

ASX: VMM MARKET ANNOUNCEMENT

# Spectacular Shallow Intercepts up to 23,556ppm TREO

Colossus Delivers Highest Reported Near-Surface Grades in Alkaline Complex

ASX Release: 01 February 2024

# **Highlights**

- Maiden RC assays have already uncovered a major high-grade zone within the Fazenda Mining License.
  - FZ-RC-29: **5.5m @ 14,896ppm TREO<sup>A</sup> [47% MREO<sup>B</sup>]** within broader section of **18.5m @ 6,253ppm TREO [36% MREO]** from 1m depth.
  - FZ-RC-29 grades at **1 to 2m depth reaching: 23,556ppm TREO** which includes 7,407ppm Neodymium, 1,753ppm Praseodymium, 441ppm Dysprosium and 96ppm Terbium Oxides.

This intercept is the highest surface grade reported by any company in the Poços de Caldas Alkaline Complex to date and represents the sheer exploration potential of Colossus. The high-grade portion itself has an impressive 5.5m @ 6,154ppm HREO<sup>c</sup> which demonstrates an entire new potential for this area of the complex to predominantly produce the high-value and critical heavy rare earths – in particular Dysprosium and Terbium.

- ▶ High-Grade Rare Earth Elements ("REEs") returned from maiden auger and diamond drilling at the Ribeirão Prospect, representing a second breakthrough discovery in as many months which will contribute to the Company's maiden resource and re-affirms the incredible exploration upside of the Colossus Project.
  - RA-AG-020: 10.0m @ 3,033ppm TREO, ending in mineralisation, from 1m, ending in 3,630ppm TREO.
  - RA-AG-030: 8.0m @ 3,083ppm TREO, ending in mineralisation, from 3m, ending in 4,868ppm TREO.
  - RA-AG-025: 15.0m @ 2,310ppm TREO, ending in mineralisation, from 7m, ending in 2,329ppm TREO.
  - RA-DDH-003: **15.5m @ 3,223ppm TREO [28% MREO]** within broader section of **24.0m @ 2,643ppm TREO** from 0.5m.
  - RA-DDH-001: 10.5m @ 3,016ppm TREO [29% MREO] within broader section of 21.0m @ 2,418ppm TREO from 8m.
- ▶ Deeper Diamond and maiden RC drilling assays continue to showcase thick saprolite horizons mineralised in high-grade REE which continue improving the grade and tonnage potential at Colossus, while containing extraordinarily elevated MREO content:
  - FZ-RC-08: **18.0m @ 4,268ppm TREO [36% MREO]** within a broader section of **31.0m @ 3,080ppm TREO** from surface.
  - CDP-DDH-003: 12.0m @ 6,039ppm TREO [32% MREO] within a broader section of 24.0m @ 4,058ppm TREO from 11m.
  - CDP-DDH-005: **13.0m @ 3,664ppm TREO [30% MREO]** within a broader section of **36.0m @ 2,604ppm TREO** from 2m.
  - CDO-DDH-004: 11.5m @ 3,344ppm TREO [34% MREO] within broader section of 17.0m @ 2,904ppm TREO from 2.5m.

<sup>&</sup>lt;sup>A</sup> Total Rare Earth Oxides ("TREO"): La2O3 + CeO2 + Pr6O11 + Nd2O3 + Sm2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3+ Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Lu2O3 + Y2O3

<sup>&</sup>lt;sup>B</sup> Magnet Rare Earth Oxides ("MREO"): Pr6O11 + Nd2O3 + Sm2O3 + Ho2O3 + Gd2O3 + Tb4O7 + Dy2O3

<sup>&</sup>lt;sup>C</sup> Heavy Rare Earth Oxides ("HREO"): Dy + Tb + Er + Eu + Gd + Ho + Lu + Tm + Y + Yb

- ► Latest batch of auger drilling has returned outstanding widespread high-grade REE assays, with Capão da Onça ("CDO") continuing to return exceptional grades above 6,000ppm which strengthens the recent discovery:
  - CDO-AG-045: 4.0m @ 6,870ppm TREO, ending in mineralisation, from 0m, ending in 3,918ppm TREO.
  - CDO-AG-047: 11.0m @ 2,847ppm TREO, ending in mineralisation, from 0m, ending in 2,414ppm TREO.
  - RA-AG-026: 11.0m @ 2,885ppm TREO, ending in mineralisation, from 9m, ending in 6,066ppm TREO.
     Including last 3m @ 4,893ppm TREO [32% MREO]
- ► Fourth batch of assays has made a fresh new discovery at the Ribeirão Prospect, and uncovered the highest grades seen at the surface within the entire complex from maiden RC assays at the Fazenda Mining License.
- More importantly FZ-RC-029 has shown the highest concentrations of Dysprosium ("Dy") and Terbium ("Tb") present at surface levels within the entire complex, which uncovers a new economic dimension to the Fazenda Mining License to predominantly host critical high-value Heavy Rare Earths alongside Neodymium ("Nd") and Praseodymium ("Pr").
- Over 100 drill holes are still pending assays with aggressive exploration ongoing. Viridis continues to make the full transition from auger to deep RC/Diamond drilling which is expected to produce thicker intercepts. Auger drilling will continue for greenfield exploration work to scout new areas of interest and has already commenced in new areas comprising the recent strategic expansion of Colossus.

# Chief Executive Officer, Rafael Moreno commented:

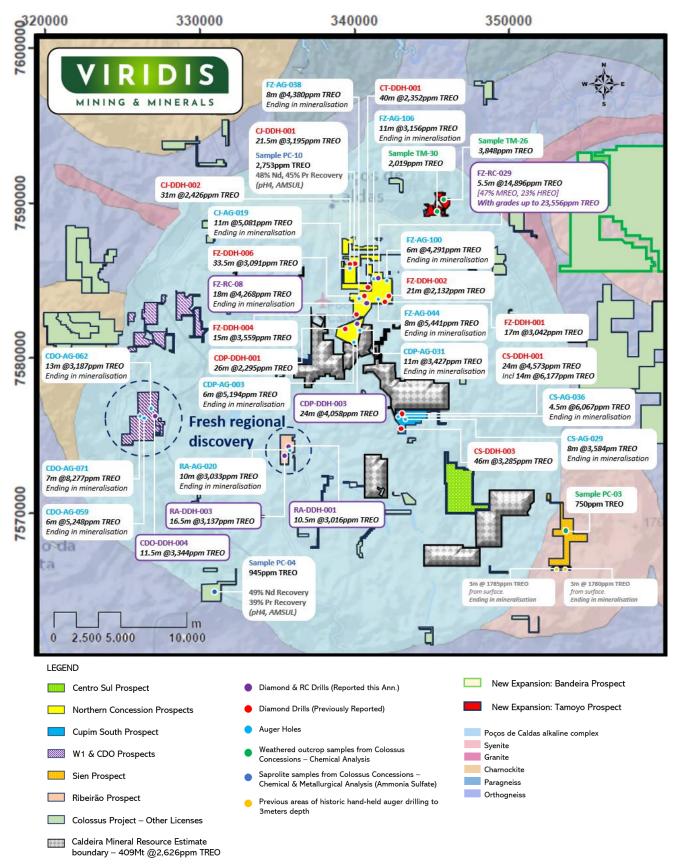
"These results are truly staggering. This set of assays not only contains another greenfield discovery which will contribute to our Maiden Resource, but also contains the highest reported grade intercept at surface within the entire Poços de Caldas Alkaline Complex by any company.

FZ-RC-29 is the best hit we've seen to date within Colossus, not only in terms of grade, but to have 47% MREO and a remarkable 23% HREO starting near surface completely changes the economic potential of this area. Nowhere else in the Complex have we seen over 500ppm of Dysprosium and Terbium so close to the surface. This has resulted in Colossus holding a critically important position and project within the entire complex, with the first known Mining License to predominantly host HREO mineralisation within its basket. It's the first time I've seen an Ionic Clay project report grades this high at surface with almost a quarter being mineralised in high-value HREO. Heavy Rare Earths such as Dysprosium and Terbium fetch 5 to 10 times the value of Neodymium and Praseodymium — and this intercept shows we are fortunate to have all four in significant amounts. This area of Fazenda has now become a significant area of interest for Viridis, with grades at 1m depth reaching a peak of 23,556ppm TREO, 7,407ppm Nd, 1,753ppm Pr, 441ppm Dy, 96ppm Tb.

The latest batch of results continues to demonstrate that Colossus is yet to uncover its full potential. With aggressive exploration, we continue to make discoveries at depth and in new areas. Capão da Onça Prospect has demonstrated further correlation of the lithology – Breccia Tinguaite – with high grade REO contents, with intercepts in this batch showing 4m @6,870ppm TREO. We've also made another discovery in the newly drilled Ribeirão Prospect which has assayed 15.5m @ 3,223ppm TREO."



# Map of Exploration Data Highlights on Colossus Project



**Figure 1:** Map of exploration highlights with proximity to Caldeira IAC Resource<sup>1</sup>. Grab and hand-held auger samples were taken within the superficial leached layer. Diamond and RC drill highlights reported in this announcement outlined in purple.



Viridis Mining and Minerals Limited ("Viridis" or "Company") is pleased to report the fourth set of assays received from Phase I and II maiden exploration programs. Furthermore, over 100 holes are still awaiting assays. The Company has also doubled its exploration fleet with another Diamond and RC rig added recently, allowing simultaneous drilling to continue across Centro Sul ("CNS"), Capão da Onça ("CDO"), Ribeirão ("RA") and recently acquired prospects.

Maiden RC assays have been received for Northern Concessions which have resulted in the highest-grade surface intercept reported in the complex. Moreover, these intercepts have shown significant concentrations of MREO and HREO with individual grades reaching 23,556ppm TREO. The significantly elevated heavy rare earths concentrations present within this intercept – in particular Dysprosium and Terbium – have uncovered breakthrough economic potential within this area of the Fazenda Mining License, which is now the first known region of the complex consisting of both high-grade and heavy rare earth mineralisation at surface, designating even greater strategic importance of the project due to its elevated Dy and Tb contents.

Furthermore, this latest batch continues to re-affirm the significantly high-grade corridor present at the CDO Prospect, in addition to a fresh greenfield discovery at Ribeirão Prospect, both of which are to be included into the Colossus Maiden Resource.

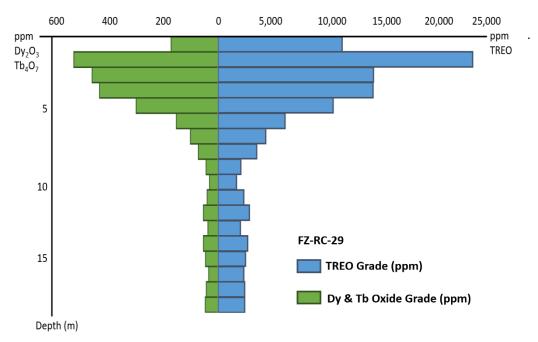
# **Northern Concessions**

## **FAZENDA**

The fourth batch results have identified the highest-grade zones at Fazenda seen to date and re-affirm the enormous exploration potential remaining at the Colossus Project as the Company continues its aggressive exploration strategy. Interestingly, these assays have shown consistently elevated MREO content, which enhances the economic potential of the Mining License.

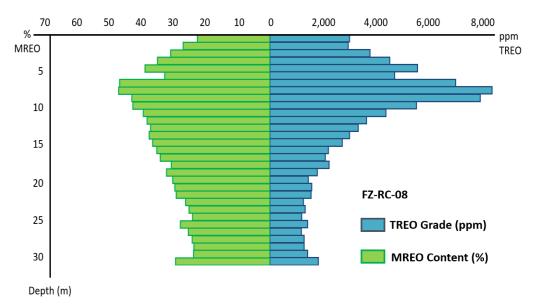
Maiden RC assays from Fazenda Mining License have been received including:

- FZ-RC-29: **5.5m @ 14,896ppm TREO [47% MREO]** within broader section of **18.5m @ 6,253ppm TREO** from 1m.
- FZ-RC-08: **18.0m @ 4,268ppm TREO [36% MREO]** within a broader section of **31.0m @ 3,080ppm TREO** from 0m.
- FZ-RC-56: 13.0m @ 2,853ppm TREO [31% MREO] within a broader section of 22.0m @ 2,318ppm TREO from 0m.



**Figure 2:** Metre by Metre assay for **FZ-RC-29** which shows significantly elevated Dy and Tb grades starting at surface with upto 23,556ppm and over 500ppm Dy + Tb Oxide present.





**Figure 3:** Metre by Metre assay for **FZ-RC-08** which shows significantly elevated MREO content and over 60ppm Dy and Tb Oxides present over 12metres.

FZ-RC-29 is an impressive hole at Fazenda which effectively from near surface has intercepted 5.5m @ 14,896ppm TREO and 386ppm Dy-Tb oxide and 5,486ppm Nd-Pr Oxide. This is the first reported instance of these levels of Dysprosium and Terbium discovered near surface with the entire Alkaline Complex.

Given the location of FZ-RC-29 within the Mining License, this area now holds significant strategic importance to Viridis, with the potential to produce both significant quantities of Dy and Tb (which generally is valued 5 to 10 times more than Neodymium)<sup>2</sup> alongside Nd and Pr during early mining. As a result of these exceptional grades, Viridis intends to complete a follow up 50x50m drill program adjacent to FZ-RC-29 to gain a better understanding of the extent and nature of heavy rare earth and high-grade mineralisation.

# **CAMINHO DAS PEDRAS AND CENTRAL**

Furthermore, diamond assays from Caminho Das Pedras Mining License have returned the best result to date comprising of thick intercepts with exceptional grades of TREO mineralisation, alongside further assays from the Central Prospect which significantly improves the resource potential.

- CDP-DDH-003: 12.0m @ 6,039ppm TREO [32% MREO] within a broader section of 24.0m @ 4,058ppm TREO from 11m.
- CDP-DDH-005: **13.0m @ 3,664ppm TREO [30% MREO]** within a broader section of **36.0m @ 2,604ppm TREO** from 2m.
- CT-DDH-002: 13.5m @ 2,800ppm TREO [31% MREO] within broader section of 27.0m @ 2,347ppm TREO from 4.5m.

# **Western Concessions**

# **RIBEIRÃO**

Maiden drilling results from Ribeirão signify another breakthrough discovery within the Colossus Project. This was previously a greenfield concession with no adjacent exploration or sampling completed. Maiden drilling has revealed a homogenously mineralised saprolite profile approximately 10-20m thick with consistent grades of ~3,000ppm TREO. Further assays are expected to be received from Ribeirão with follow up deeper drilling also commencing soon. This discovery is to be included into the Company's maiden resource and improves the potential grade and tonnage of the Colossus Project.



Highlights of maiden discovery assays at Ribeirão are contained below:

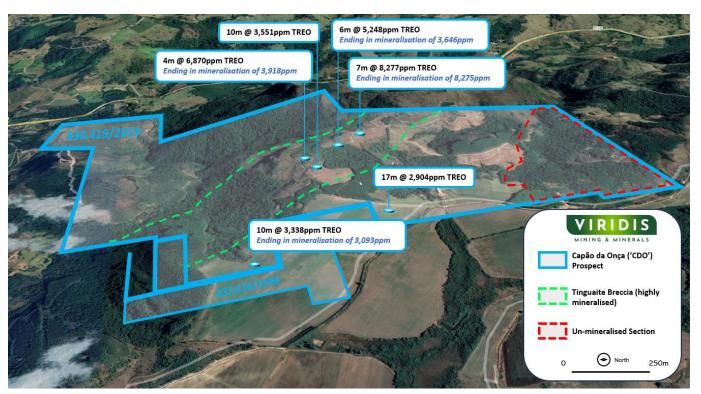
- RA-AG-020: 10.0m @ 3,033ppm TREO, ending in mineralisation, from 1m, ending in 3,630ppm TREO.
- RA-AG-030: 8.0m @ 3,083ppm TREO, ending in mineralisation, from 3m, ending in 4,868ppm TREO.
- RA-AG-025: 15.0m @ 2,310ppm TREO, ending in mineralisation, from 7m, ending in 2,329ppm TREO.
- RA-AG-026: 11.0m @ 2,885ppm TREO, ending in mineralisation, from 9m, ending in 6,066ppm TREO.
- RA-DDH-003: 15.5m @ 3,223ppm TREO [28% MREO] within broader section of 24.0m @ 2,678ppm TREO from 0.5m.
- RA-DDH-001: 10.5m @ 3,016ppm TREO [29% MREO] within broader section of 21.0m @ 2,418ppm TREO from 8m.

# CAPÃO DA ONÇA PROSPECT

Follow up assays have been received from Capão da Onça since its significant discovery. These assays in combination with previously announced holes have re-affirmed the understanding that the main portion of the prospect hosts a significantly high-grade corridor, which is underlain by a Tinguaite Breccia – a host rock which is unique to the western edge of the complex. This corridor has repeatedly provided results above ~3,500ppm TREO:

- CDO-DDH-004: 11.5m @ 3,344ppm TREO [34% MREO] within broader section of 17.0m @ 2,904ppm TREO from 2.5m.
- CDO-DDH-002: 10.0m @ 3,551ppm TREO [24% MREO] within a broader section of 15.0m @ 2,712ppm TREO from 0m.<sup>3</sup>
- CDO-AG-045: 4.0m @ 6,870ppm TREO, ending in mineralisation, from 0m, ending in 3,918ppm TREO.
- CDO-AG-071: 7.0m @ **8,277ppm TREO**, ending in mineralisation, from 1m, ending in **8,275ppm TREO**.

  Including last 4m @ **9,447ppm TREO** [35% MREO]<sup>3</sup>
- CDO-AG-059: 6.0m @ 5,248ppm TREO, ending in mineralisation, from 0m, ending in 3,646ppm TREO.<sup>3</sup>



**Figure 4:** Satellite view of Capão da Onça which highlights interpreted corridor of significant high-grade mineralisation and area of concession which remains un-mineralised in economic levels of TREO (~<800ppm).



#### **Future Work**

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

RC drilling has commenced within the significantly high-grade corridor at the CDO Prospect and will follow up deeper drilling into the RA Prospect. Diamond drilling has commenced at Centro Sul ("CNS") and newly acquired prospects within Colossus.

Metallurgical sampling has also commenced and with further samples from this set of results expected to be sent for in-depth analysis and optimised metallurgical leaching tests with Ammonium Sulfate.

Approved for release by the Board.

## **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 kaolinhalloysite; 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 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.

# **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. https://www.metal.com/Rare-Earth-Oxides
- 3. Viridis Mining & Minerals Ltd (ASX: VMM) announcement dated 3 Jan 2024 'World-Class Rare Earth Discoveries Continue at Colossus'



# **APPENDIX A: DRILL LOCATIONS**

# Auger coordinates of assays reported within this announcement:

Drill ID	Prospect	East (m)	North (m)
SI-AG-07	Sien	353413.2	7569973.4
SI-AG-09	Sien	353378.3	7569464.7
SI-AG-10	Sien	353531.3	7569564.2
SI-AG-18	Sien	353248.8	7568736.9
SI-AG-27	Sien	353710.2	7568835.9
SI-AG-32	Sien	353833.8	7568746.5
SI-AG-33	Sien	353933.8	7568863.2
SI-AG-37	Sien	353949.2	7568570.5
RA-AG-01	Ribeirão	335279.2	7574912.2
RA-AG-02	Ribeirão	335596.2	7574966.3
RA-AG-03	Ribeirão	335811.9	7574976.3
RA-AG-04	Ribeirão	335457.4	7574824.6
RA-AG-05	Ribeirão	335750.5	7574797.2
RA-AG-06	Ribeirão	335322.7	7574668.4
RA-AG-07	Ribeirão	335601	7574677.1
RA-AG-08	Ribeirão	335884	7574678.9
RA-AG-10	Ribeirão	335736.4	7574566.1
RA-AG-13	Ribeirão	335628.3	7574421.9
RA-AG-14	Ribeirão	335849	7574407.5
RA-AG-15	Ribeirão	335442.8	7574275.9
RA-AG-16	Ribeirão	335743.6	7574257.5
RA-AG-17	Ribeirão	336023.3	7574260.8
RA-AG-18	Ribeirão	335285.2	7574115
RA-AG-19	Ribeirão	335593.6	7574098.5
RA-AG-20	Ribeirão	335875.5	7574098
RA-AG-21	Ribeirão	335472.6	7573985
RA-AG-22	Ribeirão	335694.9	7573978
RA-AG-23	Ribeirão	336001.9	7573988.6
RA-AG-24	Ribeirão	335304.9	7573804.4
RA-AG-25	Ribeirão	335617.7	7573835.3
RA-AG-26	Ribeirão	335457.4	7573692.9
RA-AG-27	Ribeirão	335320.8	7573562.1
RA-AG-28	Ribeirão	335595.2	7573563.5
RA-AG-29	Ribeirão	335530.2	7573420.8
RA-AG-30	Ribeirão	335316	7573238.4
RA-AG-31	Ribeirão	335587.2	7573263.3
CDO-AG-03	Capão da Onça	326703	7574807.2
CDO-AG-04	Capão da Onça	326820.1	7574955.6
CDO-AG-07	Capão da Onça	326429.9	7574791.4
CDO-AG-08	Capão da Onça	326625.2	7574951.7
CDO-AG-09	Capão da Onça	326712.9	7575101.6



Drill ID	Prospect	East (m)	North (m)
CDO-AG-10	Capão da Onça	326861.5	7575240.7
CDO-AG-11	Capão da Onça	326991.4	7575368.5
CDO-AG-12	Capão da Onça	327148	7575527.4
CDO-AG-16	Capão da Onça	326292	7574961
CDO-AG-17	Capão da Onça	326449.4	7575110.6
CDO-AG-27	Capão da Onça	326207.2	7575084.4
CDO-AG-28	Capão da Onça	326289.1	7575251.3
CDO-AG-32	Capão da Onça	326864.2	7575808.1
CDO-AG-45	Capão da Onça	326712.4	7575941.5
CDO-AG-47	Capão da Onça	326977.9	7576216.2
CDO-AG-58	Capão da Onça	326439.2	7575945.7
CDO-AG-60	Capão da Onça	326757.2	7576234.3
CDO-AG-61	Capão da Onça	326856.8	7576374.6
CDO-AG-70	Capão da Onça	326293.2	7576093.6
CDO-AG-74	Capão da Onça	326863.8	7576597.3
CDO-AG-83	Capão da Onça	326432.2	7576514.5
CDO-AG-85	Capão da Onça	326723.1	7576792.4
CDO-AG-86	Capão da Onça	326859.6	7576927.9
CDO-AG-88	Capão da Onça	326999	7577083
CDO-AG-89	Capão da Onça	327205.6	7577372.6
CDO-AG-94	Capão da Onça	326435.7	7576797.3
CDO-AG-96	Capão da Onça	326736.7	7577100.3
CDO-AG-98	Capão da Onça	326949.8	7577374.9
CDO-AG-100	Capão da Onça	327272.7	7577645.1
CDO-AG-102	Capão da Onça	326300.2	7576939.4
CDO-AG-104	Capão da Onça	326559.8	7577222.9
CDO-AG-105	Capão da Onça	326817.5	7577370.3
CDO-AG-106	Capão da Onça	326837.4	7577515.3
CDO-AG-112	Capão da Onça	326727.6	7577650

# Diamond and RC coordinates of assays reported within this announcement:

Drill ID	Prospect	East (m)	North (m)	Elevation (m)	DH Type
CDP-DDH-002	Northern Concessions	340062.933	7581867.776	1356.885	DDH
CDP-DDH-003	Northern Concessions	340476.777	7582309.621	1326.931	DDH
CDP-DDH-005	Northern Concessions	340087.067	7581501.868	1356.58	DDH
CT-DDH-002	Northern Concessions	340814.566	7584724.425	1272.041	DDH
CT-DDH-003	Northern Concessions	340503.2	7584702.657	1273.998	DDH
CT-DDH-004	Northern Concessions	340110.887	7584707.502	1260.247	DDH
CDO-DDH-003	Capão da Onça	326528.845	7576523.482	1311.776	DDH
CDO-DDH-004	Capão da Onça	327155.751	7576189.358	1313.873	DDH
RA-DDH-001	Ribeirão	335715.566	7574169.12	1293.398	DDH
RA-DDH-002	Ribeirão	335430.27	7574816.898	1281.659	DDH



Drill ID	Prospect	East (m)	North (m)	Elevation (m)	DH Type
RA-DDH-003	Ribeirão	335501.888	7573743.247	1331.907	DDH
FZ-RC-08	Northern Concessions	340941.31	7583492.5	1300.876	RC
FZ-RC-11	Northern Concessions	340895.352	7583899.684	1302.375	RC
FZ-RC-12	Northern Concessions	341343.329	7583934.874	1323.079	RC
FZ-RC-13	Northern Concessions	341704.451	7583982.82	1300.082	RC
FZ-RC-14	Northern Concessions	342067.991	7584004.491	1314.633	RC
FZ-RC-16	Northern Concessions	340511.727	7584237.984	1298.265	RC
FZ-RC-18	Northern Concessions	341208.837	7584297.328	1292.679	RC
FZ-RC-20	Northern Concessions	342064.469	7584356.059	1280.862	RC
FZ-RC-28	Northern Concessions	341192.515	7585085.295	1267.319	RC
FZ-RC-29	Northern Concessions	341712.017	7585096.821	1293.128	RC
FZ-RC-36	Northern Concessions	341807.059	7585415.707	1292.578	RC
FZ-RC-56	Northern Concessions	340926.826	7583693.814	1311.679	RC



# **APPENDIX B: ASSAY RESULTS COMPILED**

Auger Drilling: All holes were drilled vertically.

Prospect	Hole	From	То	Length	TREO	MREO %	Nd + Pr	Dy +Tb	TREO at end of
		(m)	(m) 3	(m)	(ppm)	33%	(ppm) 265	(ppm)	hole (ppm) 1,001
	SI-AG-07 SI-AG-09	0	)	3	1,056		203  SI	16	1,001
	SI-AG-09 SI-AG-10	0	6	6	1,415	33%	362	21	1,356
	SI-AG-10 SI-AG-18	0	8	8	1,707	33%	430	24	1,199
SIEN	SI-AG-18 SI-AG-27	3	12	9	1,366	30%	318	17	1,199
	SI-AG-32	<u> </u>	12	3	1,300	L.	ISI	17	1,231
	SI-AG-33	0	8	8	1,198	31%	291	14	1,348
	SI-AG-37	0	10	10	1,386	32%	348	17	1,996
	CDO-AG-03	2	14	12	1,839	16%	256	12	1,504
	CDO-AG-04	0	4	4	1,552	15%	188	12	1,415
	CDO-AG-07	0	11	11	1,673	16%	224	18	1,125
	CDO-AG-08	0	9	9	1,602	13%	175	12	1,132
	CDO-AG-09	0	11	11	1,554	20%	247	16	1,380
	CDO-AG-10	1	10	9	1,933	16%	270	12	1,036
	CDO-AG-100		I		,	1	'SI		,
	CDO-AG-102	0	10	10	1,215	21%	206	15	1,101
	CDO-AG-104		I		,	L.	ISI		,
	CDO-AG-105					N	'SI		
	CDO-AG-106					N	'SI		
	CDO-AG-11	5	11	6	1,300	16%	179	9	1,736
	CDO-AG-112	1	4	3	1,061	19%	169	7	1,015
	CDO-AG-12	0	5	5	1,800	24%	361	18	1,261
	CDO-AG-16	0	14	14	1,814	15%	227	14	1,245
	CDO-AG-17	0	12	12	1,382	23%	254	16	1,354
CAPÃO DA	CDO-AG-27	0	7	7	1,421	17%	198	14	1,291
ONÇA	CDO-AG-28	0	7	7	1,208	20%	198	12	1,006
	CDO-AG-32	0	8	8	1,604	12%	161	11	1,363
	CDO-AG-45	0	4	4	6,870	20%	1,108	82	3,918
	CDO-AG-47	0	11	11	2,847	27%	660	28	2,414
	CDO-AG-58	0	4	4	1,367	18%	195	14	1,317
	CDO-AG-60	0	5	5	1,568	25%	318	25	1,023
	CDO-AG-61		П				ISI		T
	CDO-AG-70	0	11	11	1,556	18%	233	16	1,208
	CDO-AG-74		I				'SI		T
	CDO-AG-83	0	8	8	1,376	24%	268	18	1,022
	CDO-AG-85						'SI		
	CDO-AG-86		I				'SI		1
	CDO-AG-88	2	5	3	1,147	18%	178	8	1,264
	CDO-AG-89	_	l			1	SI 		1
	CDO-AG-94	0	11	11	1,498	23%	276	18	1,399
	CDO-AG-96						ISI		
	CDO-AG-98	_	_	-	4 2 4 2		ISI 144	47	4 474
	RA-AG-01	0	6	6	1,243	15%	141	17	1,471
RIBEIRÃO	RA-AG-02	0	6	6	1,839	18%	289	18	3,559
	RA-AG-03	3	6	3	2,346	23%	444	24	2,729
	RA-AG-04	0	9	9	1,702	11%	163	12	2,375



Prospect	Hole	From (m)	To (m)	Length (m)	TREO (ppm)	MREO %	Nd + Pr (ppm)	Dy +Tb (ppm)	TREO at end of hole (ppm)
	RA-AG-05	0	3	3	1,198	9%	78	12	1,293
	RA-AG-06	0	13	13	1,723	19%	262	24	3,094
	RA-AG-07	0	7	7	1,472	15%	177	14	1,961
	RA-AG-08	0	5	5	1,213	11%	92	17	1,515
	RA-AG-10	0	4	4	1,309	16%	160	17	1,446
	RA-AG-13					N	SI		
	RA-AG-14	0	5	5	1,410	15%	163	16	1,431
	RA-AG-15	5	8	3	2,333	30%	586	24	2,503
	RA-AG-16	0	15	15	1,565	10%	125	13	1,887
	RA-AG-17	0	2	2	1,221	17%	98	13	643
	RA-AG-18	0	7	7	1,492	10%	92	15	1,492
	RA-AG-19	0	6	6	1,644	8%	88	14	1,618
	RA-AG-20	1	11	10	3,033	32%	827	34	3,630
	RA-AG-21	7	13	6	2,374	29%	595	33	3,029
	RA-AG-22	0	14	14	1,706	19%	254	19	2,066
	RA-AG-23	0	4	4	1,806	16%	234	18	2,152
	RA-AG-24	5	9	4	2,419	29%	601	27	3,440
	RA-AG-25	7	22	15	2,310	24%	485	22	2,329
	RA-AG-26	9	20	11	2,885	29%	749	30	6,066
	RA-AG-27	3	16	13	2,507	25%	538	23	2,133
	RA-AG-28	0	9	9	1,392	17%	199	17	1,926
	RA-AG-29	0	7	7	1,738	12%	168	16	1,449
	RA-AG-30	3	11	8	3,083	28%	682	43	4,868
	RA-AG-31	8	12	4	2,207	27%	508	18	2,074

**Table 1:** REE assays from auger drilling hosted within weathered clays, 1000ppm TREO cut-off, 2m dilution. DyTb and NdPr grades presented are in Oxide converted form. Figures were rounded to nearest 0.5m for length and nearest whole number for 'ppm'.



# Diamond and RC Drilling: All holes were drilled vertically.

Prospect	Hole	From (m)	To (m)	Length (m)	TREO (ppm)	MREO %	Nd + Pr (ppm)	Dy +Tb (ppm)
	CDP-DDH-002	3	25.0	22.0	2,429	25%	515	26
	Incl.	6	19.0	13.0	2,930	26%	637	29
CAMINHO	CDP-DDH-003	11	35.0	24.0	4,058	26%	989	44
DAS PEDRAS	Incl.	20	32.0	12.0	6,039	32%	1,622	68
	CDP-DDH-005	2	38.0	36.0	2,604	24%	513	25
	Incl.	18	31.0	13.0	3,664	30%	902	36
0.15 0.5.1	CDO-DDH-003	0	3.0	3.0	1,624	25%	342	22
CAPÃO DA ONÇA	CDO-DDH-004	2.5	19.5	17.0	2,904	34%	863	26
UNÇA	Incl.	2.5	14.0	11.5	3,344	34%	1,015	29
	CT-DDH-002	4.5	31.5	27.0	2,347	26%	520	27
	Incl.	10.5	24.0	13.5	2,800	31%	717	34
CENTRAL	CT-DDH-003	4	25.0	21.0	1,417	22%	258	15
	CT-DDH-004	3.5	29.0	25.5	1,854	22%	356	19
	Incl.	10.5	23.5	13.0	2,260	25%	482	24
	FZ-RC-08	0	31.0	31.0	3,080	32%	920	38
	Incl.	0	18.0	18.0	4,268	36%	1,360	51
	FZ-RC-11	8	37.0	29.0	1,745	23%	315	21
	FZ-RC-12	0	22.0	22.0	1,242	24%	233	14
	FZ-RC-13	4	28.0	24.0	1,839	23%	345	21
	Incl.	9	19.0	10.0	2,314	23%	439	25
	FZ-RC-14	3	23.0	20.0	1,985	32%	528	26
	FZ-RC-16	12	32.0	20.0	2,158	32%	587	37
FAZENDA	Incl.	12	24.0	12.0	2,782	36%	813	50
	FZ-RC-18	0	54.0	54.0	1,477	22%	259	18
	FZ-RC-20	3	11.0	8.0	1,621	12%	144	14
	FZ-RC-28	0	17.0	17.0	1,874	23%	339	24
	FZ-RC-29	1	19.0	18.5	6,253	36%	2,066	150
	Incl.	1	6.5	5.5	14,896	47%	5,486	386
	FZ-RC-36	9	29.0	20.0	2,132	30%	527	29
	FZ-RC-56	5	27.0	22.0	2,318	26%	526	31
	Incl.	11	23.0	12.0	2,853	31%	727	40
	RA-DDH-001	8	29.0	21.0	2,418	26%	553	28
	Incl.	15	25.5	10.5	3,016	29%	749	34
RIBEIRÃO	RA-DDH-002	4.5	14.5	10.0	2,142	28%	518	23
	RA-DDH-003	0.5	24.5	24.0	2,643	23%	577	24
	Incl.	9.5	25.0	15.5	3,223	28%	814	29

**Table 2:** REE assays from diamond and RC drilling hosted within weathered clays, 1000ppm TREO cut-off, 2m dilution. RC denotes Adapted Reverse Circulation Drill Holes; DDH denotes Diamond Drill Holes. DyTb and NdPr grades presented are in Oxide converted form. Figures were rounded to nearest 0.5m for length and nearest whole number for 'ppm'.



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

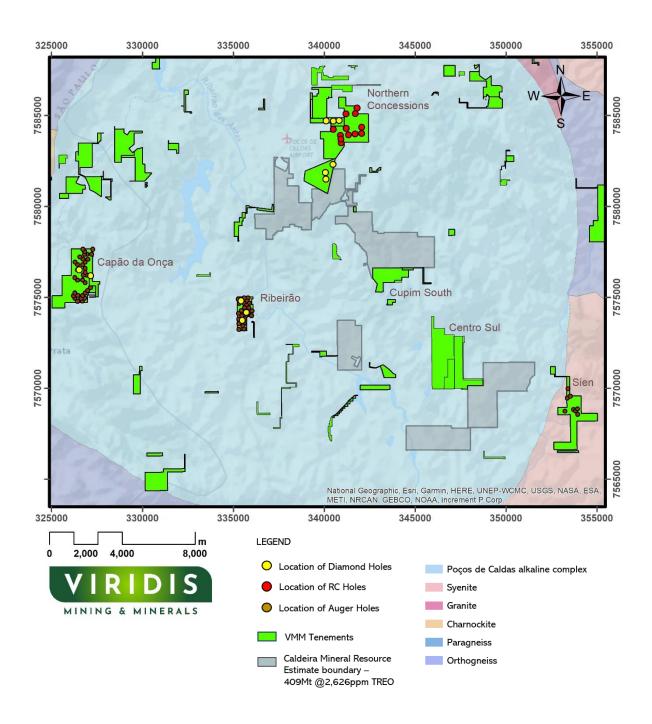


Figure 5: Location of all drill holes reported



# Appendix D: JORC Code, 2012 Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <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> <li>Nature of Sampling: Reverse Circulario (RC), Diamond Drill Hole (DDH) 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, DDH was executed using HQ and HWL diametres and RC 4 3/3 inches, 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>Method of Collection: Samples from auger and RC drilling, were retrieved directly from the auger and RC sampler and immediately preserved in identified and sealed plastic bags to prevent contamination. 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>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.</li> <li>Sample Weight: The sample weights varied according to the method and core diameter, with auger drilling samples ranging from 4Kg to 12Kg, diamond core drilling samples from 2Kg to 6Kg and RC ranging from 10Kg to 22Kg.</li> <li>Packaging &amp; Labeling: 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>
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, facesampling bit or other type, whether core is oriented and if so, by what method, etc).	<ul> <li>Type of Drill: The exploration program employed three primary drilling techniques: auger, RC and DDH. Auger drilling, using diametres of 4", 3.5", 2.5", and 2", targeted surface and near-surface samples down to 21 metres. Diamond and RC drilling was used for continuous core samples down to the fresh rock.</li> <li>Drill Method: Auger drilling utilised 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>Drill Rig: Lightweight, mechanised 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>Drill Orientation: 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>
Drill sample recovery	<ul> <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> <li>Recovery Rates: 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 optimise sample integrity and recovery.</li> <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>



#### 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: 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.
- 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, diametre, 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 that no significant geological features or sample attributes are omitted.

### Subsampling techniques and sample preparation

- If core, whether cut or sawn and whether quarter, half or all core taken.
- 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 subsampling 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.

- Sample Preparation Facility: Auger samples were processed at the SGS-GEOSOL laboratory, while RC and diamond drill hole (DDH) samples were handled by ALS-Laboratories. Both facilities are located in Vespasiano-MG, Brazil.
- General Sample Preparation: Samples underwent rigorous physical preparation following standard industry practices at the SGS-GEOSOL and ALS laboratories. This encompassed:
  - Homogenisation: Comprehensive mixing was performed on the samples to ensure uniform particle distribution.
  - Separation: From each sample, an aliquot of 150g was reserved for ammonium sulfate leaching tests.
  - Drying: All samples were dried at a controlled temperature of up to 65°C.
  - Sub-sampling: Utilising a Jones splitter, sub-samples of approximately 250g were extracted.
  - Pulverisation: The 250g sub-sample was pulverised using a steel mill until 95% of the sample particles achieved a fineness below 150 mesh.

### 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, spectrometres, handheld XRF instruments, etc, the parametres 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: All assay tests for the auger samples were conducted by the SGS-GEOSOL laboratory in Brazil and all the RC and DDH samples were conducted by the ALS laboratory in Lima - Peru.

#### Assay Techniques:

a. ICP MS\_ Determination by Fusion with Lithium Metaborate - ICP MS for Major Oxides. Some elements and their detection limits include:

$AI_2O_3$	0,01 - 75 (%)	Ва	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)

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)	Но	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)	Υ	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 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.

## 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.
- Auger Twinned holes were used to Quality Control.
- 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.
- 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 <sub>2</sub>	1.2284
La	$La_2O_3$	1.1728
Sm	$Sm_2O_3$	1.1596
Nd	$Nd_2O_3$	1.1664
Pr	$Pr_6O_{11}$	1.2082
Dy	$Dy_2O_3$	1.1477
Eu	$Eu_2O_3$	1.1579
Υ	$Y_2O_3$	1.2699
Tb	Tb <sub>4</sub> O <sub>7</sub>	1.1762
Gd	$Gd_2O_3$	1.1526
Но	$Ho_2O_3$	1.1455
Er	$Er_2O_3$	1.1435
Tm	$Tm_2O_3$	1.1421
Yb	$Yb_2O_3$	1.1387
Lu	Lu <sub>2</sub> O <sub>3</sub>	1.1371

- The TREO (Total Rare Earth Oxides) was determined by the sum of the following oxides: CeO₂, Dy₂O₃, Er₂O₃, Eu₂O₃, Gd₂O₃, Ho₂O₃, La₂O₃, Lu₂O₃, Nd₂O₃, Pr₀O₁₁, Sm₂O₃, Tb₄O₁, Tm₂O₃, Y₂O₃, Yb₂O₃. For the MREO (Magnetic Rare Earth Oxides), the following oxides were considered: Dy₂O₃, Gd₂O₃, Ho₂O₃, Nd₂O₃, Pr₀O₁₁, Sm₂O₃, Tb₄O₁. And for the HREO we consider: Dy₂O₃, Er₂O₃, Eu₂O₃, Eu₂O₃, Gd₂O₃, Ho₂O₃, La₂O₃, Lu₂O₃, Tb₄O₁, Tm₂O₃, Y₂O₃ and Yb₂O₃
- REO assays from auger drilling on the appendix were reported within clays and with 1000ppm TREO cut-off and 2m dilution.
- REO assays from diamond drilling on the appendix were reported



		within clays and with 1000ppm TREO cut-off and 2m dilution.
		Grade (ppm) were rounded to nearest whole figure, lengths (m)     were rounded to the nearest 0.5m.
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.	<ul> <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> </ul>
		<ul> <li>To ensure the quality and reliability of the topographic location data, benchmark and control points were established within the project area.</li> </ul>
Data spacing and distribution	<ul> <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>	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 assist in the definition of 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.
		<ul> <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 mineralisation zones. The exploratory nature of the diamond drilling further supports the overall geological understanding, although its data spacing is not predefined.</li> </ul>
		<ul> <li>Reverse circulation (RC) drilling is being carried out on a structured grid with a spacing of 400 x 400 meters. This grid pattern is tailored to facilitate a comprehensive exploration strategy, suitable for the designated area, with the primary goal of enhancing our understanding of the mineral distribution and geological consistency across the target zone. The broader spacing of 400 x 400 meters for the RC drilling is strategically chosen to cover a larger area efficiently while still providing valuable insights into the potential mineralization patterns and geological features.</li> </ul>
		<ul> <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>
Orientation of data about geological structure	<ul> <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> <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 mineralised 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 mineralised zones and provides a representative view of the overall geology and mineralisation.</li> <li>There is no indication that the orientation of the drilling has introduced any sampling bias about the crucial mineralised structures. The drilling orientation aligns well with the known geology of the deposit, ensuring accurate representation and unbiased sampling of the mineralised zones. Any potential bias due to drilling orientation is considered negligible in this context.</li> </ul>
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 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.
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	<ul> <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> <li>All samples were acquired from tenements owned by Viridis Mining and Minerals Ltd, following an agreement with the Varginha Parties. Specifically:</li> </ul>		
		Prospect #Tenement total size (m²)		
		CDP 007737/1959 1,827,100		
		CDO 830419/2019 4,459,800		
		RA 833619/1996 1,311,500		
		SI 834738/1995 2,813,500		
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <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	Deposit type, geological setting and style of mineralisation.	<ul> <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 km². 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 diametre 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 lonic 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 lonic 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.</li> <li>Given the strategic importance of REEs in modern industries, a thoro</li></ul>		



Criteria	JORC Code explanation	Commentary
		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.	<ul> <li>Auger Drilling         Total number of holes: 70</li> <li>Diamond Drilling         Total number of holes: 11</li> <li>RC Drilling:         Total number of holes: 12</li> <li>Reported in Appendix A and B of this Report</li> </ul>
Data aggregation methods	<ul> <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>	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	<ul> <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> <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 mineralised zones.</li> <li>All drill holes are vertical and are appropriate for the deposit type, ensuring unbiased sampling of the mineralisation.</li> <li>Due to the geometry of the mineralisation and the vertical orientation of the drill holes, the down hole lengths can be considered close representations of the true widths of the mineralised 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	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 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.
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. Cross-references to previous announcements have been provided where relevant to ensure



Criteria	JORC Code explanation	Commentary
		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.
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	<ul> <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>	Future works include carrying on the auger, diamond, and RC drilling campaign in 2024, geological mapping, geochemical and metallurgical tests, and mineralogical characterisation.

