

ASX: VMM MARKET ANNOUNCEMENT

## Further Exceptional Discoveries Continue at Colossus 21.5m @ 3,195ppm TREO from surface

ASX Release: 07 December 2023

### Highlights

- ▶ **Second set of assays for auger and diamond drilling received, confirming further widespread world-class discoveries of high-grade Ionic Adsorption Clay (“IAC”) mineralisation.**
- ▶ **Four diamond holes in total now received at Fazenda Prospect, resulting in an IAC body with average thickness of ~14 metres and weighted average grade of 2,979ppm Total Rare Earth Oxides (“TREO”)<sup>A</sup>. Fazenda continues delivering world class discoveries from diamond drilling:**
  - FZ-DDH-004: **15.0m @ 3,559ppm TREO** [33% MREO]<sup>B</sup> within broader section of **33.5m @ 2,509ppm TREO** from surface.
- ▶ **First two diamond holes received at the Carijo Prospect have discovered a high-grade IAC body with average thickness of ~18 metres and a weighted average grade of 3,201ppm TREO:**
  - CJ-DDH-001: **21.5m @ 3,195ppm TREO** [21% MREO] within a broader section of **32m @ 2,563ppm TREO** from surface.
  - CJ-DDH-002: **15.0m @ 3,210ppm TREO** [25% MREO] within a broader section of **31m @ 2,426ppm TREO** from surface.
- ▶ **Assays received from the first and only diamond holes at Central and Caminho Das Pedras Prospects both returned outstanding rare earth element (“REE”) rich clay discoveries:**
  - CT-DDH-001: **40.0m @ 2,352ppm TREO** [22% MREO] incl. **16.0m @ 3,401ppm TREO** from 7m.
  - CDP-DDH-001: **26.0m @ 2,295ppm TREO** [24% MREO] incl. **9.5m @ 3,079ppm TREO** from surface.
- ▶ **Fazenda and Caminho Das Pedras Mining Licenses: continue to deliver remarkable wide-spread discoveries of REE-rich clay intercepts across auger drilling:**
  - FZ-AG-033: **7.0m @ 4,882ppm TREO (ending in mineralisation)** from 8m, ending in **6,717ppm TREO**.
  - FZ-AG-087: **13.0m @ 3,232ppm TREO (ending in mineralisation)** from 0m, ending in **6,884ppm TREO**.
  - CDP-AG-031: **11.0m @ 3,427ppm TREO (ending in mineralisation)** from 0m, ending in **3,296ppm TREO**.
  - FZ-AG-061: **4.0m @ 3,570ppm TREO (ending in mineralisation)** from 5m, ending in **4,094ppm TREO**.
  - FZ-AG-088: **16.0m @ 2,741ppm TREO (ending in mineralisation)** from 0m, ending in **2,723ppm TREO**.
  - FZ-AG-047: **11.0m @ 2,561ppm TREO (ending in mineralisation)** from 0m, ending in **4,249ppm TREO**.
  - FZ-AG-021: **6.0m @ 3,721ppm TREO (ending in mineralisation)** from 6m, ending in **3,488ppm TREO**.
  - FZ-AG-040: **9.0m @ 2,436ppm TREO (ending in mineralisation)** from 0m, ending in **3,140ppm TREO**.
  - FZ-AG-060: **7.0m @ 3,563ppm TREO (ending in mineralisation)** from 5m, ending in **3,522ppm TREO**.
  - FZ-AG-073: **4.0m @ 3,359ppm TREO (ending in mineralisation)** from 4m, ending in **3,391ppm TREO**.

<sup>A</sup>TREO: La<sub>2</sub>O<sub>3</sub> + CeO<sub>2</sub> + Pr<sub>6</sub>O<sub>11</sub> + Nd<sub>2</sub>O<sub>3</sub> + Sm<sub>2</sub>O<sub>3</sub> + Eu<sub>2</sub>O<sub>3</sub> + Gd<sub>2</sub>O<sub>3</sub> + Tb<sub>4</sub>O<sub>7</sub> + Dy<sub>2</sub>O<sub>3</sub> + Ho<sub>2</sub>O<sub>3</sub> + Er<sub>2</sub>O<sub>3</sub> + Tm<sub>2</sub>O<sub>3</sub> + Yb<sub>2</sub>O<sub>3</sub> + Lu<sub>2</sub>O<sub>3</sub> + Y<sub>2</sub>O<sub>3</sub>

<sup>B</sup> MREO (Magnet Rare Earth Oxides): Pr<sub>6</sub>O<sub>11</sub> + Nd<sub>2</sub>O<sub>3</sub> + Sm<sub>2</sub>O<sub>3</sub> + Ho<sub>2</sub>O<sub>3</sub> + Gd<sub>2</sub>O<sub>3</sub> + Tb<sub>4</sub>O<sub>7</sub> + Dy<sub>2</sub>O<sub>3</sub>

- ▶ **Diamond drilling to date has now defined IAC bodies across three concessions, with discoveries on a further two concessions:**
  - **Cupim South: Average ~28 metres thick with weighted average grade of 3,460ppm TREO.**
  - **Fazenda: Average ~14 metres thick with weighted average grade of 2,979ppm TREO.**
  - **Carijo: Average ~18 metres thick with weighted average grade of 3,201ppm TREO.**
  
- ▶ **Second batch of diamond results has discovered thick and high-grade mineralisation across three new concessions.** These results continue to illustrate that the Colossus Project remains of world-class nature and homogenous in high-grade REE mineralisation, with outstanding intercepts covering only a small portion of the overall project, **with over 140 holes still awaiting assay results.**
  
- ▶ **Over 95% of holes intersected >1,000ppm TREO, with all 47 auger holes ending in REE mineralisation and grades increasing with depth.** From this second batch, **auger holes which have been shown to intersect through the leached layer/soil cover into the main IAC body (>20% MREO) have returned an average grade of 3,003ppm TREO with a Nd-Pr Oxide content of 755ppm and Dy-Tb Oxide content of 35ppm.** This second batch of auger results has significantly advanced the economic potential of Fazenda with higher average grades and thicknesses and a thinner leached layer in comparison to the first batch of results.
  
- ▶ **Auger drilling has discovered new areas of exceptionally high grades at Fazenda, which will become priority targets for deeper drilling.** Furthermore, the second batch of auger drilling has confirmed the ~5 – 8m 'leached layer' is limited to the southeast corner of Fazenda, with the remainder of the License generally showing < 5m of leached and soil cover.

#### **Executive Chairman Agha Shahzad Pervez commented:**

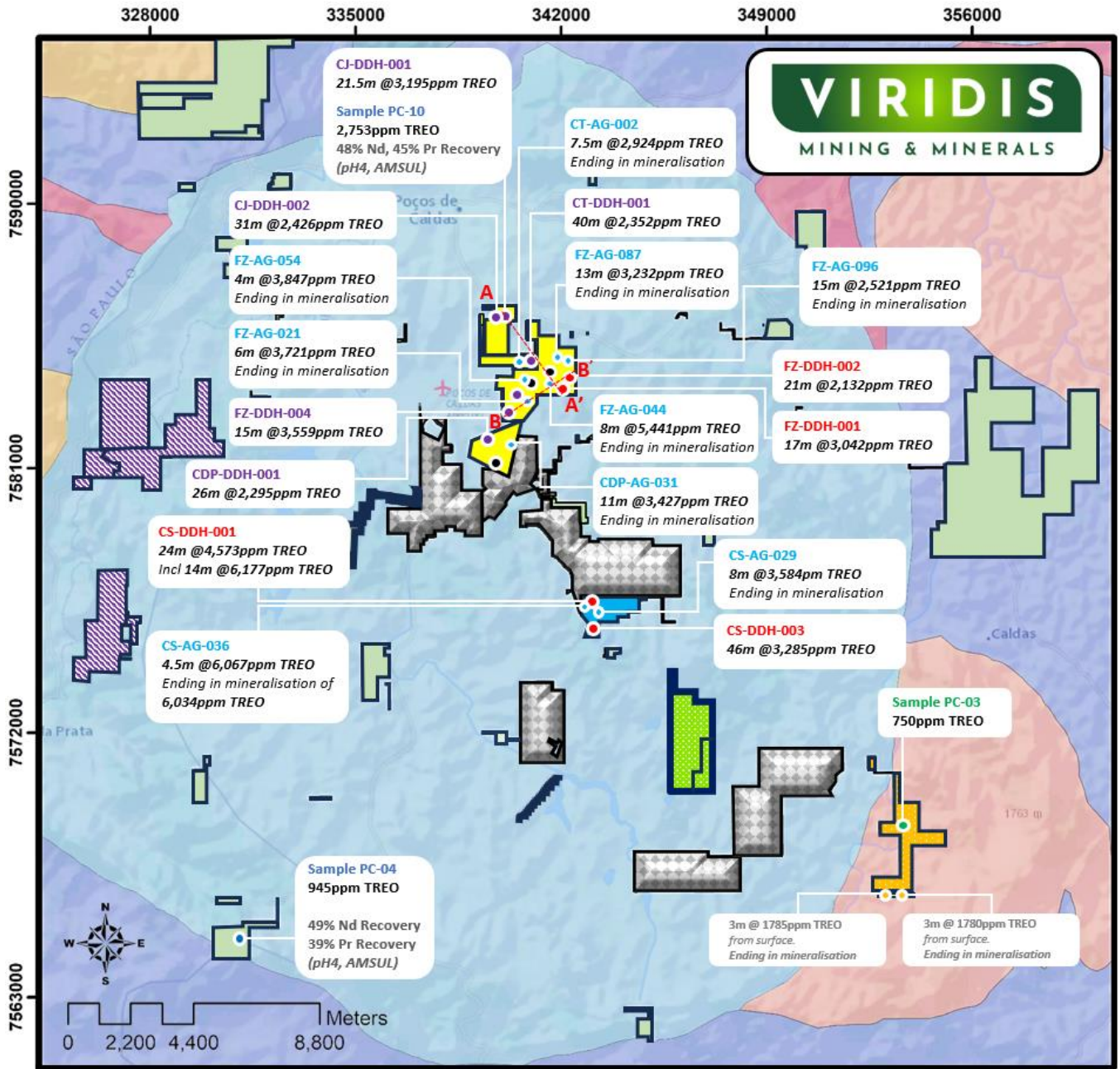
*"The Colossus Project continues to deliver world-class IAC REE results across multiple concessions. This set of results is groundbreaking for the Company, with three additional high-grade discoveries at Carijo, Central and Caminho Das Pedras prospects identified through diamond drilling, of which the latter two adjoin the Fazenda Concession.*

*Combined with our first batch of results, we are demonstrating the entire Northern Concessions system has the potential to contribute to a substantial REE resource, alongside Cupim South, which holds the potential to be the highest-grade deposit within the entire Complex from drill data we've received thus far – boasting an impressive weighted average grade of 3,460ppm across diamond drilling in a 15 to 45m thick IAC body.*

*Our first diamond assay within the Central Prospect revealed the REE mineralisation's full extent, returning an impressively thick 40m @ 2,352ppm TREO intercept. Furthermore, the first two diamond drills on the Carijo saprolite hill has discovered a high-grade IAC body ~18 metres thick with a remarkable weighted average grade of 3,210ppm TREO.*

*The exploration success achieved to date at Colossus is a result of the diligent work by the Viridis team that continues to put money into the ground to generate shareholder value."*

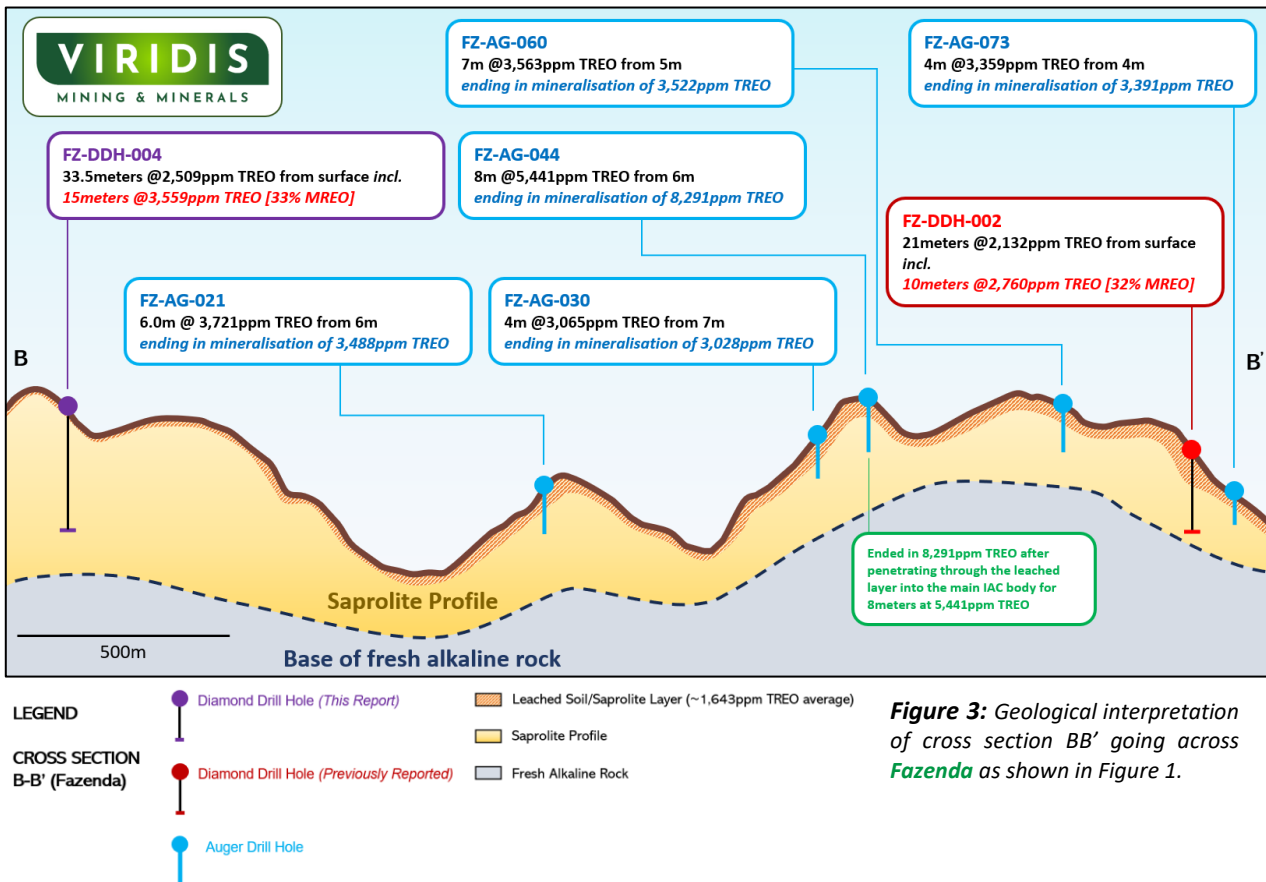
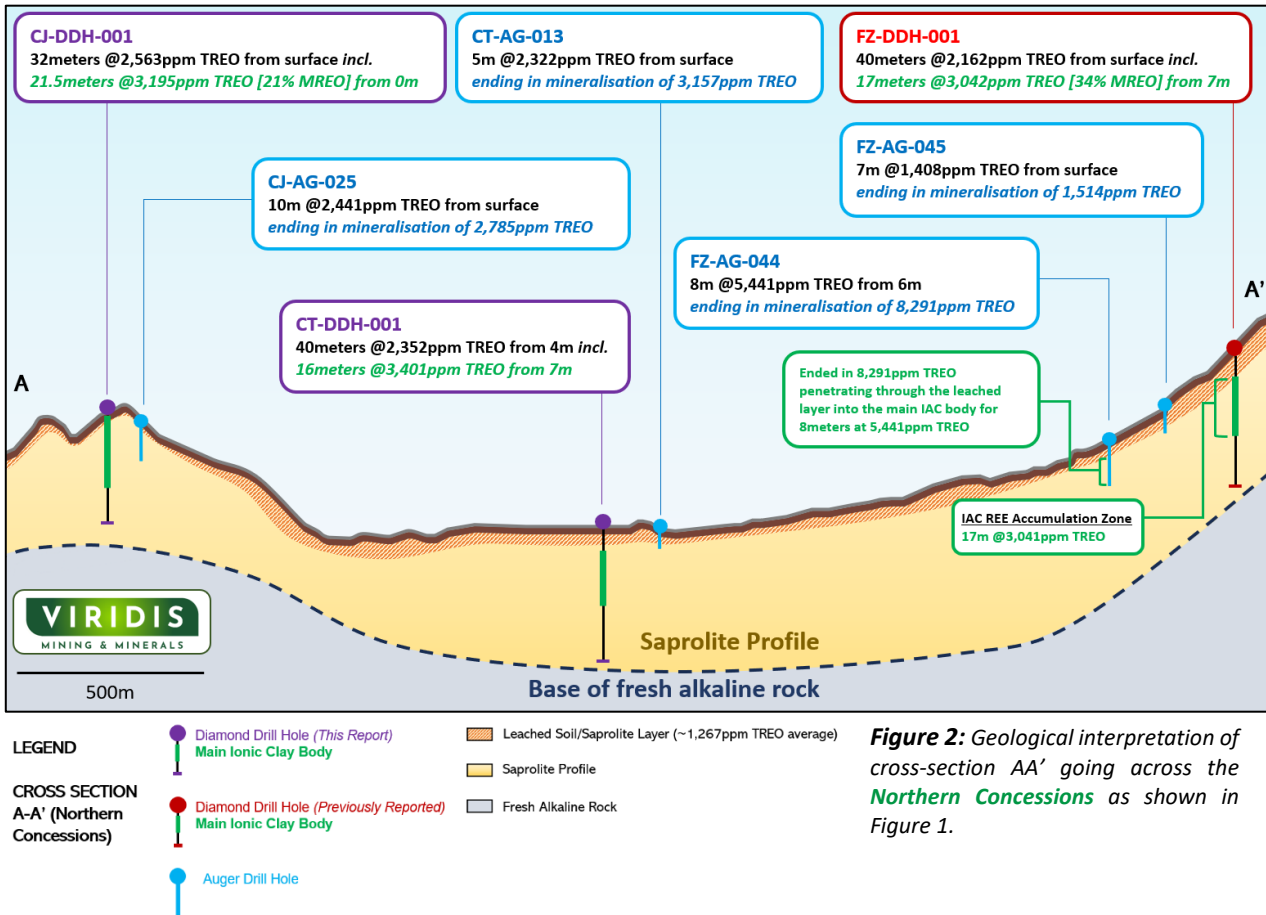
### Map of Exploration Data Highlights on Colossus Project



LEGEND

- Newly Optioned Centro Sul Prospect
- Northern Concession Prospects
- Cupim South Prospect
- W1 & W2 Prospects
- Sien Prospect
- Colossus Project - Other Licenses
- Caldeira Mineral Resource Estimate boundary – 409Mt @ 2,626ppm TREO
- Diamond Drills (Assays this Report)
- Diamond Drills (Previously Reported)
- Diamond Drills (Pending Assays)
- Auger Holes
- Weathered outcrop samples from Colossus Concessions – Chemical Analysis
- Saprolite samples from Colossus Concessions – Chemical & Metallurgical Analysis (Ammonia Sulfate)
- Previous areas of historic hand-held auger drilling to 3meters depth
- Cross Section AA'
- Cross Section BB'
- Poços de Caldas alkaline complex
- Syenite
- Granite
- Charnockite
- Paragneiss
- Orthogneiss

**Figure 1:** Map of diamond and auger drill highlights, surface grab sample in 'leached layer' including recoveries of samples washed with ammonia sulfate and historic hand-held auger highlights on Colossus concessions. Image superimposes newly optioned Centro Sul Prospect and proximity of Caldeira Ionic Clay Resource<sup>1</sup>. Auger holes have all ended in mineralisation.



Viridis Mining and Minerals Limited (“Viridis” or “Company”) is pleased to report the second set of assays it has received from Phase I and II maiden exploration programs. A total of 47 auger hole assays have been received from SGS GEOSOL, and 6 diamond hole assays have been received from ALS Laboratories as part of the second batch of results. **Over 120 auger holes, 14 adapted-RC holes and 9 diamond holes are still awaiting assays with exploration drilling on-going.**

Diamond assays have been received for another two holes at Fazenda Prospect, which was drilled >1.8km from previously reported holes from the first batch. Drilling has confirmed the IAC hosting body remains widespread with an average thickness of **~14 metres and weighted average grade of 2,979ppm TREO with a Nd-Pr Oxide content of 788ppm and Dy-Tb Oxide content of 42ppm** achieved from the diamond holes received to date.

Diamond assays from the first two holes within the **Carijo Prospect have intercepted an outstanding IAC body with an average thickness of ~18 metres and weighted average grade of 3,201ppm TREO across the holes with a Nd-Pr Oxide content of 700ppm and Dy-Tb Oxide content of 28ppm.**

Furthermore, the first and only diamond assay received from the Central Prospect (which adjoins Fazenda) has successfully confirmed thick and high-grade mineralisation under a thin 4 metres of soil cover with an impressive **40m @ 2,352ppm TREO (incl. 16.0m @ 3,401ppm TREO)**. The first and only diamond assay received from the Caminho Das Pedras Mining License, which adjoins both Fazenda and Dona Maria 2 Deposit (*94Mt @ 2,320ppm TREO; DM1 & DM2*)<sup>1</sup> has confirmed the presence of high-grade REE mineralisation with **26m @ 2,295ppm TREO [24% MREO] from surface.**

Drilling across Colossus has now confirmed high-grade mineralisation across 5 separate concessions with a combined area of ~10km<sup>2</sup> and presents consistent grades of ~2,400 – 3,500ppm TREO within the intermediate layer (“REE Accumulation Zone”), which sits below a thin cover over leached clays and soils. Auger holes have all ended in mineralisation, with grades improving at depth, leaving significant upside scope for both grades and thickness upon receiving further RC and diamond assays. From the second batch of results, **auger holes which have penetrated through the leached layer (illustrated by a filter of >20% MREO content) into the main IAC zone have shown an average grade of 3,003ppm TREO with a Nd-Pr Oxide content of 755ppm and Dy-Tb Oxide content of 35ppm, which is a significant improvement from the first batch of results,** illustrating the true potential of Colossus continues to be uncovered with each set of results.

These assays are confirmatory that the Colossus project is homogenous and widespread with high-grade REE mineralisation across numerous concessions, furthermore, auger drilling has illustrated the project remains open in all directions and at depth. Viridis continues RC drilling at Fazenda, with diamond and auger drilling continuing at the W1, Corrego da Anta and Cupim South prospects.

## Northern Concessions

### CARIJO PROSPECT

The Carijo prospect is an extension to the Fazenda Mining License, which forms part of the Colossus Northern Concessions.

Carijo was a greenfield exploration opportunity that was originally prospected by Viridis management through a surface grab sample of saprolite within the ‘leached layer’, which returned 2,753ppm TREO<sup>7</sup>. Furthermore, this sample also confirmed Ionic Clay recovery of 48% for Neodymium and 45% for Praseodymium through Ammonia Sulfate wash (“AMSUL”) [pH4, room temperature]. Both the grades and recoveries of this surface sample were highly favourable given it was taken from the superficial leached layer, which generally hosts the lowest levels of Ionic mineralisation<sup>2</sup> and generated a high-priority exploration target within Carijo.

**The first two diamond holes received have now discovered a thick and exceptionally high-grade IAC body at the Carijo saprolite hill, which exceeds well beyond previously understood grades and depth:**

- CJ-DDH-001: **21.5m @ 3,195ppm TREO [21% MREO]** within broader section of **32m @ 2,563ppm TREO** from surface.
- CJ-DDH-002: **15.0m @ 3,210ppm TREO [25% MREO]** within broader section of **31m @ 2,426ppm TREO** from surface.

These first two diamond assays received have confirmed that **the Carijo prospect comprises an outstanding IAC body with an average thickness of ~18 metres and weighted average grade of 3,201ppm TREO**. These initial diamond assays cover an area less than 3% of the concession, with significant room for further greenfield discoveries at Carijo.

### **FAZENDA AND CAMINHO DAS PEDRAS MINING LICENSES**

A total of 30 auger holes and 2 diamond holes have been received as part of the second batch of exploration results, which continue to deliver remarkable grades at Fazenda and provide further confidence that mineralisation is widespread with further discoveries of new higher-grade areas across the mining license.


Over 100 auger, 6 diamond and 14 RC holes have been completed to date across the Fazenda Mining License. The auger drilling, along with diamond drilling has continued to show Fazenda follows a typical IAC deposition model<sup>6</sup> with a thin layer of ~0 – 5m leached saprolite and soils, followed by a thick IAC body, which shows an immediate doubling of TREO grade and approximately six times more MREO contents. The results also indicate that grades continue to increase substantially with depth by penetrating the intermediate layer which has a higher affinity towards ionically bonding the critical magnet rare earth elements<sup>5,6</sup>.

**Most importantly, the auger holes end in high-grade mineralisation which illustrates the resource body remains completely open at depth and along strike** and Viridis is yet to uncover the highest grades of mineralisation, as shown below:

- FZ-AG-033: 7.0m @ **4,882ppm TREO (ending in mineralisation)** from 8m, ending in **6,717ppm TREO**.
- FZ-AG-087: 13.0m @ **3,232ppm TREO (ending in mineralisation)** from 0m, ending in **6,884ppm TREO**.
- FZ-AG-060: 7.0m @ **3,563ppm TREO (ending in mineralisation)** from 5m, ending in **3,522ppm TREO**.
- FZ-AG-088: 16.0m @ **2,741ppm TREO (ending in mineralisation)** from 0m, ending in **2,723ppm TREO**.
- FZ-AG-073: 4.0m @ **3,359ppm TREO (ending in mineralisation)** from 4m, ending in **3,391ppm TREO**.

The second set of results has shown the ‘leached layer’ consisting of transported sediments, oxidised clays and soils is thinner than previously understood with a slightly thicker leaching zone only being localised to the Southeast corner of the License.


The examples FZ-AG-087 and FZ-AG-040 shown below have illustrated no leached layer or soil cover, with the **ionic body starting at surface**. Whereas numerous other auger holes received within the second batch have shown a far thinner leached layer than previously understood, as exemplified in FZ-AG-047.

ID	Zone	From (m)	TREO	NdPr	DyTb	MREO %
FZ-AG-87	ACCUMULATION REE CLAYS [IAC BODY]	0	2,202	321	22	18%
		1	2,283	340	26	19%
		2	2,366	351	29	19%
		3	2,865	409	27	18%
		4	2,435	408	27	21%
		5	2,370	394	26	21%
		6	2,468	421	27	21%
	7	2,418	510	28	26%	
	HIGH-GRADE [IAC BODY]	8	3,019	755	40	31%
		9	2,933	761	43	32%
		10	3,985	1,185	65	37%
		11	5,783	1,974	101	43%
12		6,884	2,441	122	44%	
 <b>OPEN AT DEPTH</b>						

**Figure 4:** Metre by metre assay of FZ-AG-087

ID	Zone	From (m)	TREO	NdPr	DyTb	MREO %
FZ-AG-40	ACCUMULATION REE CLAYS [IAC BODY]	0	2,498	484	25	24%
		1	2,016	399	21	24%
		2	2,047	517	25	31%
		3	2,818	582	30	25%
		4	1,871	261	18	18%
		5	2,700	571	29	26%
	HIGH-GRADE [IAC BODY]	6	2,122	495	31	29%
		7	2,709	635	28	28%
		8	3,140	679	35	27%

OPEN AT DEPTH




**Figure 5:** Metre by metre assay of FZ-AG-040

In both FZ-AG-087 (13m @ 3,232ppm TREO) and FZ-AG-040 (9m @ 2,436ppm TREO) examples, the assays illustrate almost zero surficial leaching in these areas, with the IAC body present at surface and continual improvements of grades with depth. Both holes ended in significantly higher mineralisation than on surface, in particular hole FZ-AG-087 **ended the last 5m @ 4,521ppm TREO** which indicates the higher grades potentially will be intercepted upon deeper RC or diamond drilling with expectations of an even more impressive assay result.

Meanwhile, in consistency with other auger results received in the second batch, the example of FZ-AG-047 seen below, shows a leached layer of ~3 metres which is thinner than previously understood, with grades significantly improving with depth. This hole intercepted 11m of clay @ 2,561ppm TREO, with the first 3m returning an average of 8% MREO ('Leached Clay'), followed by the next 4m returning an average of 18% MREO ('IAC Body'), with the final 4m returning an average of 34% MREO ("High Grade IAC Body"). Similar to other holes, FZ-AG-047 **ended the last 2m @ 3,914ppm TREO**, indicating the auger drill has only scratched the surface of the highest graded portion of the body which leaves significant scope for potentially better results upon deeper drilling.

ID	Zone	From (m)	TREO	NdPr	DyTb	MREO %
FZ-AG-47	LEACHED SAPROLITE/CLAYS	0	1,886	99	13	7%
		1	2,367	108	14	6%
		2	2,267	167	16	10%
	ACCUMULATION REE CLAYS [IAC BODY]	3	2,206	187	15	11%
		4	1,923	428	22	27%
		5	2,289	168	15	10%
		6	1,919	386	18	24%
	HIGH-GRADE [IAC BODY]	7	2,995	748	31	30%
		8	2,485	690	29	34%
		9	3,580	1,029	42	35%
		10	4,249	1,262	52	36%

OPEN AT DEPTH



**Figure 6:** Metre by metre assay of FZ-AG-047

Two more diamond assays have been received from the Fazenda Mining License which continue to make further widespread discoveries of IAC mineralisation. In particular, FZ-DDH-004 was drilled over 2.2km away from previously reported FZ-DDH-001 (*VMM announcement dated 20 November 2023*), and is now the best intercept at Fazenda to date and exemplifies the large area of high-grade mineralisation:

- FZ-DDH-004: **15.0m @ 3,559ppm TREO [33% MREO]** within broader section of **33.5m @ 2,509ppm TREO** from surface.

In combination with the first two diamond assays received in the first batch, Fazenda has increasingly proved its potential to host a large and high-grade resource:

- FZ-DDH-001: **17.0m @ 3,042ppm TREO [34% MREO]** within broader section of **40.0m @ 2,162ppm TREO** incl. from surface
- FZ-DDH-002: **10.0m @ 2,760ppm TREO [32% MREO]** within broader section of **21.0m @ 2,132ppm TREO** incl. from surface.

The first and second batch of diamond holes at Fazenda have now **confirmed a weathered clay hosting ionic body averaging ~14 metres thick with weighted average grade of 2,979ppm TREO across the holes** and a high content of critical and valuable MREO.

The Caminho Das Pedras Prospect is a Mining License which was a greenfield exploration opportunity within the Colossus Project with no previous exploration. This prospect adjoins the Fazenda Mining License and is the northern extension of the Don Maria II Deposit (94Mt at 2,320ppm TREO – Don Maria I and II)<sup>1</sup>.

The very first assays have been received for Caminho Das Pedras, which confirms the concessions consists of analogous geology which hosts IAC REE mineralisation to its neighbouring deposit, with both grades and thickness of the first diamond intercept being in parallel to that of the Dona Maria deposit:

- CDP-DDH-001: **26.0m @ 2,295ppm TREO [24% MREO]**, incl. **9m @ 3,079ppm TREO** from surface.
- CDP-AG-031: **11.0m @ 3,427ppm TREO (ending in mineralisation)** from 0m, ending in **3,296ppm TREO**.

### **CENTRAL PROSPECT**

The Central Prospect adjoins the Fazenda Mining License and was a brownfield concession within Colossus. Previous vendors drilled 15 hand-held auger holes (~25m spacing) to a depth of 3 metres each into the superficial leached layer and identified high-grade REE mineralisation in saprolite, with 11 of these historic holes returning 3m at >1,000ppm, all ending in mineralisation<sup>2</sup>. This presented Viridis with a unique brownfield opportunity to test the true depths and grades of this area through deeper drilling below the leached layer.

The very first diamond assay has now been received from the Central Prospect, confirming the thesis the historic 3m hand-held auger holes presented the lowest levels of REE mineralisation in the surficial leached layer, with a significant high-grade and thick IAC body sitting right below the leached clay and soil cover:

- CT-DDH-001: **40.0m @ 2,352ppm TREO [22% MREO]** incl. **16.0m @ 3,401ppm TREO** from 7m.

Auger holes received from the first batch of assays have also shown high grade REE mineralisation remains widespread across the Central Prospect which provides numerous high priority follow up targets for deeper drilling:

- CT-AG-002: **7.5m @ 2,924ppm TREO (ending in mineralisation)** from 3m, ending in **2,353ppm TREO**.
- CT-AG-013: **5.0m @ 2,322ppm TREO (ending in mineralisation)** from 0m, ending in **3,157ppm TREO**.
- CT-AG-011: **7.0m @ 2,059ppm TREO (ending in mineralisation)** from 0m, ending in **2,196ppm TREO**.

Viridis intends on moving its adapted-RC rig to Central Prospect subsequently and testing below the impressive auger grades seen to date, with expectations to reveal the full thickness of mineralisation as shown in CT-DDH-001.

### **Future Work**

Future works include continuation of the auger, diamond and RC drilling campaigns, geological mapping, geochemical and metallurgical tests, and mineralogical characterisation.



## Contacts

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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, 2023, 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 the inclusion of matters in the report based on information in the form and context in which it appears.

The Company confirms that it is not aware 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](http://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. *Meteoric Resources NL (ASX: MEI) announcement dated 1 May 2023 'Caldeira REE Project Maiden Mineral Resource'*
2. *VMM ASX announcement dated 1 August 2023 'Acquisition Potential Tier One Ionic Clay Rare Earth Project'*
3. *Polygenetic processes in the genesis of clay deposit of Poços de Caldas alkaline massif in southeastern Brazil, C. Montes, A. Melfi, A. Carvalho, A. Viera-Coelho, Journal of Applied Clay Science, 2016*
4. *Comparison of characteristics and geochemical behaviors of REEs in two weathered granitic profiles generated from metamictized bedrocks in Western Peninsular Malaysia, A. Yaraghi, K. Ariffin, N. Baharun, Journal of Asian Earth Sciences, 2020*
5. *Adsorption of rare earth elements in regolith-hosted clay deposits, A. Borst, M. Smith et al., 2020*
6. *The role of clay minerals in the formation of the regolith-hosted heavy rare earth element deposits, M. Li, M. Zhou, Journal of American Mineralogist, 2020*
7. *VMM ASX announcement dated 29 August 2023 'Initial Metallurgical Work Confirm Colossus True IAC Project'*

## APPENDIX A: DRILL LOCATIONS

Diamond and auger drill coordinates of assays reported within this announcement:

Drill ID	ANM Process No.	East (m)	North (m)	Elevation (m)	DH Type
CDP-AG-15	007.737/1959	340014	7581393	1346	Auger
CDP-AG-27	007.737/1959	339675	7581808	1319	Auger
CDP-AG-29	007.737/1959	340030	7581811	1356	Auger
CDP-AG-31	007.737/1959	340392	7581707	1314	Auger
CDP-AG-35	007.737/1959	339800	7581997	1389	Auger
CDP-AG-36	007.737/1959	339976	7581991	1382	Auger
CDP-AG-37	007.737/1959	340168	7582029	1361	Auger
CDP-AG-38	007.737/1959	340416	7582040	1332	Auger
CDP-AG-39	007.737/1959	339632	7582199	1373	Auger
CDP-AG-40	007.737/1959	339803	7582214	1348	Auger
CDP-AG-41	007.737/1959	339999	7582203	1357	Auger
CDP-AG-42	007.737/1959	340160	7582132	1355	Auger
CDP-AG-43	007.737/1959	340414	7582201	1343	Auger
CDP-AG-44	007.737/1959	340198	7582397	1320	Auger
CDP-AG-45	007.737/1959	340422	7582413	1314	Auger
CDP-AG-46	007.737/1959	340580	7582604	1296	Auger
FZ-AG-20	9031/1966	340813	7583416	1277	Auger
FZ-AG-21	9031/1966	341002	7583401	1298	Auger
FZ-AG-26	9031/1966	340800	7583603	1282	Auger
FZ-AG-27	9031/1966	341009	7583600	1294	Auger
FZ-AG-33	9031/1966	342197	7583604	1354	Auger
FZ-AG-34	9031/1966	342403	7583601	1309	Auger
FZ-AG-40	9031/1966	340802	7583803	1283	Auger
FZ-AG-41	9031/1966	341005	7583798	1287	Auger
FZ-AG-47	9031/1966	342199	7583801	1328	Auger
FZ-AG-48	9031/1966	342401	7583796	1303	Auger
FZ-AG-53	9031/1966	340614	7584013	1272	Auger
FZ-AG-54	9031/1966	340799	7584003	1286	Auger
FZ-AG-55	9031/1966	340996	7583994	1279	Auger
FZ-AG-60	9031/1966	342006	7583997	1313	Auger
FZ-AG-61	9031/1966	342211	7584002	1318	Auger
FZ-AG-62	9031/1966	342391	7583999	1297	Auger
FZ-AG-63	9031/1966	340400	7584197	1279	Auger
FZ-AG-64	9031/1966	340602	7584203	1299	Auger
FZ-AG-65	9031/1966	340803	7584202	1286	Auger
FZ-AG-71	9031/1966	341996	7584200	1291	Auger
FZ-AG-73	9031/1966	342399	7584193	1287	Auger

FZ-AG-74	9031/1966	340399	7584400	1277	Auger
FZ-AG-75	9031/1966	340600	7584404	1285	Auger
FZ-AG-84	9031/1966	342305	7584331	1281	Auger
FZ-AG-87	9031/1966	341655	7584691	1285	Auger
FZ-AG-88	9031/1966	341796	7584662	1301	Auger
FZ-AG-90	9031/1966	342149	7584612	1298	Auger
FZ-AG-93	9031/1966	341403	7584807	1268	Auger
FZ-AG-94	9031/1966	341643	7584812	1287	Auger
FZ-AG-101	9031/1966	341621	7584996	1287	Auger
FZ-AG-109	9031/1966	341796	7585207	1293	Auger
CDP-DDH-001	007.737/1959	339625	7582153	1381	DDH
FZ-DDH-003	9031/1966	340342	7583408	1320	DDH
FZ-DDH-004	9031/1966	339984	7582745	1343	DDH
CT-DDH-001	830.927/2016	340819	7584833	1268	DDH
CJ-DDH-001	830.113/2006	340213	7585954	1327	DDH
CJ-DDH-002	830.113/2006	339871	7585996	1332	DDH

## APPENDIX B: ASSAY RESULTS COMPILED

Auger Drilling: All holes were drilled vertically (90°). Selected intercepts show weighted average grades.

Location	Hole	From (m)	To (m)	Length (m)	TREO (ppm)	MREO %	Nd + Pr (ppm)	Dy +Tb (ppm)	TREO at EOH (ppm)
Fazenda	FZ-AG-60	5	12	7	3,563	35%	1,083	44	3522
	FZ-AG-61	6	10	4	3,570	20%	615	32	4094
	FZ-AG-34	0	6	6	1,385	25%	297	23	2020
	FZ-AG-47	0	11	11	2,561	21%	479	24	4249
	FZ-AG-71	0	6	6	1,702	7%	89	9	1881
	FZ-AG-48	0	8	8	1,784	15%	216	17	1834
	FZ-AG-62	4	7	3	2,708	19%	438	25	3247
	FZ-AG-63	0	8	8	1,655	14%	183	17	1795
	FZ-AG-33	8	15	7	4,882	34%	1,418	54	6717
	FZ-AG-64	0	16	16	2,123	13%	242	17	2356
	FZ-AG-75	0	9	9	1,918	10%	138	14	1887
	FZ-AG-53	0	9	9	1,969	20%	332	21	3176
	FZ-AG-74	0	10	10	2,026	15%	254	16	1682
	FZ-AG-40	0	9	9	2,436	26%	514	27	3140
	FZ-AG-27	0	8	8	2,478	19%	414	23	2539
	FZ-AG-41	0	3	3	1,289	11%	103	12	1249
	FZ-AG-26	4	8	4	3,112	39%	988	47	3284
	FZ-AG-21	6	12	6	3,721	29%	882	46	3488
	FZ-AG-20	0	8	8	2,116	16%	275	19	1823
	FZ-AG-54	6	10	4	3,874	39%	1,203	48	3557
	FZ-AG-55	0	4	4	1,675	14%	198	15	2521
	FZ-AG-65	0	5	5	1,630	11%	126	16	1659
	FZ-AG-94	0	7	7	1,783	16%	238	18	2064
FZ-AG-88	0	16	16	2,741	31%	718	32	2723	

	FZ-AG-87	0	13	13	3,232	27%	790	45	6884
	FZ-AG-73	4	8	4	3,359	29%	840	44	3391
	FZ-AG-84	0	3	3	1,352	10%	95	14	1432
	FZ-AG-90	0	4	4	1,732	11%	152	12	1669
	FZ-AG-93	0	4	4	1,136	11%	90	12	1155
	FZ-AG-101	0	10	10	1,551	12%	143	11	1452
<b>Caminho Das Pedras</b>	CDP-AG-39	0	9	9	1,213	14%	130	15	1025
	CDP-AG-36	5	10	5	1,327	6%	43	12	1636
	CDP-AG-37	6	15	9	1,403	17%	171	19	1669
	CDP-AG-35	0	7	7	1,176	6%	51	9	1158
	CDP-AG-15	0	6	6	1,809	12%	170	12	2256
	CDP-AG-31	4	15	11	3,427	23%	731	16	3296
	CDP-AG-29	0	12	12	1,947	21%	334	20	2041
	CDP-AG-40	0	4	4	954	5%	38	3	1031
	CDP-AG-27	0	2	2	1,797	20%	291	20	1891
	CDP-AG-41	0	13	13	1,310	4%	33	7	1271
	CDP-AG-42	0	14	14	1,402	8%	87	11	1515
	CDP-AG-43	6	11	5	1,518	18%	211	20	1299
	CDP-AG-44	0	10	10	1,620	12%	160	12	1244
	CDP-AG-45	0	6	6	1,815	8%	109	10	1471
	CDP-AG-38	0	15	15	1,168	6%	43	12	1176
CDP-AG-46	0	6	6	913	6%	32	10	854	

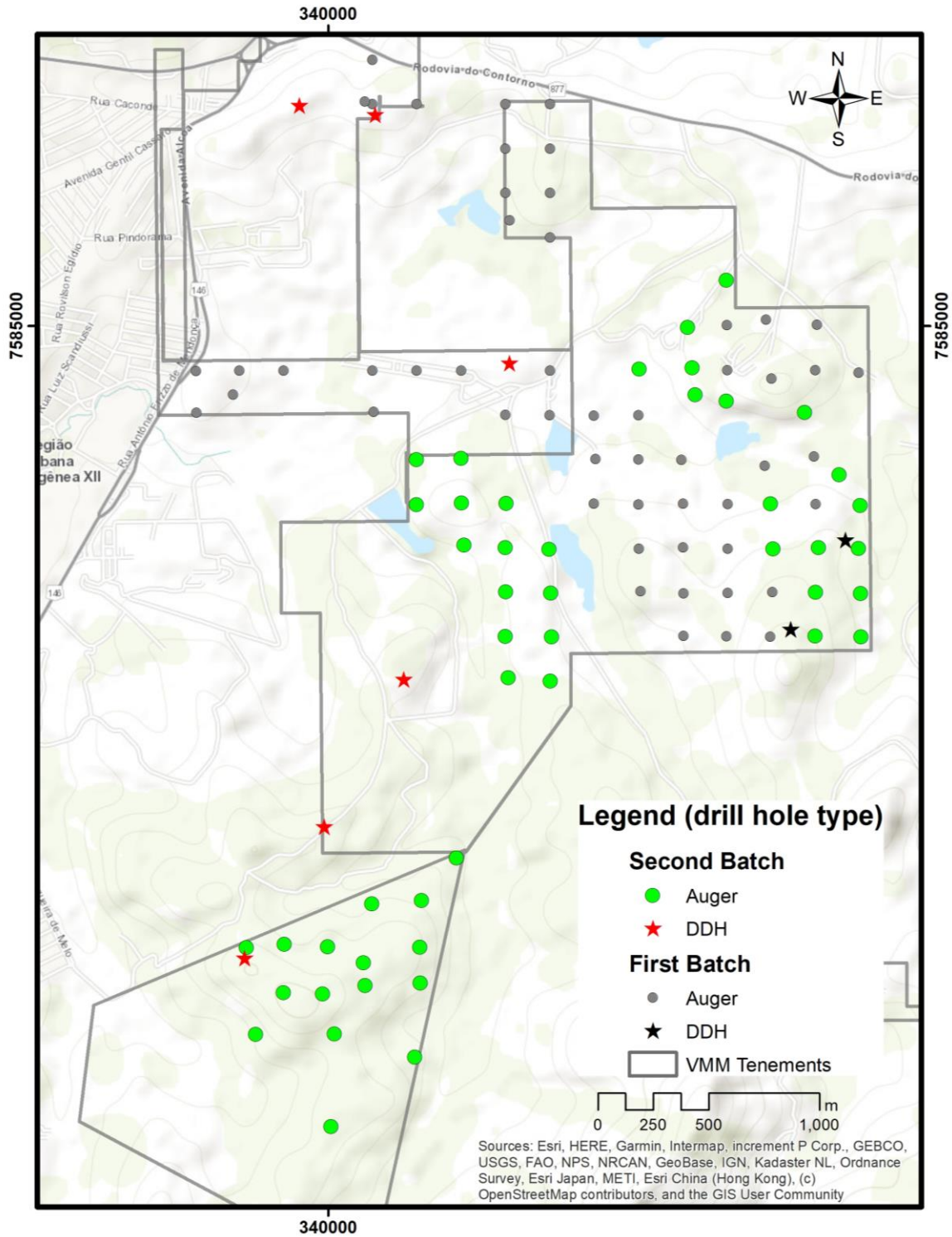
**Table 1:** REE assays from auger drilling hosted within weathered clays, 800ppm TREO cut-off, 2m dilution.

**Diamond Drilling: All holes were drilled vertically (90°). Selected intercepts show weighted average grades.**

Location	Hole	From (m)	To (m)	Length (m)	TREO (ppm)	MREO %	Nd + Pr (ppm)	Dy +Tb (ppm)
Caminho Das Pedras	CDP-DDH-001	0	26	26.0	2,295	24%	410	25
	<i>Including</i>	<b>0</b>	<b>9.5</b>	<b>9.5</b>	<b>3,079</b>	<b>15%</b>	<b>350</b>	<b>19</b>
Carijo	CJ-DDH-001	0	32	32.0	2,563	21%	501	21
	<i>Including</i>	<b>0</b>	<b>21.5</b>	<b>21.5</b>	<b>3,195</b>	<b>21%</b>	<b>650</b>	<b>23</b>
	CJ-DDH-002	0	31	31.0	2,426	17%	435	24
	<i>Including</i>	<b>14</b>	<b>29</b>	<b>15.0</b>	<b>3,210</b>	<b>24%</b>	<b>750</b>	<b>33</b>
Central	CT-DDH-001	4	44	40.0	2,352	22%	468	24
	<i>Including</i>	<b>7</b>	<b>23</b>	<b>16.0</b>	<b>3,401</b>	<b>23%</b>	<b>739</b>	<b>30</b>
Fazenda	FZ-DDH-003	0	11.5	11.5	2,318	25%	554	32
	FZ-DDH-004	0	33.5	33.5	2,509	23%	554	33
	<i>Including</i>	<b>16</b>	<b>31</b>	<b>15.0</b>	<b>3,559</b>	<b>33%</b>	<b>1,000</b>	<b>53</b>

**Table 2:** REE assays from diamond drilling hosted within weathered clays, 900ppm TREO cut-off, 2m dilution.

# APPENDIX C: DRILL LOCATIONS OF HOLES REPORTED IN THIS ANNOUNCEMENT





## Appendix D: JORC Code, 2012 Table 1

### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Include reference to measures taken to ensure sample retrospectivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li><b>Nature of Sampling:</b> Both diamond core drilling and auger drilling methods were used for sampling. Auger drilling was performed using diametres of 4", 3.5", 2.5", and 2", and to a depth of up to 21 metres. In contrast, diamond core drilling was executed using HQ and HWL diametres, continuing until contact with fresh rock was achieved. These techniques were implemented to secure accurate and representative sampling while preserving the integrity of the collected cores and samples.</li> <li><b>Method of Collection:</b> Samples from auger drilling, conducted at various diametres, were retrieved directly from the auger and immediately preserved in identified and sealed plastic bags to prevent contamination for each metre. The last interval was rounded to 0.5 metre. Diamond core drilling was employed until fresh rock was encountered, with cores housed in plastic trays, each marked to identify each stage of drilling advance and core recovery.</li> <li><b>Sample careful:</b> 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.</li> <li><b>Sample Weight:</b> The sample weights varied according to the method and core diametre, with auger drilling samples ranging from 4Kg to 12Kg and diamond core drilling samples from 2Kg to 6Kg.</li> <li><b>Packaging &amp; Labeling:</b> Auger 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. Diamond drilling cores were stored in dedicated plastic boxes, labelled clearly with information including depth, sample interval, and specifics of the drilling advances and recovery.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li><b>Type of Drill:</b> The exploration program employed two primary drilling techniques: auger drilling and diamond core drilling. Auger drilling, using diametres of 4", 3.5", 2.5", and 2", targeted surface and near-surface samples down to 21 metres. Diamond core drilling, with HQ and HWL bit sizes, was used for continuous core samples down to the fresh rock.</li> <li><b>Drill Method:</b> Auger drilling utilized a bucket drill bit, ideal for shallow depths and quick surface geological investigations. Diamond core drilling was implemented to obtain continuous rock core and providing an uninterrupted record of rock formations.</li> <li><b>Drill Rig:</b> Lightweight, mechanized rigs were used for auger drilling, ensuring efficient penetration to the desired depths. More robust rigs capable of reaching fresh rock were used for diamond core drilling, ensuring high-quality core recovery.</li> <li><b>Drill Parameters:</b> Auger drilling was conducted to a maximum depth of 21 metres, with various drill bit diametres. Diamond drilling continued until fresh rock was encountered, using HQ and HWL bit sizes to ensure core integrity.</li> <li><b>Drill Orientation:</b> Drilling was exclusively vertical, with no orientation monitoring due to the straightforward nature of the approach, deemed most suitable for the geological targets.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures are taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li><b>Recovery Rates:</b> The project achieved an excellent recovery, with 99% of samples exhibiting above 80% recovery. Each drilling session was documented, assuring thorough record-keeping.</li> <li>Recovery rates were calculated by comparing actual core or chip lengths with expected run lengths, and all data was logged.</li> <li>Consistent drilling protocols, immediate secure packaging, and minimal handling were standard practices to optimize sample integrity and recovery.</li> </ul>

		<ul style="list-style-type: none"> <li>No significant bias was detected between sample recovery and grade, suggesting reliable assay data with minimal material loss or gain across varying grain sizes.</li> </ul>																																
<b>Logging</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Geological and Geotechnical Detail: Both core and auger samples from the boreholes were geologically and geotechnically logged in detailed accordance with the NBR 9603 standards. This level of detail is sufficient to support appropriate Mineral Resource estimation, mining studies, and metallurgical studies.</li> <li>Nature of Logging: Logging is both qualitative and quantitative in nature. Descriptive attributes such as 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.</li> <li>Extent of Logging: 100% of the boreholes, encompassing their entire length, were logged. This includes all relevant intersections, ensuring that no significant geological features or sample attributes are omitted.</li> </ul>																																
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Sample Preparation Facility: Auger samples were processed at the SGS-GEOSOL laboratory, while diamond drill hole (DDH) samples were handled by ALS-Lab. Both facilities are located in Vespasiano-MG, Brazil.</li> <li>General Sample Preparation: Samples underwent rigorous physical preparation following standard industry practices at the SGS-GEOSOL laboratory. This encompassed: <ul style="list-style-type: none"> <li>Homogenization: Comprehensive mixing was performed on the samples to ensure uniform particle distribution.</li> <li>Separation: From each sample, an aliquot of 150g was reserved for ammonium sulfate leaching tests.</li> <li>Drying: All samples were dried at a controlled temperature of up to 65°C.</li> <li>Sub-sampling: Utilizing a Jones splitter, sub-samples of approximately 250g were extracted.</li> <li>Pulverization: The 250g sub-sample was pulverized using a steel mill until 95% of the sample particles achieved a fineness below 150 mesh.</li> </ul> </li> <li>For the DDH samples, twin duplicates were dispatched to assess the representativity of the samples.</li> </ul>																																
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometres, 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.</li> <li>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.</li> </ul>	<p>Laboratory: All assay tests for the auger samples were conducted by the SGS-GEOSOL laboratory in Brazil and all the DDH samples were conducted by the ALS laboratory in Lima - Peru.</p> <p>Assay Techniques:</p> <p>a. ICP MS_ Determination by Fusion with Lithium Metaborate - ICP MS for Major Oxides. Some elements and their detection limits include:</p> <table border="0"> <tr> <td>Al<sub>2</sub>O<sub>3</sub></td> <td>0,01 - 75 (%)</td> <td>Ba</td> <td>10 – 100,000 (ppm)</td> </tr> <tr> <td>Fe<sub>2</sub>O<sub>3</sub></td> <td>0,01 - 75 (%)</td> <td>K<sub>2</sub>O</td> <td>0,01 - 25 (%)</td> </tr> <tr> <td>Na<sub>2</sub>O</td> <td>0,01 - 30 (%)</td> <td>P<sub>2</sub>O<sub>5</sub></td> <td>0,01 - 25 (%)</td> </tr> <tr> <td>TiO<sub>2</sub></td> <td>0,01 - 25 (%)</td> <td>V</td> <td>5 – 10,000 (ppm)</td> </tr> <tr> <td>CaO</td> <td>0,01 - 60 (%)</td> <td>Cr<sub>2</sub>O<sub>3</sub></td> <td>0,01 - 10 (%)</td> </tr> <tr> <td>MgO</td> <td>0,01 - 30 (%)</td> <td>MnO</td> <td>0,01 - 10 (%)</td> </tr> <tr> <td>SiO<sub>2</sub></td> <td>0,01 - 90 (%)</td> <td>Sr</td> <td>10 – 100,000 (ppm)</td> </tr> <tr> <td>Zn</td> <td>5 – 10,000 (ppm)</td> <td>Zr</td> <td>10 – 100,000 (ppm)</td> </tr> </table> <p>b. PHY01E: Loss on Ignition (LOI) was determined by calcining the sample at 1,000°C.</p>	Al <sub>2</sub> O <sub>3</sub>	0,01 - 75 (%)	Ba	10 – 100,000 (ppm)	Fe <sub>2</sub> O <sub>3</sub>	0,01 - 75 (%)	K <sub>2</sub> O	0,01 - 25 (%)	Na <sub>2</sub> O	0,01 - 30 (%)	P <sub>2</sub> O <sub>5</sub>	0,01 - 25 (%)	TiO <sub>2</sub>	0,01 - 25 (%)	V	5 – 10,000 (ppm)	CaO	0,01 - 60 (%)	Cr <sub>2</sub> O <sub>3</sub>	0,01 - 10 (%)	MgO	0,01 - 30 (%)	MnO	0,01 - 10 (%)	SiO <sub>2</sub>	0,01 - 90 (%)	Sr	10 – 100,000 (ppm)	Zn	5 – 10,000 (ppm)	Zr	10 – 100,000 (ppm)
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MgO	0,01 - 30 (%)	MnO	0,01 - 10 (%)																															
SiO <sub>2</sub>	0,01 - 90 (%)	Sr	10 – 100,000 (ppm)																															
Zn	5 – 10,000 (ppm)	Zr	10 – 100,000 (ppm)																															

		<p>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:</p> <table border="0"> <tr> <td>Ce</td><td>0.1 – 10,000 (ppm)</td> <td>Dy</td><td>0.05 – 1,000 (ppm)</td> </tr> <tr> <td>Gd</td><td>0.05 – 1,000 (ppm)</td> <td>Ho</td><td>0.05 – 1,000 (ppm)</td> </tr> <tr> <td>Nd</td><td>0.1 – 10,000 (ppm)</td> <td>Pr</td><td>0.05 – 1,000 (ppm)</td> </tr> <tr> <td>Th</td><td>0.1 – 10,000 (ppm)</td> <td>Tm</td><td>0.05 – 1,000 (ppm)</td> </tr> <tr> <td>Yb</td><td>0.1 – 1,000 (ppm)</td> <td>Eu</td><td>0.05 – 1,000 (ppm)</td> </tr> <tr> <td>Er</td><td>0.05 – 1,000 (ppm)</td> <td>Lu</td><td>0.05 – 1,000 (ppm)</td> </tr> <tr> <td>La</td><td>0.1 – 10,000 (ppm)</td> <td>Tb</td><td>0.05 – 1,000 (ppm)</td> </tr> <tr> <td>Sm</td><td>0.1 – 1,000 (ppm)</td> <td>Y</td><td>0.05 – 1,000 (ppm)</td> </tr> <tr> <td>U</td><td>0.05 – 10,000 (ppm)</td> <td></td><td></td> </tr> </table> <p>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.</p> <p>Comments on Assay Data and Tests: The assay techniques employed are well-suited for the elements and minerals of interest. The methods utilised, combined with the reputable quality control practices of the SGS-GEOSOL and ALS laboratories, ensure the reliability of the assay data.</p>	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 – 1,000 (ppm)	U	0.05 – 10,000 (ppm)														
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<p><b>Verification of sampling and assaying</b></p>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, and data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Significant intersections have not been independently verified by alternative company personnel yet.</li> <li>Auger Twinned holes were used to Quality Control.</li> <li>Primary data collection follows a structured protocol, with standardized 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.</li> <li>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.</li> </ul> <table border="0"> <thead> <tr> <th>Element</th> <th>Oxide</th> <th>Factor</th> </tr> </thead> <tbody> <tr><td>Ce</td><td>CeO<sub>2</sub></td><td>1.2284</td></tr> <tr><td>La</td><td>La<sub>2</sub>O<sub>3</sub></td><td>1.1728</td></tr> <tr><td>Sm</td><td>Sm<sub>2</sub>O<sub>3</sub></td><td>1.1596</td></tr> <tr><td>Nd</td><td>Nd<sub>2</sub>O<sub>3</sub></td><td>1.1664</td></tr> <tr><td>Pr</td><td>Pr<sub>6</sub>O<sub>11</sub></td><td>1.2082</td></tr> <tr><td>Dy</td><td>Dy<sub>2</sub>O<sub>3</sub></td><td>1.1477</td></tr> <tr><td>Eu</td><td>Eu<sub>2</sub>O<sub>3</sub></td><td>1.1579</td></tr> <tr><td>Y</td><td>Y<sub>2</sub>O<sub>3</sub></td><td>1.2699</td></tr> <tr><td>Tb</td><td>Tb<sub>4</sub>O<sub>7</sub></td><td>1.1762</td></tr> <tr><td>Gd</td><td>Gd<sub>2</sub>O<sub>3</sub></td><td>1.1526</td></tr> <tr><td>Ho</td><td>Ho<sub>2</sub>O<sub>3</sub></td><td>1.1455</td></tr> <tr><td>Er</td><td>Er<sub>2</sub>O<sub>3</sub></td><td>1.1435</td></tr> <tr><td>Tm</td><td>Tm<sub>2</sub>O<sub>3</sub></td><td>1.1421</td></tr> <tr><td>Yb</td><td>Yb<sub>2</sub>O<sub>3</sub></td><td>1.1387</td></tr> <tr><td>Lu</td><td>Lu<sub>2</sub>O<sub>3</sub></td><td>1.1371</td></tr> </tbody> </table> <ul style="list-style-type: none"> <li>The TREO (Total Rare Earth Oxides) was determined by the sum of the following oxides: CeO<sub>2</sub>, Dy<sub>2</sub>O<sub>3</sub>, Er<sub>2</sub>O<sub>3</sub>, Eu<sub>2</sub>O<sub>3</sub>, Gd<sub>2</sub>O<sub>3</sub>, Ho<sub>2</sub>O<sub>3</sub>, La<sub>2</sub>O<sub>3</sub>, Lu<sub>2</sub>O<sub>3</sub>, Nd<sub>2</sub>O<sub>3</sub>, Pr<sub>6</sub>O<sub>11</sub>, Sm<sub>2</sub>O<sub>3</sub>, Tb<sub>4</sub>O<sub>7</sub>, Tm<sub>2</sub>O<sub>3</sub>, Y<sub>2</sub>O<sub>3</sub>, Yb<sub>2</sub>O<sub>3</sub>. And for the MREO (Magnetic Rare Earth Oxides), the following oxides were considered: Dy<sub>2</sub>O<sub>3</sub>, Gd<sub>2</sub>O<sub>3</sub>, Ho<sub>2</sub>O<sub>3</sub>, Nd<sub>2</sub>O<sub>3</sub>, Pr<sub>6</sub>O<sub>11</sub>, Sm<sub>2</sub>O<sub>3</sub>, Tb<sub>4</sub>O<sub>7</sub>.</li> </ul>	Element	Oxide	Factor	Ce	CeO <sub>2</sub>	1.2284	La	La <sub>2</sub> O <sub>3</sub>	1.1728	Sm	Sm <sub>2</sub> O <sub>3</sub>	1.1596	Nd	Nd <sub>2</sub> O <sub>3</sub>	1.1664	Pr	Pr <sub>6</sub> O <sub>11</sub>	1.2082	Dy	Dy <sub>2</sub> O <sub>3</sub>	1.1477	Eu	Eu <sub>2</sub> O <sub>3</sub>	1.1579	Y	Y <sub>2</sub> O <sub>3</sub>	1.2699	Tb	Tb <sub>4</sub> O <sub>7</sub>	1.1762	Gd	Gd <sub>2</sub> O <sub>3</sub>	1.1526	Ho	Ho <sub>2</sub> O <sub>3</sub>	1.1455	Er	Er <sub>2</sub> O <sub>3</sub>	1.1435	Tm	Tm <sub>2</sub> O <sub>3</sub>	1.1421	Yb	Yb <sub>2</sub> O <sub>3</sub>	1.1387	Lu	Lu <sub>2</sub> O <sub>3</sub>	1.1371
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<b>Location of data points</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>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 a level of accuracy within centimetres.</li> <li>The grid system employed for the project is based on the SIRGAS 2000 UTM coordinate system. This universal grid system facilitates consistent data interpretation and integration with other geospatial datasets.</li> <li>To ensure the quality and reliability of the topographic location data, benchmark and control points were established within the project area.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>The auger drilling is conducted on a regular grid with a spacing of 200 x 200 metres. This grid spacing is designed to provide a detailed exploration framework suitable for the area of interest, and aims to define our initial inferred resource, offering a foundational understanding of the geological and grade continuity in the targeted zone. The data spacing and distribution for the auger drilling are considered appropriate for the intended purpose of establishing an inferred mineral resource.</li> <li>Diamond drilling, on the other hand, is not being conducted on a predefined exploration grid. Instead, exploratory boreholes are being drilled to provide insights into specific areas of interest and potential mineralization zones. The exploratory nature of the diamond drilling further supports the overall geological understanding, although its data spacing is not predefined.</li> <li>No sample compositing has been applied in the reporting of the exploration results. Each sample is treated and reported individually to maintain the highest level of detail and accuracy.</li> </ul>
<b>Orientation of data about geological structure</b>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>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 mineralized body. This type of deposit tends to be horizontally extensive with relatively consistent thickness.</li> <li>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 mineralized zones and provides a representative view of the overall geology and mineralization.</li> <li>There is no indication that the orientation of the drilling has introduced any sampling bias about the crucial mineralized structures. The drilling orientation aligns well with the known geology of the deposit, ensuring accurate representation and unbiased sampling of the mineralized zones. Any potential bias due to drilling orientation is considered negligible in this context.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>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 or ALS laboratories in Brazil. 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.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>

## 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	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All samples were acquired from tenements owned by Viridis Mining and Minerals LTD, following an agreement with the Varginha Parties. Specifically: Northern Concessions: <ul style="list-style-type: none"> <li>ANM 009.031/1966 Area: 446.66 hectares Status: Mining Licence Location: Fazenda</li> <li>ANM 830.113/2006 Area: 137 hectares Status: Mining Application Location: Carijo</li> <li>ANM 830.927/2016 Area: 70.37 hectares Status: Exploration Licence Location: CENTRAL</li> </ul> Cupim South Prospect: <ul style="list-style-type: none"> <li>ANM 833.560/1996 Area: 154.26 hectares Status: Mining Application Location: Cupim South</li> </ul> </li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Historical exploration in the area comprises notable endeavours by various entities:</li> <li>The Colossus project is geologically intertwined with the Caldeira Project, sharing the same geological context.</li> <li>Varginha Mineração previously undertook regional drilling exercises, utilising a powered auger drill rig to produce open holes.</li> <li>This historical data provides essential context and complements current exploration efforts in understanding the region's geological potential.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The geology of the region where the deposit is located can be summarised as follows:</li> <li>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.</li> <li>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<sup>2</sup>. 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.</li> <li>REE Mineralisation: The specific REE mineralisation 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.</li> <li>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</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>ability of these deposits to offer relatively environmentally friendly mining prospects compared to traditional hard rock REE mines further enhances their appeal.</p> <ul style="list-style-type: none"> <li>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.</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <li>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: <ul style="list-style-type: none"> <li>Eastings and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>Dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Auger Drilling: Total number of holes: 48 Number of twin holes: 2</li> <li>Diamond Drilling: Total number of holes: 6</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>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 mineralized zones.</li> <li>All drill holes are vertical and are appropriate for the deposit type, ensuring unbiased sampling of the mineralization.</li> <li>Due to the geometry of the mineralization and the vertical orientation of the drill holes, the down hole lengths can be considered close representations of the true widths of the mineralized zones. However, for absolute precision, further studies would be required.</li> <li>In cases where there might be a discrepancy between downhole lengths and true widths, it should be noted that "down hole length, true width not known".</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>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.</li> </ul>	<p>The data presented in this report offers a better understanding of the information. Various diagrams and supplementary information included in the document, enhancing the clarity and accessibility of the geological findings and exploration results.</p> <p>Figure 1 Map showing drill highlights, sample locations, and concessions.</p> <p>Figure 2 Geological interpretation of cross-section AA' in the</p>

Criteria	JORC Code explanation	Commentary
		<p>Northern Concessions.</p> <p>Figure 3 Geological interpretation of cross-section BB' in the Fazenda area.</p> <p>Figures 4-6: Meter-by-meter assay results for drill holes FZ-AG-087, FZ-AG-040, and FZ-AG-047.</p> <p>APPENDIX A Drill location details.</p> <p>APPENDIX B Assay results.</p> <p>APPENDIX C Map with Drill locations in this announcement.</p>
Balanced reporting	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>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. Cross-references to previous announcements have been provided where relevant 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. In essence, this report is a faithful representation of the exploration activities and findings without any undue bias or omission.</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>There is no additional substantive exploration data to report currently.</li> </ul>
Further work	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Future works include carry on the auger, diamond and RC drilling campaign in 2023/2024, geological mapping, geochemical and metallurgical tests, and mineralogical characterisation.</li> </ul>