are expected during August and will be reported once they have been received and interpreted.

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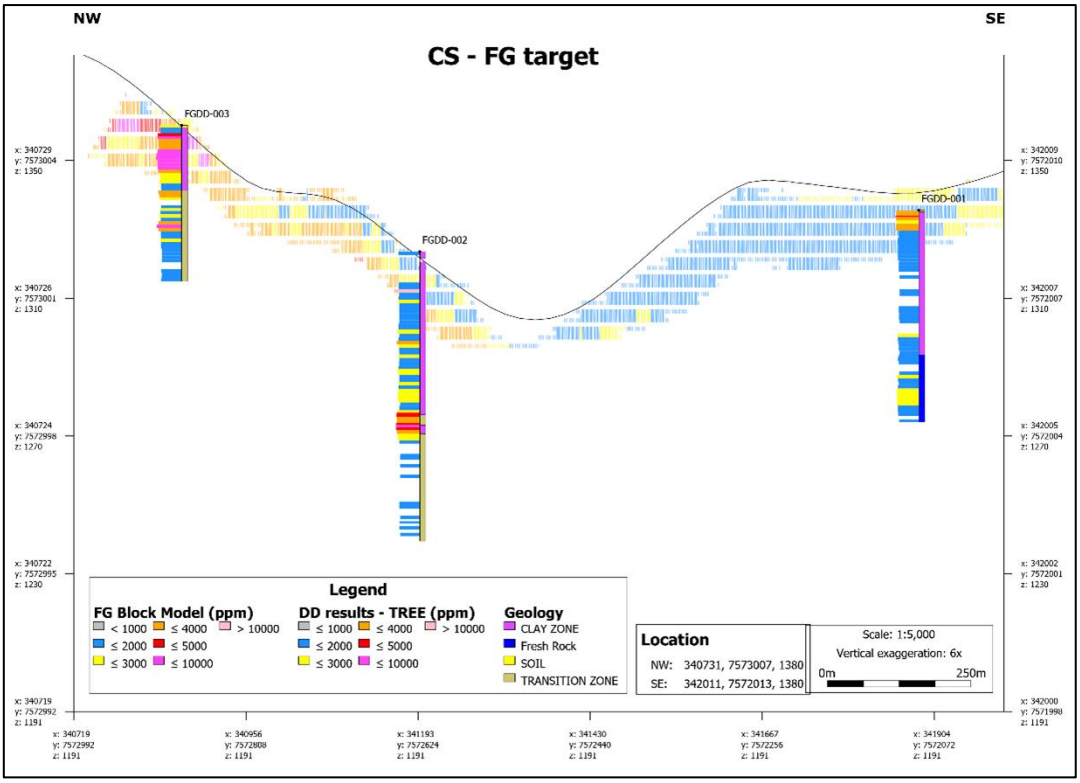

Figure 2. *Oblique Cross Section (NW-SE) through Figueira Deposit showing: current Inferred Resource block model, DD drill holes intersecting clays up to 70m below the current Inferred Resource (FGDD002), with an average increase in depth of Clay Zone of 449% across the Deposit.*

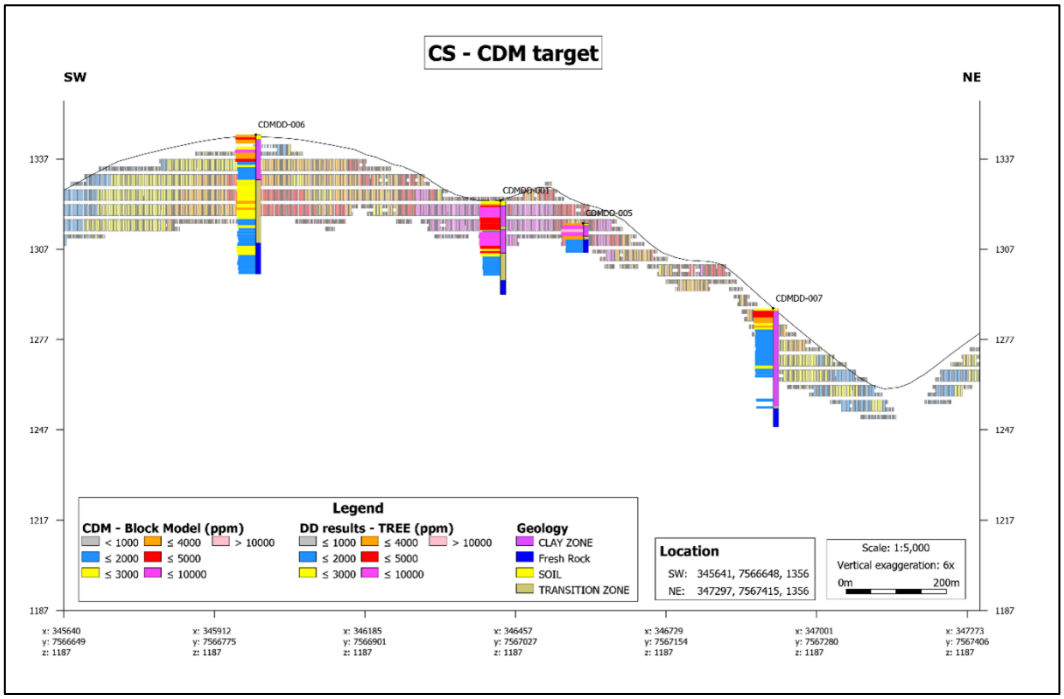

Figure 3. *Oblique Cross Section (SW-NE) through Capão do Mel Deposit showing: current Inferred Resource block model, DD drill holes intersecting clays up to 19m below the current Inferred Resource (CDMDD006), with an average increase in depth of Clay Zone of 161% across the Deposit.*

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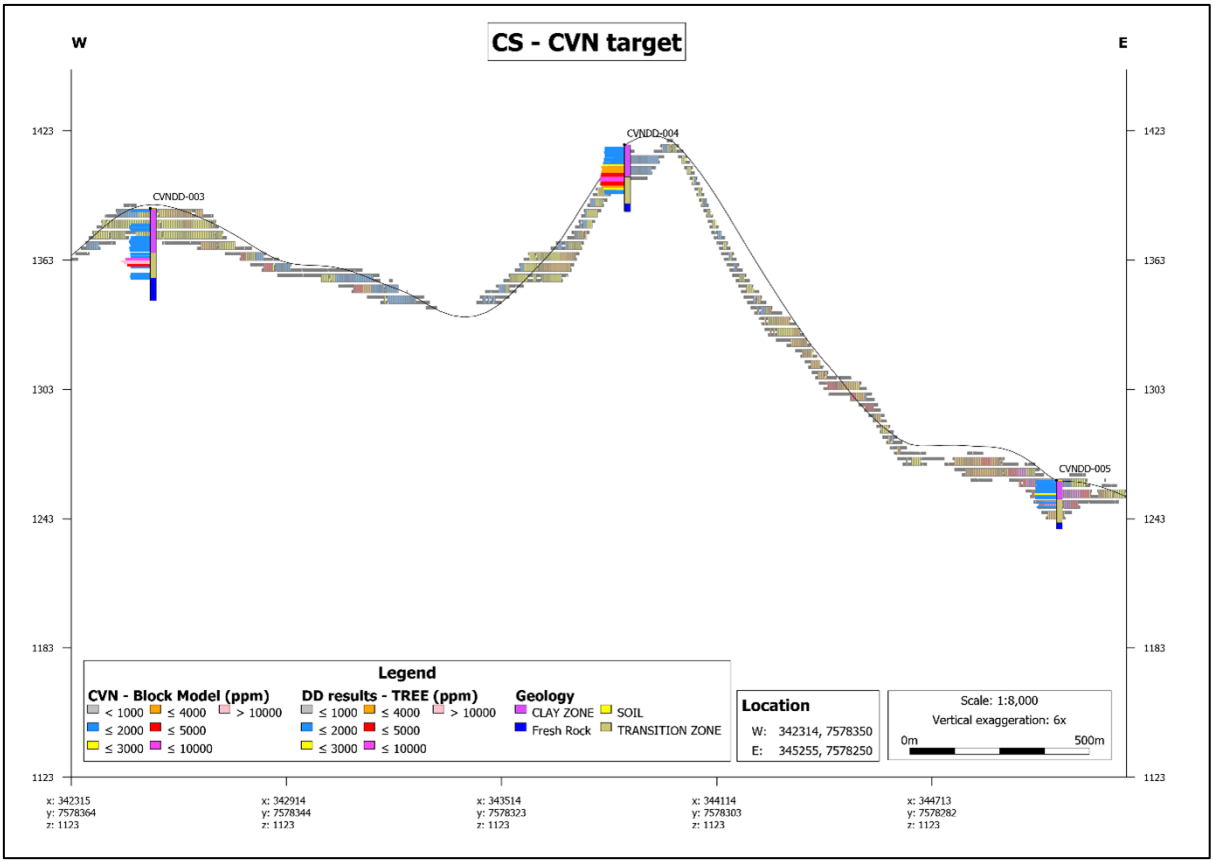

Figure 4. *Oblique Cross Section (E-W) through Cupim Vermelho Norte Deposit showing: current Inferred Resource block model, DD drill holes intersecting clays up to 17m below the current Inferred Resource (CVNDD003), with an average increase in depth of Clay Zone of 139% across the Deposit.*

Background Information on Ionic Clay REE Deposits

Geologically, the Caldeira REE Project is classified as an Ionic Adsorption Clay REE Deposit, which is characterised by the following key criteria:

- Formed in the saprolite (clay) zone of the weathering profile
- Majority of the REE's **adsorbed** onto clay minerals and accumulated in the clay zone of the regolith profile
- Adsorbed REE are ionically attached to the clay minerals and can be liberated by leaching in a weak solution of ammonium sulphate (or other metal salt) at near neutral pH
- Ionic Adsorption Clay REE Deposits are typically found near the surface, often at depths of less than 10 metres
- The U and Th levels in Ionic Clay REE Deposits are typically low, as these elements are less soluble in ground waters and are not preferentially adsorbed by clays during the weathering and leaching processes

Mineral Resource Statement – Caldeira Project (ASX:MEI 30/04/2023)

Table 3. *Caldeira REE Project 2023 Mineral Resource Estimate (JORC 2012) – by licence at 1,000ppm TREO cut-off*

Licence	JORC Category	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	Inferred	68	2,692	148	399	4	22	572	21.3%
Cupim Vermelho Notre	Inferred	104	2,485	152	472	5	26	655	26.4%
Dona Maria 1 & 2	Inferred	94	2,320	135	404	5	25	569	24.5%
Figueira	Inferred	50	2,811	135	377	5	26	542	19.3%
Soberbo	Inferred	92	2,948	190	537	6	27	759	25.8%
Total	**Inferred**	**409**	**2,626**	**154**	**447**	**5**	**25**	**631**	**24.0%**

TREO = 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

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

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APPENDIX 1

Drill Hole Location Co-Ordinates (all holes were drilled vertical).

Target	Hole ID	East	North	RL	Hole Depth	Depth of Clay	Assays
Capão do Mel	CDMDD-001	346439	7566994	1328	31.18	26.54	Received
Capão do Mel	CDMDD-002	345627	7567601	1312	20.40	18.50	Received
Capão do Mel	CDMDD-004	347477	7567043	1326	18.85	16.35	Received
Capão do Mel	CDMDD-005	346611	7567015	1316	9.78	5.40	Received
Capão do Mel	CDMDD-006	345992	7566799	1344	46.35	35.95	Received
Capão do Mel	CDMDD-007	346893	7567307	1288	39.44	33.25	Received
Capão do Mel	CDMDD-008	347079	7567709	1272	40.58	36.76	Received
Capão do Mel	CDMDD-009	346578	7566694	1289	29.61	16.92	Pending
Capão do Mel	CDMDD-010	346631	7567194	1308	57.75	52.63	Pending
Capão do Mel	CDMDD-011	346621	7566802	1296	25.95	25.95	Pending
Cupim Vermelho	CVNDD-001	342885	7576690	1422	23.25	19.15	Received
Cupim Vermelho	CVNDD-002	341677	7579289	1382	28.05	20.64	Received
Cupim Vermelho	CVNDD-003	342535	7578361	1421	42.95	32.40	Received
Cupim Vermelho	CVNDD-004	343854	7578258	1434	31.10	27.40	Received
Cupim Vermelho	CVNDD-005	345060	7578282	1272	22.75	19.76	Received
Dona Maria 1	DM1DD-001	337939	7581336	1353	33.25	20.41	Received
Dona Maria 1	DM1DD-002	338450	7579638	1367	37.25	34.58	Received
Dona Maria 1	DM1DD-003	338886	7579953	1382	15.05	9.93	Received
Dona Maria 1	DM1DD-004	339141	7579358	1374	21.20	14.46	Received
Dona Maria 1	DM1DD-005	338056	7580236	1405	12.11	1.00	Received
Dona Maria 2	DM2DD-001	339847	7579729	1391	22.05	15.63	Received
Dona Maria 2	DM2DD-002	339441	7579946	1346	22.35	13.63	Received
Dona Maria 2	DM2DD-003	339936	7580142	1385	23.20	15.26	Received
Dona Maria 2	DM2DD-004	339649	7580345	1394	18.62	15.60	Pending
Figueira	FGDD-001	341851	7572048	1351	61.80	42.20	Received
Figueira	FGDD-002	341238	7572677	1352	84.45	84.45	Received
Figueira	FGDD-003	340847	7572850	1282	45.55	45.55	Received
Figueira	FGDD-004	340882	7571408	1343	97.65	97.65	Pending
Figueira	FGDD-005	340893	7572111	1330	20.74	11.10	Pending
Figueira	FGDD-006	341233	7573358	1250	58.99	58.99	Pending
Soberbo	SBDD-001	348798	7569484	1307	18.15	12.95	Received
Soberbo	SBDD-002	349087	7568044	1298	31.45	26.10	Received
Soberbo	SBDD-003	348993	7570684	1311	19.75	3.90	Received
Soberbo	SBDD-004	350298	7569905	1218	31.10	28.83	Pending
Soberbo	SBDD-005	348119	7568003	1313	23.40	17.00	Pending
Soberbo	SBDD-006	349845	7570492	1296	10.25	7.51	Pending
Soberbo	SBDD-007	347973	7569979	1209	11.14	8.81	Pending
Soberbo	SBDD-008	349905	7570592	1283	29.25	26.20	Pending
Soberbo	SBDD-009	350003	7570490	1261	29.57	26.15	Pending
Soberbo	SBDD-010	348201	7569900	1236	38.69	24.26	Pending
Soberbo	SBDD-011	348806	7569291	1306	28.85	24.45	Pending
Total	**41 Holes**				**1,313.85**		

**Geographic Datum SIRGAS_2000_23S*

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APPENDIX 2 - JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	• The drilling utilises a conventional wireline diamond drill rig (Mach 1200) with HQ diameter. • The core is collected in core trays with depth markers at the end of each drill run (blocks). • 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.
Drilling techniques	• The drilling is diamond drill rig (Mach 1200) with HQ diameter using the wireline technique. • Each drill site was cleaned and levelled with a backhoe loader. • All holes are vertical. • Drilling is stopped once intersection with unweathered basement intrusives is confirmed = +5m of fresh rock.
Drill sample recovery	• Core recoveries were measured after each drill run, comparing length of core recovered vs. drill depth. Overall Core recoveries are 92.5%, achieving 95% in the saprolite target horizon, 89% in the transitional rock (fresh fragments in clay), and 92.5% in fresh rock.
Logging	• The geology was described in a core facility by geologist - logging focused on the soil (humic) horizon, saprolite and fresh rock boundaries. Depth of geological boundaries are honoured and described with downhole depth – not metre by metre. • Others important parameters data collected includes: grainsize, texture and colour, which can help to identify the parent rock before weathering. • All drilled holes have a digital photographic record. The log is stored in Microsoft Excel template with inbuilt validation tables and pick list to avoid data entry errors. • All geological data are imported into a Microsoft Access database and validated.

Sub-sampling techniques and sample preparation	• Sample preparation (drying, crushing, splitting and pulverising) is carried out by ALS laboratory using industry standard protocols:
	  ○ dried at 60°C
	  ○ the fresh rock is crushed to sub 2mm
	  ○ the saprolite is just disaggregated with hammers
	  ○ Riffle split 800g sub-sample
	  ○ 800 g pulverized to 90% passing 75um, monitored by sieving.
	  ○ Aliquot selection from pulp packet

Quality of assay data and laboratory tests	• All samples were assayed by three ALS methods:
	  ○ ME-MS81 – Lithium borate fusion prior acid dissolution and ICP-MS analysis for Ba, Ce, Cr, Cs, Dy, Er, Eu, Ga, Gd, Hf, Ho, La, Lu, Nb, Nd, Pr, Rb, Sc, Sm, Sn, Sr, Ta, Tb, Th, Ti, Tm, U, V, W, Y, Yb, Zr
	  ○ Me-4ACD81 - Lithium borate fusion prior acid dissolution and ICP-MS analysis for Ag, Au, Cd, Co, Cu, Li, Mo, Ni, Pb, Sc, Tl, Zn.
	  ○ ME-ICP06 – X-Ray Fluorescence (XRF) and acid ICP-AES analysis for Al_2O_3, BaO, CaO, Cr_2O_3, Fe_2O_3, K_2O, MgO, MnO, Na_2O, P_2O_5, SiO_2, SrO, TiO_2, LOI.
	• Laboratory inserted its own QA/QC controls, with standards, blanks and duplicates to assure the quality and standards of the lab.
	• The QA/QC data includes a duplicate sample every 20 samples, and a blank and standard sample in each 30 samples.

Verification of sampling and assaying	• All data is in digital format and stored in a cloud server, also the company maintains a back up in a desktop computer to assure that the data could be restored if any problem occurs with the cloud or with the desktop server. • 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:-

Ce Ox	Dy Ox	Er Ox	Eu Ox	Gd Ox	Ho Ox	La Ox	Lu Ox	Nd Ox	Pr Ox	Sm Ox	Tb Ox	Tm Ox	Y Ox	Yb Ox
1.2284	1.1477	1.1435	1.1579	1.1526	1.1455	1.1728	1.1372	1.1664	1.1702	1.1596	1.151	1.142	1.2697	1.1379

Location of data points	• All collars were surveyed in SIRGAS 2000, 23S spindle UTM grid system. The SIRGAS 2000 is a South American Datum which is very similar with the WGS 84. • At present the survey of collars was made with a hand GPS. Prior to inclusion in any resource estimation work the holes will be surveyed by a RTK GPS. • The Topographic data was made by 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. • For the generation of planialtimetric maps (DEM), drones were used with control points in the

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	field (mainly in a region with more dense vegetation), in addition to the auger drillholes.an employed company with drone imaging and RTK GPS on auger drill holes
Data spacing and distribution	• Collar plan displayed in the body of the release. • No resources are reported.
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 the diamond holes is appropriate. • Diamond drill core is acknowledged to deliver uncontaminated samples, as such no sampling bias is believed to be introduced.
Sample security	• Samples are removed from the field and transported back to a Core shad to be logged and sampled as reported before. • 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 remaining sample is stored in the core trays and stored at the core shed on wooden pallets. • The transport of samples from Poços de Caldas to ALS laboratory in Vespasiano was undertaken by a competent independent contractor.
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). • No independent audit of sampling techniques and data has been completed.

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	• No change since previous report. • 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 terrain which hosts deposits of ETR, 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 REE mineralisation discussed in this release is of the Ionic Clay type as evidenced by development within the saprolite/clay zone of the weathering profile of the Alkaline syenite basement as well as enriched HREE composition.
Drill hole Information	• Reported in body of report and Appendix 1.
Data aggregation methods	• Mineralised Intercepts are reported with a minimum of 4m width, lower cut-off 1000ppm 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 3000 ppm TREO, with a maximum of 1m internal dilution.
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	• Highlights of the Mineralised Intercepts are reported in the body of the text with results from every drill reported in the Mineralised Intercept table for balanced reporting.
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.
Further work	• Proposed work is discussed in the body of the text.

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