ASX: VMM MARKET ANNOUNCEMENT

80% Average Ionic Recoveries from First Colossus Hole

Initial Results from ANSTO Confirm Colossus as Exceptional Ionic Adsorption Clay Rare Earth Project

ASX Release: 20 March 2024

Highlights

- **First Diamond Hole from Cupim South [CS-DDH-001] has been tested by Australian Nuclear Science and Technology Organisation ('ANSTO') using a standard Ammonium Sulphate ('AMSUL'), pH4, room temperature and 30 minutes leach cycle:**
  - **11.9m @ 80% Nd-Pr recovery from 3.3m.**
  - **11.9m @ 66% Dy-Tb recovery from 3.3m.**
  - **17.9m @ 71% TREE[A]-Ce recovery from 3.3m.**
  - **Recoveries are open in all directions; untested above 3.3 metres or below 21.2 metres.**

- **ANSTO has tested ionic recoveries under non-optimised conditions for CS-DDH-001 [24m @ 4,573ppm TREO[B] from 0m][5] from 3.3m to 21.2m. The testing has confirmed exceptional ionic recoveries across the entire intercept, with the first 11.9m averaging 80% recovery for Nd+Pr and 66% for Dy+Tb within the highly weathered clays.**

- **The results have also returned low levels of impurities, including Uranium (U) and Thorium (Th), in the leached solution:**
  - **0.01ppm of U and <0.01ppm of Th (below detection limit), de-risking the project with regards to associated environmental challenges or delays to approvals.**
  - **There is negligible gangue material, which results in a simplified impurity removal flowsheet, reduced CAPEX and lower operating expenses.**

- **This initial metallurgical test work has confirmed Cupim South hosts a high-quality Ionic Adsorption Clay ('IAC') body, which is expansive and high-grade, but also very low in impurities including U and Th. This testing is a significant step in validating the world-class nature of the Colossus Project and de-risking the complexity of the process design and timeline for environmental approvals:**
  - **In un-optimised conditions, all four high-value rare earth elements ('REE') (Nd, Pr, Dy, Tb) exhibited incredibly high ionic recoveries across an extensive profile.**
  - **Significant scope for improvement under ANSTO's testing programs under optimised conditions.**
  - **Low levels of U and Th in both the feed and spent ore, will ensure that the environmental and regulatory approvals will remain the remit of the state and local governments (rather than federal) where Viridis has already gained immense support as evidenced by the recently signed key MoUs with the State of Minas Gerais and the Municipality of Pocos De Caldas[2].**

[A] Total Rare Earth Elements

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

Viridis Mining and Minerals Limited | ACN: 121 969 819
Level 50, 108 St Georges Terrace, Perth, WA 6000
Telephone: + 61 3 9071 1847 Email: info@viridismining.com.au
www.viridismining.com.au.com.au

- **3% average recovery of Cerium (low-value mineral) leading to high value basket concentrated in critical rare earths.**

- **This marks the first result amongst an extensive metallurgical program Viridis is undertaking at Colossus, which aims to position it as the premier global rare earth development project:**
  - **Further diamond and RC holes have already been transported to ANSTO for leach testing.**
  - **Viridis is also conducting further metallurgical drilling across Northern Concessions, Cupim South and Capão Da Onca, which will be transported to ANSTO upon sample collection.**
  - **Viridis has also completed three large-scale and extensive bulk samples across Northern Concessions, Cupim South and Capão Da Onca, consisting of >30 hole locations. These results are expected from SGS Laboratories late April/early May 2024.**

Chief Executive Officer, Rafael Moreno commented:

"This incredible result is a significant milestone which confirms that Colossus indeed has the potential to be a world class ionic adsorption clay rare earth resource, with exceptionally high recoveries for both light, medium and heavy magnet rare earth elements throughout the clay intercept.

Just as impressive were the low levels of impurities in the leached solution, especially the levels of Aluminium which can be difficult to separate in downstream processing operations. Although the levels of Uranium and Thorium in the Colossus feed ore are extremely low to begin with, it's pleasing to see the metallurgical test work confirm that next to no extraction of Uranium and Thorium takes place when leaching with pH4 AMSUL solution, supporting a fast-tracked environmental approvals process as per the MoUs recently signed with the State of Minas Gerais and the Municipality of Poços De Caldas.

The benign leaching conditions, reagent selection and low impurity concentration in the leached solution, simplifies the process flowsheet significantly and strengthens the robust economics of the project, as we look to design and build a low CAPEX production facility, with an OPEX that puts Colossus at the lowest part of the cost curve.

I'm looking forward to receiving the next set of metallurgical results, expected in late April/early May, and to working closely with ANSTO to optimise the leaching conditions to maximise recoveries at the Colossus project."

ANSTO Metallurgical Testing Scope

Viridis Mining and Minerals Limited ("Viridis" or Company") is pleased to report the results of the first hole tested by ANSTO for the Colossus IAC project, in the state of Minas Gerais, Brazil.

The first diamond drill core completed at Cupim South (CS-DDH-001) was sent to ANSTO, as the first step of a comprehensive metallurgical testing campaign aimed at understanding the leaching characteristics throughout the entire saprolite clay profile.

The scope of the work program included:

- Test CS-DDH-001 from 3.3 to 21.2m in 3m composites (6 x 3m samples).
- Head assays were completed by ALS (Peru).
- The composite samples were subjected to a diagnostic leach test at ANSTO laboratories under standard conditions (4 wt% solids, pulverised sample, pH 4, 0.5 wt% ammonium sulfate, room temperature, for 30 minutes.
- The final and intermediate leach liquor filtrates were analysed as follows:
  - ICP-MS for Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Nd, Pr, Sc, Sm, Tb, Th, Tm, U, Y, Yb (ALS Brisbane);
  - ICP-OES for Al, Ca, Fe, K, Mg, Mn, Na, Si, (in-house at ANSTO).

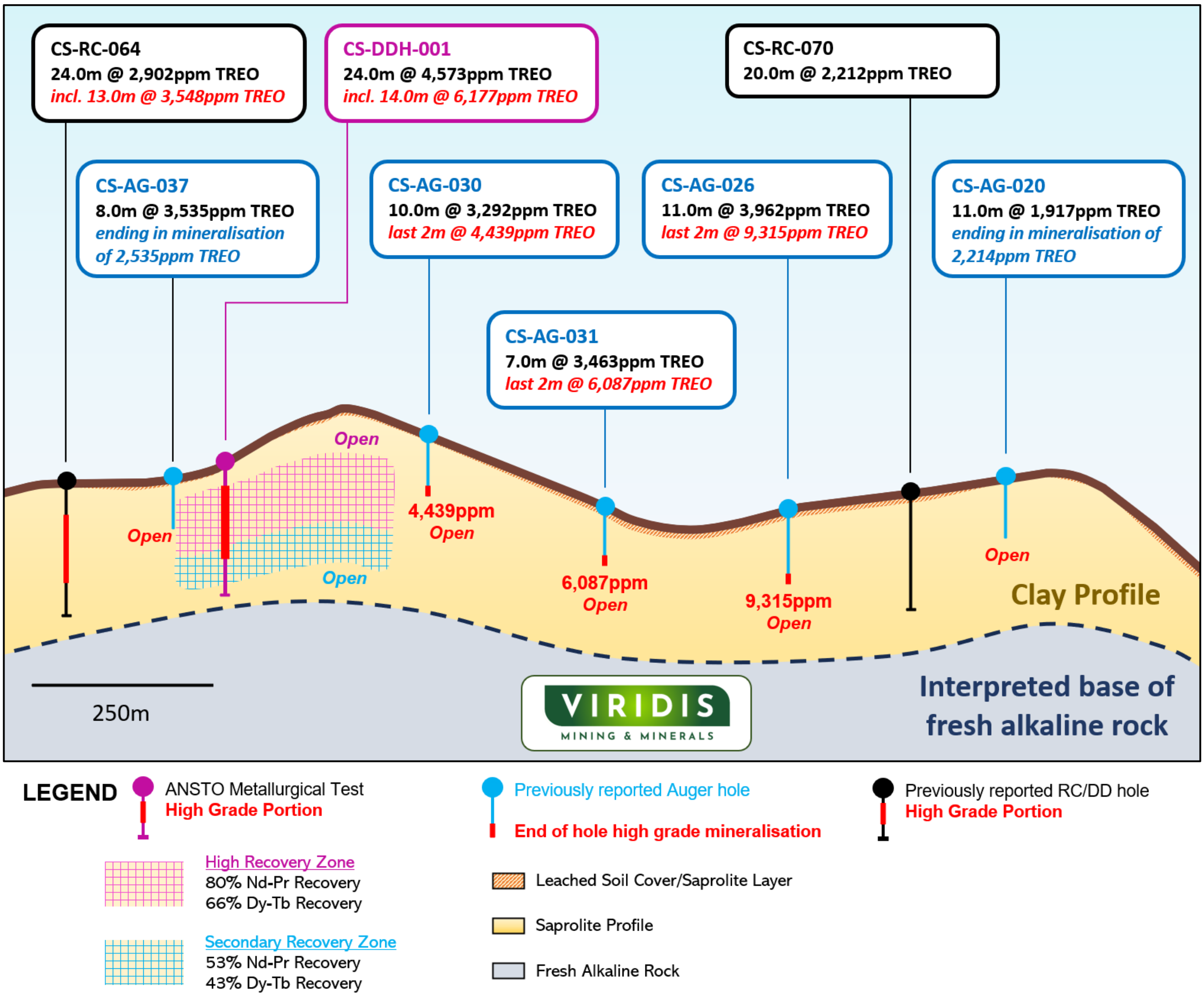

Figure 1: *Cross section AA' (looking North) at Cupim South from Figure 4 and the geological interpretation of the ionic recovery zones around CS-DDH-001. The X and Y axes are at different scales. Head assays are in TREO form and from ALS[1].*

ANSTO Metallurgical Testing Results

ANSTO has tested the first Diamond Hole from Cupim South [CS-DDH-001] using a standard AMSUL, pH4, room temperature and 30 minutes leach cycle. The MREE[C] recovery results are summarised in Figure 2 below.

DRILL HOLE	DRILL LOG				RECOVERY - Ammonium Sulphate [pH4, Room Temp.]							
DRILL ID	From m	To m	Intercept m	Head Assay TREE ppm	Pr %	Nd %	Tb %	Dy %	Nd-Pr %	Dy-Tb %	Magnets %	TREE-Ce %
CS-DDH-001	3.3	6.3	3.0	3,807	76	80	56	55	78	55	**79**	74
	6.3	9.3	3.0	6,284	80	79	66	68	79	67	**79**	78
	9.3	12.3	3.0	5,821	83	84	70	73	84	72	**83**	84
	12.3	15.2	2.9	4,842	75	80	68	71	77	70	**78**	80
	15.2	18.2	3.0	3,456	49	53	44	45	51	45	52	54
	18.2	21.2	3.0	1,713	55	57	42	43	56	43	56	54

Figure 2: *ANSTO MREE leaching recovery results for CS-DDH-001. Head Assay data provided from ALS Peru*

[C] Magnet Rare Earth Elements = Dy, Gd, Ho, Nd, Pr, Sm and Tb.

The ANSTO testing has confirmed exceptional ionic recoveries across the entire CS-DDH-001 intercept, with MREE showing a strong response to AMSUL leaching, whilst unwanted gangue and radioactive contaminants seem to show little to no leaching affinity at pH4.

Recoveries are open in all directions and have not been tested above 3.3 metres or below 21.2 metres.

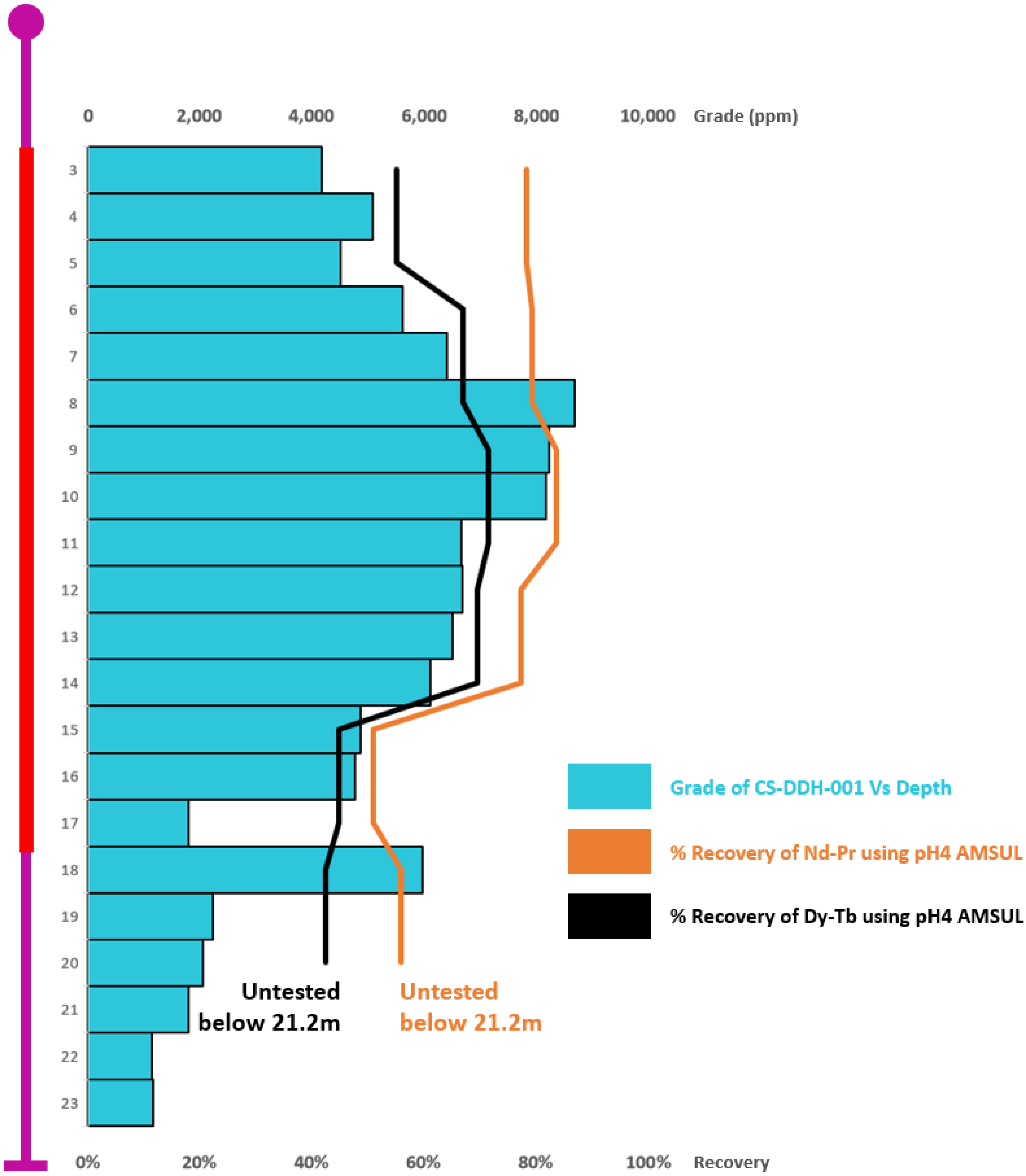

Figure 3: *Close up of results for hole CS-DDH-001 as seen in Figure 1. Left hand axis shows depth ('from' in metres), top axis shows grade (ppm TREO, taken from previous ALS assays)[5], bottom axis shows recovery % using pH4 AMSUL, room temp at 30 min leach cycle. Blue columns indicate grade distribution versus depth, orange line indicates Nd-Pr recovery with depth, black line indicates Dy-Tb recovery with depth.*

Hole CS-DDH-001 is the first hole as part of a broader and extensive metallurgical program Viridis is currently undertaking at its Colossus project. This result builds the metallurgical foundation on what is a world-class asset, both in terms of grade and scale.

These results have been achieved under non-optimised conditions, which leaves ANSTO with significant scope to utilise its leading expertise in the space to adjust desorption chemistry and provide improved results over subsequent tests.

The results have shown the highest-grade section which occurs near surface within CS-DDH-001 (as seen in Figure 1) displays the best desorption characteristics, with low Cerium desorption and little to no radioactive mineralisation or waste. This has significant economic implications at Colossus:

- Confirmation Cupim South contains a very high fraction of ionic rare earths that are amendable through an Ionic Exchange desorption process using a cheap salt solution (AMSUL).
- **Inherent Uranium and Thorium mineralisation in the feed ore is already low**, and with the **REE leached solution containing 0.01ppm U and Th levels, below the detection limit (<0.01ppm)**, leading to a very pure product and no costs to manage radioactive waste streams. Furthermore, it relieves the project of any associated environmental challenges.
- There is minimal gangue material with 7ppm Aluminium and 4ppm Iron, which indicates that the impurity removal steps for Colossus will be straightforward and lead to reductions of CAPEX and OPEX.
- Low Cerium recovery (averaging 3% across the tested intercept) leads to a high-value solution dominant in critical rare earths.
- The highest-grade portion occurs near surface, rather than >30m depth. Mining soft clays at depths faces logistic, structural, and hydrogeological challenges.
- Highest grade portion also shows best recoveries essentially CS-DDH-001 had assayed (from ALS)[5] **12m @ 6,402ppm TREO (2,146ppm Nd-Pr and 67ppm Dy-Tb Oxide)** from 3m of which **1,717ppm of Nd-Pr and 44ppm of Dy-Tb Oxide can be recovered across each meter of the section into a precipitate using a salt solution, at room temperature, pH4 over 30 minutes cycle.**

Viridis continues to execute a systematic strategy on all key fronts that accentuates the tier-1 potential for Colossus to fast become a significant player in the Rare Earths industry:

- **Grade:** Each batch of results has exceptional grades, which are amongst the highest in the globe for an IAC project. These include recent peak grades at Caminho Das Pedras (1m @ 25,075ppm TREO, CDP-DD-010), which is the highest grade reported in the complex, and Cupim South (**1m @ 24,894ppm TREO**, CS-AG-002)[1].
- **Size:** Step-out drilling across 7 concessions covering an area of >15km^2 has shown mineralisation of> 3,000ppm TREO.
- **Upside Scalability:** The total land package held at Colossus is an outstanding 239km^2 with an aggressive expansion strategy commencing since August 2023, with only a portion of the package being explored to date. More recently, **Viridis secured a pivotal expansion of Cupim South, which has built a corridor of landholdings sitting between and adjoining JORC-Compliant Cupim Vermelho Norte Deposit (104Mt @2,485ppm TREO[3]) and the Soberbo Deposit (92Mt @2,948ppm TREO[3]).** Recent drilling has also shown that the highest grades at Cupim South occur on the eastern border (**5m @ 15,680ppm TREO**, CS-AG-002[1]), which adjoins the newly expanded areas. Drilling is still ongoing, with >100 holes awaiting assays.
- **Recovery:** This is the first step in a broad program that shows true ionic metallurgical recoveries of Colossus from ANSTO, a world-leading organisation that exemplifies a simple extraction methodology with the capacity to generate a high-purity product that is low in radioactive/gangue minerals.
- **Community and Government Support:** The recent MoUs signed with local and state governments is further confirmation of the vast support received to date from the local community and vendors. The state government has prioritised this project, which is expected to fast-track the asset through legislative and licensing milestones. Viridis has had immense success gaining support from the Mayor of Poços De Caldas and the local community in a relatively short time to progress Colossus. Mining has occurred and been supported historically in our Northern Concessions for over 70 years with Alcoa's operation (largest plant in Poços De Caldas, operating since 1965) located <2km west from our mining licenses, which places us in a favourable position to leverage the ample infrastructure, low-cost energy, and trained workforce which isn't accessible to this degree anywhere else in the Complex.

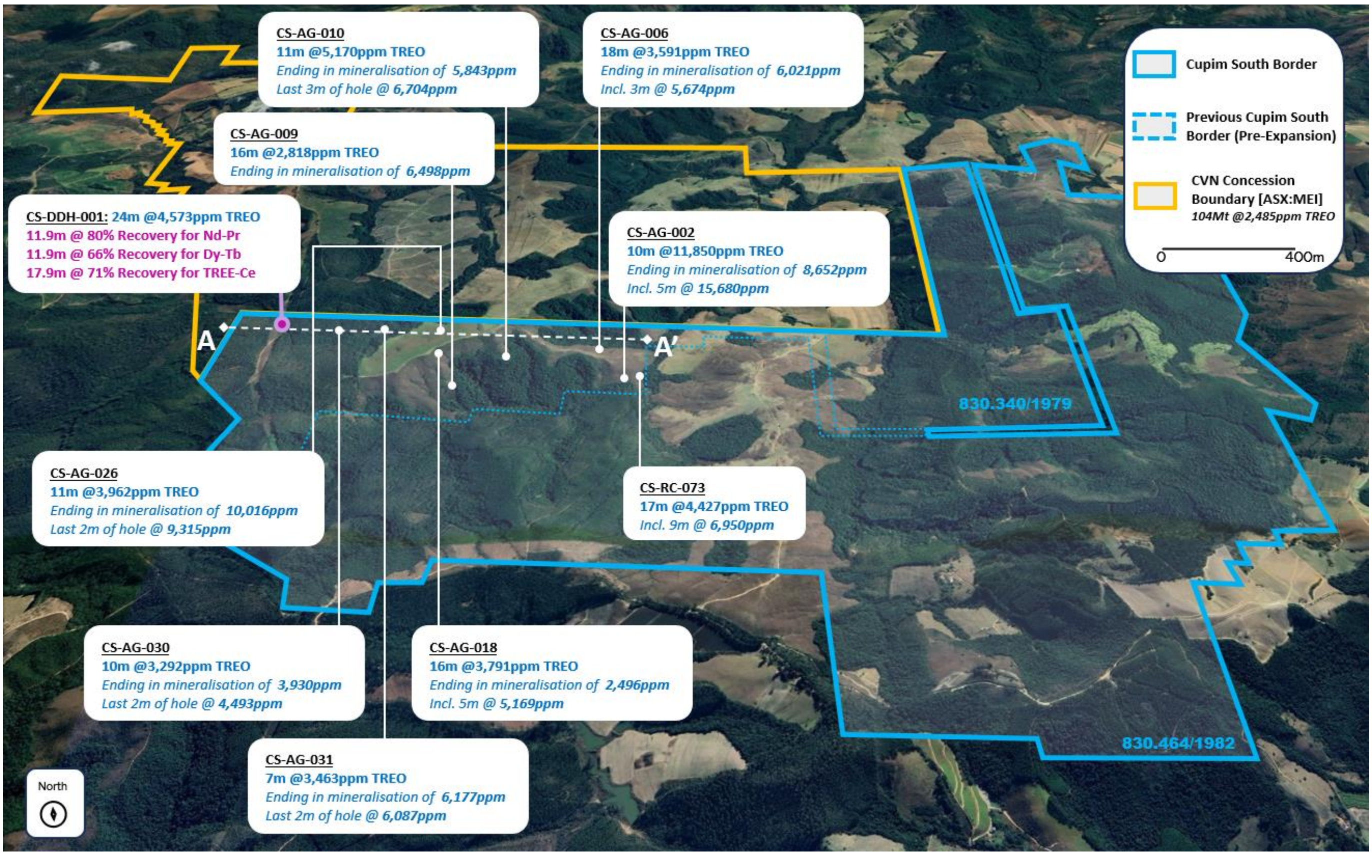

Figure 4: *Auger (Denoted by AG) and RC (Denoted by RC) holes from drill highlights at Cupim South[1]. Location of diamond hole with ANSTO test results shown in purple (CS-DDH-001)[5]. Previous border of Cupim South shown as a dotted boundary before the recent acquisition agreement with São Domingos Minerdom, which has expanded the Cupim South prospect[4]. Cross section can be seen in Figure 1.*

Uranium and Thorium Levels at the Colossus Project

The dominant REE mineral in the source rock beneath the clay zone in the Pocos de Caldas Alkaline complex is Bastnaesite, known to have lower levels of Uranium and Thorium compared to other REE minerals such as monazite or xenotime. This has been observed with the assays on the Colossus project to date. Even with the elevated levels of REE in CS-DDH-001, the head assay confirms the low levels of U and Th with the average values through the clay profile measured at 6ppm and 34ppm respectively. The ANSTO results also confirm there is little to no transfer (below detection limit) of radioactive elements into the leached solution.

Upcoming Metallurgical Work Strategy

The Company has commenced a large-scale metallurgical program with ANSTO and SGS Laboratories which focuses on Northern Concessions, Cupim South and Capão Da Onca before scaling across multiple other concessions.

This will be completed in parallel with the Mineral Resource work program. The upcoming metallurgical work programs will consist of the following:

- Further Diamond and RC holes, which have already been shipped to ANSTO and will undergo spatial and depth desorption analysis.
- Metallurgical infill drilling into areas of key interest which the Company will report both assays and then follow up diagnostic leach testing by ANSTO. Drilling for this work program has already commenced.
- Widescale bulk sampling covering 5 concessions (Carijo, Caminho Das Pedras, Fazenda, Cupim South, Capão Da Onca) which will be critical to understand the overall average recoveries within Colossus. Samples are currently being transported to the lab and results expected in late April/early May 2024.
- Optimising test-work under different leaching conditions to improve recoveries utilising the best of ANSTO's in-house expertise.

Contacts

For more information, please visit our website, www.viridismining.com.au or contact:

Carly Terzanidis	Rafael Moreno	Media Enquiries
Company Secretary	Chief Executive Officer	Fadi Diab
Tel: + 61 3 9071 1847	Tel: + 61 3 9071 1847	Phoenix Global Investments
Email: cosec@viridismining.com.au	Email: rafaelm@viridismining.com.au	info@phoenixglobalinvestments.com.au

About Viridis Mining and Minerals

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

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

Competent Person Statement

Dr. José Marques Braga Júnior, the in-country Executive Director of Viridis' Brazilian subsidiary (Viridis Mineração Ltda), compiled and evaluated the technical information in this release and is a member of the Australian Institute of Geoscientists (AIG) (MAusIMM, 2024, 336416), accepted to report in accordance with ASX listing rules. Dr Braga has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australian Code for Reporting of Regulation, Exploration Results, Mineral Resources, and Ore Reserves. Dr Braga consents to 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. *VMM announcement dated 12 March 2024 'Step-Out Drilling intercepts up to 24,894ppm TREO at Cupim South'*
2. *VMM announcement dated 4 March 2024 'Viridis Signs Key MOU's with State of Minas Gerais and Poços De Caldas'*
3. *Meteoric Resources NL (ASX: MEI) announcement dated 1 May 2023 'Caldeira REE Project Maiden Mineral Resource'*
4. *VMM announcement dated 6 March 2024 'Viridis Secures Pivotal Southern Complex Expansion'*
5. *VMM announcement dated 20 November 2024 'Major Ionic Clay Rare Earth Discoveries at Colossus'*

Appendix A: JORC Code, 2012 Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample retrospectivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• *Diamond core drilling, employing HQ and HWL diameters, continued until fresh rock contact was achieved, with cores stored in plastic trays marked to identify each drilling stage and core recovery status. Initial sample inspections were conducted in the field by assigned geologists, followed by a secondary review upon arrival at the storage facility, including a thorough check of drilling reports and physical examination of cores samples. Detailed logging of drill holes emphasized precise geological information collection and sample integrity assurance. Sample weights varied based on method and core diameter, typically ranging from 2kg to 6kg for diamond core drilling samples. Cores were stored in dedicated plastic boxes, clearly labeled with depth, sample interval, and drilling advances and recovery specifics.*
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diametre, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• *Diamond core drilling, utilising HQ and HWL bit sizes, was employed to obtain continuous core samples down to the fresh rock. More robust rigs were utilised to ensure high-quality core recovery. Drilling was exclusively vertical, with no orientation monitoring, as this approach was deemed most suitable for the geological targets.*
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures are taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• *The drill core achieved good recovery rates, with 99% of samples exhibiting above 80% recovery. Each drilling session was documented to maintain thorough records. Recovery rates were calculated by comparing actual core or chip lengths with expected run lengths, with all data being logged for analysis. Consistent drilling protocols, immediate secure packaging, and minimal handling were standard practices aimed at optimizing sample integrity and recovery. Moreover, no significant bias was detected between sample recovery and grade, indicating reliable assay data with minimal material loss or gain across varying grain sizes.*
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• *Drill core samples were logged in detailed accordance with NBR 9603 standards, providing geological and geotechnical detail sufficient to support Mineral Resource estimation, mining studies, and metallurgical studies. Logging encompassed both qualitative and quantitative aspects, with descriptive attributes such as color and consistency offering qualitative insights, while parameters like weight, diameter, and net advance provided quantitative data. Additionally, systematic photography ensured a visual record of the core to complement the logs. Logging covered 100% of boreholes along their entire length, including all relevant intersections, to ensure comprehensive documentation of geological features and sample attributes.*
Sub-sampling 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 sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is*	*Diamond drill hole (DDH) samples were processed at ALS Laboratories in Vespasiano-MG, Brazil. Samples underwent thorough physical preparation following standard industry practices at the ALS laboratory, including:* • *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.*

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr>
<td></td>
<td>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.</td>
<td>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.
Twin duplicates were dispatched to assess the representativity of the samples.
For the leaching test at ANSTO, each of the 6 interval composite samples was crushed to <2-4 mm and dried at 50-60 °C at the ALS lab. Subsequently, each interval composite was further crushed to <1 mm at ANSTO to ensure sample representativity in subsequent sub-sampling. Afterwards, each interval composite was rotary split into 1 kg portions. One 500 g portion of each sample was rotary split and pulverized, then divided into 80 g portions for diagnostic leaches and 50 g for head assay. The assay samples were dried at 105 °C, and the mass loss was determined.</td>
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<tr>
<td>Quality of assay data and laboratory tests</td>
<td>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.</td>
<td>Laboratory: The head assay tests for the samples were conducted by the ALS laboratory in Lima, Peru.
Assay Techniques:
a. ME-ICP06- Determination by Fusion with Lithium borate – ICP-AES for Major Oxides. Some elements and their detection limits include:
<table>
<tr><td>Al_2O_3</td><td>0.01 - 100 (%)</td><td>Ba</td><td>0.01 – 100 (%)</td></tr>
<tr><td>Fe_2O_3</td><td>0.01 - 100 (%)</td><td>K_2O</td><td>0.01 - 100 (%)</td></tr>
<tr><td>Na_2O</td><td>0.01 - 100 (%)</td><td>P_2O_5</td><td>0.01 - 25 (%)</td></tr>
<tr><td>TiO_2</td><td>0.01 - 100 (%)</td><td>Cr_2O_3</td><td>0.02 - 100 (%)</td></tr>
<tr><td>CaO</td><td>0.01 - 100 (%)</td><td>MnO</td><td>0.01 - 100 (%)</td></tr>
<tr><td>MgO</td><td>0.01 - 100 (%)</td><td>SrO</td><td>0.01 – 100 (%)</td></tr>
<tr><td>SiO_2</td><td>0.01 - 100 (%)</td><td></td><td></td></tr>
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b. PHY01E: Loss on Ignition (LOI) was determined by calcining the sample at 1,000°C - (0.01 – 100%)
c. ME-MS81: 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:
<table>
<tr><td>Ba</td><td>0.5 – 10,000 (ppm)</td><td>Rb</td><td>0.2 – 10,000 (ppm)</td></tr>
<tr><td>Ce</td><td>0.1 – 10,000 (ppm)</td><td>Sc</td><td>0.5 – 500 (ppm)</td></tr>
<tr><td>Cr</td><td>5 – 10,000 (ppm)</td><td>Sm</td><td>0.03 – 1,000 (ppm)</td></tr>
<tr><td>Cs</td><td>0.01 – 10,000 (ppm)</td><td>Sn</td><td>1 – 10,000 (ppm)</td></tr>
<tr><td>Dy</td><td>0.05 – 1,000 (ppm)</td><td>Sr</td><td>0.1 – 10,000 (ppm)</td></tr>
<tr><td>Er</td><td>0.03 – 1,000 (ppm)</td><td>Ta</td><td>0.1–2,500 (ppm)</td></tr>
<tr><td>Eu</td><td>0.02 – 1,000 (ppm)</td><td>Tb</td><td>0.01 – 1,000 (ppm)</td></tr>
<tr><td>Ga</td><td>0.1 – 1,000 (ppm)</td><td>Th</td><td>0.05 – 1,000 (ppm)</td></tr>
<tr><td>Gd</td><td>0.05 – 1,000 (ppm)</td><td>Ti</td><td>0.01 – 10%</td></tr>
<tr><td>Hf</td><td>0.05 – 10,000 (ppm)</td><td>Tm</td><td>0.01 – 1,000 (ppm)</td></tr>
<tr><td>Ho</td><td>0.01 – 1,000 (ppm)</td><td>U</td><td>0.05 – 1,000 (ppm)</td></tr>
<tr><td>La</td><td>0.1 – 10,000 (ppm)</td><td>V</td><td>5 – 10,000 (ppm)</td></tr>
<tr><td>Lu</td><td>0.01 – 1,000 (ppm)</td><td>W</td><td>0.5 – 10,000 (ppm)</td></tr>
<tr><td>Nb</td><td>0.05 – 2,500 (ppm)</td><td>Y</td><td>0.1 – 10,000 (ppm)</td></tr>
<tr><td>Nd</td><td>0.1 – 10,000 (ppm)</td><td>Yb</td><td>0.03 – 1,000 (ppm)</td></tr>
<tr><td>Pr</td><td>0.02 – 1,000 (ppm)</td><td>Zr</td><td>1 – 10,000 (ppm)</td></tr>
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</table>

Criteria	JORC Code explanation	Commentary
		The leaching test were conducted under the following conditions: • *Utilization of 0.5 M $(NH_4)_2SO_4$ as lixiviant;* • *pH maintained at 4;* • *Duration of 0.5 hours;* • *Ambient temperature (~22°C);* • *Solids density of 4 wt%.* *Each test was carried out in a 2 L baffled leach vessel equipped with an overhead stirrer. 1 M H_2SO_4 was used to adjust the test pH if necessary. Minor elements in solution were not analyzed due to high dilution, focusing instead on assessing REE extraction variability. Gangue element dissolution provided an indication of relative acid consumption. After each test, the slurry was vacuum filtered to separate the leach liquor. The final residue solids were washed on the filter with 200 mL of DI water and dried at 105°C to constant weight. Individual REE recoveries from each sample were calculated using head and leach liquor assays. The final leach liquor filtrates were analyzed subsequently.* *The final leach liquor filtrates were analysed as follows:* *ICP-MS for Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Mn, Nd, Pr, Sc, Sm, Tb, Th, Tm, U, Y, Yb (At ALS-Brisbane);* *ICP-OES for Al, Ca, Fe, K, Mg, Mn, Na, Si, Zn (At ANSTO: in-house).* *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 ANSTO 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.* • *Primary data collection follows a structured protocol, with standardised data entry procedures in place. Data verification procedures ensure that any anomalies or discrepancies are identified and rectified. All data is stored both in physical forms, such as hard copies and electronically, in secure databases with regular backups.* • *The only adjustments to the data were made- transforming the elemental values into the oxide values. The conversion factors used are included in the table below.* Element / Oxide / Factor Ce / CeO_2 / 1.2284 La / La_2O_3 / 1.1728 Sm / Sm_2O_3 / 1.1596 Nd / Nd_2O_3 / 1.1664 Pr / Pr_6O_{11} / 1.2082 Dy / Dy_2O_3 / 1.1477 Eu / Eu_2O_3 / 1.1579 Y / Y_2O_3 / 1.2699 Tb / Tb_4O_7 / 1.1762 Gd / Gd_2O_3 / 1.1526 Ho / Ho_2O_3 / 1.1455 Er / Er_2O_3 / 1.1435 Tm / Tm_2O_3 / 1.1421 Yb / Yb_2O_3 / 1.1387 Lu / Lu_2O_3 / 1.1371 • *The TREO (Total Rare Earth Oxides) was determined by the sum of the following oxides: CeO_2, Dy_2O_3, Er_2O_3, Eu_2O_3, Gd_2O_3, Ho_2O_3, La_2O_3,*

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>Lu_2O_3, Nd_2O_3, Pr_6O_{11}, Sm_2O_3, Tb_4O_7, Tm_2O_3, Y_2O_3, Yb_2O_3. For the MREO (Magnetic Rare Earth Oxides), the following oxides were considered: Dy_2O_3, Gd_2O_3, Ho_2O_3, Nd_2O_3, Pr_6O_{11}, Sm_2O_3, Tb_4O_7.</td></tr>
<tr><td>Location of data points</td><td>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.</td><td>The positioning of the drill has been achieved with high precision using a GPS RTK (Real-Time Kinematic) system.
The grid system employed for the project is based on the SIRGAS 2000 UTM coordinate system.
To ensure the quality and reliability of the topographic location data, benchmark and control points were established within the project area.</td></tr>
<tr><td>Data spacing and distribution</td><td>Data spacing for reporting of Exploration Results.
Whether the data spacing and distribution are sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.
Whether sample compositing has been applied.</td><td>Diamond drilling were not 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.
The original meter by meter samples composited in 3 meters as follow:
<table>
<tr><th>DRILL ID</th><th>From
m</th><th>To
m</th><th>Intercept
m</th></tr>
<tr><td rowspan="6">CS-DDH-001</td><td>3.3</td><td>6.3</td><td>3</td></tr>
<tr><td>6.3</td><td>9.3</td><td>3</td></tr>
<tr><td>9.3</td><td>12.3</td><td>3</td></tr>
<tr><td>12.3</td><td>15.2</td><td>2.9</td></tr>
<tr><td>15.2</td><td>18.2</td><td>3</td></tr>
<tr><td>18.2</td><td>21.2</td><td>3</td></tr>
</table></td></tr>
<tr><td>Orientation of data about geological structure</td><td>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.
If the relationship between the drilling orientation and the orientation of crucial mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</td><td>The drill hole was vertically oriented, deemed appropriate for the supergene deposit being explored, characterized by a larger areal extent compared to its thickness. This type of deposit typically exhibits horizontal extensive characteristics with consistent thickness. Vertical drilling was chosen to achieve unbiased sampling due to the deposit's vast area and uniform thickness. This orientation ensured consistent intersection of horizontal mineralized zones, providing a representative view of the geology and mineralization. There is no indication that drilling orientation introduced sampling bias regarding crucial mineralized structures. It aligns well with the known geology, ensuring accurate representation and unbiased sampling. Any potential bias due to orientation is considered negligible in this context.</td></tr>
<tr><td>Sample security</td><td>The measures taken to ensure sample security.</td><td>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.</td></tr>
<tr><td>Audits or reviews</td><td>The results of any audits or reviews of sampling techniques and data.</td><td>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.</td></tr>
</table>

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership, including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• *All samples were acquired from tenements owned by Viridis Mining and Minerals Ltd, following an agreement with the Varginha Parties. Specifically:* *Cupim South Prospect:* • *ANM 833.560/1996* *Area: 154.26 hectares* *Status: Mining Application* *Location: Cupim South*
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• *Historical exploration in the area involved significant efforts by various entities, including the Colossus and Caldeira Projects, which share the same geological context. Varginha Mineração conducted regional drilling exercises using a powered auger drill rig, resulting in open holes. This historical data offers crucial context, supplementing current exploration endeavors in comprehending the region's geological potential.*
Geology	• *Deposit type, geological setting and style of mineralisation.*	• *The geology of the region where the deposit is located can be summarised as follows:* • *Deposit Nature: The deposit under study is recognised as an Ionic Adsorption Clay Rare Earth Element (REE) deposit. Its spatial positioning is within and adjacent to the renowned Poços De Caldas Alkaline massif complex.* • *Poços de Caldas Complex: This geological entity stands as one of the most extensive alkaline massif intrusions globally, enveloping an area of roughly 800 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 diameter of 30 km. This formation has a semblance of a collapsed caldera. Delving deeper, the dominant rocks within the alkaline complex encompass phonolite, nepheline syenites, sodalite syenites, and many volcanic rocks. This diverse geological setting has played a crucial role in dictating mineral occurrences and potential mining prospects.* • *REE Mineralisation: The specific REE mineralisation highlighted in this disclosure leans towards the Ionic Clay type. Evidence pointing to this is mainly derived from its occurrence within the saprolite/clay zone of the weathering profile of the Alkaline granite basement. The enriched MREO (Medium Rare Earth Oxides) composition also attests to this classification.* • *Relevant Additional Information: The Ionic Adsorption Clay Rare Earth Element deposits, particularly in regions like Poços de Caldas, have recently gained significant attention due to the global demand surge for rare earth elements. These elements, especially the heavy rare earths, have vital applications in modern technologies such as renewable energy systems, electronics, and defence apparatus. The ability of these deposits to offer relatively environmentally friendly mining prospects compared to traditional hard rock REE mines further enhances their appeal.* • *Given the strategic importance of REEs in modern industries, a thorough understanding and exploration of such geologies becomes paramount. The unique geological setting of the Poços de Caldas complex presents both opportunities and challenges, making further detailed study and research essential for sustainable exploitation.*
Drill hole Information	• *A summary of all information material to the understanding of the exploration results, including a tabulation of the*	• *Diamond Drilling:* *Total number of holes: 1*

Criteria	JORC Code explanation	Commentary
	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.*	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• *Data were compiled without selective exclusion. All analytical methods and aggregation were done according to industry best practices, as detailed in previous discussions.*
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• *The vertical drilling orientation is suitable for accurately representing the mineralized zones of the supergene deposit, which has a larger areal extent than thickness. This orientation ensures unbiased sampling of the mineralization. Due to the geometry of the mineralization and the vertical drill holes, downhole lengths closely represent the true widths of the mineralized zones, though further studies would enhance precision. In cases of potential discrepancies between downhole lengths and true widths, it is noted as "down hole length, true width not known".*
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	*The data presented in this report 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 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.*

Criteria	JORC Code explanation	Commentary
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• *There is no additional substantive exploration data to report currently.*
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• *Future works include carrying on the auger, diamond and RC drilling campaign in 2024, geological mapping, geochemical and metallurgical tests, and mineralogical characterisation.*