

16 December 2022

## Acquisition of Potential World Class Ionic Clay Rare Earth Project

### Highlights

- Meteoric has entered into a binding agreement to acquire a Tier 1 Ionic Clay Rare Earth Element (**REE**) project in the Minas Gerais State of Brazil
- The Caldeira Project comprises 30 licenses (21 Mining Licenses and 9 Mining Licence Applications) and has previously had significant exploration conducted including **1,311 shallow auger drill holes for 13,037m (all drill results reported in Appendix 1)**
- Drilling across six (6) licenses returned ultra-high-grade Total Rare Earth Oxide (**TREO**) intersections **all of which are reported from surface [0m]**, highlights include:
  - 10m @ **8,810** ppm TREO ending in **1,942** ppm TREO (Hole FG-82)
  - 20m @ **8,924** ppm TREO ending in **9,945** ppm TREO (Hole CDM-311)
  - 15m @ **7,042** ppm TREO ending in **3,425** ppm TREO (Hole CDM-286)
  - 7m @ **7,646** ppm TREO ending in **12,429** ppm TREO (Hole DM2-28)
  - 20m @ **6,779** ppm TREO ending in **4,652** ppm TREO (Hole CDM-47)
  - 11m @ **6,763** ppm TREO ending in **25,341** ppm TREO (Hole CVN-53)
  - 12m @ **8,367** ppm TREO ending in **5,829** ppm TREO (Hole CVN-22)
  - 13m @ **6,600** ppm TREO ending in **6,817** ppm TREO (Hole CVN-80)
  - 14m @ **5,103** ppm TREO ending in **2,649** ppm TREO (Hole DM1-180)
  - 20m @ **5,918** ppm TREO ending in **2,239** ppm TREO (Hole CDM-27)
  - 14m @ **5,979** ppm TREO ending in **2,325** ppm TREO (Hole FG-27)
  - 15m @ **7,551** ppm TREO ending in **7,915** ppm TREO (Hole FG-89)
  - 13m @ **7,641** ppm TREO ending in **2,072** ppm TREO (Hole SB-109)
  - 19m @ **6,895** ppm TREO ending in **7,840** ppm TREO (Hole CDM-134)
  - 15m @ **6,709** ppm TREO ending in **4,460** ppm TREO (Hole SB-44)

**Cautionary Statement:** The exploration results have been reported by the previous owner. The Exploration Results have not been reported in accordance with JORC Code 2012. A competent Person has not done sufficient work to disclose the exploration results in accordance with the JORC Code 2012. It is possible that following further evaluation and/or exploration work that the confidence in the prior exploration results may be reduced when reported under the JORC Code 2012. Nothing has come to the attention of Meteoric that causes it to question the accuracy or reliability of the former owner's exploration. The Company however has not independently validated the former owner's exploration results and therefore is not to be regarded as reporting, adopting or endorsing those results.

- REE mineralisation commences from surface and remains completely open at depth with **85%** of the 1,311 auger holes ending in grades above **1,000ppm TREO**. No drilling has been conducted below **20m depth**
- The TREO identified across the Caldeira Project represents an enriched HREO basket with strongly enriched Magnet REO's – **Tb<sub>2</sub>O<sub>3</sub>, Dy<sub>2</sub>O<sub>3</sub>, Nd<sub>2</sub>O<sub>3</sub> and Pr<sub>2</sub>O<sub>3</sub>** - averaging greater than **22% of TREO**
- Meteoric is **fully funded** to rapidly define the full potential of this unique project with the final payment for the sale of the Juruena Gold asset of USD\$17.5M due in March 2023

**Company Director Dr. Andrew Tunks said,**

*"The Caldeira Project is a fifteen-kilometre scale, ultra-high-grade ionic clay deposit which is completely open at depth and it has the potential to host large, high grade rare-earth element-ionic clays and represents an enormous opportunity for Meteoric.*

*An extensive shallow auger program was conducted over 6 of the 30 Project licences contained within the Project. Of the 1,311 holes drilled, over 85% finish with grades in excess of 1,000ppm TREO. With mineralisation commonly extending from surface down the entire length of these holes. The deepest hole ends at 20m and the average hole depth is less than 10m. The depth of the deposit is at this stage unknown and Meteoric is preparing to mobilise a diamond drilling team to site in January 2023 to commence further exploration to better understand the Caldeira Project's scale and depth.*

*The distribution of the rare earth elements at Caldeira is enriched in Heavy Rare Earth Elements (HREE). Additionally, the sample results to date are strongly enriched in the magnet rare earths of Terbium, Dysprosium, Praesidium and Neodymium (Tb, Dy, Pr and Nd) which make up more than 22% of the total rare earth elemental composition. These four elements will be the magnetic powerhouse of the green energy transition, crucial if we are to reach global CO<sub>2</sub> reduction targets.*

*There has been specialist technical evaluation of the Caldeira Project already completed, including preliminary metallurgical testwork. These studies are under review by experts, with results expected to be announced over the coming weeks.*

*The Vendors of the Project are Togni S/A Materiais Refratários, a family led private company that have been mining the clay deposits in the Poços de Caldas area for 112 years. Originally they made building bricks and roof tiles, before commencing the production of refractory products for use in furnaces and kilns in the steel, aluminum, non-ferrous metals, industrial minerals, glass and ceramics industries. They have strong connections to the local government mining and environmental bodies due to their long history of development in the area, making them ideal business partners.*

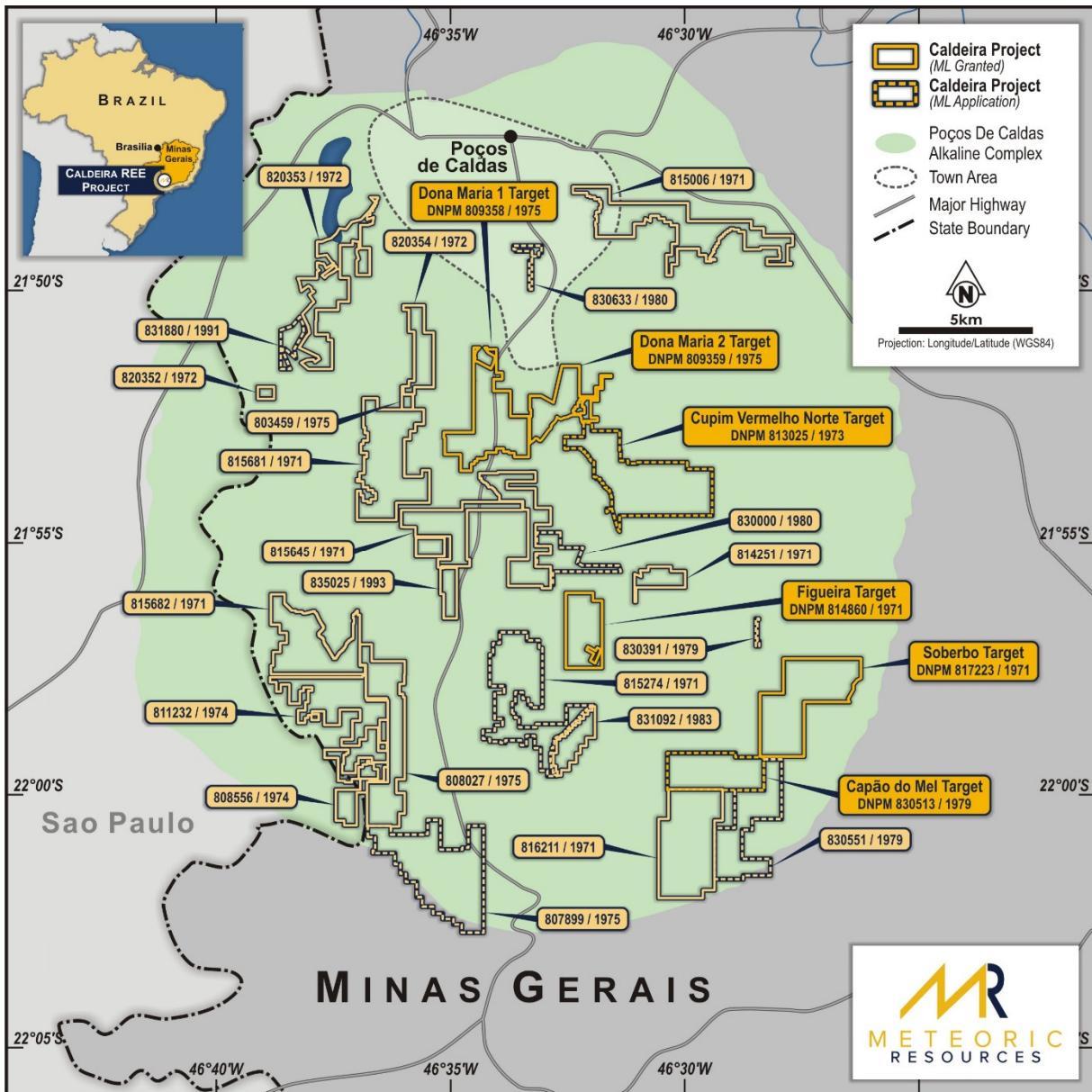
*Meteoric is fully funded for its 2023 exploration activities on the Caldeira Project, owing to the sale of the Juruena Gold Project, that was announced in June 2022, with the final payment tranche of USD\$17.5M due in March 2023. Exploration activities at Caldeira will commence with diamond drilling to validate the depth extent of mineralisation, mineral resource estimation, regional target evaluation and additional metallurgical testwork.*

*Meteoric will leverage the advanced nature of the Caldeira Project and the excellent technical work already completed to further progress the Project and move rapidly towards becoming a significant participant in the global rare earth industry."*

## **Project Geology**

The Alkaline Intrusive Complex of Poços de Caldas represents one of the most important economic terrains in Brazil and hosts deposits of bauxite, clay, uranium, zirconium, REEs and leucite (used as a fertilizer). The Poços de Caldas Intrusive Complex covers an area of approximately 800km<sup>2</sup>, constituting the largest occurrence of alkaline rocks in South America. The main rock types found in the Poços de Caldas Complex are intrusive and volcanic alkaline rocks of the nepheline syenite system comprising phonolites and foidolites.

The Poços de Caldas area has a long and continuous history of clay mining for bricks and subsequently refractory clays along with a more recent history (from the 1950s) of mining activities focused on bauxite for aluminum and uranium by the Brazilian Nuclear Industry (INB - decommissioned).

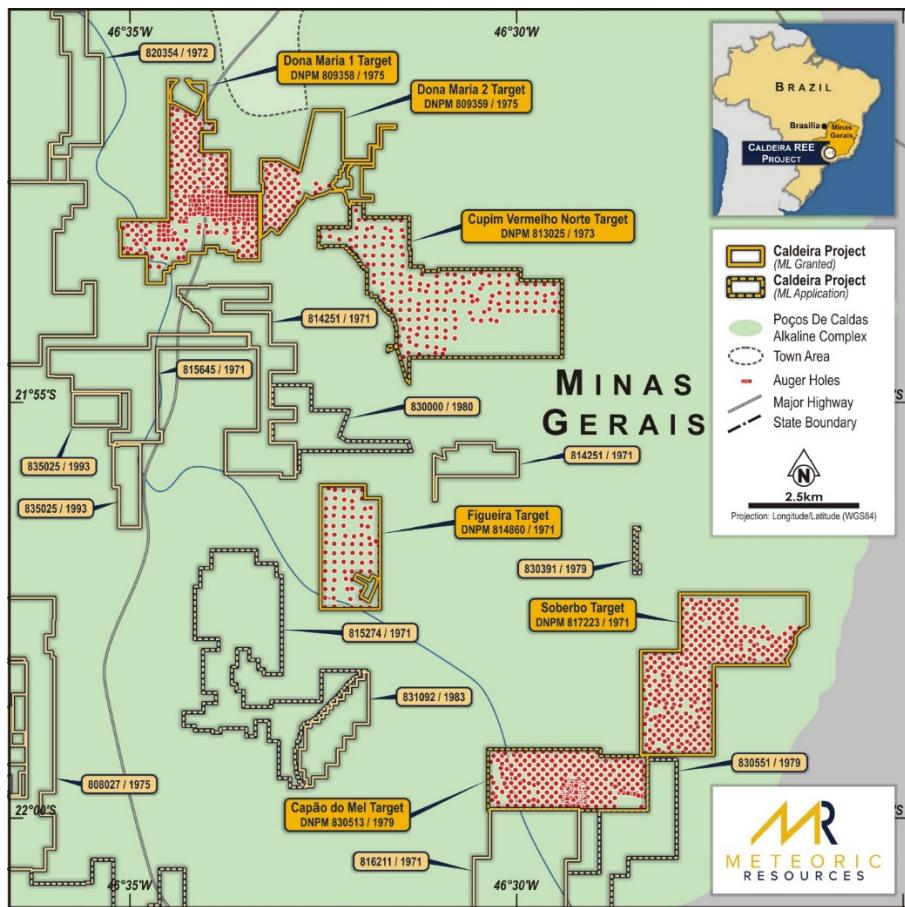


**Figure 1.** Simplified regional geological map of the Poços de Caldas Intrusive complex highlighting licenses included in the Caldeira Project deal (Licence details are provided in Appendix 3). Licenses emphasised in callouts have had extensive auger drilling.

(Inset – Location of Caldeira Project)

### Previous Exploration

The elevated levels of REE within the well-developed saprolite-clay zones of the regolith was first noted by local explorers in 2010, with dedicated exploration for REE deposits commencing in 2018. A significant program of reconnaissance surface geochemistry sampling (regional) was undertaken in 2018 – 2019. Of the 30 mining concessions held in the area, 6 anomalous areas identified in the Regional Scouting were followed up with more detailed work including: geologic mapping, powered auger sampling (1,311 holes for 13,037m), multi-element geochemical analysis (12,275 samples), topographic surveys and one bulk sample for metallurgical study.



**Figure 2.** Auger drill collar locations (red dots) across 6 licenses – 1,311 holes for 13,037 m

As the project was privately owned the exploration results in this Release have not previously been publicly reported, however were reported to the National Mining Agency in Brasil (ANM) in Belo Horizonte (Minas Gerais) as part of the Brazilian final exploration reports (statutory requirements) in March 2020. MEI has no reason to doubt the reliability of the Exploration Results presented in this Release based on the information set out in JORC Table, namely: drilling and sampling techniques are well documented and appropriate for the stage of exploration and style of mineralisation reported, assays were analysed at an accredited lab (SGS-Gesol) and all Certificates of Analysis were provided, and appropriate QAQC protocols were employed.

The auger holes were four-inch diameter and drilled to a maximum depth of 20m. Next to the borehole, several tarps were placed on the ground and samples collected every meter of drilling advance. Each meter was described and photographed, before bagging of the sample in plastic bags, which were labelled with hole name and depth interval, before being transported to sample prep facility where all samples are weighed, dried, sieved, homogenised, and finally split before being packed in plastic bags and dispatched to SGS-Geosol Laboratory for analysis.

It is important to note that the maximum depth achievable with the powered auger was 20m, and this was only achievable if the hole did not encounter fragments of rocks/boulders sitting within the weathered profile, and / or the water table.

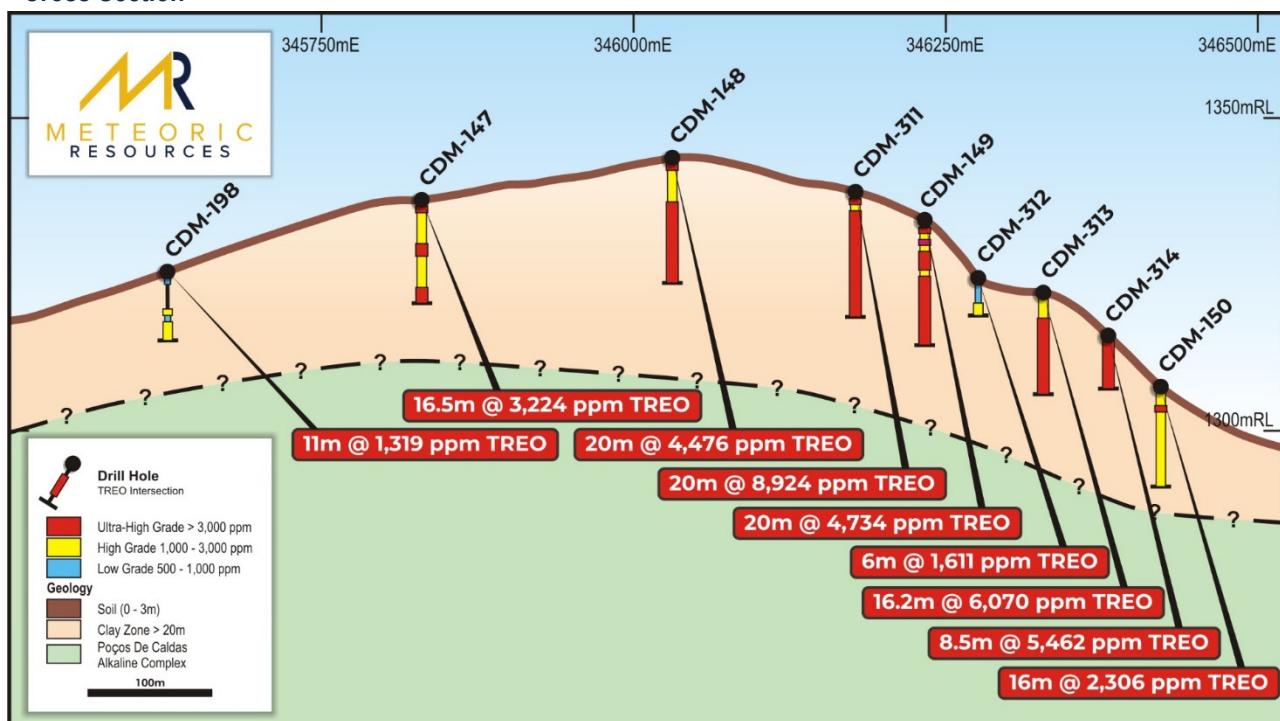
Review of the auger drilling method and results showed the method was ineffective for testing the depth extent of the weathering and mineralisation (in saprolite/clays), with 85% of all holes ending in mineralisation above 1,000ppm total REE oxides (see Figure 3 & Table 1). The thickness of the saprolite/clay zone which hosts the mineralisation is not known. More sophisticated drilling methods such as: sonic, aircore, or diamond drilling will need to be employed to reach the base of oxidation in future programs.

The Caldeira Project REE mineralisation occurs within the saprolite zone of the deeply weathered regolith profile. Elevated REE grades common from surface or immediately under a thin layer of topsoil (see Figures 3 a & b).



**Figure 3.** a) From Togni SA refractory clay mining pit at Capo do Mel (CDM) Project highlighting the thin soil horizon (approx. 1m this area). Mixed clay soil zone 1-2m thick and then the mineralised clay zone enriched in REE. b) Detail of REE enriched clay-zone sample from clay mining area on CDM prospect. Note: the thicknesses of horizons may vary considerably across the project. REE mineralisation has been found in all zones.

#### Cross Section



**Figure 4.** Capão do Mel -Stylised Cross Section 7 566 800m N.

**Table 1:** Ultra high-grade mineralised intercepts (> 4000ppmTREO) sorted by Prospect from powered auger drilling at Caldeira Prospects. Every hole finishes in grades above 1500 ppm TREO

Prospect	Hole #	From (m)	To (m)	Min Interval	TREO (ppm)	TREO EOH (ppm)
Capao do Mel	CDM-277	0	9	9.0	10059	8054
Capao do Mel	CDM-311	0	20	20.0	8924	9945
Capao do Mel	CDM-337	0	8	7.5	8783	8111
Capao do Mel	CDM-275	0	9	8.5	8678	8213
Capao do Mel	CDM-264	0	13	13.0	8635	7224
Capao do Mel	CDM-257	0	11	11.0	8075	9180
Capao do Mel	CDM-266	0	9	9.0	8019	7152
Capao do Mel	CDM-318	0	9	9.0	7803	8959
Capao do Mel	CDM-304	0	12	12.0	7491	6627
Capao do Mel	CDM-265	0	9	9.0	7481	7140
Capao do Mel	CDM-309	0	10	10.0	7452	12703
Capao do Mel	CDM-276	0	12	12.0	7381	8516
Capao do Mel	CDM-338	0	13	13.0	7109	3377
Capao do Mel	CDM-263	0	15	15.0	7060	2696
Capao do Mel	CDM-286	0	15	14.5	7042	3425
Capao do Mel	CDM-134	0	19	18.5	6895	7840
Capao do Mel	CDM-47	0	20	20.0	6779	4652
Capao do Mel	CDM-283	0	13	12.7	6735	9847
Capao do Mel	CDM-135	0	8	8.0	6709	5042
Capao do Mel	CDM-119	0	19	19.0	6673	2793
Capao do Mel	CDM-279	0	13	13.0	6432	4762
Capao do Mel	CDM-261	0	12	11.5	6191	1712
Capao do Mel	CDM-285	0	9	9.0	6157	10316
Capao do Mel	CDM-313	0	16	16.2	6070	6222
Capao do Mel	CDM-284	0	10	9.5	6036	5021
Capao do Mel	CDM-287	0	13	13.0	6029	9994
Capao do Mel	CDM-250	0	13	12.5	6007	6854
Cupim Vermelho	CVN-22	0	12	12.0	8367	5829
Cupim Vermelho	CVN-53	0	11	11.0	6763	25341
Cupim Vermelho	CVN-80	0	13	13.0	6600	6817
Cupim Vermelho	CVN-182	0	11	11.0	5650	8279
Cupim Vermelho	CVN-153	0	10	9.5	5202	4998
Dona Maria I	DM1-15A	0	9	9.0	5428	6127
Dona Maria I	DM1-180	0	14	13.5	5103	2649
Dona Maria I	DM1-176	0	10	10.0	4939	5163
Dona Maria I	DM1-261	0	12	11.7	4503	1283
Dona Maria I	DM1-68	0	17	17.0	4420	3868
Dona Maria II	DM2-28	0	7	7	7646	12429
Dona Maria II	DM2-73	0	10.5	10.5	4239	1250
Dona Maria II	DM2-81	0	17.5	17.5	2312	3662
Figueira	FG-82	0	10	9.5	8810	1942
Figueira	FG-89	0	15	14.5	7551	7915
Figueira	FG-96	0	9	9.0	6739	14520
Figueira	FG-27	0	14	14.0	5979	2325
Figueira	FG-33	0	12	12.3	5629	6885
Figueira	FG-48	0	12	12.0	5462	3312
Figueira	FG-68	0	8	7.5	5084	10120
Soberbo	SB-321	0	8	8.0	7986	7929
Soberbo	SB-109	0	13	13.0	7641	2072
Soberbo	SB-44	0	15	14.7	6709	4460
Soberbo	SB-69	0	10	10.0	5841	8416
Soberbo	SB-166	0	11	10.5	5774	10140
Soberbo	SB-175	0	7	7.2	5573	5655
Soberbo	SB-246	0	9	8.5	5528	2626
Soberbo	SB-307	0	12	12.0	5211	3388
Soberbo	SB-98	0	15	14.5	5157	3767
Soberbo	SB-76	0	18	17.5	5058	4050
Soberbo	SB-157	0	11	11.0	5034	8417

## REE Element Distribution

Table 2: REO Distribution across all Prospects.

	REO	FG	CDM	CVN	DM1	DM2	SB	TREO AVE	Magnet REE	Heavy REE
LREE	La <sub>2</sub> O <sub>3</sub>	917.8	1404.6	797.4	743.6	929.6	1167.2	993.4		
	CeO <sub>2</sub>	1110.2	1023.2	771.3	727.5	692.9	829.1	859.0		
	Pr <sub>2</sub> O <sub>3</sub>	135.6	193.9	145.5	131.1	135.0	195.5	156.1	156.1	
	Nd <sub>2</sub> O <sub>3</sub>	400.1	534.3	456.0	406.2	382.3	569.2	458.0	458.0	
	Sm <sub>2</sub> O <sub>3</sub>	47.6	58.8	57.0	49.8	44.1	65.4	53.8		
HREE	Eu <sub>2</sub> O <sub>3</sub>	12.4	15.0	14.3	12.9	11.5	16.5	13.8		13.8
	Gd <sub>2</sub> O <sub>3</sub>	31.9	42.8	40.7	32.6	31.1	43.7	37.1		37.1
	Tb <sub>2</sub> O <sub>3</sub>	4.7	5.5	4.9	4.4	4.4	5.6	4.9	4.9	4.9
	Dy <sub>2</sub> O <sub>3</sub>	27.1	27.1	25.5	24.5	25.7	27.7	26.2	26.2	26.2
	Ho <sub>2</sub> O <sub>3</sub>	5.3	4.8	4.4	4.6	4.9	4.8	4.8		4.8
	Er <sub>2</sub> O <sub>3</sub>	15.4	12.5	12.9	13.0	14.7	12.6	13.5		13.5
	Tm <sub>2</sub> O <sub>3</sub>	2.2	1.5	1.6	1.8	2.0	1.6	1.8		1.8
	Yb <sub>2</sub> O <sub>3</sub>	14.2	9.4	10.5	11.2	13.3	9.7	11.4		11.4
	Lu <sub>2</sub> O <sub>3</sub>	2.0	1.3	1.4	1.6	1.9	1.3	1.6		1.6
	Y <sub>2</sub> O <sub>3</sub>	172.3	158.2	136.8	151.6	173.5	152.5	157.5		157.5
<b>Totals</b>		<b>2,899</b>	<b>3,493</b>	<b>2,480</b>	<b>2,317</b>	<b>2,467</b>	<b>3,103</b>	<b>2,793</b>	<b>645</b>	<b>273</b>

Note: Top two metres (2m) of every hole excluded as soil profile which would have to be reserved during any mining program. The data presented is the average REE grade for every sample deeper than 2m downhole (2,622 samples excluded from data base of 13,037 samples) across all prospects. There is no cut-off grade applied and all samples deeper than 2m down hole are used in the calculation. Data is sorted by prospect where FG = Figueira, CDM = Capo do Mel, CVN = Cupim Vermelho Norte, DM1 = Dona Maria 1, DM2 = Dona Maria 2, SB = Soberbo

An analysis of the REE basket data in Table 2 shows the Caldeira Project to be enriched in HREO (Eu<sub>2</sub>O<sub>3</sub> + Gd<sub>2</sub>O<sub>3</sub> + Tb<sub>2</sub>O<sub>3</sub> + Dy<sub>2</sub>O<sub>3</sub> + Ho<sub>2</sub>O<sub>3</sub> + Er<sub>2</sub>O<sub>3</sub> + Tm<sub>2</sub>O<sub>3</sub> + Yb<sub>2</sub>O<sub>3</sub> + Lu<sub>2</sub>O<sub>3</sub> + Y<sub>2</sub>O<sub>3</sub>)/TREO which represent 10% of the total REO basket.

Additionally, the project is enriched in the Magnet REO (Pr<sub>2</sub>O<sub>3</sub> + Nd<sub>2</sub>O<sub>3</sub> + Tb<sub>2</sub>O<sub>3</sub> + Dy<sub>2</sub>O<sub>3</sub>)/TREO making up 22% of the total REO basket across the project.

### Future Work

Previous exploration exclusively used powered auger drilling across the Project. Clearly this drilling method was inappropriate to test the base of the mineralisation and in fact the thickness of the mineralisation remains unknown, as 85% of all completed holes end in grades greater than 1,000ppm TREO.

As part of the project due diligence Meteoric will commence diamond drilling the six previously drilled prospects in January 2023 to assess the true thickness of the mineralised regolith profile down to fresh rock. Initially this will involve completing diamond holes on a 400m by 400m grid to check the validity of the powered auger results, and ensure an accurate representation of the regolith profile. Upon completion of the diamond drilling program, detailed infill drilling will be conducted over the highest priority target areas with fit for purpose drilling techniques (e.g., reverse circulation, aircore or sonic drilling).

Resource estimations for the highest priority target areas are envisaged to be completed by the end of Q2 2023 to allow a preliminary economic assessment (PEA) of the project to begin.

A substantial metallurgical testwork program has been completed at SGS Geosol laboratories in Brazil. Meteoric will verify these results before releasing to the market.

## Due Diligence

The MEI technical team in Brazil has already mobilised to site, as part of the due diligence process and has commenced resampling and re-assaying approximately 5% of historic samples for verification.

As part of the Diamond Drilling Program (detailed in the previous section of the report - **Future Work** above) all of the initial phase of diamond drilling to be conducted by Meteoric will be collared in close proximity (<+- 2m) to auger drill hole collars from previous exploration. This twin drilling will provide sample data allowing direct comparison between the diamond and auger drilling and in this will serve to validate results from the previous exploration. Drilling is anticipated to commence in January 2023.



*Figure 5. NED Andrew Tunks inspecting the storage of bulk rejects from powered auger holes.*



*Figure 6. Storage boxes with sample pulps from SGS assay lab at the Togni storage facility south of Poços de Caldas.*

## Acquisition Terms

The material terms of the Acquisition are as follows.

Meteoric to acquire the exclusive rights to explore for and develop all rare earths elements located on the 30 mining leases that comprise the Caldeira Project from Togni S/A Materiais Refratários on the following terms:

- Payment (completed) of US\$200,000 for an exclusivity period to 6 April 2023, to allow Meteoric to complete due diligence on the Project;
- Subject to the satisfactory completion of due diligence and negotiation of formal binding transaction documents, payment of:
  - Total cash consideration of US\$20,000,000 comprised as follows:
    - Initial cash payment of US\$5 million on Completion; and
    - Three further payments of US\$5 million on the 12th, 24th and 36th month anniversaries of Completion; and
  - A royalty payment of 4.75% on minerals extracted from the Project, with the purchase price of US\$20,000,000 to be credited against initial payments under the royalty (so that there is a royalty holiday for the first US\$20,000,000 of royalty payments otherwise due).

The Company's existing cash reserves (as supplemented by the receipt of the outstanding purchase price from the sale of the Juruena Project) will be used to fund the payment due on Completion, transaction costs including due diligence, initial exploration work on the REE Project as well as the Company's other assets, including the Palm Springs Project.

## Board

Pat Burke, currently Non-Executive Chairman, shall assume the role of Executive Chairman for the purposes of driving completion of the Acquisition. The material terms of his appointment are set out in Appendix 4.

## Performance Rights

Subject to Shareholder approval (as applicable), Meteoric intends to issue the following Performance Rights each of which shall be convertible into 1 Meteoric Share at the election of the holder, upon achievement of both Completion of the Acquisition and Meteoric delineating a JORC Resource in the Inferred Category on the Project of not less 100Mt @ not less than 2,500 PPM total rare earths oxides, expiring 1 July 2025:

- Pat Burke and Andrew Tunks: 20,000,000 Performance Rights each;
- Paul Kitto and Marcello Carvalho: 5,000,000 Performance Rights each; and
- Employees and Contractors: A total of up to 50,000,000 Performance Rights.

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

For further information, please contact:

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The information in this announcement that relates to exploration results is based on information reviewed, collated and fairly represented by Dr Andrew Tunks who is a Member of the Australasian Institute Geoscientists and a Director of Meteoric Resources NL. Dr Tunks has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which has been undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Tunks consents to the inclusion in this report of the matters based on this information in the form and context in which it appears. Dr Tunks confirms information in this market announcement is an accurate representation of the available data and studies for the material mining project.







































## Appendix 2 JORC Code, 2012 Edition – Table 1

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

Criteria	Commentary																																																																
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>Holes were sampled using a powered auger drill rig (open hole). Each drill site was cleaned, removing leaves and roots at the surface. Tarps were placed on either side of the hole and samples of soil and saprolite were collected every 1m of advance, logged, photographed with subsequent bagging of the sample in plastic bags.</li> </ul>																																																																
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li>Powered auger drilling was employed. All holes are vertical and 4 inch in diameter. The maximum depth achievable with the powered auger was 20m, and this was only achievable if the hole did not encounter fragments of rocks/boulders etc. sitting within the weathered profile, and / or the water table.</li> </ul>																																																																
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>Auger sample recovery calculated as length of sample recovered per interval drilled.</li> <li>Generally, within range of 75% to 100%.</li> </ul>																																																																
<i>Logging</i>	<ul style="list-style-type: none"> <li>For every 1m drilled, the material was described in a drilling bulletin, and photographed.</li> <li>The sample description is made according to the tactile-visual characteristics, such as material (soil, colluvium, saprolite, rock fragments); material color; predominant particle size; presence of moisture; indicator minerals; extra observations. If the water level is reached, it will also be described.</li> </ul>																																																																
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>The auger drill samples undergo a physical preparation process: <ul style="list-style-type: none"> <li>Samples are weighed</li> <li>If the samples are wet, they will be dried for several days on rubber mats.</li> <li>Samples when dried will be passed through a screen (5mm).</li> <li>Homogenization occurs by agitation in bags, followed by screening to &lt;3mm.</li> <li>Fragments of rock or hardened clay that are retained in the sieves are fragmented with a 10kg manual disintegrator and a 1kg hammer, until 100% of the sample passes through the screening.</li> <li>The sample is homogenized again by agitation in bags.</li> <li>Sample then passes through a Jones 12 channel splitter, where 500g will be sent to the lab (SGS_geosol laboratory in Vespasiano – Minas Gerais).</li> <li>Remaining samples are placed in 20 litre plastic buckets, clearly labelled by hole ID and depth, and stored on site.</li> </ul> </li> <li>All samples generated have identification that are registered in internal control spreadsheets. This identification is linked to the name of the hole and interval to which the sample belongs.</li> </ul>																																																																
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>Samples were analysed at SGS-Geosol laboratory, located in Vespasiano – MG.</li> <li>Duplicate samples are predetermined and identified in the splitting phase with two samples ~ 500g selected, receiving different identifications. Blank samples consist of milky quartz, two blank samples (100g each) are inserted in each batch. Two standard samples are inserted in each batch.</li> <li>After the physical preparation of the samples at Plant 2, in Poços de Caldas, batches with 43 samples are sent to the SGS-Geosol laboratory, located in Vespasiano – MG for splitting of the natural sample in a Jones type splitter to remove an aliquot and later, pulverization in a steel mill, 95% minus 150 mesh.</li> <li>The analytical methodologies used are identified by the codes IMS95A (determination by fusion with lithium metaborate - ICP MS) and ICM655 (2% ammonium sulfate leaching and reading by ICP OES / ICP MS).</li> <li>For fusion with lithium metaborate, graphite crucibles are used, in which initially 0.5 g of lithium metaborate, 0.1 g of pulverized sample and other 0.5 g of lithium metaborate are inserted. Heated up to 950 °C. Molten content is placed in beaker with 100ml solution of 2% tartaric acid (C4H6O6), 10% nitric acid (HNO3) and 88% purified water for homogenization. Two aliquots with 15ml each are transferred to test tubes and are sent for ICP analysis (analytical reference IMS95A).</li> <li>The analyses are performed through mass spectrometry with inductively coupled plasma (ICP-MS). In this procedure, the ions are separated according to the mass / charge ratio through transport under the action of electric and magnetic fields. Quantitative analyzes include rare earth elements, in addition to Y, Co, Cu, Cs, Ga, Hf, Mo, Ni, Rb, Sn, Ta, Th, Ti, U and W (ICP-MS-IMS-95<sup>a</sup> Detection limits are shown in the Table below).</li> </ul>																																																																
<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td>Ce</td><td>0,1 - 10000 (ppm)</td> <td>Co</td><td>0,5 - 10000 (ppm)</td> <td>Cs</td><td>0,05 - 1000 (ppm)</td> <td>Cu</td><td>5 - 10000 (ppm)</td> </tr> <tr> <td>Dy</td><td>0,05 - 1000 (ppm)</td> <td>Er</td><td>0,05 - 1000 (ppm)</td> <td>Eu</td><td>0,05 - 1000 (ppm)</td> <td>Ga</td><td>0,1 - 10000 (ppm)</td> </tr> <tr> <td>Gd</td><td>0,05 - 1000 (ppm)</td> <td>Hf</td><td>0,05 - 500 (ppm)</td> <td>Ho</td><td>0,05 - 1000 (ppm)</td> <td>La</td><td>0,1 - 10000 (ppm)</td> </tr> <tr> <td>Lu</td><td>0,05 - 1000 (ppm)</td> <td>Mo</td><td>2 - 10000 (ppm)</td> <td>Nb</td><td>0,05 - 1000 (ppm)</td> <td>Nd</td><td>0,1 - 10000 (ppm)</td> </tr> <tr> <td>Ni</td><td>5 - 10000 (ppm)</td> <td>Pr</td><td>0,05 - 1000 (ppm)</td> <td>Rb</td><td>0,2 - 10000 (ppm)</td> <td>Sm</td><td>0,1 - 1000 (ppm)</td> </tr> <tr> <td>Sn</td><td>0,3 - 1000 (ppm)</td> <td>Ta</td><td>0,05 - 10000 (ppm)</td> <td>Tb</td><td>0,05 - 1000 (ppm)</td> <td>Th</td><td>0,1 - 10000 (ppm)</td> </tr> <tr> <td>Tl</td><td>0,5 - 1000 (ppm)</td> <td>Tm</td><td>0,05 - 1000 (ppm)</td> <td>U</td><td>0,05 - 10000 (ppm)</td> <td>W</td><td>0,1 - 10000 (ppm)</td> </tr> <tr> <td>Y</td><td>0,05 - 10000 (ppm)</td> <td>Yb</td><td>0,1 - 1000 (ppm)</td> <td></td><td></td> <td></td><td></td> </tr> </tbody> </table>		Ce	0,1 - 10000 (ppm)	Co	0,5 - 10000 (ppm)	Cs	0,05 - 1000 (ppm)	Cu	5 - 10000 (ppm)	Dy	0,05 - 1000 (ppm)	Er	0,05 - 1000 (ppm)	Eu	0,05 - 1000 (ppm)	Ga	0,1 - 10000 (ppm)	Gd	0,05 - 1000 (ppm)	Hf	0,05 - 500 (ppm)	Ho	0,05 - 1000 (ppm)	La	0,1 - 10000 (ppm)	Lu	0,05 - 1000 (ppm)	Mo	2 - 10000 (ppm)	Nb	0,05 - 1000 (ppm)	Nd	0,1 - 10000 (ppm)	Ni	5 - 10000 (ppm)	Pr	0,05 - 1000 (ppm)	Rb	0,2 - 10000 (ppm)	Sm	0,1 - 1000 (ppm)	Sn	0,3 - 1000 (ppm)	Ta	0,05 - 10000 (ppm)	Tb	0,05 - 1000 (ppm)	Th	0,1 - 10000 (ppm)	Tl	0,5 - 1000 (ppm)	Tm	0,05 - 1000 (ppm)	U	0,05 - 10000 (ppm)	W	0,1 - 10000 (ppm)	Y	0,05 - 10000 (ppm)	Yb	0,1 - 1000 (ppm)				
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Criteria	Commentary
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li>There are no twin holes drilled.</li> <li>There are no details around data entry procedures.</li> <li>There has been no adjustment to the REE assay results other than the accepted factors applied to report REO rather than REE.</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>All holes were picked up by NortearTopografia 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.</li> <li>The coordinates were provided in following formats: Sirgas 2000 datum, and UTM WGS 84 datum - georeferenced to spindle 23S.</li> <li>For the generation of planialtimetric maps (DEM), drones were used control points in the field (mainly in a region with more dense vegetation), in addition to the auger drillholes.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>Hole spacing varies across the prospect scale from a maximum of: 200m by 200m, infill drilled to 100m by 100m in some areas, with tighter spacing of 50m by 50m in the closest space areas.</li> <li>Given the substantial geographic extent and generally shallow, flat lying geometry of the mineralisation, the spacing and orientation are considered sufficient to establish the geologic and grade continuity.</li> <li>Samples are not composited.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>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 powered auger holes is appropriate.</li> <li>As such, no sampling bias is believed to be introduced.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>Samples are removed from the field and transported back to Plant 2 sample preparation and sample storage facility of the company where they are checked and organized on wooden pallets in a covered shed. After checking, all samples are weighed then the samples undergo a physical preparation process including: drying, sieving, homogenisation, and finally splitting before being packed in plastic bags, packed into batches of 43 samples, and despatched to SGS-Geosol for analysis.</li> <li>The remaining sample is stored in 20 ltr plastic buckets, labelled with the name of the target, the hole name and sampled intervals. Samples are securely locked up in the storage shed.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>There have been no audits. MEI is conducting an audit of previous assay results by re-assaying pulps and coarse reject from 4-5% of all historic samples at an umpire Lab.</li> </ul>

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section.)

Criteria	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li>Listed in Appendix 3.</li> <li>Given the rich history of mining and current mining activity in the Pocos de Caldas there appears to be no impediments to obtaining a License to operate in the area.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>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 13,710m and 12,962 samples).</li> <li>Refer to body of the release for appraisal of previous exploration.</li> </ul>
<i>Geology</i>	<p>The Alkaline Complex of Pocos 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 mineralisation are products of a history of post-magmatic alteration and weathering, in the last stages of its evolution (Schorscher &amp; Shea, 1992; Ulbrich et al., 2005), described below:</p> <ol style="list-style-type: none"> <li>Deuteric post-magmatic alteration and incipient hydrothermal alteration: potassium metasomatism and zeolitization and, subordinately, formation of clays under oxidizing conditions, with hematitization and hydrated iron oxides;</li> <li>Hydrothermal alteration: piritization, strong potassium metasomatism, mobilization and concentration of U, Th, ETR, Zr and Mo;</li> <li>Emplacement of mafic-ultramafic dikes (lamprophyres);</li> <li>Development of lateritic surface and extensive saprolitization of the massif, supergenic remobilization and precipitation of uranium concentrations.</li> </ol>

Criteria	Commentary
	<p>5) The REE mineralisation focused on 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 granite basement as well as enriched HREE composition.</p>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li>• Drill hole information for all 1,396 powered auger holes drilled by previous explorers is presented in Appendix 1.</li> </ul>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>• Appendix 1 lists Mineralised Intercepts for all powered auger holes drilled by previous explorers. For simplicity the mineralised intercepts reported are a weighted average grade of the entire drill hole. No top-cuts have been employed and no restriction on the amount of internal dilution. Inspection of the assay table shows there are only 26 samples of 12,964 total samples which are &lt;500 ppm TREO, therefore it is effectively a 500ppm bottom cut.</li> <li>• No Metal Equivalents are used.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>• The mineralisation is flat lying (reflecting topography and weathering) and occurs within the saprolite/clay zone of a deeply developed regolith. As the drilling is vertical, down hole intervals are assumed to be true widths.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>• A tenement location plan, regional geology map, and a type cross section are presented in the main body.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>• Collar information and Significant Intercepts for all drill holes from the project are reported in Appendix 1.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>• A report on preliminary metallurgical testwork of material from Dona Maria I and a nearby pit was presented in the data package. A review is underway and will be released to the ASX as soon as completed.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>• Proposed work is discussed in the body of the text.</li> </ul>

### Appendix 3 - Licence details

Process	Phase	Owner	Area (ha)
814.251/1971	Mining Concession	Mineração Perdizes Ltda	124.35
814.860/1971	Mining Concession	Mineração Zelândia Ltda	341.73
815.006/1971	Mining Concession	Mineração Perdizes Ltda	717.52
815.274/1971	Mining Request	Companhia Geral de Minas	739.73
815.645/1971	Mining Concession	Companhia Geral de Minas	366.02
815.681/1971	Mining Concession	Mineração Zelândia Ltda	766.54
815.682/1971	Mining Concession	Companhia Geral de Minas	575.26
816.211/1971	Mining Concession	Mineração Perdizes Ltda	796.55
817.223/1971	Mining Concession	Mineração Daniel Togni Loureiro Ltda	772.72
820.352/1972	Mining Concession	Mineração Zelândia Ltda	26.40
820.353/1972	Mining Concession	Mineração Zelândia Ltda	529.70
820.354/1972	Mining Concession	Mineração Zelândia Ltda	216.49
813.025/1973	Mining Request	Mineração Perdizes Ltda	943.74
808.556/1974	Mining Concession	Mineração Perdizes Ltda	204.09
811.232/1974	Mining Concession	Mineração Perdizes Ltda	524.40
809.359/1975	Mining Concession	Companhia Geral de Minas	317.36
803.459/1975	Mining Concession	Mineração Perdizes Ltda	24.02
804.222/1975	Mining Request	Mineração Perdizes Ltda	403.65
807.899/1975	Mining Request	Companhia Geral de Minas	948.92
808.027/1975	Mining Concession	Companhia Geral de Minas	600.76
809.358/1975	Mining Concession	Companhia Geral de Minas	617.23
830.391/1979	Mining Request	Mineração Perdizes Ltda	7.30
830.551/1979	Mining Request	Togni S A Materiais Refratários	528.88
830.000/1980	Mining Request	Mineração Perdizes Ltda	203.85
830.633/1980	Mining Request	Mineração Zelândia Ltda	35.25
831.880/1991	Mining Request	Mineração Zelândia Ltda	84.75
835.022/1993	Mining Concession	Mineração Perdizes Ltda	73.50
835.025/1993	Mining Concession	Mineração Perdizes Ltda	100.47
831.092/1983	Mining Concession	Mineração Perdizes Ltda	171.39
830.513/1979	Mining Request	Mineração Monte Carmelo Ltda	457.27

### Appendix 4 – Material Terms of Executive Chairman Appointment

Item	Term
1. Position	Executive Chairman
2. Commencement Date	15 December 2022
3. Term	No fixed term, ongoing until terminated by either party in accordance with the agreement
4. Fixed Remuneration	Mr Burke is entitled to fixed remuneration of \$20,000 per month.
5. Long-Term Incentives	Subject to shareholder approval, Mr Burke will be entitled to a grant of 20 million performance rights under Meteoric's equity incentive plan. Further details of the terms and conditions of the performance rights will be included in a notice of meeting to be dispatched to shareholders in due course.
6. Termination	Either party may terminate the agreement by providing the other party with three months' notice in writing.
7. Other	The agreement contains other standard terms and conditions for agreements of this nature.