ASX: VMM MARKET ANNOUNCEMENT

Colossus Achieves Highest Overall Bulk Ionic Recoveries Globally

First widespread metallurgical test work across Colossus confirms highest average ionic recoveries for bulk testing globally; optimisation studies underway

ASX Release: 18 April 2024

Highlights

- **Maiden bulk composite test work consisted of 37 holes for 91 samples, with Northern Concessions providing a Head Grade of 4,984ppm TREO[A], including 32% MREE [Nd, Pr, Dy, Tb].**

- **Initial metallurgical test work reported for Northern Concessions, Ribeirão and Capão da Onça, along with follow-up at Cupim South, have all shown superior desorption rates using a standard AMSUL [$(NH_4)_2SO_4$)] test at pH4, Room Temperature, 30minutes leach cycle.**

- **Results have shown the overall average ionic recoveries at Colossus to be the highest worldwide for this form of test work *(see Table 3 for full data)*:**
  - **Northern Concessions:**
    - **Average Recovery of Nd + Pr was 63%**
    - **Average Recovery of Dy + Tb was 65%**
  - **Cupim South:**
    - **Average Recovery of Nd + Pr was 67%**
    - **Average Recovery of Dy + Tb was 53%**
  - **Capão da Onça:**
    - **Average Recovery of Nd + Pr was 59%**
    - **Average Recovery of Dy + Tb was 59%**
  - **Ribeirão:**
    - **Average Recovery of Nd + Pr was 59%**
    - **Average Recovery of Dy + Tb was 49%**

- **This is the first time reporting metallurgical test work for 3 out of 4 key concessions at Colossus along with follow-up at Cupim South, with all showing remarkable recoveries for bulk composite test work. It also confirms that previous ANSTO-tested CS-DHH-001, which recovered 11.9m @ 80% Nd-Pr[1], was not an isolated hole at Cupim South but rather part of a widespread broader ionic deposit.**

- **The initial widespread bulk test work, performed under unoptimised conditions, is incredibly encouraging. Viridis is now actively engaging ANSTO to do metre-by-metre drill hole testing to identify spot locations of higher recoveries at each of the key concessions.**

- **Most remarkably, Northern Concessions achieved an AVERAGE 65% recovery for Dysprosium and Terbium, indicating just the average Dy + Tb recovery at Northern concession is on par with some of the peak Dy + Tb spot recoveries reported in both the Complex and worldwide.**

[A] Total Rare Earth Oxides ('TREO'): La2O3 + CeO2 + Pr6O11 + Nd2O3 + Sm2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3+ Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Lu2O3 + Y2O3

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Chief Executive Officer, Rafael Moreno commented:

"This is the first set of bulk met test work completed at Colossus, and the results have exceeded our expectations. This positions Colossus as one of the leading projects worldwide for Nd, Pr, Dy, and Tb recovery using simple, effective extraction. These results bode incredibly well for delivering a low CAPEX and OPEX critical minerals asset.

Our Northern Concessions continue to demonstrate why they remain the foundation for building Colossus into the premier ionic adsorption clay ('IAC') deposit globally; they sit on granted mining licenses and contain the highest grades of Heavy Rare Earths at the surface in the Poços De Caldas alkaline complex ('Complex'), now combined with the best average Dy and Tb ionic recoveries in the world.

The Cupim South results also highlight the consistent geological make-up and ease of leaching in our southern tenements, following up on initial results from Australian Nuclear Science and Technology Organisation ('ANSTO'). Ribeirão and Capão da Onça have also shown remarkable bulk composite recoveries as part of their maiden metallurgical test work which rank highest amongst the globe for overall magnet rare earth element ('MREE') recoveries.

The consistency of the results confirm that the bulk of our Rare Earth mineralisation is ionically bonded onto clays. This can be liberated into a high-value REE chemical product simply by washing the clays with a salt solution at room temperature, e.g., Ammonium Sulfate. Unlike hard-rock Rare Earth projects, Colossus won't require blasting, corrosive acids, high temperatures and pressures, toxic fumes, and radioactive waste streams to extract Rare Earths, allowing Colossus to avoid the associated significant economic and environmental implications.

These results lay the foundation for the broad recoveries within each concession which have outperformed on a global scale. Viridis can now follow up with ANSTO to identify spot locations of significantly higher recoveries through metre-by-metre drill hole testing to support our mine planning and overall development strategy. We look forward to building the resource for Colossus and updating our shareholders with further exploration and metallurgical results shortly."

GLOBAL RANKINGS BY OVERALL AVERAGE MREE [Nd, Pr, Dy, Tb] RECOVERY IN BULK MET-WORK

					Average (A,B)	(A)	(B)						
Global Ranking	Company	Project	Head Grade (TREO, ppm)	MREO	MREE Recovery	Nd & Pr Recovery	Dy & Tb Recovery	Leaching Agent	pH	Temperature	Number Samples	Lab	Reference
1	Viridis (ASX:VMM)*	Northern Concessions *Colossus*	4,984	32%	64%	63%	65%	Ammonia Sulfate	4	Room	29	SGS	*This announcement*
2	Viridis (ASX:VMM)*	Cupim South *Colossus*	4,208	33%	60%	67%	53%	Ammonia Sulfate	4	Room	19	SGS	*This announcement*
3	Viridis (ASX:VMM)*	Capão da Onça *Colossus*	5,762	29%	59%	59%	59%	Ammonia Sulfate	4	Room	22	SGS	*This announcement*
4	Viridis (ASX:VMM)*	Ribeirão *Colossus*	3,705	29%	54%	59%	49%	Ammonia Sulfate	4	Room	21	SGS	*This announcement*
5	Meteoric (ASX:MEI)*	Capao Do Mel *Caldeira*	4,917	25%	51%	58%	43%	Ammonia Sulfate	4	Room	184	SGS	Ann. dated 20/12/2022
6	Alvo (ASX:ALV)**	Bluebush	1,014	24%	50%	58%	42%	Ammonia Sulfate	4	Room	13	SGS	Ann. dated 02/11/2023
7	Resouro (TSX-V:RSM)*	Tiros	4,049	22%	49%	36%	61%	Ammonia Sulfate	4	80 Degrees	242	Prosper	Ann. dated 01/11/2023
8	Aclara (TSX:ARA)	Carina Module	1,510	23%	46%	43%	48%	Ammonia Sulfate	3	Room	1418	AGS	Ann. dated 12/12/2023
9	DevEx (ASX:DEV)**	Kennedy	N/A	N/A	35%	39%	30%	Ammonia Sulfate	4	Room	8	ANSTO	Ann. dated 10/07/2023
10	Australian Rare Earths (ASX: AR3)*	Koopamurra	1,113	N/A	23%	26%	20%	Magnesium Sulfate	4	N/A	58	ANSTO	Ann. dated 16/05/2023

Averages from testwork conducted by each company

MREE = Nd, Pr, Dy, Tb. See Table 3 for further commentary

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Viridis Mining and Minerals Limited ('Viridis' or 'Company') is pleased to report its maiden wide-spread metallurgical test work conducted at the Colossus IAC Project, which has **achieved the highest publicly known bulk composite recoveries globally.** This work was completed by SGS-Geosol Laboratories in Brazil using a standard AMSUL desorption test (pH4, room temp, 30 minutes leach cycle) and repeated across all four key concessions of the Colossus Project. These results are remarkable because they represent the average recovery through widespread bulk composite leaching across each of the four concessions, which demonstrate the baseline of Rare Earths that are ionically bonded onto the weathered clays. As Viridis steps into its next phase of metallurgical work with ANSTO and conducts metre-by-metre depth and spatial drill hole testing, the Company will be able to identify precise locations of significantly higher recoveries and pinpoint the precise depths, horizon, sections, and weathered material, which is most amenable to AMSUL.

The average recovery rates of MREE (Nd, Pr, Dy, Tb) for all four concessions have outperformed every publicly known IAC prospect and deposit globally, which has conducted similar bulk tests – either through metre-by-metre testing or through forming a composite**. In conjunction with superior recoveries, the Northern Concessions have outperformed all other global IAC projects in all aspects, concerning Head Grade, MREE Content, negligible U and Th recovery, and overall Dy and Tb Recovery**.

The Northern Concessions continue to demonstrate that both their location and geology place them in an incredibly strategic and unique position within the Complex, due to:

- **Recovery** – Bulk AMSUL testing has ranked the **Northern Concessions' overall MREE recovery as the best in the Poços De Caldas Alkaline Complex and the globe.** In particular, the overall **average recovery for Dysprosium and Terbium is extraordinary at 65%, which is the highest known global average.**
- **Heavy Rare Earths –** Northern Concessions are the only mining licenses in the entire Complex that have shown multiple near-surface heavy rare earth mineralisation (>100ppm Dy and Tb). Furthermore, the only area in the Complex with grades as high as 537ppm Dy and Tb Oxide which has been found at 1m depth.
- **Location –** Situated close to brownfield infrastructure and ability to leverage low-cost services access, water, energy and an experienced labour force, plus a supportive pro-mining township which de-risks the development of the Northern Concessions Mining Licenses, and positions Viridis to fast-track the approvals to construct and run a rare earth operation.
- **Local Government Support –** Due to the highly favourable location, the Northern Concessions are the only Mining Licenses in the Complex, which have garnered development support from the local municipality and town mayor through a strategic MoU[2]. Viridis is the only company in the Complex with this accreditation due to its incredibly supportive township and environmentally favourable location. Local municipal support is a pre-requisite before gaining State development or environmental approvals to start a rare earth operation. This is a major step unique to the Northern Concessions for overcoming bureaucratic hurdles.

Metallurgy Testing Program

The metallurgic testing program consisted of bulk composites weighing ~100kg (91 samples) formed from 37 separate holes across the Colossus IAC Project.

Samples were taken from each of the four key concessions and formed into four separate batches, each representing one of the key concessions expected to form the Colossus maiden mineral resource estimate: Northern Concessions, Cupim South, Capão da Onça, and Ribeirão.
Upon arrival at SGS Geosol, each batch of samples was kept separate. Each batch was then dried and crushed to 2mm before being homogenised in a cement mixer, forming 4 separate bulk composites – one per concession.

A random 4 sub-samples were then prepared from each bulk composite and assayed using a standard IMS95A test to determine an accurate head grade for each concession's bulk sample.
A further random 4 sub-samples were prepared from each bulk composite and tested through standard AMSUL wash (ICM694 test) to determine the ionic recoveries of each prospect, under the following conditions:

- 0.5M $(NH_4)_2SO_4$ [Ammonium Sulfate] as lixiviant;
- pH4;
- 30 minutes leach cycle; and
- Ambient temperature (~22°C) and pressure.

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Head Assay Results

Each bulk composite had 4 random sub-samples prepared from it and tested 4 times for an accurate head grade reading. Average of those tests presented in Table 1 below:

	Northern Concessions	Cupim South	Capão da Onça	Ribeirão
CeO2	674	704	698	647
Dy2O3	**49**	**39**	**55**	**35**
Tb4O7	**10**	**8**	**11**	**7**
Er2O3	21	17	24	16
Eu2O3	33	26	32	21
Gd2O3	84	66	88	54
Ho2O3	8	7	10	6
La2O3	2,148	1,656	2,728	1,572
Lu2O3	2	2	3	2
Nd2O3	**1,147**	**1,004**	**1,190**	**761**
Pr6O11	**388**	**334**	**428**	**272**
Sm2O3	131	108	127	86
Tm2O3	3	2	3	2
Y2O3	270	223	347	212
Yb2O3	15	14	17	12
TREO	**4,984**	**4,208**	**5,762**	**3,705**
MREO	**32%**	**33%**	**29%**	**29%**

Table 1: *Assay results for bulk composite within each concession. REO grades were determined by testing each concession's bulk composite four times and averaging the assay results. MREO = Nd + Pr + Dy + Tb Oxides.*

Metallurgical Recovery Results

Elemental Recovery	Ce	Dy	Tb	Er	Eu	Gd	Ho	La	Lu	Nd	Pr	Sm	Tm	Y	Yb	Average Recovery Nd & Pr	Average Recovery Dy & Tb	Recovery Uranium	Recovery Thorium
Northern Concessions Average Recovery	**4%**	**63%**	**67%**	**57%**	**63%**	**68%**	**61%**	**53%**	**47%**	**65%**	**60%**	**65%**	**52%**	**65%**	**46%**	**63%**	**65%**	**1%**	**1%**
NC Sub-Sample 1 Test	5%	68%	70%	59%	67%	70%	65%	52%	52%	68%	63%	67%	56%	69%	49%			2%	2%
NC Sub-Sample 2 Test	4%	65%	67%	56%	63%	68%	60%	58%	46%	65%	60%	66%	51%	63%	44%			1%	0%
NC Sub-Sample 3 Test	4%	61%	64%	57%	61%	68%	59%	52%	46%	64%	59%	64%	50%	66%	45%			1%	0%
NC Sub-Sample 4 Test	4%	58%	65%	54%	61%	66%	59%	50%	43%	63%	59%	64%	50%	62%	46%			2%	0%
Cupim South Average Recovery	**3%**	**50%**	**57%**	**35%**	**60%**	**63%**	**42%**	**62%**	**24%**	**68%**	**65%**	**66%**	**31%**	**44%**	**26%**	**67%**	**53%**	**1%**	**0%**
CS Sub-Sample 1 Test	3%	51%	59%	36%	62%	65%	42%	65%	25%	70%	67%	67%	32%	45%	25%			1%	0%
CS Sub-Sample 2 Test	3%	51%	58%	38%	61%	65%	43%	64%	25%	70%	67%	68%	31%	45%	27%			1%	0%
CS Sub-Sample 3 Test	3%	50%	57%	36%	62%	62%	43%	64%	24%	69%	66%	66%	30%	45%	26%			1%	0%
CS Sub-Sample 4 Test	3%	47%	52%	32%	56%	59%	39%	56%	22%	64%	60%	61%	30%	41%	24%			1%	0%
Capao Da Onca Average Recovery	**10%**	**58%**	**60%**	**53%**	**57%**	**61%**	**55%**	**60%**	**43%**	**61%**	**58%**	**59%**	**49%**	**70%**	**45%**	**59%**	**59%**	**5%**	**0%**
CDO Sub-Sample 1 Test	10%	58%	61%	53%	57%	62%	55%	59%	44%	61%	58%	60%	50%	69%	46%			4%	0%
CDO Sub-Sample 2 Test	10%	56%	60%	53%	56%	61%	55%	59%	44%	60%	58%	58%	51%	68%	46%			5%	0%
CDO Sub-Sample 3 Test	10%	58%	62%	54%	58%	62%	56%	62%	43%	61%	59%	60%	49%	72%	46%			5%	0%
CDO Sub-Sample 4 Test	10%	58%	59%	54%	57%	61%	55%	60%	40%	60%	58%	59%	47%	74%	44%			4%	0%
Ribeirao Average Recovery	**5%**	**46%**	**51%**	**39%**	**52%**	**56%**	**42%**	**64%**	**30%**	**60%**	**58%**	**52%**	**33%**	**47%**	**31%**	**59%**	**49%**	**2%**	**0%**
RA Sub-Sample 1 Test	5%	48%	52%	40%	53%	57%	44%	65%	30%	62%	59%	53%	35%	49%	31%			2%	0%
RA Sub-Sample 2 Test	4%	44%	49%	38%	50%	53%	41%	66%	27%	58%	55%	52%	31%	44%	30%			2%	0%
RA Sub-Sample 3 Test	5%	48%	54%	40%	53%	60%	45%	62%	31%	63%	60%	54%	36%	49%	32%			2%	0%
RA Sub-Sample 4 Test	4%	44%	50%	36%	50%	54%	41%	64%	30%	59%	56%	51%	32%	46%	29%			2%	0%

Table 2: *Full set of metallurgical leaching results using AMSUL [$(NH_4)_2SO_4$)]*

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The four key concessions had a bulk composite formed from multiple drill locations covering a broad area. Each bulk composite had 4 sub-samples prepared to independently test ionic recoveries four times over, using standard AMSUL wash, pH4, and room temperature. All results of these tests are presented in Table 2 above. This led to average recoveries within each concessions bulk composite (also shown in Table 2) of:

- **Northern Concessions:**
  - **Average Recovery of Nd + Pr was 63%**
  - **Average Recovery of Dy + Tb was 65%**
- **Cupim South:**
  - **Average Recovery of Nd + Pr was 67%**
  - **Average Recovery of Dy + Tb was 53%**
- **Capão da Onça:**
  - **Average Recovery of Nd + Pr was 59%**
  - **Average Recovery of Dy + Tb was 59%**
- **Ribeirão:**
  - **Average Recovery of Nd + Pr was 59%**
  - **Average Recovery of Dy + Tb was 49%**

Furthermore, consistent with the results presented by ANSTO, these results show negligible uranium and thorium contents in the final liquor. Three bulk samples returned an average of 0% recovery of Thorium and negligible recoveries of Uranium, which further de-risks Colossus from environmental hurdles and simplifies the final process flow sheet. The maximum Uranium content found in any bulk composite assays was 10ppm.

The recoveries verify the world-class true ionic nature of Colossus and, more importantly, demonstrate that the Northern Concessions have shown the highest bulk recoveries for critical heavy rare earths (Dy and Tb) globally.

Peer Group Comparison

The average recovery of Nd + Pr and Dy + Tb for each concession is outstanding compared to neighbouring projects and on a global scale. **Each key concession at Colossus ranks as the highest worldwide for overall average ionic recoveries for MREEs (Nd, Pr, Dy, Tb).**

					Average (A,B)	(A)	(B)						
Global Ranking	Company	Project	Head Grade (TREO, ppm)	MREO	MREE Recovery	Nd & Pr Recovery	Dy & Tb Recovery	Leaching Agent	pH	Temperature	Number Samples	Lab	Reference
1	Viridis (ASX:VMM)*	Northern Concessions *Colossus*	4,984	32%	64%	63%	65%	Ammonia Sulfate	4	Room	29	SGS	*This announcement*
2	Viridis (ASX:VMM)*	Cupim South *Colossus*	4,208	33%	60%	67%	53%	Ammonia Sulfate	4	Room	19	SGS	*This announcement*
3	Viridis (ASX:VMM)*	Capão da Onça *Colossus*	5,762	29%	59%	59%	59%	Ammonia Sulfate	4	Room	22	SGS	*This announcement*
4	Viridis (ASX:VMM)*	Ribeirão Colossus	3,705	29%	54%	59%	49%	Ammonia Sulfate	4	Room	21	SGS	*This announcement*
5	Meteoric (ASX:MEI)*	Capao Do Mel *Caldeira*	4,917	25%	51%	58%	43%	Ammonia Sulfate	4	Room	184	SGS	Ann. dated 20/12/2022
6	Alvo (ASX:ALV)**	Bluebush	1,014	24%	50%	58%	42%	Ammonia Sulfate	4	Room	13	SGS	Ann. dated 02/11/2023
7	Resouro (TSX-V:RSM)*	Tiros	4,049	22%	49%	36%	61%	Ammonia Sulfate	4	80 Degrees	242	Prosper	Ann. dated 01/11/2023
8	Aclara (TSX:ARA)	Carina Module	1,510	23%	46%	43%	48%	Ammonia Sulfate	3	Room	1418	AGS	Ann. dated 12/12/2023
9	DevEx (ASX:DEV)**	Kennedy	N/A	N/A	35%	39%	30%	Ammonia Sulfate	4	Room	8	ANSTO	Ann. dated 10/07/2023
10	Australian Rare Earths (ASX: AR3)*	Koopamurra	1,113	N/A	23%	26%	20%	Magnesium Sulfate	4	N/A	58	ANSTO	Ann. dated 16/05/2023
					Averages from testwork conducted by each company								

***Table 3:** Global Ranking by overall average MREE recovery from bulk testing, for all IAC projects. MREO = Nd, Pr, Dy, Tb.*
** = Average recoveries from bulk composite(s) with standard ionic leaching. Note: TSX-V: RSM utilised higher temperatures.*
*** = Average recoveries from the entire bulk of metre-by-metre samples tested with standard ionic leaching.*

Table 3 aims to compare average recoveries across bulk composite samples within IAC projects for each public listed company, in the case bulk composite testing was not performed, the bulk of metre-by-metre testing has been used to determine the average recoveries from test-work. Although metre-by-metre testing may show certain sections within a drill hole containing higher recoveries (*i.e. CS-DDH-001 returning up to 84% Nd-Pr recovery*[1]), the bulk average across both metre-by-metre and composite test-work indicates Colossus to be the most robust project globally in terms of overall MREE recoveries.

For Colossus as an entire project, averaging the results across all 4 prospects with 91 samples, results in an overall 62% Nd and Pr Recovery and 56% Dy and Tb Recovery. This still ranks Colossus overall as the "best in class" for IAC mineralisation and MREE recoveries across the globe in the entirety of its project. Viridis is actively working with ANSTO to test metre-by-metre holes to determine spot locations and sections of higher recoveries (i.e. Maiden ANSTO hole tested: CS-DDH-001 which returned 11.9m @ 80% Nd and Pr recovery)[1].

In particular, the **average heavy rare earths recoveries shown from testing the Northern Concessions bulk composite has been outstanding.** The initial un-optimised test-work at Northern Concessions resulted in an average of 65% Dysprosium and Terbium recovery, which is the highest average recovery for heavy rare earths (Dy and Tb) in any form of standard widespread ionic testing in the globe (see table 4 – Brazilian Deposits).

In comparison to Table 3 (which aims to compare bulk averages), the table below (Table 4) aims to compare the average Dy and Tb recoveries across multiple forms of test-work completed by other Brazilian deposits (bulk composite, bulk metre-by-metre and isolating different concessions, horizons and materials) which has been conducted through a standard AMSUL test (Ammonia Sulfate, pH 3-4, Room temperature). This highlights Northern Concessions stands out distinctly for average Dy and Tb recoveries regardless if one was to consider bulk composite, bulk of metre-by-metre testing or even considering separate clay and transitional horizons, which demonstrates the Northern Concessions' unparalleled superiority.

Rankings by average Dy and Tb recovery for Brazilian Deposits, including comparison with test-work analysis conducted by other companies which splits concessions into higher recovering materials

Global Ranking	Company	Project	Head Grade (TREO, ppm)	MREE (ppm)	Average Dy & Tb Recovery	Leaching Agent	pH	Temperature	Number Samples	Lab	Reference
1	**Viridis (ASX:VMM)***	**Northern Concessions**	**4,984**	**1,356**	**65%**	**Ammonia Sulfate**	**4**	**Room**	**29**	**SGS**	***This announcement***
2	**Viridis (ASX:VMM)***	**Capão da Onça**	**5,762**	**1,431**	**59%**	**Ammonia Sulfate**	**4**	**Room**	**22**	**SGS**	***This announcement***
3	Meteoric (ASX:MEI)**	Dona Maria 1&2 - *Just Clay Material*	3,007	762	56%	Ammonia Sulfate	4	Room	22	ANSTO	*Ann. dated 08/12/2023 (Table 7)*
4	**Viridis (ASX:VMM)***	**Cupim South**	**4,208**	**1,177**	**53%**	**Ammonia Sulfate**	**4**	**Room**	**19**	**SGS**	***This announcement***
5	Meteoric (ASX:MEI)**	Dona Maria 1&2 - *All Clay & Transition Material*	2,510	602	50%	Ammonia Sulfate	4	Room	38	ANSTO	*Ann. dated 08/12/2023 (Table 7)*
6	**Viridis (ASX:VMM)***	**Ribeirão**	**3,705**	**914**	**49%**	**Ammonia Sulfate**	**4**	**Room**	**21**	**SGS**	***This announcement***
7	Aclara (TSX:ARA)	Carina Module	1,510	292	48%	Ammonia Sulfate	3	N/A	1418	AGS	Ann. dated 12/12/2023 *(Table 3)*
8	Meteoric (ASX:MEI)*	Capao Do Mel	4,917	1,073	43%	Ammonia Sulfate	4	Room	184	SGS	Ann. dated 20/12/2022 *(Table 2)*
9	Alvo (ASX:ALV)**	Bluebush	1,014	N/A	42%	Ammonia Sulfate	4	Room	13	SGS	Ann. dated 02/11/2023 *(Table 1)*
10	Meteoric (ASX:MEI)**	Capao Do Mel - *Just Clay Material*	4,181	845	39%	Ammonia Sulfate	4	Room	37	ANSTO	*Ann. dated 08/12/2023 (Table 2)*
11	Meteoric (ASX:MEI)**	Soberbo - *All Clay & Transition Material*	3,313	812	37%	Ammonia Sulfate	4	Room	44	ANSTO	*Ann. dated 08/12/2023 (Table 4)*
12	Meteoric (ASX:MEI)**	Soberbo - *Just Clay Material*	3,214	764	35%	Ammonia Sulfate	4	Room	33	ANSTO	*Ann. dated 08/12/2023 (Table 4)*
13	Meteoric (ASX:MEI)**	Capao Do Mel - *All Clay & Transition Material*	3,298	655	33%	Ammonia Sulfate	4	Room	64	ANSTO	*Ann. dated 08/12/2023 (Table 2)*

Table 4: ***Global Ranking by overall average Dy and Tb recovery from bulk testing, including test work conducted across different material within the saprolite (clay and transitional), for all Brazil IAC Projects. MREE = Nd, Pr, Dy, Tb.***
Note average Dy and Tb Recovery % was calculated through averaging the Dy Recovery % and Tb Recovery %.
Note MREO column (from Table 3) has been converted to MREE in Table 4.
** = Average recoveries from bulk composite(s) with standard ionic leaching*
*** = Average recoveries from the entire bulk of metre-by-metre samples tested with standard ionic leaching.*

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Location of Holes

The location of holes selected to form all 4 bulk samples was intentionally selected over a wide area to confirm the homogenous and widespread nature of clays being amendable through an ion exchange mechanism. These results now confirm to Viridis the homogeneity of Ionic mineralisation, which appears to exist inside project areas. More importantly, this testing confirms each key prospect of Colossus, which has been thoroughly explored, is also incredibly amendable to an AMSUL wash to leach out rare earths.

Furthermore, the average depth of samples taken from drill holes also confirms recoveries occur within a shallow and flat-lying mineral body. Ionic mineralisation rarely exceeds 35 metres in depth, nor are mining clays beyond 35 metres in depth logistically, economically, geologically, or structurally simple. Hence, although broad intercepts of REE mineralisation are impressive, the key remains to have the highest grades, recoveries, and concentrations of Nd, Pr, Dy, and Tb near the surface rather than >35 metres deep. Further details on the formulation of the bulk samples are provided below:

Bulk Sample Statistics				
Bulk Sample	Concession	Number of Samples	Number of Drill Holes Tested	Average Depth of Sample (m)
1	Northern Concession	29	12	9.0
2	Cupim Sul	19	10	7.0
3	Capão da Onça	22	7	5.0
4	Ribeirão	21	8	11.0
Total		91	37	8.0

Table 5: *Statistical distribution for bulk sample selection*

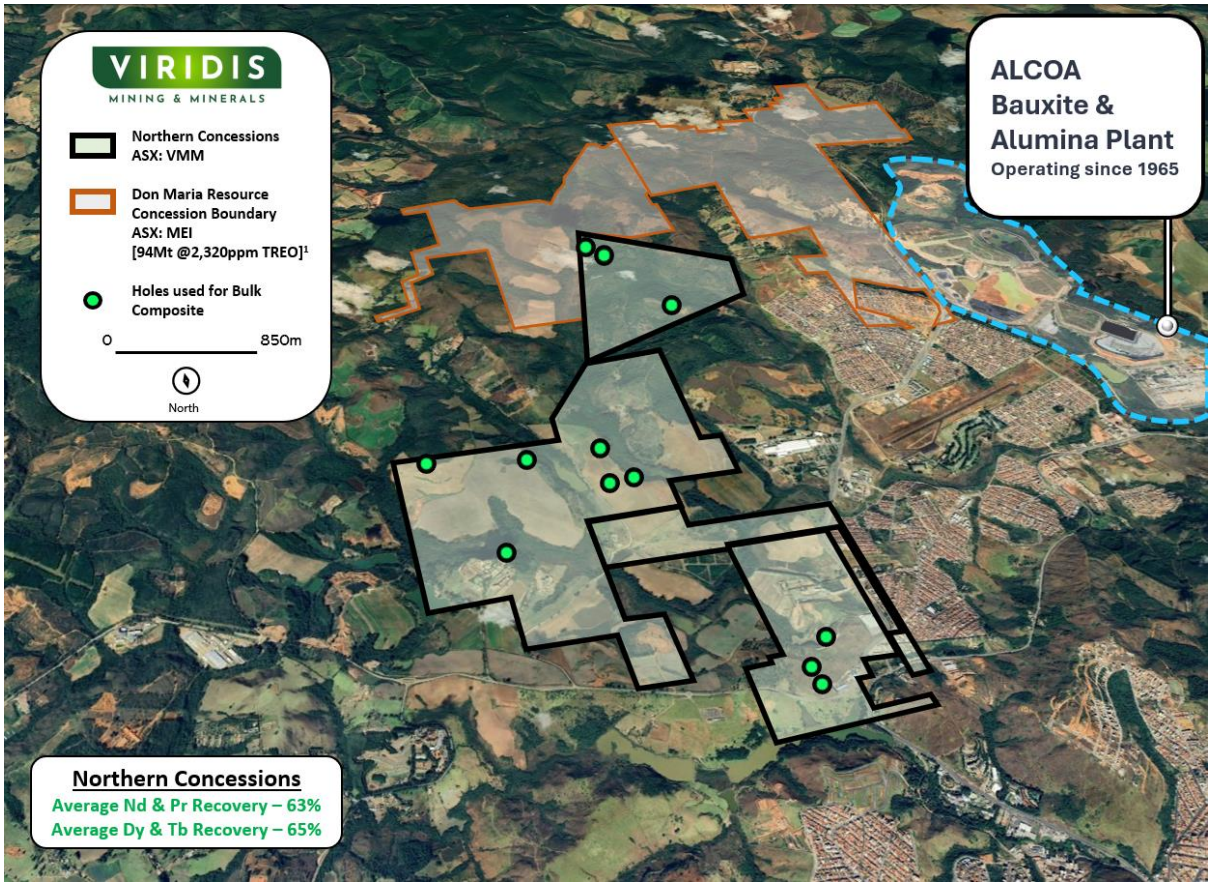

Figure 1: *Location of holes used to sample across Northern Concessions for bulk composite ionic recoveries. Figure 1 also shows both Alcoa and Dona Maria I deposit, which adjoin and go into the town, respectively. This provides context on the relative proximity Colossus has to the town, requiring no residential relocation or disruption[3].*

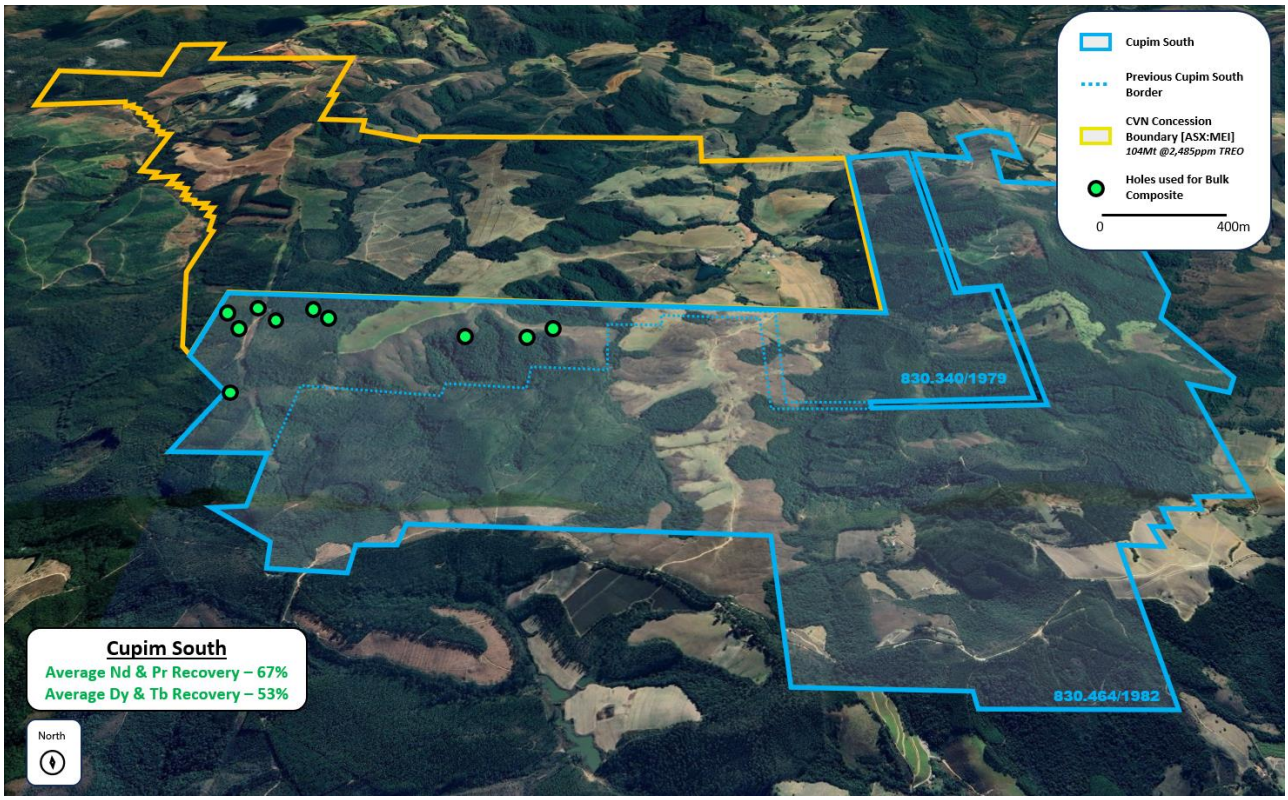

Figure 2: *Location of holes used to sample across Cupim South for bulk composite Ionic Recoveries[3].*

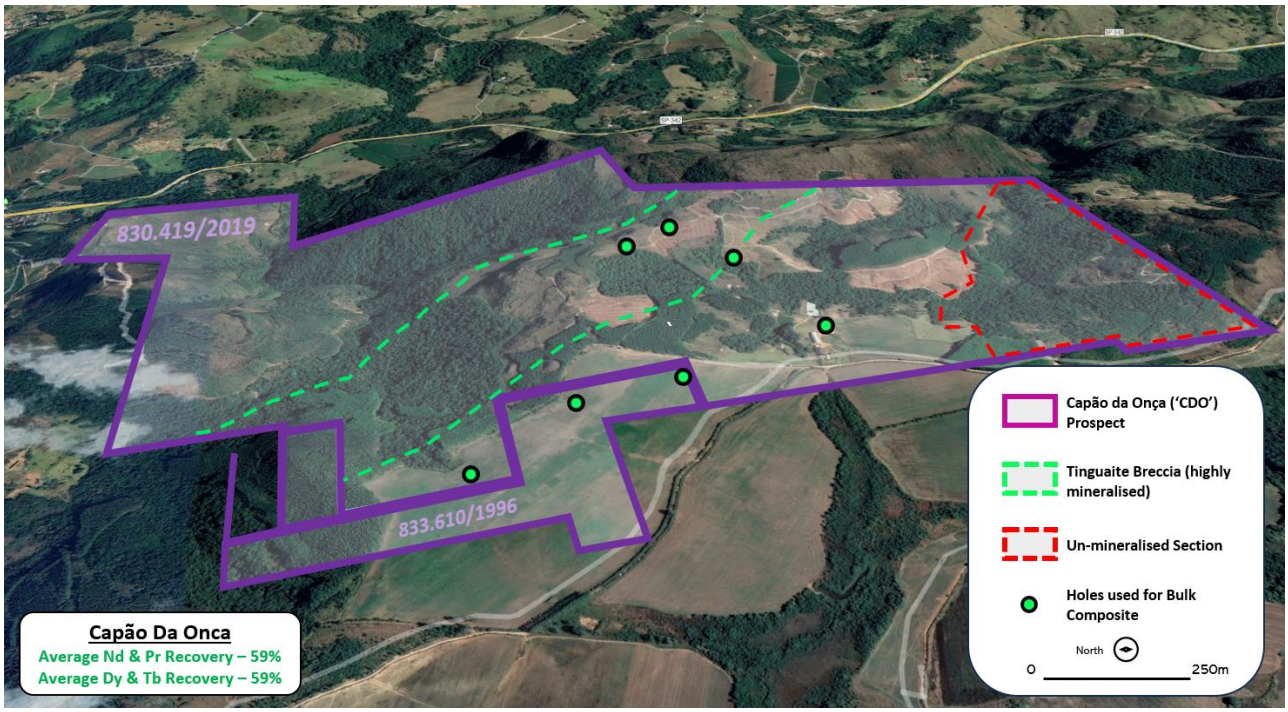

Figure 3: *Location of holes used to sample across Capão da Onça for bulk composite Ionic Recoveries.*

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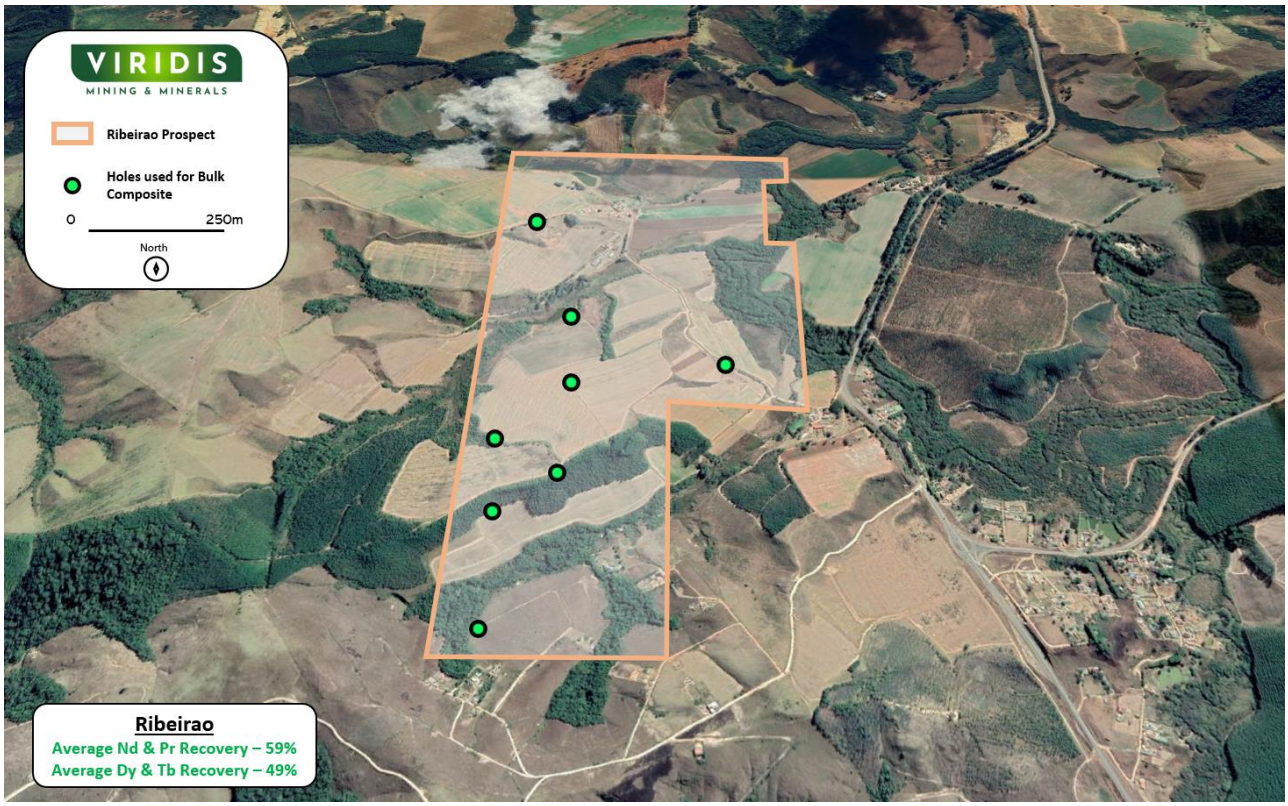

Figure 4: *Location of holes used to sample across Ribeirao for bulk composite Ionic Recoveries.*

Future Work

Continuing metallurgical testing program with ANSTO, including metre-by-metre testing to identify precise locations of highest recoveries to support mine planning and development strategy. Progressing drilling and environmental permitting scope at our Northern Concessions which is the focus of our initial production facility. In parallel, Viridis is progressing with all key development activities, including resource modelling and scoping study.

Approved for release by the Board of Viridis Mining and Minerals Ltd.

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About Viridis Mining and Minerals

Viridis Mining and Minerals Limited is a resource exploration and development company with assets in Brazil, Canada and Australia. The Company's Projects comprise:

- The Colossus Project, which the Company considers to be prospective for Rare Earth Elements;
- The South Kitikmeot Project, which the Company considers to be prospective for gold;
- The Boddington West Project, which the Company considers to be prospective for gold;
- The Bindoon Project, which the Company considers to be prospective for nickel, copper and platinum group elements; and
- The Poochera and Smoky Projects, which the Company considers to be prospective for kaolin-halloysite; and
- The Ytterby and Star Lake Projects, which the Company considers prospective for Rare Earth Elements.

Competent Person Statement

Dr. José Marques Braga Júnior, the in-country Executive Director of Viridis' Brazilian subsidiary (Viridis Mineração Ltda), compiled and evaluated the technical information in this release and is a member of the Australian Institute of Geoscientists (AIG) (MAusIMM, 2024, 336416), accepted to report in accordance with ASX listing rules. Dr Braga has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australian Code for Reporting of Regulation, Exploration Results, Mineral Resources, and Ore Reserves. Dr Braga consents to including of matters in the report based on information in the form and context in which it appears.

The Company confirms that it is unaware of any new information or data that materially affects the information included in the market announcements referred to in this release and that all material assumptions and technical information referenced in the market announcement continue to apply and have not materially changed.
All announcements referred to throughout can be found on the Company's website – viridismining.com.au.

Forward-Looking Statements

This announcement contains 'forward-looking information' based on the Company's expectations, estimates and projections as of the date the statements were made. This forward-looking information includes, among other things, statements concerning the Company's business strategy, plans, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations, mineral reserves and resources, results of exploration and related expenses. Generally, this forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'potential', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this announcement are cautioned that such statements are only predictions and that the Company's results or performance may differ materially. Forward-looking information is subject to known and unknown risks, uncertainties, and other factors that may cause the Company's actual results, level of activity, performance or achievements to materially differ from those expressed or implied by such forward-looking information.

References

1. *VMM ASX announcement dated 20 March 2024 '80% Average Ionic Recoveries from First Colossus Hole'*
2. *VMM ASX announcement dated 4 March 2024 'Key MOUs Signed With State and Local Governments'*
3. *Meteoric Resources NL (ASX: MEI) announcement dated 1 May 2023 'Caldeira REE Project Maiden Mineral Resource'*

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APPENDIX A: DRILL LOCATIONS

Coordinates of holes used to form bulk composites at each concession.

All holes were drilled vertically.

Hole ID	EAST (m)	NORTH (m)	Elevation (m)	Total Depht (m)	DH Type	Prospect
FZ-AG-26	340800	7583600	1282.29	8.00	Auger	Northern Concessions
FZ-AG-29	341400	7583600	1290.05	6.00	Auger	Northern Concessions
FZ-AG-33	342200	7583600	1354.31	15.00	Auger	Northern Concessions
FZ-AG-53	340600	7584000	1271.52	9.00	Auger	Northern Concessions
FZ-AG-54	340800	7584000	1285.59	11.00	Auger	Northern Concessions
FZ-AG-88	341800	7584600	1301.01	16.00	Auger	Northern Concessions
CJ-AG-019	339800	7585800	1303.68	11.00	Auger	Northern Concessions
CJ-AG-24	340000	7586000	1320.72	13.00	Auger	Northern Concessions
CJ-AG-28	340000	7586200	1303.1	17.50	Auger	Northern Concessions
CDP-AG-01	340200	7580800	1305.84	7.00	Auger	Northern Concessions
CDP-AG-03	340000	7581000	1317.47	9.00	Auger	Northern Concessions
CDP-AG-34	339600	7582000	1358.01	13.50	Auger	Northern Concessions
CS-AG-30	343263	7576375	1385.722	10.50	Auger	Cupim Sul
CS-AG-33	342838	7576234	1426.38	8.30	Auger	Cupim Sul
CS-AG-34	342980	7576375	1410.21	9.70	Auger	Cupim Sul
CS-AG-35	343121	7576517	1415.46	16.00	Auger	Cupim Sul
CS-AG-36	342697	7576375	1397.73	9.50	Auger	Cupim Sul
CS-AG-37	342838	7576517	1400.91	9.70	Auger	Cupim Sul
CS-AG-38	342929	7575728	1419.12	8.50	Auger	Cupim Sul
CS-AG-05	344253	7576234	1334.557	5.30	Auger	Cupim Sul
CS-AG-06	344394	7576375	1334.286	19.00	Auger	Cupim Sul
CS-AG-10	343970	7576234	1377.104	13.00	Auger	Cupim Sul
CDO-AG-06	327424	7575527	1319.75	11.00	Auger	Capão da onça
CDO-AG-22	327141	7575810	1320.45	6.00	Auger	Capão da onça
CDO-AG-34	327141	7576093	1319.82	10.00	Auger	Capão da onça
CDO-AG-59	326575	7576093	1341.32	6.00	Auger	Capão da onça
CDO-AG-62	326999	7576517	1301.93	13.00	Auger	Capão da onça
CDO-AG-71	326434	7576234	1333.52	7.30	Auger	Capão da onça
CDO-AG-72	326575	7576375	1305.64	11.30	Auger	Capão da onça
RA-AG-06	335316	7574685	1303.27	13.00	Auger	Ribeirão
RA-AG-15	335457	7574261	1269.33	8.00	Auger	Ribeirão
RA-AG-20	335882	7574120	1268.83	11.00	Auger	Ribeirão
RA-AG-21	335457	7573979	1306.77	13.00	Auger	Ribeirão
RA-AG-24	335315	7573838	1301.7	9.00	Auger	Ribeirão
RA-AG-26	335456	7573696	1326.93	20.00	Auger	Ribeirão
RA-AG-27	335315	7573555	1306.19	16.00	Auger	Ribeirão
RA-AG-30	335314	7573273	1308.35	11.00	Auger	Ribeirão

Table 6: *Drill log table of drills used for sampling to form bulk composites and leach for the reported metallurgical work.*

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APPENDIX B: SAMPLES USED

Hole samples used to form bulk composites at each concession.

All holes were drilled vertically.

BULK SAMPLE COMPOSITE NO.	Concession	Hole ID	Sample ID	From	To
BULK SAMPLE NUMBER 1 Northern Concession	Fazenda	FZ-AG-26	FZ-AG-26-5	4	5
	Fazenda	FZ-AG-26	FZ-AG-26-6	5	6
	Fazenda	FZ-AG-26	FZ-AG-26-7	6	7
	Fazenda	FZ-AG-26	FZ-AG-26-8	7	8
	Fazenda	FZ-AG-29	FZ-AG-29-5	4	5
	Fazenda	FZ-AG-29	FZ-AG-29-6	5	6
	Fazenda	FZ-AG-33	FZ-AG-33-11	10	11
	Fazenda	FZ-AG-33	FZ-AG-33-14	13	14
	Fazenda	FZ-AG-33	FZ-AG-33-15	14	15
	Fazenda	FZ-AG-53	FZ-AG-53-9	8	9
	Fazenda	FZ-AG-54	FZ-AG-54-11	9	10
	Fazenda	FZ-AG-88	FZ-AG-88-11	10	11
	Fazenda	FZ-AG-88	FZ-AG-88-13	12	13
	Fazenda	FZ-AG-88	FZ-AG-88-15	14	15
	Carijo	CJ-AG-19	CJ-AG-19-10	9	10
	Carijo	CJ-AG-19	CJ-AG-19-11	10	11
	Carijo	CJ-AG-19	CJ-AG-19-6	5	6
	Carijo	CJ-AG-19	CJ-AG-19-9	8	9
	Carijo	CJ-AG-24	CJ-AG-24-10	9	10
	Carijo	CJ-AG-24	CJ-AG-24-11	10	11
	Carijo	CJ-AG-24	CJ-AG-24-8	7	8
	Carijo	CJ-AG-24	CJ-AG-24-9	8	9
	Carijo	CJ-AG-28	CJ-AG-28-13	12	13
	CDP	CDP-AG-01	CDP-AG-01-03	2	3
	CDP	CDP-AG-01	CDP-AG-01-04	3	4
	CDP	CDP-AG-01	CDP-AG-01-05	4	5
	CDP	CDP-AG-01	CDP-AG-01-07	6	7
	CDP	CDP-AG-03	CDP-AG-03-9	8	9
	CDP	CDP-AG-34	CDP-AG-34-7	6	7
BULK SAMPLE NUMBER 2 Cupim South	Cupim	CS-AG-30	CS-AG-30-010	8	9
	Cupim	CS-AG-33	CS-AG-33-1	0	1
	Cupim	CS-AG-34	CS-AG-34-7	6	7
	Cupim	CS-AG-34	CS-AG-34-8	7	8
	Cupim	CS-AG-34	CS-AG-34-10	9	10
	Cupim	CS-AG-35	CS-AG-35-13	12	13
	Cupim	CS-AG-35	CS-AG-35-14	13	14
	Cupim	CS-AG-36	CS-AG-36-6	5	6
	Cupim	CS-AG-36	CS-AG-36-7	6	7

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	Cupim	CS-AG-37	CS-AG-37-5	4	5
	Cupim	CS-AG-37	CS-AG-37-7	6	7
	Cupim	CS-AG-38	CS-AG-38-6	5	6
	Cupim	CS-AG-38	CS-AG-38-7	6	7
	Cupim	CS-AG-05	CS-AG-05-04	2	3
	Cupim	CS-AG-05	CS-AG-05-05	3	4
	Cupim	CS-AG-06	CS-AG-06-10	8	9
	Cupim	CS-AG-10	CS-AG-10-14	12	13
	Cupim	CS-AG-10	CS-AG-10-05	4	5
	Cupim	CS-AG-10	CS-AG-10-06	5	6
BULK SAMPLE NUMBER 3 Capão Da Onca	Capão	CDO-AG-06	CDO-AG-06-9	8	9
	Capão	CDO-AG-06	CDO-AG-06-10	9	10
	Capão	CDO-AG-06	CDO-AG-06-11	10	11
	Capão	CDO-AG-22	CDO-AG-22-3	2	3
	Capão	CDO-AG-22	CDO-AG-22-4	3	4
	Capão	CDO-AG-22	CDO-AG-22-5	4	5
	Capão	CDO-AG-34	CDO-AG-34-10	9	10
	Capão	CDO-AG-59	CDO-AG-59-2	1	2
	Capão	CDO-AG-59	CDO-AG-59-3	2	3
	Capão	CDO-AG-59	CDO-AG-59-4	3	4
	Capão	CDO-AG-62	CDO-AG-62-2	1	2
	Capão	CDO-AG-62	CDO-AG-62-3	2	3
	Capão	CDO-AG-62	CDO-AG-62-4	3	4
	Capão	CDO-AG-62	CDO-AG-62-6	5	6
	Capão	CDO-AG-71	CDO-AG-71-2	1	2
	Capão	CDO-AG-71	CDO-AG-71-3	2	3
	Capão	CDO-AG-71	CDO-AG-71-4	3	4
	Capão	CDO-AG-71	CDO-AG-71-5	4	5
	Capão	CDO-AG-71	CDO-AG-71-6	5	6
	Capão	CDO-AG-71	CDO-AG-71-7	6	7
	Capão	CDO-AG-71	CDO-AG-71-8	7	8
	Capão	CDO-AG-72	CDO-AG-72-2	1	2
BULK SAMPLE NUMBER 4 Ribeirao	Ribeirao	RA-AG-06	RA-AG-06-14	12	13
	Ribeirao	RA-AG-15	RA-AG-15-10	7	8
	Ribeirao	RA-AG-20	RA-AG-20-07	5	6
	Ribeirao	RA-AG-20	RA-AG-20-08	6	7
	Ribeirao	RA-AG-20	RA-AG-20-09	7	8
	Ribeirao	RA-AG-20	RA-AG-20-11	8	9
	Ribeirao	RA-AG-20	RA-AG-20-12	9	10
	Ribeirao	RA-AG-20	RA-AG-20-13	10	11
	Ribeirao	RA-AG-21	RA-AG-21-14	11	12
	Ribeirao	RA-AG-21	RA-AG-21-15	12	13
	Ribeirao	RA-AG-24	RA-AG-24-09	7	8
	Ribeirao	RA-AG-24	RA-AG-24-11	8	9
	Ribeirao	RA-AG-26	RA-AG-26-19	15	16

	Ribeirao	RA-AG-26	RA-AG-26-20	16	17
	Ribeirao	RA-AG-26	RA-AG-26-21	17	18
	Ribeirao	RA-AG-26	RA-AG-26-22	18	19
	Ribeirao	RA-AG-26	RA-AG-26-23	19	20
	Ribeirao	RA-AG-27	RA-AG-27-14	11	12
	Ribeirao	RA-AG-30	RA-AG-30-06	4	5
	Ribeirao	RA-AG-30	RA-AG-30-07	5	6
	Ribeirao	RA-AG-30	RA-AG-30-08	6	7

Table 7: *Sample numbers used to form each bulk composite. Depths have been rounded to closest 0.5m.*

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Appendix C: JORC Code, 2012 Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample retrospectivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• *Nature of Sampling: Auger drilling were used for sampling. I was performed using diameters of 4", 3.5", 2.5", and 2".* • *Method of Collection: Samples from auger were retrieved directly from the auger sampler and immediately preserved in identified and sealed plastic bags to prevent contamination.* • *Sample careful: Initial inspections of samples were carried out in the field by the assigned geologist, followed by a secondary review upon their arrival at the storage facility, which included a thorough check of the drilling reports and a physical examination of the cores and auger samples. Detailed logging of all drill and auger holes was conducted, emphasizing the collection of precise geological information and ensuring the integrity of each sample.* • *Sample Weight: The sample weights varied according to the core diameter, with auger drilling samples ranging from 3Kg to 9Kg.* • *Packaging & Labelling: The samples were placed in double plastic bags post-collection, sealed to prevent contamination, and labelled with 'pc', followed by a unique identification number for traceability.*
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diametre, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• *Type of Drill: Auger drilling, using diameters of 4", 3.5", 2.5", and 2", targeted surface and near-surface samples down to 21 metres.* • *Drill Method: Auger drilling utilised a bucket drill bit, ideal for shallow depths and quick surface geological investigations.* • *Drill Rig: Lightweight, mechanised rigs were used for auger drilling, ensuring efficient penetration to the desired depths.* • *Drill Orientation: Drilling was exclusively vertical, with no orientation monitoring, due to the straightforward nature of the approach, which was deemed most suitable for the geological targets.*
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures are taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• *Recovery Rates: The project achieved an excellent recovery, with 94% of samples exhibiting above 80% recovery. Each drilling session was documented, assuring thorough record-keeping.* • *Recovery rates were calculated by comparing actual core or chip lengths with expected run lengths, and all data was logged.* • *Consistent drilling protocols, immediate secure packaging, and minimal handling were standard practices to optimise sample integrity and recovery.* • *No significant bias was detected between sample recovery and grade, suggesting reliable assay data with minimal material loss or gain across varying grain sizes.*
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• *Geological and Geotechnical Detail: auger samples from the boreholes were geologically and geotechnically logged in detail in accordance with the NBR 9603 standards. This level of detail is sufficient to support appropriate Mineral Resource estimation, mining studies, and metallurgical studies.* • *Nature of Logging: Logging is both qualitative and quantitative in nature. Descriptive attributes like colour and consistency provide qualitative insights, while parameters like weight, diameter, and net advance offer quantitative data. Additionally, core samples were systematically photographed, ensuring a visual record of the core was available to complement the logs.* • *Colour: Recording the observed colour of the sample.* • *Extent of Logging: 100% of the boreholes, encompassing their entire length, were logged. This includes all relevant intersections, ensuring no significant geological features or sample attributes are omitted.*
Sub-sampling techniques	• *If core, whether cut or sawn and whether quarter, half or all core taken.*	• *The metallurgic testing program consisted of bulk composites weighing ~100kg (91 samples) formed from 37 separate holes*

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and sample preparation	• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*
	• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*
	• *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.*
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*
		across the Colossus IAC Project.
		• *On average, 22 samples were taken from each of the four key concessions, which are expected to form the Colossus maiden mineral resource estimate: Northern Concessions, Cupim South, Capão da Onça, and Ribeirão.*
		• *Upon arrival at SGS Geosol, each batch of samples was kept separate. Each batch was then dried and crushed to 2mm before being homogenised in a cement mixer, forming 4 separate bulk composites, each representing one of the key concessions.*
		• *A random 4 sub-samples were then taken from each bulk composite and assayed using a standard IMS95A test to determine an accurate head grade for each concession's bulk sample.*
		• *A further random 4 sub-samples were taken from each bulk composite and tested through standard AMSUL wash (ICM694 test) to determine the recoveries of each prospect, under the following conditions:*
		  • *0.5M $(NH_4)_2SO_4$ [Ammonium Sulfate] as lixiviant.*
		  • *pH4;*
		  • *30 minutes leach cycle; and*
		  • *Ambient temperature (~22°C) and pressure.*

Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	*Laboratory: The SGS-GEOSOL laboratory in Brazil conducted all the assay tests for the auger.* *Assay Techniques:* *a. ICP95A - Determination by Fusion with Lithium Metaborate - ICP MS for Major Oxides. Some elements and their detection limits include:* *Al_2O_3 0,01 - 75 (%) Ba 10 – 100,000 (ppm)* *Fe_2O_3 0,01 - 75 (%) K_2O 0,01 - 25 (%)* *Na_2O 0,01 - 30 (%) P_2O_5 0,01 - 25 (%)* *TiO_2 0,01 - 25 (%) V 5 – 10,000 (ppm)* *CaO 0,01 - 60 (%) Cr_2O_3 0,01 - 10 (%)* *MgO 0,01 - 30 (%) MnO 0,01 - 10 (%)* *SiO_2 0,01 - 90 (%) Sr 10 – 100,000 (ppm)* *Zn 5 – 10,000 (ppm) Zr 10 – 100,000 (ppm)* *b. PHY01E: Loss on Ignition (LOI) was determined by calcining the sample at 1,000°C.* *c. IMS95R: Lithium Metaborate Fusion followed by Inductively Coupled Plasma Mass Spectrometry (ICP MS) was employed to determine concentrations of Rare Earth elements. Detection limits for some elements include:* Ce 0.1 – 10,000 (ppm) Dy 0.05 – 1,000 (ppm) Gd 0.05 – 1,000 (ppm) Ho 0.05 – 1,000 (ppm) Nd 0.1 – 10,000 (ppm) Pr 0.05 – 1,000 (ppm) Th 0.1 – 10,000 (ppm) Tm 0.05 – 1,000 (ppm) Yb 0.1 – 1,000 (ppm) Eu 0.05 – 1,000 (ppm) Er 0.05 – 1,000 (ppm) Lu 0.05 – 1,000 (ppm) La 0.1 – 10,000 (ppm) Tb 0.05 – 1,000 (ppm) Sm 0.1 – 1,000 (ppm) Y 0.05 – 1,0000 (ppm) U 0.05 – 10,000 (ppm) *Quality Control: The laboratory follows strict quality control procedures, ensuring the accuracy and precision of the assay data. Internally, the laboratory uses duplicate assays, standards, and blanks to maintain quality.* *Comments on Assay Data and Tests: The techniques employed are well-suited for the elements and minerals of interest. These methods, combined with the reputable quality control practices of the SGS-GEOSOL ensure the reliability of the assay data.* *c. ICM694: Lixiviation with 0.5 molar Ammonium Sulfate in 30 minutes, analysis by ICP-OES / ICP-MS. The final leach liquor filtrates were analysed with the as followed detection limits:* Al 2 - 8000 (mg/kg) Ba 20 - 800 (mg/kg) Ca 10 - 8000 (mg/kg) Cd 0.12 - 800 (mg/kg) Cr 1 - 800 (mg/kg) Cs 0.2 - 200 (mg/kg) Er 0.02 - 200 (mg/kg) Eu 0.02 - 200 (mg/kg)

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		Ho	0.016 - 200 (mg/kg)	In	0.08 - 200 (mg/kg)
		Li	0.4 - 800 (mg/kg)	Lu	0.04 - 200 (mg/kg)
		Mo	0.2 - 200 (mg/kg)	Na	20 - 8000 (mg/kg)
		Ni	0.2 - 800 (mg/kg)	P	4 - 8000 (mg/kg)
		Rb	0.8 - 200 (mg/kg)	Re	0.4 - 200 (mg/kg)
		Sn	1.2 - 200 (mg/kg)	Sr	0.16 - 800 (mg/kg)
		Th	0.2 - 200 (mg/kg)	Ti	5 - 8000 (mg/kg)
		U	0.04 - 200 (mg/kg)	V	2 - 800 (mg/kg)
		Yb	0.4 - 200 (mg/kg)	Zn	0.5 - 800 (mg/kg)
		Be	0.4 - 800 (mg/kg)	Bi	0.8 - 800 (mg/kg)
		Ce	0.2 - 800 (mg/kg)	Co	0.2 - 800 (mg/kg)
		Cu	0.04 - 800 (mg/kg)	Dy	0.028 - 200 (mg/kg)
		Fe	2 - 8000 (mg/kg)	Gd	0.028 - 200 (mg/kg)
		K	20 - 8000 (mg/kg)	La	1 - 800 (mg/kg)
		Mg	2 - 8000 (mg/kg)	Mn	0.4 - 8000 (mg/kg)
		Nb	0.2 - 200 (mg/kg)	Nd	2.4 - 800 (mg/kg)
		Pb	0.32 - 800 (mg/kg)	Pr	0.06 - 800 (mg/kg)
		Sc	0.24 - 800 (mg/kg)	Sm	0.04 - 200 (mg/kg)
		Ta	0.2 - 200 (mg/kg)	Tb	0.08 - 200 (mg/kg)
		Tl	0.08 - 200 (mg/kg)	Tm	0.012 - 200 (mg/kg)
		W	1 - 800 (mg/kg)	Y	0.2 - 800 (mg/kg)
		Zr	0.2 - 800 (mg/kg)		
		The leaching test were conducted under the following conditions: • *Utilization of 0.5 M (NH4)2SO4 as lixiviant;* • *pH maintained at 4;* • *Duration of 0.5 hours;* • *Ambient temperature (~22°C);* • *Solids density of 4 wt%.* *Each test was carried out in a 2 L baffled leach vessel equipped with an overhead stirrer. 1 M H_2SO_4 was used to adjust the test pH if necessary. Minor elements in solution were not analyzed due to high dilution, focusing instead on assessing REE extraction variability. Gangue element dissolution provided an indication of relative acid consumption. After each test, the slurry was vacuum filtered to separate the leach liquor. The final residue solids were washed on the filter with 200 mL of DI water and dried at 105°C to constant weight. Individual REE recoveries from each sample were calculated using head and leach liquor assays. The final leach liquor filtrates were analyzed subsequently.* *Quality Control: The laboratory follows strict quality control procedures, ensuring the accuracy and precision of the assay data. Internally, the laboratory uses duplicate assays, standards, and blanks to maintain quality.* *Comments on Assay Data and Tests: The assay techniques employed are well-suited for the elements and minerals of interest.*				
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, and data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• *Significant intersections have not been independently verified by alternative company personnel yet.* • *Primary data collection follows a structured protocol, with standardised data entry procedures in place. Data verification procedures ensure that any anomalies or discrepancies are identified and rectified. All data is stored both in physical forms, such as hard copies and electronically, in secure databases with regular backups.* • *The only adjustments to the data were made- transforming the elemental values into the oxide values. The conversion factors used are included in the table below.*			
		Element	Oxide	Factor	
		Ce	CeO_2	1.2284	
		La	La_2O_3	1.1728	
		Sm	Sm_2O_3	1.1596	

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		Nd Nd_2O_3 1.1664 Pr Pr_6O_{11} 1.2082 Dy Dy_2O_3 1.1477 Eu Eu_2O_3 1.1579 Y Y_2O_3 1.2699 Tb Tb_4O_7 1.1762 Gd Gd_2O_3 1.1526 Ho Ho_2O_3 1.1455 Er Er_2O_3 1.1435 Tm Tm_2O_3 1.1421 Yb Yb_2O_3 1.1387 Lu Lu_2O_3 1.1371 • *The TREO (Total Rare Earth Oxides) was determined by the sum of the following oxides: CeO_2, Dy_2O_3, Er_2O_3, Eu_2O_3, Gd_2O_3, Ho_2O_3, La_2O_3, Lu_2O_3, Nd_2O_3, Pr_6O_{11}, Sm_2O_3, Tb_4O_7, Tm_2O_3, Y_2O_3, Yb_2O_3. For the MREO (Magnetic Rare Earth Oxides), the following oxides were considered: Dy_2O_3, Gd_2O_3, Ho_2O_3, Nd_2O_3, Pr_6O_{11}, Sm_2O_3, Tb_4O_7. And for the HREO we consider: Dy_2O_3, Er_2O_3, Eu_2O_3, Gd_2O_3, Ho_2O_3, La_2O_3, Lu_2O_3, Tb_4O_7, Tm_2O_3, Y_2O_3 and Yb_2O_3* • *Grades (ppm) were rounded to nearest whole figure, and lengths (m) were rounded to the nearest 0.5m.* • *For some samples exceeding 1000 ppm, over-limit head analysis for Nd and Pr was necessary and, for the leaching test, for some samples that exceeding 800ppm for La, Nd and Pr.*
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• *The positioning of the drill has been achieved with high precision using a GPS RTK (Real-Time Kinematic) system. This sophisticated GPS provides real-time corrections, ensuring accuracy within centimetres.* • *The project's grid system is based on the SIRGAS 2000 UTM coordinate system. This universal grid system facilitates consistent data interpretation and integration with other geospatial datasets.* • *Benchmark and control points were established within the project area to ensure the quality and reliability of the topographic location data.*
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution are sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• *The auger drilling is conducted on a regular grid with 200 x 200 metres spacing. This grid spacing is designed to provide a detailed exploration framework suitable for the area of interest. It aims to assist in defining our initial inferred resource, and offer a foundational understanding of the geological and grade continuity in the targeted zone.* *The original metre by metre samples were bulked as indicated in the table below:*

Bulk Sample	Concession	Number of Samples	Number of Drill Holes Tested	Average Depth of Sample (m)
1	Northern Concession	29	12	8.86
2	Cupim Sul	19	10	7.37
3	Capão da Onça	22	7	5.14
4	Ribeirão	21	8	11.14
Total		91	37	8.13

Orientation of data about geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of crucial mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• *All drill holes were vertically oriented, which is deemed appropriate given the nature of the deposit. The deposit in question is a supergene deposit with a much larger areal extent than the thickness of the mineralised body. This type of deposit tends to be horizontally extensive with relatively consistent thickness.* • *Given the vast area extent of the deposit and its relatively consistent thickness, vertical drilling is best suited to achieve unbiased sampling. This orientation allows for consistent intersecting of the horizontal mineralised zones and provides a representative view of the overall geology and mineralisation.* • *There is no indication that drilling orientation has introduced any sampling bias about the crucial mineralised structures. The drilling orientation aligns well with the deposit's known geology, ensuring accurate representation and unbiased sampling of the mineralised*

		zones. Any potential bias due to drilling orientation is considered negligible in this context.
Sample security	• *The measures taken to ensure sample security.*	• *All samples were collected by field personnel and carefully packed in labelled plastic bags. Once packaged, the samples were transported directly to the SGS-GEOSOL. The samples were secured during transportation to ensure no tampering, contamination, or loss. Chain of custody was maintained from the field to the laboratory, with proper documentation accompanying each batch of samples to ensure transparency and traceability of the entire sampling process. Using a reputable laboratory further reinforces the sample security and integrity of the assay results.*
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• *As of the current reporting date, no external audits or reviews have been conducted on the sampling techniques, assay data, or results obtained from this work. However, internal processes and checks were carried out consistently to ensure the quality and reliability of the data.*

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership, including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• *All samples were acquired from tenements owned by Viridis Mining and Minerals Ltd, following an agreement with the Varginha Parties. Specifically:* Prospect / #Tenement / Tenement total size (m^2) NC / 830.113/2006, 830.927/2016, 009.031/1966 and 007.737/1959 / 8,371,000 CDO / 830419/2019 / 4,459,800 RA / 833.619/1996 / 1,311,500 CS / 833.560/1996 / 1,542,600

Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• *Historical exploration in the area comprises notable endeavors by various entities:*
		  • *The Colossus project is geologically intertwined with the Caldeira Project, sharing the same geological context.*
		  • *Varginha Mineração previously undertook regional drilling exercises, utilising a powered auger drill rig to produce open holes.*
		  • *This historical data provides essential context and complements current exploration efforts in understanding the region's geological potential.*

Geology	• *Deposit type, geological setting and style of mineralisation.*	• *The geology of the region where the deposit is located can be summarised as follows:*
		  • *Deposit Nature: The deposit under study is recognised as an Ionic Adsorption Clay Rare Earth Element (REE) deposit. Its spatial positioning is within and adjacent to the renowned Poços De Caldas Alkaline massif complex.*
		  • *Poços de Caldas Complex: This geological entity stands as one of the most extensive alkaline massif intrusions globally, enveloping an area of roughly 800 km^2. It stretches across the Brazilian states of São Paulo and Minas Gerais. From a macro perspective, it portrays a near-circular structure with an approximate diameter of 30 km. This formation has a semblance of a collapsed caldera. Delving deeper, the dominant rocks within the alkaline complex encompass phonolite, nepheline syenites, sodalite syenites, and many volcanic rocks. This diverse geological setting has played a crucial role in dictating mineral occurrences and potential mining prospects.*
		  • *REE Mineralisation: The specific REE mineralisation*

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Criteria	JORC Code explanation	Commentary
		highlighted in this disclosure leans towards the Ionic Clay type. Evidence pointing to this is mainly derived from its occurrence within the saprolite/clay zone of the weathering profile of the Alkaline granite basement. The enriched MREO (Medium Rare Earth Oxides) composition also attests to this classification. • *Relevant Additional Information: The Ionic Adsorption Clay Rare Earth Element deposits, particularly in regions like Poços de Caldas, have recently gained significant attention due to the global demand surge for rare earth elements. These elements, especially the heavy rare earths, have vital applications in modern technologies such as renewable energy systems, electronics, and defence apparatus. The ability of these deposits to offer relatively environmentally friendly mining prospects compared to traditional hard rock REE mines further enhances their appeal.* • *Given the strategic importance of REEs in modern industries, a thorough understanding, and exploration of such geologies becomes paramount. The unique geological setting of the Poços de Caldas complex presents both opportunities and challenges, making further detailed study and research essential for sustainable exploitation.*
Drill hole Information	• *A summary of all information material to the understanding of the exploration results, including a tabulation of the following information for all Material drill holes:* ○ *Easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *Dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• *Auger Drilling* *Total number of holes: 37* *Total number of samples: 91* *Reported in Appendix A and B of this Report*
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• *Data collected for this project includes surface geochemical analyses, geological mapping, and auger and diamond drilling results. Data were compiled without selective exclusion. All analytical methods and aggregation were done according to industry best practices, as detailed in previous discussions.*
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a*	• *Given the nature of the deposit, which is a supergene deposit with a much larger areal extent than its thickness, the vertical drilling orientation is suitable for accurately representing the mineralised zones.* • *All drill holes are vertical and are appropriate for the deposit type, ensuring unbiased sampling of the mineralisation.* • *Due to the mineralisation's geometry and the drill holes' vertical orientation, downhole lengths can be considered*

Criteria	JORC Code explanation	Commentary
	clear statement to this effect (e.g. 'down hole length, true width not known').	close representations of the true widths of the mineralised zones. However, further studies would be required for absolute precision. • In cases where there might be a discrepancy between downhole lengths and true widths, it should be noted that "downhole length, true width not known."
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	*The data presented in this report helps readers better understanding of the information. Various diagrams and supplementary information are included in the document, enhancing the clarity and accessibility of the geological findings and exploration results.*
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• The data presented in this report strives to provide a transparent and holistic view of the exploration activities and findings. All the information, ranging from sampling techniques, geological context, prior exploration work, and assay results, has been reported comprehensively. Where relevant, cross-references to previous announcements have been provided to ensure continuity and clarity. Including diagrams, such as geological maps and tables, supports a more in-depth understanding of the data. It's noteworthy to mention that while positive results have been highlighted, the nature of the samples, particularly their origin from either saprolitic clays or bauxite, has been distinctly reported to ensure a balanced view. This report faithfully represents the exploration activities and findings without any undue bias or omission.
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• There is no additional substantive exploration data to report currently.
Further work	• The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• Future works include carrying on the auger, diamond, and RC drilling campaign in 2024, geological mapping, geochemical and metallurgical tests, and mineralogical characterisation.

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