

ASX ANNOUNCEMENT

20 December 2022



Metallurgical Tests Confirm Caldeira as Ionic Adsorption Clay REE Deposit

Key Highlights

- Head grade of the composite sample for testwork collected from 44 holes, over 140 samples (200 kg) was **4,917ppm TREO including 25.5% Magnet REE**.
- Initial metallurgical testwork showed excellent recoveries by desorption of Rare Earth Elements (REE) by using ammonium sulphate solution $[(\text{NH}_4)_2\text{SO}_4]$ 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**
- These results show a considerable portion of the target REEs are adsorbed onto clays allowing for recovery by a simple washing process, unlike the case for many REE projects, where the REEs are tightly bound within the mineral lattice or are even in colloidal suspension requiring a much more intensive treatment process
- Meteoric has engaged with rare earth processing experts in the Minerals Business Unit of the Australian Nuclear Science and Technology Organisation (ANSTO) to carry out future metallurgical testwork programs
- 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

Meteoric Resources NL (**ASX: MEI**) (**Meteoric** or the **Company**) is pleased to announce it has completed a positive review of previous metallurgical testwork carried out on the Capo do Mel Prospect, located within the newly acquired Caldeira Project, in the Minas Gerais State of Brazil. The historic testwork was completed in 2019 at SGS Geosol Laboratories in Brazil. Meteoric's review of the testwork was completed by experienced metallurgist Mr. Noel O'Brien and by rare earth processing experts in the Minerals Business Unit of the Australian Nuclear Science and Technology Organisation (ANSTO).

Director, Andrew Tunks said, *“The initial testwork of the metallurgy at the Caldeira Project is very encouraging. The average recovery of the low temperature magnet REE, Pr + Nd, was 58% and the average recovery of the more valuable high temperature magnet REE, Tb +Dy, was 43%. These results were achieved by leaching with an ammonium sulphate solution [(NH₄)₂SO₄] in weakly acidic conditions [pH4] and atmospheric conditions.*

The excellent recoveries in this simple process is a crucial observation and shows that for the Capo do Mel Prospect, a considerable portion of the target REE are adsorbed onto the clays. In layman’s terms, this means the REEs are bonded onto the outside of the clay minerals (adsorbed) and can be recovered by washing the clay in a weak ammonium sulphate solution at room temperature and pressure. This is not the case for many Rare Earth Element projects, where the REEs are tightly bound within the mineral lattice or are even in colloidal suspension and require a much more intensive treatment process.

Meteoric has already announced plans for diamond drilling to commence at the Caldeira Project in January to test the depth extension of the ultra-high-grade mineralisation recorded in auger drilling (ASX 15/12/2022). Samples from the diamond drilling will also be collected from the other 5 areas drilled, to increase the coverage of metallurgical test work and thus the variability of recoveries across the Project footprint.

Rare earth elements are essential ingredients for the increased electrification of society if we are to reach the atmospheric carbon dioxide goals set in the Paris climate agreement of 2015. REE will play a crucial role in high technology industries, especially as permanent magnets in electric vehicles and wind turbines, also in electronic devices such as the screen you are reading this ASX release on.

With the large, mineralised footprint, positive results on preliminary metallurgy and high-REE grades all indicated by results from previous exploration, I believe that the Caldeira Project has the potential to become a globally significant contributor to the electrification story.”

Caldeira Project

Meteoric has entered into an agreement to acquire a Tier 1 Ionic Clay Rare Earth Element project in the Minas Gerais State of Brazil (ASX 15/12/2022). The Caldeira Project comprises 30 licenses (21 Mining Licenses and 9 Mining Licence Applications) with significant previous exploration including: regional surface sampling, geologic mapping, powered auger sampling (1,311 holes for 13,037m), multi-element geochemical analysis (12,275 samples), topographic surveys and one bulk sample. The auger drilling occurred across six (6) licenses and returned ultra-high-grade Total Rare Earth Oxide (TREO) intersections which were reported to the ASX on 15/12/2022.

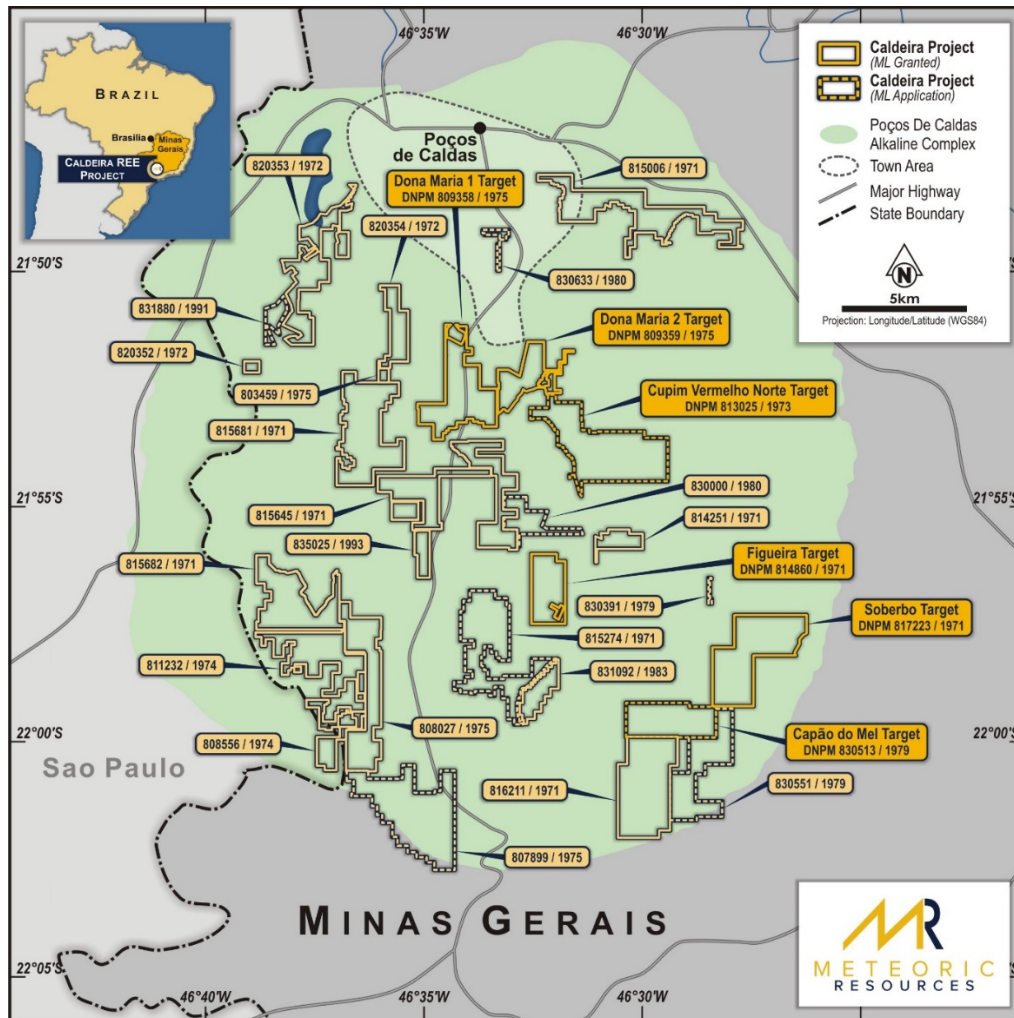


Figure 1. Simplified regional geological map of the Poços de Caldas Intrusive complex highlighting the Caldeira Project licenses.

Metallurgical Testwork program

The Caldeira Project has been sampled extensively with over 13,000m of augur drilling completed across the project across 6 different prospects (Figures 1 & 2). In 2019, a preliminary assessment of the recovery of all REE using ammonium sulphate – $[(\text{NH}_4)_2\text{SO}_4]$ as the ion exchange medium and sodium carbonate – $[\text{Na}_2\text{CO}_3]$ as a precipitation agent, was done at SGS Geosol Laboratories in Vespasiano, Minas Gerais. The 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 (See Figures 2 and 3).

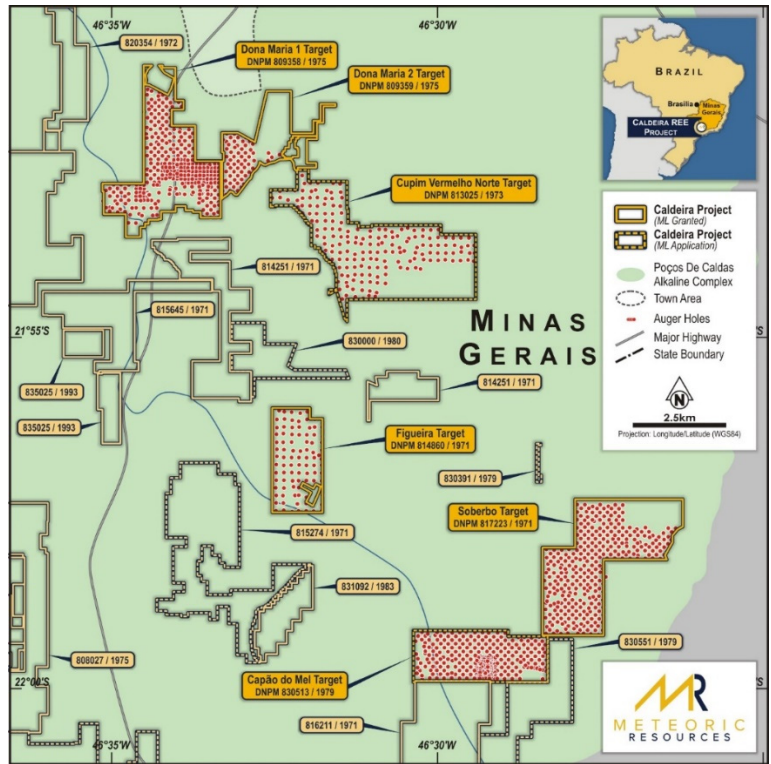


Figure 2. Auger drill hole collar location map (red dots).



Figure 3. Location plan of drill holes from the Capão do Mel prospect (holes used for the composite sample for preliminary Metallurgical testwork shown as yellow diamonds).

Sample Preparation

Prior to sending the samples to the lab the following physical preparation protocol was followed:

- Bagged 1m interval auger samples were dried then weighed and screened (5mm).
- Samples were then homogenised inside plastic sample bags by hand until 100% passed the 5mm screen.
- Samples were then split in a 12-channel Jones splitter with 500g sent to laboratory for assay and remainder archived in Poços de Caldas.

Upon arrival at SGS Geosol, the 184 samples were dried and crushed to 3mm before being homogenised in a cement mixer and split into 2kg parcels. A total of 40 x 2kg subsamples were prepared, of which 3 were randomly selected to establish the head grade of the composite sample. Table 1 shows the levels of REE in the composite sample. The head assays reported significant levels of the low temperature magnet REE - Praseodymium (**Pr**) and Neodymium (**Nd**), and also the more sought-after high temperature magnet REE – Dysprosium (**Dy**) and Terbium (**Tb**).

Table 1. Head assays of REE and REO averaged across the three randomly selected subsamples of the 200kg composite sample collected from Capo do Mel Prospect as reported by SGS GeoSol.

Classification	Element		REE (ppm)	Conversion Factor	Oxide	REO (ppm)	REO /TREO %
LREE	Lanthanum	La	1961	1.1728	La ₂ O ₃	2300	46.8%
	Cerium	Ce	731	1.2284	Ce ₂ O ₃	898	18.3%
	Praseodymium	Pr	274	1.1702	Pr ₆ O ₁₁	321	6.5%
	Neodymium	Ne	756	1.1664	Nd ₂ O ₃	882	17.9%
HREE	Samarium	Sm	86	1.1596	Sm ₂ O ₃	100	2.0%
	Europium	Eu	22	1.1579	Eu ₂ O ₃	25	0.5%
	Gadolinium	Gd	60	1.1526	Gd ₂ O ₃	69	1.4%
	Terbium	Tb	8	1.151	Tb ₄ O ₇	9	0.2%
	Dysprosium	Dy	35	1.1477	Dy ₂ O ₃	40	0.8%
	Holmium	Ho	6	1.1455	Ho ₂ O ₃	7	0.1%
	Erbium	Er	15	1.1435	Er ₂ O ₃	17	0.3%
	Thulium	Th	2	1.1142	Tm ₂ O ₃	2	0.0%
	Ytterbium	Yt	11	1.1379	Yb ₂ O ₃	13	0.3%
	Lutetium	Lu	2	1.1372	Lu ₂ O ₃	2	0.0%
	Yttrium	Y	183	1.2697	Y ₂ O ₃	232	4.7%
Totals			4151			4917	100%

A further random selection of 4kg lots were then used for the laboratory scale stirred leach tests, which were completed at atmospheric conditions on the prepared samples (PETR 1-4) using ammonium sulphate $-(\text{NH}_4)_2\text{SO}_4$ as the ion exchange medium or leaching agent. The ammonium sulphate ion exchange medium had proven successful on a number of other projects and is widely used in China on ionic clays. The tests were designed to provide preliminary information on possible process variables:

- **Concentration of leaching agent:** this was found to be best between 2% and 4% (NH₄)₂SO₄. Leaching was carried out at pH 4-4.5.
- **Liquid to solid ratio:** best results were obtained at values of 4-5.
- **Leaching agent to solid ratio:** greater than 160 kg/ton.
- **Leaching time:** the reaction occurred very quickly – in less than 10 minutes. For practical purposes, a leaching time of 15 minutes was chosen for further tests.

Larger scale leaching tests were then completed to generate sufficient leach liquor for the recovery of REE carbonates by precipitation. Following a simple impurity removal step, the REE were precipitated from the leach by raising the pH by adding commercial grade sodium carbonate, [Na₂CO₃] and the REE were recovered as a mixed carbonate concentrate after washing and filtering. It was noted that impurities such as aluminium Al₂O₃, iron Fe₂O₃ and silica SiO₂, were acceptably low for this process. The overall recoveries of REE of the four subsamples are summarised in Table 2 below:

Metallurgical Results

Table 2: Individual Sample Recoveries

REO	Sample1	Sample2	Sample3	Sample4	AVERAGE
La ₂ O ₃	61%	62%	59%	64%	62%
Ce ₂ O ₃	4%	4%	4%	4%	4%
Pr ₆ O ₁₁	53%	51%	49%	54%	52%
Nd ₂ O ₃	65%	63%	61%	67%	64%
Sm ₂ O ₃	53%	52%	48%	53%	52%
Eu ₂ O ₃	55%	53%	52%	56%	54%
Gd ₂ O ₃	56%	57%	53%	57%	56%
Tb ₄ O ₇	50%	47%	42%	48%	47%
Dy ₂ O ₃	41%	38%	35%	40%	39%
Ho ₂ O ₃	33%	28%	15%	29%	26%
Er ₂ O ₃	28%	29%	31%	29%	29%
Tm ₂ O ₃	26%	25%	22%	25%	25%
Yb ₂ O ₃	15%	19%	17%	19%	18%
Lu ₂ O ₃	21%	21%	19%	22%	21%
Y ₂ O ₃	37%	38%	35%	37%	37%

These results, for first off sighter tests using unoptimized conditions, are extremely encouraging. The average recovery of the low temperature magnet REE Pr + Nd, was 58% and the average recovery of the more valuable high temperature magnet REEs, Tb +Dy, was 43%. It is expected that this could be further optimised during future testwork

This work demonstrates that good REE desorption was achieved using a standard ammonium sulphate salt at pH 4 and supports the contention that REE mineralisation at the Caldeira Project is an Ionic (Adsorption) Clay deposit.

Future Metallurgical Testwork Programs:

Future programs will be designed to improve the overall TREEO recoveries and develop a more complete understanding of the nature of the clays. Much of this work will be conducted at ANSTO laboratories in New South Wales, Australia. ANSTO have particular expertise in the hydrometallurgy of REE's, including the processing of ionic clay REEs.

Future work will include:

- Sampling across the deposit to account for variability – REE concentrations and distributions can vary with depth and spatially
- Mineralogy on representative samples using QEMSCAN or similar technique. The aim of this work will be to look for refractory phases which don't yield REE under desorbable conditions.
- Test alternative leaching salts such as sodium chloride or magnesium sulphate.
- Investigate the impurity removal stage in more detail – aluminium and iron are the main impurities.
- Investigate the solid/liquid separation characteristics in more detail – once REEs are leached into solution, the liquid has to be separated from the solids and this requires thickening and filtration stages.
- Test the whole flowsheet at laboratory scale to get an early indication of the project requirements in terms of the possible impact of recycling process solutions, water supply and quality, availability of leaching chemicals and any environmental constraints that may influence the choice of chemicals.

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Competent Person Statement

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.

The information in this release that relates to metallurgy and metallurgical test work has been reviewed by Mr Noel O'Brien, FAusIMM, MBA, B. Met Eng. Mr O'Brien is not an employee of the Company but is employed as a contract consultant. Mr O'Brien is a Fellow of the Australasian Institute of Mining and Metallurgy, he has sufficient experience with the style of processing response and type of deposit under consideration, and to the activities undertaken, to qualify as a competent person as defined in the 2012 edition of the "Australian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves" (The JORC Code). Mr O'Brien consents to the inclusion in this report of the contained technical information in the form and context as it appears. Mr. O'Brien confirms information in this market announcement is an accurate representation of the available data and studies for the material mining project.

Appendix 1. Elemental Analysis

Elemental analysis of all 184 1m samples from across Capo do Mel used to make up the 200kg homogenised bulk sample which was used for Metallurgical testwork.

Hole	From (m)	La ₂ O ₃ (ppm)	CeO ₂ (ppm)	Pr ₆ O ₁₁ (ppm)	Nd ₂ O ₃ (ppm)	Sm ₂ O ₃ (ppm)	Eu ₂ O ₃ (ppm)	Gd ₂ O ₃ (ppm)	Tb ₄ O ₇ (ppm)	Dy ₂ O ₃ (ppm)	Ho ₂ O ₃ (ppm)	Er ₂ O ₃ (ppm)	Tm ₂ O ₃ (ppm)	Yb ₂ O ₃ (ppm)	Lu ₂ O ₃ (ppm)	Y ₂ O ₃ (ppm)	TREO
CDM-01	4	1873	645	302	910	88	19	40	4	21	3	9	1	7	1	104	4,027
CDM-01	5	1867	802	296	897	89	20	44	5	22	4	9	1	7	1	114	4,177
CDM-01	6	1779	616	280	826	90	21	48	5	25	4	10	1	8	1	128	3,842
CDM-01	7	1735	778	276	813	92	24	56	7	30	5	12	1	8	1	156	3,994
CDM-01	8	2154	605	304	930	114	29	75	9	40	7	16	2	11	1	221	4,517
CDM-01	9	1768	644	266	808	102	28	71	9	42	7	17	2	12	2	240	4,019
CDM-01	10	1286	531	192	577	75	22	59	8	38	6	16	2	11	1	220	3,042
CDM-01	11	949	570	145	435	60	18	52	7	36	6	15	2	10	1	216	2,523
CDM-04	3	1871	2057	234	644	65	17	46	5	27	5	12	2	9	1	166	5,160
CDM-04	4	1486	1892	178	495	53	15	42	6	31	6	16	2	14	2	206	4,443
CDM-08	0	2902	836	442	1339	149	37	88	10	43	7	18	2	14	2	237	6,127
CDM-08	1	4209	497	627	1898	249	74	203	26	124	20	50	6	33	4	700	8,720
CDM-08	2	3630	369	519	1612	228	75	220	31	152	25	61	8	41	6	901	7,877
CDM-08	3	2427	690	352	1067	154	50	155	22	109	18	43	5	29	4	627	5,751
CDM-08	4	2039	579	333	1023	142	44	130	18	89	15	35	4	24	3	518	4,996
CDM-08	5	2126	635	348	1070	143	44	122	17	82	14	32	4	23	3	474	5,137
CDM-08	6	1743	651	275	849	114	34	93	13	61	10	23	3	17	2	348	4,235
CDM-12	1	1128	900	137	381	42	12	33	5	24	4	11	1	8	1	159	2,847
CDM-14	10	1859	820	249	703	79	20	52	7	34	5	13	2	9	1	182	4,036
CDM-14	13	2555	417	312	890	99	27	78	10	49	8	19	2	13	2	253	4,733
CDM-14	15	1683	380	232	652	73	19	53	7	34	5	13	2	8	1	183	3,347
CDM-14	16	1457	432	201	569	65	17	49	6	33	5	13	2	8	1	178	3,036
CDM-14	17	1418	407	191	538	61	17	47	6	31	5	13	2	9	1	181	2,928
CDM-14	18	1510	520	198	554	62	17	46	6	30	5	12	1	8	1	171	3,141
CDM-14	19	2066	388	281	808	91	24	66	9	45	7	18	2	12	2	249	4,068
CDM-15	2	1277	420	175	516	63	18	52	7	36	6	16	2	11	2	224	2,825
CDM-16	2	2165	957	346	1031	96	21	44	5	22	3	9	1	6	1	106	4,814
CDM-16	5	2278	715	344	1017	103	25	63	7	31	5	12	1	8	1	161	4,771
CDM-17	0	2969	654	453	1469	169	47	125	15	71	11	27	3	18	2	404	6,437
CDM-17	1	2874	637	435	1409	181	52	145	17	83	13	31	4	19	3	460	6,364
CDM-17	2	1888	718	313	1043	133	38	106	13	61	10	24	3	15	2	355	4,723
CDM-17	3	1200	625	200	655	83	24	68	9	42	7	16	2	11	1	233	3,175
CDM-21	6	1511	633	165	444	42	10	30	4	18	3	8	1	6	1	133	3,009
CDM-21	7	1975	493	201	553	50	12	33	4	17	3	6	1	4	1	114	3,463
CDM-21	8	2887	916	318	861	77	19	50	6	25	4	10	1	6	1	171	5,351
CDM-21	9	2621	796	275	731	66	16	43	5	22	4	8	1	5	1	139	4,732
CDM-21	10	2241	330	227	621	54	13	35	4	16	3	5	1	3	1	100	3,653
CDM-22	2	1612	509	206	599	67	18	51	7	34	6	16	2	11	2	224	3,364
CDM-22	3	2873	1026	365	1065	122	35	103	14	69	12	29	3	18	3	443	6,179
CDM-22	4	1617	563	205	617	72	21	63	8	44	8	20	2	13	2	290	3,545
CDM-24	1	1834	1150	222	641	65	17	44	6	29	5	13	2	10	1	180	4,220

Hole	From (m)	La ₂ O ₃ (ppm)	CeO ₂ (ppm)	Pr ₆ O ₁₁ (ppm)	Nd ₂ O ₃ (ppm)	Sm ₂ O ₃ (ppm)	Eu ₂ O ₃ (ppm)	Gd ₂ O ₃ (ppm)	Tb ₄ O ₇ (ppm)	Dy ₂ O ₃ (ppm)	Ho ₂ O ₃ (ppm)	Er ₂ O ₃ (ppm)	Tm ₂ O ₃ (ppm)	Yb ₂ O ₃ (ppm)	Lu ₂ O ₃ (ppm)	Y ₂ O ₃ (ppm)	TREO
CDM-24	2	2286	1173	276	784	78	20	55	7	33	6	15	2	10	1	210	4,956
CDM-25	0	1868	663	287	873	91	21	52	6	27	5	11	1	8	1	144	4,059
CDM-25	1	3324	642	453	1338	149	39	101	12	55	9	22	2	14	2	312	6,474
CDM-25	2	3240	724	405	1238	144	41	119	15	69	11	26	3	16	2	408	6,460
CDM-25	3	2155	753	300	886	106	31	94	12	59	10	23	3	14	2	368	4,817
CDM-25	4	3612	887	457	1327	160	48	153	20	100	18	46	6	34	5	644	7,517
CDM-25	5	934	602	130	387	50	15	46	6	31	5	12	1	8	1	189	2,418
CDM-26	8	2556	1089	426	1350	136	32	75	8	37	6	15	2	11	1	202	5,947
CDM-26	9	2962	479	491	1526	162	38	91	11	49	8	20	2	13	2	276	6,132
CDM-26	10	2840	703	423	1320	143	36	90	11	48	8	19	2	14	2	267	5,927
CDM-26	11	3128	705	506	1618	177	45	118	14	61	10	24	3	16	2	347	6,773
CDM-26	12	2882	738	452	1450	163	42	111	13	58	10	23	3	15	2	332	6,293
CDM-26	13	2222	1015	336	1090	122	31	85	10	46	8	18	2	12	2	265	5,264
CDM-26	14	2048	625	310	1006	114	30	81	9	43	7	17	2	12	2	260	4,566
CDM-27	0	3028	557	418	1047	109	24	71	8	40	6	19	2	16	2	218	5,566
CDM-27	1	4053	268	535	1371	142	31	97	11	47	7	18	2	14	2	243	6,841
CDM-27	2	5268	633	683	1908	185	42	129	15	64	10	25	3	19	2	341	9,328
CDM-27	3	4805	1131	620	1585	174	41	126	15	66	10	26	3	19	3	350	8,974
CDM-27	4	3468	1124	447	1144	124	30	95	11	50	7	20	2	15	2	267	6,805
CDM-27	5	3667	714	468	1177	130	31	98	11	52	8	21	2	15	2	281	6,678
CDM-27	6	3442	924	436	1095	124	30	96	12	60	10	28	3	22	3	350	6,635
CDM-27	7	3734	452	460	1167	130	31	100	12	57	9	24	3	18	2	328	6,527
CDM-27	8	4782	1130	595	1521	174	43	140	17	79	12	33	4	24	3	491	9,045
CDM-27	9	4273	636	523	1301	147	36	117	14	65	10	28	3	21	3	435	7,612
CDM-27	10	3200	974	394	1007	115	28	92	11	50	8	20	2	14	2	283	6,199
CDM-27	11	3715	1140	464	1180	133	32	107	12	55	8	21	2	14	2	313	7,198
CDM-27	12	2892	960	369	929	104	25	80	9	42	6	16	2	11	1	245	5,694
CDM-27	13	2609	856	319	827	94	23	74	9	39	6	16	2	11	1	229	5,114
CDM-27	14	2880	666	351	902	100	24	80	9	43	7	18	2	13	2	259	5,356
CDM-27	16	2206	1205	237	665	79	19	64	8	36	6	15	2	12	1	225	4,779
CDM-27	17	1409	625	152	431	50	12	42	5	25	4	12	1	10	1	161	2,941
CDM-28	3	1178	1689	170	442	51	14	41	6	36	8	21	3	17	2	246	3,924
CDM-28	4	1086	1280	161	420	50	13	36	5	31	6	19	2	13	2	211	3,335
CDM-28	8	1554	1947	242	648	81	21	57	8	49	9	23	3	15	2	299	4,957
CDM-29	1	1306	2805	176	490	56	15	38	5	28	5	12	1	9	1	168	5,116
CDM-29	2	1142	1093	155	428	49	13	37	6	35	7	19	3	15	2	232	3,235
CDM-30	0	2626	863	301	839	83	22	60	7	38	6	15	2	9	1	249	5,124
CDM-30	1	1849	365	218	592	59	15	43	5	26	4	10	1	6	1	176	3,370
CDM-30	2	1222	438	138	377	38	10	27	3	19	3	8	1	5	1	127	2,416
CDM-31	2	2009	756	242	681	71	18	54	6	32	6	13	2	8	1	223	4,122
CDM-32	0	1055	1057	170	500	55	13	31	4	22	4	10	1	8	1	118	3,049
CDM-32	1	1500	1154	227	651	70	17	42	6	29	5	13	2	10	1	157	3,885
CDM-32	2	1772	1944	252	723	79	20	53	7	35	6	16	2	12	2	203	5,127
CDM-32	3	1891	1810	252	733	82	22	64	9	44	8	20	2	14	2	287	5,239
CDM-32	4	1828	1982	242	692	80	22	63	8	44	8	21	3	14	2	310	5,318

Hole	From (m)	La ₂ O ₃ (ppm)	CeO ₂ (ppm)	Pr ₆ O ₁₁ (ppm)	Nd ₂ O ₃ (ppm)	Sm ₂ O ₃ (ppm)	Eu ₂ O ₃ (ppm)	Gd ₂ O ₃ (ppm)	Tb ₄ O ₇ (ppm)	Dy ₂ O ₃ (ppm)	Ho ₂ O ₃ (ppm)	Er ₂ O ₃ (ppm)	Tm ₂ O ₃ (ppm)	Yb ₂ O ₃ (ppm)	Lu ₂ O ₃ (ppm)	Y ₂ O ₃ (ppm)	TREO
CDM-32	5	1759	1904	242	709	85	24	67	9	49	9	23	3	16	2	328	5,230
CDM-32	6	1735	2534	215	620	73	19	63	8	45	8	23	3	16	2	331	5,695
CDM-32	7	1224	2884	162	473	57	15	46	6	31	5	15	2	11	1	214	5,146
CDM-32	8	1133	932	149	438	50	13	40	5	29	5	16	2	12	2	208	3,033
CDM-32	10	1645	903	226	643	73	18	53	7	33	6	16	2	12	1	217	3,857
CDM-32	12	1383	824	191	541	60	15	43	5	26	4	11	1	7	1	164	3,277
CDM-33	4	1102	160	162	464	46	10	27	3	12	2	5	1	4	1	64	2,063
CDM-33	5	1891	125	244	713	93	26	83	10	49	7	19	2	12	2	287	3,565
CDM-33	6	1592	98	220	631	71	18	54	6	27	4	11	1	8	1	155	2,898
CDM-33	7	1650	169	217	619	88	27	88	11	57	9	22	2	14	2	344	3,319
CDM-33	8	1158	177	151	432	67	22	72	10	51	8	20	2	12	2	310	2,494
CDM-34	13	2035	1442	261	728	75	20	47	6	30	5	13	2	9	1	168	4,842
CDM-34	14	3472	2325	448	1214	123	30	75	9	42	7	17	2	11	1	233	8,010
CDM-34	15	3191	1814	374	1050	107	27	69	9	40	7	16	2	10	1	221	6,938
CDM-34	16	3738	1656	460	1319	137	35	90	11	51	9	20	2	12	2	292	7,835
CDM-36	2	1863	744	262	746	75	17	49	6	25	4	11	1	8	1	133	3,944
CDM-36	3	2233	846	328	867	87	20	57	7	29	5	13	2	10	1	167	4,673
CDM-36	4	3289	366	459	1158	113	25	76	8	35	5	14	2	10	1	202	5,764
CDM-36	5	4749	1150	648	1707	159	37	109	12	46	7	18	2	12	2	274	8,930
CDM-36	6	4551	365	600	1530	149	35	108	11	49	8	20	2	13	2	305	7,748
CDM-36	7	5068	1090	669	1911	174	42	125	14	58	9	23	2	14	2	368	9,569
CDM-36	8	3151	361	429	1072	115	30	80	8	41	6	17	2	10	1	236	5,558
CDM-36	9	3691	759	432	1214	119	31	85	10	42	7	16	2	10	1	258	6,676
CDM-36	10	4804	862	541	1513	148	39	109	12	53	9	20	3	12	2	342	8,467
CDM-36	11	3610	1050	407	1136	112	28	79	9	38	6	14	3	8	1	233	6,734
CDM-36	12	2984	608	342	950	90	22	63	7	29	5	11	2	7	1	182	5,301
CDM-36	13	2346	651	270	759	72	18	50	5	25	4	9	2	6	1	150	4,367
CDM-37	2	930	2040	127	355	42	13	38	8	66	17	55	7	37	4	516	4,258
CDM-37	3	1918	1187	230	635	67	18	50	6	32	6	13	3	8	1	187	4,359
CDM-38A	2	1982	923	246	683	65	16	42	5	24	4	10	2	7	1	133	4,144
CDM-39	0	4870	963	638	1585	144	31	62	7	34	6	15	2	11	1	182	8,551
CDM-39	1	3186	779	417	1055	103	23	49	6	30	5	13	2	10	1	163	5,842
CDM-39	2	3127	1012	411	1039	105	24	54	6	32	5	13	2	10	1	166	6,006
CDM-39	3	2494	1080	329	841	88	21	47	6	30	5	13	2	11	1	164	5,132
CDM-39	4	2058	809	282	717	75	18	40	5	26	5	12	2	9	1	149	4,209
CDM-39	5	2613	1586	349	890	97	24	55	7	36	6	16	2	12	2	200	5,893
CDM-39	6	2258	1093	303	771	83	20	48	6	31	5	14	2	11	2	177	4,824
CDM-39	7	1916	824	290	763	79	19	53	6	29	5	13	2	10	1	155	4,165
CDM-39	9	1543	774	229	609	65	16	44	5	25	4	11	1	9	1	140	3,477
CDM-40	2	1531	736	195	601	59	15	40	5	24	4	10	1	7	1	139	3,369
CDM-40	3	1599	859	210	602	65	17	46	6	26	4	11	2	7	1	146	3,600
CDM-41	4	1306	1122	199	529	56	14	36	4	20	3	8	1	7	1	98	3,404
CDM-41	5	2047	1037	296	787	86	22	61	7	32	5	13	1	9	1	165	4,569
CDM-42	3	1547	363	247	670	69	18	48	5	22	4	9	1	6	1	112	3,122
CDM-44	10	1575	687	240	611	67	16	45	6	25	4	9	1	6	1	114	3,406

Hole	From (m)	La ₂ O ₃ (ppm)	CeO ₂ (ppm)	Pr ₆ O ₁₁ (ppm)	Nd ₂ O ₃ (ppm)	Sm ₂ O ₃ (ppm)	Eu ₂ O ₃ (ppm)	Gd ₂ O ₃ (ppm)	Tb ₄ O ₇ (ppm)	Dy ₂ O ₃ (ppm)	Ho ₂ O ₃ (ppm)	Er ₂ O ₃ (ppm)	Tm ₂ O ₃ (ppm)	Yb ₂ O ₃ (ppm)	Lu ₂ O ₃ (ppm)	Y ₂ O ₃ (ppm)	TREO
CDM-44	11	1780	863	275	711	79	20	55	7	30	5	10	1	7	1	137	3,980
CDM-44	12	1390	1002	204	541	60	16	43	6	25	4	10	1	7	1	121	3,431
CDM-45	7	2009	1251	303	791	91	23	63	9	43	7	18	2	14	2	220	4,846
CDM-45	12	2291	576	305	852	90	22	66	8	36	6	14	2	9	1	181	4,459
CDM-45	13	4527	1298	617	1701	169	41	116	13	54	8	19	2	12	2	257	8,836
CDM-45	14	3425	867	448	1264	124	30	87	10	42	7	16	2	10	1	223	6,556
CDM-46	15	1785	634	230	618	62	15	43	5	23	4	9	1	6	1	131	3,567
CDM-46	16	1844	711	246	678	66	16	44	5	23	4	9	1	7	1	128	3,783
CDM-47	5	1792	1870	275	751	80	20	51	7	41	8	21	3	18	3	240	5,181
CDM-47	6	2756	1247	390	1044	106	25	65	8	42	8	18	2	12	2	256	5,981
CDM-47	7	4144	1449	564	1490	141	33	87	10	49	8	19	2	10	1	283	8,292
CDM-47	8	5764	1808	764	1990	186	43	112	13	58	10	21	2	11	1	311	11,094
CDM-47	9	6216	1023	784	2063	192	46	123	14	63	10	23	2	13	2	351	10,925
CDM-47	10	8749	1446	1083	2806	261	61	171	19	85	14	31	3	16	2	493	15,240
CDM-48	9	1575	612	227	628	69	17	46	6	27	5	12	1	8	1	166	3,401
CDM-48	10	1474	678	200	561	61	16	45	6	31	6	15	2	11	1	200	3,306
CDM-48	11	1206	449	161	453	50	13	37	5	23	4	10	1	7	1	145	2,565
CDM-48	12	2839	769	364	1017	109	28	80	9	44	7	18	2	10	1	289	5,588
CDM-48	13	2924	534	366	1026	107	28	81	10	44	7	17	2	9	1	295	5,450
CDM-48	14	2670	556	330	938	98	25	74	9	41	7	16	2	9	1	278	5,053
CDM-48	15	1612	1011	204	579	64	17	50	6	31	5	13	2	9	1	191	3,795
CDM-49	5	1434	1100	217	658	71	18	44	6	28	5	13	2	9	1	174	3,779
CDM-51	0	1907	966	278	848	98	23	72	8	37	6	16	2	11	1	222	4,495
CDM-51	1	2154	1153	336	920	110	27	88	10	48	7	20	2	13	2	292	5,183
CDM-51	2	1662	631	225	691	84	22	72	9	41	7	18	2	12	2	267	3,745
CDM-51	3	3080	821	455	1256	154	39	132	15	71	11	30	3	18	2	531	6,619
CDM-51	4	1720	814	241	747	93	24	77	9	41	6	17	2	11	1	252	4,055
CDM-53	9	1393	545	222	568	64	16	42	6	25	4	10	1	7	1	128	3,033
CDM-54	15	2064	820	279	746	81	20	51	7	34	6	12	1	8	1	160	4,290
CDM-54	16	1738	764	231	629	68	18	47	6	32	5	10	1	7	1	150	3,708
CDM-55	13	2039	2064	266	723	81	21	55	8	43	8	21	3	17	2	251	5,601
CDM-55	17	3028	1295	375	997	106	28	73	10	55	10	26	3	19	2	309	6,338
CDM-55	18	2983	1033	371	1008	103	26	69	9	48	9	22	3	15	2	271	5,973
CDM-57	4	3276	1161	466	1319	133	31	76	9	46	8	21	2	15	2	236	6,802
CDM-57	5	2243	1622	321	921	98	24	59	8	43	8	21	3	16	2	235	5,624
CDM-57	6	2110	1937	307	846	93	24	58	8	44	8	21	3	16	2	232	5,708
CDM-57	7	2731	1284	385	1084	117	31	75	10	51	9	22	3	16	2	276	6,096
CDM-57	8	1525	1608	221	633	72	20	50	7	39	7	19	2	14	2	212	4,432
CDM-57	9	1356	1258	197	567	68	19	48	7	38	7	18	2	12	1	209	3,807
CDM-57	10	1806	1045	257	715	86	23	60	8	42	7	18	2	11	2	220	4,302
CDM-57	11	1251	1117	179	514	61	17	44	6	31	5	14	2	10	1	169	3,422
CDM-57	12	1206	1101	172	504	61	17	46	7	38	7	21	3	16	2	230	3,433
CDM-58	1	1599	1234	230	674	72	18	46	7	40	8	19	2	14	2	224	4,188
CDM-58	2	2213	1816	300	859	91	23	59	8	48	9	22	3	15	2	260	5,728
CDM-58	4	2411	677	308	872	94	24	64	8	40	7	17	2	11	1	214	4,750

Hole	From (m)	La ₂ O ₃ (ppm)	CeO ₂ (ppm)	Pr ₆ O ₁₁ (ppm)	Nd ₂ O ₃ (ppm)	Sm ₂ O ₃ (ppm)	Eu ₂ O ₃ (ppm)	Gd ₂ O ₃ (ppm)	Tb ₄ O ₇ (ppm)	Dy ₂ O ₃ (ppm)	Ho ₂ O ₃ (ppm)	Er ₂ O ₃ (ppm)	Tm ₂ O ₃ (ppm)	Yb ₂ O ₃ (ppm)	Lu ₂ O ₃ (ppm)	Y ₂ O ₃ (ppm)	TREO
CDM-58	5	2532	4191	331	932	104	28	73	10	50	8	21	2	13	2	249	8,546
CDM-58	6	1988	1296	265	777	94	27	74	10	55	10	23	3	15	2	323	4,961
CDM-58	7	1780	1344	239	693	80	22	60	8	40	7	16	2	10	1	241	4,544
CDM-61	1	1648	591	265	803	83	21	52	6	34	6	15	2	11	1	203	3,740
CDM-61	2	1765	628	277	840	90	23	59	7	38	6	16	2	10	1	227	3,990
CDM-61	3	1558	653	245	750	84	22	57	7	39	6	16	2	11	2	229	3,680
CDM-61	5	2098	613	314	966	111	31	85	11	55	9	23	2	14	2	354	4,688
CDM-61	6	2141	382	324	997	116	33	90	11	58	10	24	3	14	2	376	4,582

Appendix 2. Collar table for all holes used in Metallurgical Testwork
Coordinate system Sirgas 2000 datum

Hole_ID	EOH (m)	E (m)	N (m)	RL (m)
CDM-01	13.2	345727	7567896	1286
CDM-04	5.5	346330	7567901	1275
CDM-08	9.2	345730	7567700	1289
CDM-12	20	346527	7567698	1288
CDM-14	20	346932	7567702	1291
CDM-15	12.5	347126	7567704	1257
CDM-16	5.5	347360	7567713	1276
CDM-17	6	345729	7567499	1291
CDM-21	16	346533	7567496	1306
CDM-22	20	346729	7567497	1299
CDM-24	5	347115	7567514	1246
CDM-25	7.5	347305	7567500	1274
CDM-26	20	345730	7567298	1312
CDM-27	20	345930	7567297	1305
CDM-28	9	346146	7567298	1269
CDM-29	14	346290	7567283	1281
CDM-30	14	346527	7567300	1299
CDM-31	10	346726	7567297	1299
CDM-32	20	346931	7567299	1283
CDM-33	14	347131	7567301	1259
CDM-34	20	347348	7567286	1302
CDM-36	17	345929	7567099	1322
CDM-37	14	346155	7567096	1293
CDM-38A	4	346280	7567096	1313
CDM-39	10	346530	7567100	1324
CDM-40	8	346729	7567100	1300
CDM-41	6	346934	7567093	1282
CDM-42	5	347130	7567101	1270
CDM-44	13.5	345731	7566899	1328
CDM-45	15	345930	7566898	1335
CDM-46	17	346128	7566901	1336
CDM-47	20	346329	7566898	1326
CDM-48	17	346530	7566897	1319
CDM-49	7.5	346730	7566900	1293
CDM-51	4.5	347131	7566901	1286
CDM-53	16	345733	7566699	1335
CDM-54	20	345930	7566701	1346
CDM-55	19	346131	7566698	1352
CDM-57	16.9	346527	7566698	1293
CDM-58	14	346730	7566700	1281
CDM-61	15.8	347330	7566697	1289

Appendix 3. 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"> 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.
<i>Drilling techniques</i>	<ul style="list-style-type: none"> 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.
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> Auger sample recovery calculated as length of sample recovered per interval drilled. Generally, within range of 75% to 100%.
<i>Logging</i>	<ul style="list-style-type: none"> For every 1m drilled, the material was described in a drilling bulletin, and photographed. 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.
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> The auger drill samples undergo a physical preparation process: <ul style="list-style-type: none"> Samples are weighed If the samples are wet, they will be dried for several days on rubber mats. Samples when dried will be passed through a screen (5mm). Homogenization occurs by agitation in bags, followed by screening to <3mm. Fragments of rock or hardened clay that are retained in the sieves are fragmented with a 10kg manual disintegrator and a 1kg hammer, until 100% of the sample passes through the screening. The sample is homogenized again by agitation in bags. Sample then passes through a Jones 12 channel splitter, where 500g will be sent of to the lab (SGS_geosol laboratory in Vespasiano – Minas Gerais). Remaining samples are placed in 20 litre plastic buckets, clearly labelled by hole ID and depth, and stored on site. 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.
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> Samples were analysed at SGS-Geosol laboratory, located in Vespasiano – MG. 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. 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 – Minas Gerais for splitting of the natural sample in a Jones type splitter to remove an aliquot and later, pulverisation in a steel mill, 95% minus 150 mesh. 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). For fusion with lithium metaborate, graphite crucibles are used, in which initially 0.5 g of lithium metaborate, 0.1 g of pulverised 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). 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 analyses include rare earth elements, in addition to Y, Co, Cu, Cs, Ga, Hf, Mo, Ni, Rb, Sn, Ta, Th, Tl, U and W (ICP-MS-IMS-95^a Detection limits are shown in the Table below).

Criteria	Commentary																																																																
	<table border="1"> <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> </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)				
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)																																																														
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> There are no twin holes drilled. There are no details around data entry procedures. There has been no adjustment to the REE assay results other than the accepted factors applied to report REO rather than REE. 																																																																
<i>Location of data points</i>	<ul style="list-style-type: none"> 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. The coordinates were provided in following formats: Sirgas 2000 datum, and UTM WGS 84 datum - georeferenced to spindle 23S. 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. 																																																																
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> 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. 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. Samples are not composited. 																																																																
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> 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. As such, no sampling bias is believed to be introduced. 																																																																
<i>Sample security</i>	<ul style="list-style-type: none"> Samples are removed from the field and transported back to Plant 2 sample preparation and sample storage facility of Togni SA Materiais Refratarios where they are checked and organised on wooden pallets in a covered shed. After checking, all samples were 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. 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. 																																																																
<i>Audits or reviews</i>	<ul style="list-style-type: none"> 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. 																																																																

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"> Listed in Appendix 4. 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.
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> 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).

Criteria	Commentary
	<ul style="list-style-type: none"> Refer to body of the release for appraisal of previous exploration.
<i>Geology</i>	<p>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 mineralisation 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), described below:</p> <ol style="list-style-type: none"> 1) 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; 2) Hydrothermal alteration: pyritisation, strong potassium metasomatism, mobilization and concentration of U, Th, ETR, Zr and Mo; 3) Emplacement of mafic-ultramafic dikes (lamprophyres); 4) Development of lateritic surface and extensive saprolitization of the massif, supergenic remobilization and precipitation of uranium concentrations. 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.
<i>Drill hole Information</i>	<ul style="list-style-type: none"> Drill hole information for all 1,396 powered auger holes drilled by previous explorers is presented in Appendix 1.
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> 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 <500 ppm TREO, therefore it is effectively a 500ppm bottom cut. No Metal Equivalents are used.
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> 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.
<i>Diagrams</i>	<ul style="list-style-type: none"> A tenement location plan, regional geology map, and a type cross section are presented in the main body.
<i>Balanced reporting</i>	<ul style="list-style-type: none"> Collar information and Significant Intercepts for all drill holes from the project are reported in Appendix 1.
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> 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.
<i>Further work</i>	<ul style="list-style-type: none"> Proposed work is discussed in the body of the text.

Appendix 4 - 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