ASX: VMM MARKET ANNOUNCEMENT

Significant Breakthrough in Metallurgical Testing at Colossus

Phase I MREC metallurgy testing yields Nd+Pr and Dy+Tb recoveries of 76% and 65%, respectively

ASX Release: 17 July 2024

Highlights

- **Viridis engaged Australian Nuclear Science and Technology Organisation ('ANSTO') to execute a detailed work program to confirm and optimise conditions for a flowsheet design which produces a mixed rare earth carbonate ('MREC') product from a clay bulk composite from its Northen Concessions.**

- **The bulk composite was formed using 40kg of material from the Northern Concessions, of which ~85% of the bulk sample material consisted of diamond core samples, providing a Head Grade of 4,472ppm TREO[A], including a robust 32% Magnet rare earth oxide ('MREO') [Nd, Pr, Dy, Tb].**

- **Diagnostic leach tests have been carried out across a range of desorption conditions to assess the impact of reagent selection, pH and residence time to define optimal conditions of operation in terms of OPEX and recoveries, to be further narrowed in the slurry leach tests, impurity removal, solid/liquid separation and precipitation phases.**

- **Results using a standard Ammonia Sulfate ('AMSUL') test at 0.5M, pH4, Room Temperature, and 30-minute leach cycle have shown the MREO ionic recoveries for the bulk sample to be the highest worldwide for this form of testing, as seen below:**
    - **Average Recovery of Nd+Pr was 76%**
    - **Average Recovery of Dy+Tb was 65%**

- **Sensitivity cases on this Bulk Composite have shown that exceptional recoveries can be achieved at lower molar concentrations, higher pH and shorter residence times, all of which show a positive impact in reducing the CAPEX and OPEX of the Colossus project and provide great optionality on reagent selection (See Table 1 for full details):**
    - **AMSUL, pH4.5, 30 minutes, 0.3M: Recovery Nd+Pr = 73%, Dy+Tb = 64%**
    - **AMSUL, pH4.5, 30 minutes, 0.1M: Recovery Nd+Pr = 73%, Dy+Tb = 60%**
    - **MAGSUL[B], pH4.5, 30 minutes, 0.3M: Recovery Nd+Pr = 77%, Dy+Tb = 64%**

  These are major achievements in the test work, implying Colossus can consume 1/5th AMSUL using a lower 0.1M concentration, at a higher pH level and overall MREO recoveries fall a mere 2%, which provides material operational savings while production output remains nearly identical.

- **Results demonstrate that overall recoveries improve at a higher pH level of 4.5, allowing a quicker and cheaper precipitation process from leached slurry into a pure and high basket value MREC.**

[A] Total Rare Earth Oxides ('TREO'): $La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3$

[B] Magnesium Sulfate ('MAGSUL'): $MgSO_4$

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- **The combination of lower molar concentrations, higher pH (4.5 vs. 4), and reduced residence time (0.5 hr vs. 1 hr) also reduces the levels of radionuclide and gangue elements in the leached solution, decreasing the impurities that need to be removed in the next steps of the process design.**

Chief Executive Officer, Rafael Moreno commented:

"What an outstanding start to this critical work program for Colossus. The metallurgical recoveries have exceeded our expectations and to have such high recoveries across all testing conditions, highlights the robustness of the front end of the flowsheet design which is paramount for quality control of our final product.

The excellent recoveries of the magnetic rare earths, at lower molar concentrations and higher pH's, will go a long way in reducing the operating costs and bodes well for the project economics. These are significant breakthroughs which will greatly assist in providing a lower CAPEX and OPEX operation.

The higher pH conditions have also resulted in even lower levels of radionuclides and gangue elements in the leached solution. This helps reduce the complexity and quantity of reagents required in the downstream processing facilities.

I'm looking forward to completing the remainder of the test program, which will support the finalisation of the flowsheet design and the associated CAPEX and OPEX estimates in the Scoping Study".

	Testing Conditions					Recoveries - %					Impurities and Radionuclides - ppm				
Test No.	Reagent	Concentration	pH	Temperature	Duration	Nd	Pr	Dy	Tb	MREO	Al	Ca	Fe	U	Th
1	(NH4)2SO4	0.5M	4	Ambient	0.5 hr	76	74	64	66	**75**	11	7	< 1	0.04	0
2	(NH4)2SO4	0.3M	4	Ambient	0.5 hr	74	72	62	63	**73**	11	7	< 1	0.04	<0.01
3	(NH4)2SO4	0.3M	4.5	Ambient	0.5 hr	74	71	64	66	**73**	9	7	< 1	0.03	<0.01
4	(NH4)2SO4	0.3M	4.5	Ambient	1hr	74	73	65	66	**73**	10	7	< 2	0.03	<0.01
5	(NH4)2SO4	0.1M	4.5	Ambient	0.5 hr	74	71	60	63	**73**	8	7	< 2	0.02	<0.01
6	(NH4)2SO4	0.1M	4.5	Ambient	1 hr	73	70	60	63	**72**	8	7	< 1	0.02	<0.01
7	MgSO4	0.3M	4	Ambient	0.5 hr	75	74	64	66	**74**	11	10	< 1	0.04	<0.01
8	MgSO4	0.3M	4.5	Ambient	0.5 hr	78	74	63	66	**76**	8	11	< 1	0.03	<0.01
9	MgSO4	0.3M	4.5	Ambient	1hr	75	73	62	66	**74**	9	11	< 1	0.03	<0.01

Table 1: *Ionic recoveries and residual impurities within leached solution under different reagents and conditions for Northern Concessions Bulk Composite. Note MREO = Average of Nd, Pr, Dy, Tb recovery.*

Viridis Mining and Minerals Limited ('Viridis' or 'Company') is pleased to report its second bulk sample metallurgical test work conducted on the Northern Concessions within the Colossus ionic adsorption clay ('IAC') Project, **which has achieved the highest ionic leaching recoveries in the globe using this form of test work.**

This work was completed by ANSTO to study optimal reagent selection and operating conditions for the Colossus Project which provides the lowest OPEX and CAPEX solution without compromising on recoveries.

The Bulk Sample was formed using 40kg of clay material from Northern Concessions, which consisted of 36 samples from 6 drill holes spanning across ~5km distance, with ~85% of the Bulk Sample material coming from diamond cores, which were previously untested metallurgically in the earlier Northern Concession Bulk Sample[2].

A standard AMSUL desorption test (0.5M, pH4, room temp, 30-minute leach cycle) achieved the **highest ionic MREO (Nd, Pr, Dy, Tb) bulk sample recoveries in the globe of 75%:**

- **Recovery of Nd+Pr was 76%**
- **Recovery of Dy+Tb was 65%**

Furthermore, this test work has made significant breakthroughs in the economic implications of the Colossus Project, which shows great optionality in reagent selection and potential operational conditions – including the use of $1/5^{th}$ of AMSUL consumption, simplified impurity removal, optimised leach time and significant basket values.

Metallurgy Testing Program

The Northern Concessions (NC) bulk composite consisted of 36 samples totalling 40kg, with the majority (~85%) of the material sourced from diamond core sections that had previously been untested for ionic desorption in the last Northern Concessions bulk composite[2].

Samples were taken across a ~5km strike through the Northern Concessions (147Mt @ 2,516ppm TREO and 642ppm MREO)[1]. These samples were shipped to ANSTO, where they were dried and homogenised into a bulk composite.

Portions of the bulk composite were split for diagnostic leach tests and head assays. ALS Brisbane took three 50g sub-samples and tested them for head assays (ICMPS). The average of these three results (as seen in Table 2 below) was used to determine the overall head assay for the Bulk Composite.

For each diagnostic leach test (taken under the conditions provided in Table 1), 80g sub-samples were split and tested under a 4% S/L ratio with ambient room temperature (~22ºC). The final liquor was assayed using ICP-MS for rare earth elements ('REEs') by ALS Brisbane and ICP-OES for assaying impurities by ANSTO.

Results

Head Assay Data

The Northern Concessions' 40kg bulk composite test completed by ANSTO had 3 random sub-samples prepared from it to test for head assay data, which returned an average of **4,472ppm TREO** and **1,420ppm MREO.** A full breakdown of REE head-grade assays for the Northern Concessions' (NC) bulk composite is provided below**:**

	Northern Concessions Comp. Sample 1A	Northern Concessions Comp. Sample 1B	Northern Concessions Comp. Sample 1C	Northern Concessions Composite Average
CeO2	865	681	705	750
Dy2O3	49	49	49	49
Tb4O7	10	10	10	10
Er2O3	22	22	22	22
Eu2O3	31	30	30	30
Gd2O3	84	83	82	83
Ho2O3	9	9	9	9
La2O3	1,706	1,677	1,695	1,693
Lu2O3	2	2	2	2
Nd2O3	1,059	1,042	1,031	1,044
Pr6O11	320	315	315	317
Sm2O3	130	131	132	131
Tm2O3	3	3	3	3
Y2O3	316	316	311	315
Yb2O3	15	14	15	15
TREO	4,623	4,384	4,410	**4,472**
MREO	1,439	1,416	1,405	**1,420**
MREO %	31%	32%	32%	**32%**

Table 2: *Head Assay data for each sub-sample taken from the master bulk composite to form an overall representative average of the Northern Concessions master composite grades.*

MREO = Sum of Nd, Pr, Dy, Tb Oxides

MREO % = MREO/TREO

Metallurgical Recovery Data

Numerous metallurgical tests were completed under different conditions with variables in reagent choice, pH level, reagent concentration, and leaching time. This multi-variate testing has made a significant breakthrough in the metallurgical characteristics of the Northern Concessions, drastically improving the economic implication and potential of the Colossus Project in terms of both CAPEX, OPEX and basket value. Highlights of this testing are provided below:

	Testing Conditions					Recoveries - %					Impurities and Radionuclides - ppm				
Test No.	Reagent	Concentration	pH	Temperature	Duration	Nd	Pr	Dy	Tb	MREO	Al	Ca	Fe	U	Th
1	(NH4)2SO4	0.5M	4	Ambient	0.5 hr	76	74	64	66	**75**	11	7	< 1	0.04	0
2	(NH4)2SO4	0.3M	4	Ambient	0.5 hr	74	72	62	63	**73**	11	7	< 1	0.04	<0.01
3	(NH4)2SO4	0.3M	4.5	Ambient	0.5 hr	74	71	64	66	**73**	9	7	< 1	0.03	<0.01
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5	(NH4)2SO4	0.1M	4.5	Ambient	0.5 hr	74	71	60	63	**73**	8	7	< 2	0.02	<0.01
6	(NH4)2SO4	0.1M	4.5	Ambient	1 hr	73	70	60	63	**72**	8	7	< 1	0.02	<0.01
7	MgSO4	0.3M	4	Ambient	0.5 hr	75	74	64	66	**74**	11	10	< 1	0.04	<0.01
8	MgSO4	0.3M	4.5	Ambient	0.5 hr	78	74	63	66	**76**	8	11	< 1	0.03	<0.01
9	MgSO4	0.3M	4.5	Ambient	1hr	75	73	62	66	**74**	9	11	< 1	0.03	<0.01

Table 1: *Ionic recoveries and residual impurities within leached solution under different reagents and conditions for Northern Concessions (NC) Bulk Composite. Note MREO = Nd, Pr, Dy, Tb.*

Metallurgical Breakthroughs

ANSTO has made significant metallurgical breakthroughs in the diagnostic leaching characteristics of the high-grade Northern Concessions ore, which displays tremendous potential for a lower OPEX and CAPEX operation at the Colossus Project.

1. pH level

Between Test No. 2 and Test No. 3 within Table 1, the key variable change was raising the pH level from 4 to 4.5 while all other key variables remained static (0.3M AMSUL with 30-minute leach cycle Contrary to the majority of Rare Earth Projects globally, whereby raising the pH generally leads to lower recoveries, Colossus has shown better recoveries at a higher 4.5 pH over a 4 pH – in particular between test No. 2 and No. 3 there is a distinct jump in Terbium recoveries through increasing the pH level.

Similarly, between Test No. 7 and Test No. 8, using MAGSUL as the reagent, all key variables were kept equal and only the pH level was raised which resulted in the better MREO recoveries of 76%.

The raising of pH has also led to lower impurities being recovered into the leach solution, with higher levels of MREO being recovered, providing an overall purer and higher value product. Furthermore, having a higher pH for leaching will support lower reagent consumption in the downstream impurity removal operation while simultaneously also having to remove less impurities from the solution.

This breakthrough essentially leads to less reagent consumption, a purer product, and a less intensive impurity removal stage, which shows the potential for Colossus to be a lower-cost-intensive and high-value operation.

2. Leaching Reagent Concentration

Between Test No. 1 and Test No. 5 within Table 1, the key variable change was raising the pH level from 4 to 4.5 while also reducing the concentration from 0.5M AMSUL to 0.1M AMSUL.

This is an outstanding outcome, which shows even at a higher pH level and reducing the AMSUL concentration to 1/5th of that used in a standard AMSUL test (Test No. 1), the MREO recoveries only fall by a mere 2%.

This implies that the Northern Concession ore can be ionically recovered by consuming only 1/5th of the AMSUL than other ionic clay peers. This reduces downstream reagent consumption (through using a pH of 4.5) while still maintaining significantly high overall MREO recoveries.

3. Leach Times

Between Test No. 5 and Test No. 6 within Table 1, the only variable change was raising the leaching time from 0.5 hr to 1 hr, while all other key variables remained static (0.1M AMSUL with pH 4.5).

This test shows no added benefit to increasing the leaching cycle, which means Colossus can maintain a short leaching time of 0.5 hr and provide better operational throughputs with short leaching cycles.

Similarly, between Test No. 3 and No. 4, the only key variable changed was increasing the leaching time to 1 hr, which resulted in no additional recoveries. Also, comparing Test No. 8 and No. 9 using MAGSUL, the 0.5-hr leach cycle showed better recoveries and lower impurities than a 1-hr cycle.

4. Low Impurities

Within Test No 5. in Table 1, the 0.1M AMSUL, pH 4.5, 30-minute leach cycle shows minor recoveries of low-value elements such as Cerium while maintaining high recoveries of MREO (Nd, Pr, Dy, Tb). Furthermore, the leached solution also shows incredibly low levels of impurities, consisting of 8ppm Aluminium (0.0008%) and 7ppm Calcium (0.0007%), while maintaining negligible amounts of radioactive elements of Thorium and Uranium.

This breakthrough shows that the ore at Northern Concessions can maintain a higher pH without compromising MREO recoveries while simultaneously reducing overall impurities that need to be removed in downstream unit operations. Due to a higher starting pH within the leaching step, this requires lower raw material consumption in impurity removal step, suggesting a uniquely low OPEX and CAPEX operation.

5. Optionality

Between Test No. 1 and Test No. 8 within Table 1, the reagent was changed all together. Both tests resulted in the similar overall average MREO recovery (Nd, Pr, Dy, Tb) of 75% and 76% respectively. However, this breakthrough provides Colossus with great optionality in reagent selection based on market prices.

Test No. 8 shows the ore is amendable to desorption with magnesium sulphate (MAGSUL) at a lower concentration and higher pH, which leads to potentially a reduction in reagent consumption and fewer impurities compared to the industry standard AMSUL test (0.5M $(NH_4)_2SO_4$, pH4, 0.5hr cycle).

Furthermore, as detailed above, Test No. 5 shows the ore to be amendable to desorption using 1/5th of the AMSUL at a higher pH and presents the lowest level of impurities while retaining near identical MREO recoveries.

These results provide Northern Concessions with excellent processing options for reducing OPEX and CAPEX, insuring against raw material price fluctuations through alternate reagents and concentrations, and maintaining operational efficiencies.

6. Basket Value

The composite at Northern Concessions assayed an average of 4,472ppm TREO with an outstanding 1,420ppm MREO (Nd, Pr, Dy, Tb). More importantly, all tests have shown significant recoveries of the MREO into the leached solution with low recoveries of Cerium.

The recovered distribution of Rare Earth Oxides suggests a superior basket value from testing so far. The basket value from these tests implies a high-value distribution of MREOs, which will provide a robust foundation for moving into precipitation steps. The key focus will be minimising any MREO losses to maintain the current basket values achieved.

The tables below provide further detail on individual REE recoveries for Test 1 (AMSUL, 0.5M, pH4, 0.5hr leach time) and Test 5 (AMSUL, 0.1M, pH4.5, 0.5hr leach time). The price assumptions used to calculate the current theoretical basket value for the leaching tests were taken from Asian Metals, dated 30 June 2024[C].

[C] https://www.asianmetal.com/RareEarthsPrice/RareEarths.html

Test Number 1: 0.5M AMSUL, pH4, 0.5 hr

	Head Assay (ppm)	Recovery (%)	Ionically recovered REO (ppm)	Spot Price Assumption ($/kg)	Theoretical Basket Value Distribution
	Composite Average	0.5M (NH4)2SO4 pH4 for 0.5hr			
CeO2	750	9	71	$1.00	$0.03
Dy2O3	49	64	31	$252.39	$2.97
Tb4O7	10	66	7	$739.28	$1.89
Er2O3	22	58	13	$42.64	$0.20
Eu2O3	30	74	23	$26.82	$0.23
Gd2O3	83	70	58	$22.69	$0.49
Ho2O3	9	62	6	$67.39	$0.14
La2O3	1,693	73	1,240	$0.55	$0.26
Lu2O3	2	50	1	$763.35	$0.30
Nd2O3	1,044	76	798	$51.03	$15.28
Pr6O11	317	74	234	$51.03	$4.47
Sm2O3	131	68	89	$2.06	$0.07
Tm2O3	3	60	2	$0.01	$0.00
Y2O3	315	63	197	$5.91	$0.44
Yb2O3	15	52	8	$13.75	$0.04
TREO	**4,472**	**62**	**2,776**		**$26.81/kg**
MREO	**1,420**	**75**	**1,070**		
MREO %	**32%**		**39%**		

Table 3: *Individual Rare Earth Element assays, recovery rates and final distribution in the leaching process for Test 1 – Standard Ammonium Sulfate, 0.5M, pH4, 30-minute leach. The subsequent basket value of the leaching step was calculated using prices on Asian Metals dated 30 June 2024. MREO = Nd, Pr, Dy, Tb Oxides.*

Test Number 5: 0.1M AMSUL, pH4.5, 0.5hr

	Head Assay (ppm)	Recovery (%)	Ionically recovered REO (ppm)	Spot Price Assumption ($/kg)	Theoretical Basket Value Distribution
	Composite Average	0.1M (NH4)2SO4 pH4.5 for 0.5hr			
CeO2	750	9	68	1	$0.03
Dy2O3	49	60	29	252	$2.77
Tb4O7	10	63	7	739	$1.82
Er2O3	22	53	12	43	$0.19
Eu2O3	30	72	22	27	$0.22
Gd2O3	83	65	54	23	$0.46
Ho2O3	9	56	5	67	$0.13
La2O3	1,693	70	1,189	1	$0.25
Lu2O3	2	50	1	763	$0.30
Nd2O3	1,044	74	774	51	$14.81
Pr6O11	317	71	224	51	$4.29
Sm2O3	131	64	84	2	$0.07
Tm2O3	3	50	1	0	$0.00
Y2O3	315	60	189	6	$0.42
Yb2O3	15	47	7	14	$0.04
TREO	**4,472**	**60**	**2,666**		**$25.78/kg**
MREO	**1,420**	**73**	**1,034**		
MREO %	**32%**		**39%**		

Table 4: *Individual Rare Earth Element assays, recovery rates and final distribution in the leaching process for Test 5 – Ammonium Sulfate, 0.1M, pH4.5, 30-minute leach. The subsequent basket value of the leaching step was calculated using prices on Asian Metals dated 30 June 2024. MREO = Nd, Pr, Dy, Tb Oxides.*

Test Number 5 uses 1/5th of the AMSUL at a higher pH level, contains extremely low impurities, and provides a substantially high basket value of $25.78/kg TREO. In comparison to the standard AMSUL leach in Test Number 1, this methodology in Test Number 5 poses numerous cost benefits while only reducing the overall basket value of recovered Rare Earths by $1.03/kg. Overall MREO recoveries in both Test Number 1 and Number 5 are outstanding at 75% and 73% respectively.

Furthermore, the overall recovered MREO in Test Number 5 is only 36ppm less than that of Test Number 1, implying that the potential production profile of MREO remains near identical while consuming far fewer raw materials.

These tests exemplify the numerous unique advantages hosted within the composition and metallurgy of the Northern Concessions ore.

The breakthrough results by ANSTO will underpin a critical component to be fed into the Scoping Study, which will evaluate all options in reagent selection that aims to place Colossus at a unique position, with substantially low OPEX and CAPEX while maintaining a significantly high basket value.

This marks the first successful phase of ANSTO's metallurgical work to produce a final high-value MREC. The work program will now move towards slurry leach testing, impurity removal, MREC precipitation, and lifecycle flowsheet studies. The key priority in the subsequent stages will be minimising any MREO losses and producing a final MREC basket value that is reflective of the current robust baskets shown in Tables 3 and 4.

In parallel, Viridis aims to continue its program with ANSTO for further leach tests at Cupim South Extension, which will be reported in the near future upon completion.

Comparison

Project	Bulk Composite	Head Grade (TREO, ppm)	MREO (ppm)	Average Nd & Pr Recovery	Average Dy & Tb Recovery	Overall MREO Recovery	Leaching Agent	Concentration	pH	Temperature	Holes used for Composite	No. Samples	Lab	Reference
Northern Concessions	1	4,984	1,594	63%	65%	64%	Ammonia Sulfate	0.5M	4	Room	FZ-AG-26, FZ-AG-29, FZ-AG-33, FZ-AG-53, FZ-AG-54, FZ-AG-88, CJ-AG-19, CJ-AG-24, CJ-AG- 28, CDP-AG-01, CDP-AG-03, CDP-AG-34	29	SGS	*Ann. 18/04/2024*
Northern Concessions	**2**	**4,472**	**1,420**	**76%**	**65%**	**75%**	**Ammonia Sulfate**	**0.5M**	**4**	**Room**	**CDP-DDH-10, CDP-DDH-08, FZ-DDH-06, CJ-DDH-02, FZ-AG-33, FZ-AG-26**	**36**	**ANSTO**	***This announcement***
Northern Concessions	**2**	**4,472**	**1,420**	**73%**	**60%**	**73%**	**Ammonia Sulfate**	**0.1M**	**4.5**	**Room**	**CDP-DDH-10, CDP-DDH-08, FZ-DDH-06, CJ-DDH-02, FZ-AG-33, FZ-AG-26**	**36**	**ANSTO**	***This announcement***

***Table 5:** Comparison of Ionic leaching recoveries between the initial bulk composite from auger drilling and second bulk composite at Northern Concessions with optimised recoveries by ANSTO, which will be used for full flowsheet test work and MREC production[2].*

MREO = Nd, Pr, Dy, Tb.

The comparison in Table 5 shows the significant improvements made by Viridis on Northern Concessions, with tests from diamond drills all returning materially better recoveries for MREOs, even when consuming 1/5th of the Ammonia Sulfate and raising the pH levels.

Using **0.5M AMSUL, pH4, 30min leach –** Viridis has shown a **17% improvement in MREO recoveries** within this bulk composite.

Using **0.1M AMSUL, pH4.5**, **30min leach –** Viridis has shown a **14% improvement in MREO recoveries** within this bulk composite.

In comparison with the previous bulk composite, the new composite, which will be thoroughly tested through the entire flowsheet, has already presented a substantial improvement in MREO recoveries using the same conditions. Furthermore, the numerous testing conditions have made breakthroughs in the Company's understanding of the unique characteristics of the Northern Concessions ore, which can be effectively recovered using a higher pH, short leaching cycle and lower concentrations of reagents – presenting a robust low OPEX and CAPEX operation.

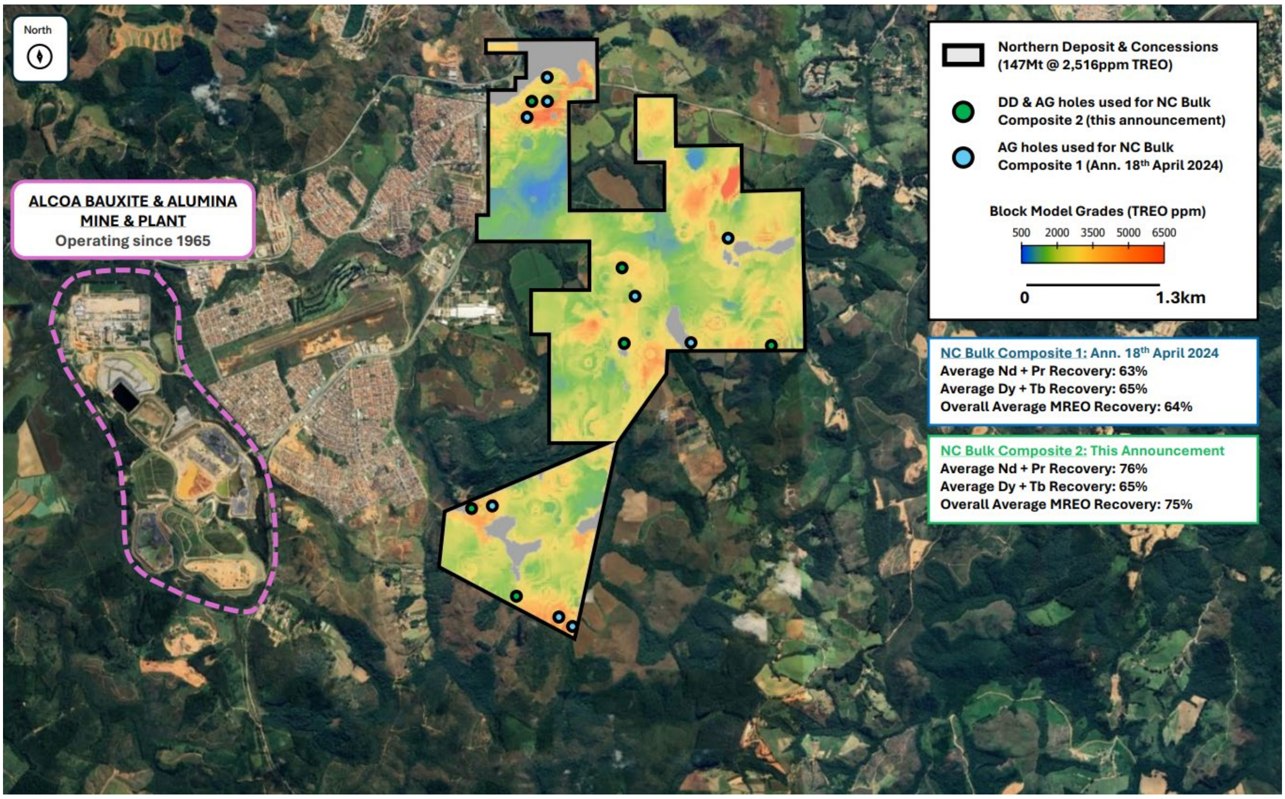

Figure 1: *Northern Concessions Bulk Sample Location Map[2].*

Future Work

On the metallurgical front, the scope with ANSTO will continue to determine optimal conditions for key processing aspects of the flowsheet. In parallel, infill drilling at Cupim South Extensions remains on track and will support an updated resource estimate in Q4-2024. Finally, Viridis looks forward to completing its Scoping Study in the coming months and continuing its critical permitting activities.

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

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About Viridis Mining and Minerals

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

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

Maiden Mineral Resource Estimate

Colossus Project Maiden Resource Estimate at 1,000pm Cut-Off

Category	License	Million Tonnes (Mt)	TREO (ppm)	Pr6O11 (ppm)	Nd2O3 (ppm)	Tb4O7 (ppm)	Dy2O3 (ppm)	MREO (ppm)	MREO/TREO
Indicated	Northern Concessions (NC)	50	2,511	145	441	5	25	616	25%
	Cupim South (CS)	10	3,014	204	612	6	31	853	28%
	Capao Da Onca (CDO)	2	2,481	152	414	4	22	592	24%
	Indicated Sub-Total	**62**	**2,590**	**154**	**467**	**5**	**26**	**653**	**25%**
Inferred	Northern Concessions (NC)	97	2,519	151	473	5	26	656	26%
	Cupim South (CS)	18	3,087	199	620	6	34	859	28%
	Ribeirao (RA)	19	2,544	159	455	4	24	642	25%
	Capao Da Onca (CDO)	5	2,393	132	358	4	22	517	22%
	Inferred Sub-Total	**139**	**2,591**	**158**	**486**	**5**	**27**	**675**	**26%**
GLOBAL RESOURCE (INDICATED & INFERRED)		**201**	**2,590**	**157**	**480**	**5**	**27**	**668**	**26%**

Table 6: *Maiden Mineral Resource Estimate for Colossus REE Project using 1,000ppm TREO Cut-Off Grade. The resource model excludes leached/soil clays, transitional horizon and material under 300ppm MREO[1].*

Competent Person Statement

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

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

Forward-Looking Statements

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

References

1. *VMM announcement dated 4 June 2024 'Globally Significant Maiden MRE for Colossus IAC Project'*
2. *VMM announcement dated 18 April 2024 'Colossus Achieves Highest Overall Bulk Ionic Recoveries'*

APPENDIX A: SAMPLES USED

Hole ID	Sample ID	From	To	Concession	EAST	NORTH
FZ-AG-0033	FZ-AG-33-11	10.00	11.00	Fazenda	342196.87	7583603.63
FZ-AG-0033	FZ-AG-33-12	11.00	12.00	Fazenda	342196.87	7583603.63
FZ-AG-0033	FZ-AG-33-13	12.00	13.00	Fazenda	342196.87	7583603.63
FZ-AG-0033	FZ-AG-33-14	13.00	14.00	Fazenda	342196.87	7583603.63
FZ-AG-0033	FZ-AG-33-15	14.00	15.00	Fazenda	342196.87	7583603.63
FZ-AG-0026	FZ-AG-26-5	4.00	5.00	Fazenda	340800.18	7583602.58
FZ-AG-0026	FZ-AG-26-6	5.00	6.00	Fazenda	340800.18	7583602.58
FZ-AG-0026	FZ-AG-26-7	6.00	7.00	Fazenda	340800.18	7583602.58
FZ-AG-0026	FZ-AG-26-8	7.00	8.00	Fazenda	340800.18	7583602.58
FZ-DDH-0006	FZ-DDH-006-028	22.69	23.69	Fazenda	340673.14	7584366.98
FZ-DDH-0006	FZ-DDH-006-029	23.69	24.69	Fazenda	340673.14	7584366.98
FZ-DDH-0006	FZ-DDH-006-030	24.69	26.04	Fazenda	340673.14	7584366.98
FZ-DDH-0006	FZ-DDH-006-032	26.04	27.04	Fazenda	340673.14	7584366.98
FZ-DDH-0006	FZ-DDH-006-033	27.04	28.04	Fazenda	340673.14	7584366.98
FZ-DDH-0006	FZ-DDH-006-034	28.04	29.04	Fazenda	340673.14	7584366.98
FZ-DDH-0006	FZ-DDH-006-035	29.04	29.54	Fazenda	340673.14	7584366.98
FZ-DDH-0006	FZ-DDH-006-036	29.54	30.54	Fazenda	340673.14	7584366.98
FZ-DDH-0006	FZ-DDH-006-037	30.54	31.98	Fazenda	340673.14	7584366.98
FZ-DDH-0006	FZ-DDH-006-038	31.98	32.49	Fazenda	340673.14	7584366.98
FZ-DDH-0006	FZ-DDH-006-039	32.49	33.30	Fazenda	340673.14	7584366.98
FZ-DDH-0006	FZ-DDH-006-041	33.30	34.30	Fazenda	340673.14	7584366.98
CJ-DDH-0002	CJ-DDH-002-025	23.32	24.32	Carijo	339870.92	7585996.46
CJ-DDH-0002	CJ-DDH-002-026	24.32	25.07	Carijo	339870.92	7585996.46
CDP-DDH-0010	CDP-DDH-010-010	6.06	6.70	Caminho das Pedras	339296.27	7581953.48
CDP-DDH-0010	CDP-DDH-010-011	6.70	7.70	Caminho das Pedras	339296.27	7581953.48
CDP-DDH-0010	CDP-DDH-010-012	7.70	8.70	Caminho das Pedras	339296.27	7581953.48
CDP-DDH-0010	CDP-DDH-010-015	9.32	10.49	Caminho das Pedras	339296.27	7581953.48
CDP-DDH-0010	CDP-DDH-010-016	10.49	11.49	Caminho das Pedras	339296.27	7581953.48
CDP-DDH-0010	CDP-DDH-010-017	11.49	12.76	Caminho das Pedras	339296.27	7581953.48
CDP-DDH-0010	CDP-DDH-010-018	12.76	13.76	Caminho das Pedras	339296.27	7581953.48
CDP-DDH-0010	CDP-DDH-010-020	15.25	16.25	Caminho das Pedras	339296.27	7581953.48
CDP-DDH-0008	CDP-DDH-008-015	11.71	12.71	Caminho das Pedras	339738.62	7581211.03
CDP-DDH-0008	CDP-DDH-008-016	12.71	13.71	Caminho das Pedras	339738.62	7581211.03
CDP-DDH-0008	CDP-DDH-008-018	13.71	14.71	Caminho das Pedras	339738.62	7581211.03
CDP-DDH-0008	CDP-DDH-008-019	14.71	15.71	Caminho das Pedras	339738.62	7581211.03
CDP-DDH-0008	CDP-DDH-008-020	15.71	16.71	Caminho das Pedras	339738.62	7581211.03

Appendix B: 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.*	*The samples used for the bulk composite were taken using a powered auger drill machine (open hole), and a diamond drill machine.* ***Auger drill holes:*** • *Each drill site was cleaned, removing leaves and roots from the surface. Tarps were placed on either side of the hole, and samples of soil and saprolite were collected every 1m in advance. They were logged, photographed, and subsequently bagged in plastic bags, and each sample was identified.* ***Diamond drill holes:*** • *The intact drill cores are collected in plastic core trays, and depth markers record the depth at the end of each drill run (blocks).* • *Samples were collected at 1m intervals. In the unconsolidated zone, the core was halved with a metal spatula and bagged in plastic bags, while a powered SA halved the fresh rock, bagged, and each sample was identified.*
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).*	***Powered Auger:*** • *Powered auger drilling employed a motorised post-hole digger with a 2 to 4-inch diameter. All holes were drilled vertically. The maximum depth achieved was 20 meters, the minimum was 2 meters, and the average was 9 meters, providing the hole did not encounter fragments of rocks/boulders within the weathered profile and/or excessive water. Final depths were recorded according to the length of rods in the hole.* ***Diamond Core:*** • *Diamond drilling was conducted vertically and sampled generally at intervals of 1.0m using a Maquesonda MACH 1210 Machine. The drilling used an HWL diamond core of 3.06-inch diameter in the unconsolidated portion, switching to an HQ diamond core 2.63 inches from the depth transitional zone. Drilling within each hole was conducted by the diamond core rig and terminated upon intercepting between 2 to 5 meters of hard-rock material, indicative of penetration into the fresh rock. Diamond drilling was predominantly used non-systematic to gain further lithological understanding and test high-priority auger 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.*	***Auger sample recovery:*** • *Estimated visually based on the sample recovered per 1m interval drilled. Recoveries generally ranged from 75% to 110%. If estimates dropped below 75% recovery in a 1m interval, the field crew aborted the drill hole and redrilled the hole.* ***Diamond drill hole recovery:*** • *Calculated after each run, comparing the length of core recovery vs. drill depth. Overall core recoveries are 97.4%, achieving 96.5% in the regolith target horizon, 98.1% in the transition zone (saprolite), and 99.4% in fresh rock.*
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.*	*Geological descriptions are made using a tablet with the MX Deposit system, which directly connects the geological descriptions to the database in the MX Deposit system managed by the Viridis geologist team.* ***Auger drilling:*** • *Material is described in a drilling bulletin every 1m and photographed. The description is made according to tactile-visual*

Criteria	JORC Code explanation	Commentary
	• *The total length and percentage of the relevant intersections logged.*	*characteristics, such as material (soil, colluvium, saprolite, rock fragments), material colour, predominant particle size, presence of moisture, indicator minerals, and extra observations.* • *The chip trays of all drilled holes have a digital photographic record and are retained at the core facility in Pocos de Caldas.* ***Diamond drilling:*** • *Geological descriptions are made in a core facility, focused on the soil (humic) horizon, saprolite, transition zone, and fresh rock boundaries. The geological depth is honoured and described with downhole depth (not meter by meter). Parameters logged include grain size, texture, colour, mineralogy, magnetism, type of alterations (hydrothermal or weathering) and type of lithologic contact, which can help to identify the parent rock before weathering.* • *All drill holes are photographed and stored at the core facility in Pocos de Caldas.*
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 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.*	*The bulk sample composite was formed from the composition of 36 samples taken from 6 drill holes, including 4 DDH and 2 auger holes. The weight of each sample ranged from 200g to 2.5kg, with an average weight of 1.2kg per sample. This homogenization process was carried out at the ANSTO laboratory.* ***Powdered Auger Drilling:*** • *Collection and Labeling: Samples of regolith, and saprolite were collected at 1m intervals, placed into clear plastic bags, sealed, and labelled.* • *Weighing and Lab Analysis: The samples were weighed and sent to SGS Geosol for analysis.* • *Sample Preparation (PRP102_E): Upon arrival at the lab, samples were dried at 105°C, crushed to 75% less than 3 mm, homogenised, and passed through a Jones riffle splitter.* ***Diamond Core Drilling:*** • *Collection and Labeling: Samples of diamond cores were taken at 0.5 to 1m intervals from regolith and saprolite. The cores were split longitudinally using a spatula for unconsolidated portions, and a rock-cutting saw for hard rock. The samples were placed in labelled plastic bags and sent to ANSTO Laboratory in Australia.* ***ANSTO*** *The Bulk composite was dried at 60°C, homogenised and crushed to <1 mm to ensure sample representativity in subsequent sub-sampling.* *Portions of the bulk composite were split for diagnostic leach tests and head assays. ALS Brisbane took three 50g sub-samples and tested them for head assays (ICMPS). The average of these three results was used to determine the overall head assay for the Bulk Composite.* *For each diagnostic leach test, 80g sub-samples were split and tested under a 4% S/L ratio with ambient room temperature (~22ºC). The final liquor was assayed using ICP-MS for rare earth elements ('REEs') by ALS Brisbane and ICP-OES for assaying impurities by ANSTO.*
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.*	*The leaching test were conducted under the different following conditions:* • *Utilization of 0.5M – 0.1M $(NH_4)_2SO_4$ as lixiviant;* • *Utilization of 0.3M $MgSO_4$ as lixiviant;* • *pH maintained at 4 – 4.5;* • *Duration of 1.0 - 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*

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
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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.

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Verification of sampling and assaying

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- *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.*

</td><td>

- *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.*

<table>
<tr><th>Element</th><th>Oxide</th><th>Factor</th></tr>
<tr><td>Ce</td><td>CeO_2</td><td>1.2284</td></tr>
<tr><td>La</td><td>La_2O_3</td><td>1.1728</td></tr>
<tr><td>Sm</td><td>Sm_2O_3</td><td>1.1596</td></tr>
<tr><td>Nd</td><td>Nd_2O_3</td><td>1.1664</td></tr>
<tr><td>Pr</td><td>Pr_6O_{11}</td><td>1.2082</td></tr>
<tr><td>Dy</td><td>Dy_2O_3</td><td>1.1477</td></tr>
<tr><td>Eu</td><td>Eu_2O_3</td><td>1.1579</td></tr>
<tr><td>Y</td><td>Y_2O_3</td><td>1.2699</td></tr>
<tr><td>Tb</td><td>Tb_4O_7</td><td>1.1762</td></tr>
<tr><td>Gd</td><td>Gd_2O_3</td><td>1.1526</td></tr>
<tr><td>Ho</td><td>Ho_2O_3</td><td>1.1455</td></tr>
<tr><td>Er</td><td>Er_2O_3</td><td>1.1435</td></tr>
<tr><td>Tm</td><td>Tm_2O_3</td><td>1.1421</td></tr>
<tr><td>Yb</td><td>Yb_2O_3</td><td>1.1387</td></tr>
<tr><td>Lu</td><td>Lu_2O_3</td><td>1.1371</td></tr>
</table>

- *The TREO (Total Rare Earth Oxides) was determined by the sum of the following oxides: CeO_2, Dy_2O_3, Er_2O_3, Eu_2O_3, Gd_2O_3, Ho_2O_3, La_2O_3, Lu_2O_3, Nd_2O_3, Pr_6O_{11}, Sm_2O_3, Tb_4O_7, Tm_2O_3, Y_2O_3, Yb_2O_3. For the MREO (Magnetic Rare Earth Oxides), the following oxides were considered: Dy_2O_3, Nd_2O_3, Pr_6O_{11}, and Tb_4O_7.*

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Location of data points

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- *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.*

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Diamond and auger collars

- *The positioning of the drill has been achieved with high precision using a GPS RTK (Real-Time Kinematic) system CHC i73. This sophisticated GPS provides real-time corrections. The horizontal accuracy in RTK is 8 mm + 1 ppm RMS, and the Vertical accuracy is 15 mm + 1 ppm RMS, with a startup time of under 10 seconds and a Startup Reliability greater than 99.9%. The project's grid system is based on the SIRGAS 2000 UTM coordinate system. This universal grid system facilitates consistent data interpretation and integration with other geospatial datasets.*
- *Benchmark and control points were established within the project*

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</table>

Criteria	JORC Code explanation	Commentary
		area to ensure the quality and reliability of the topographic location data.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution are sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• *The auger drilling was conducted on a regular grid with 200 x 200 metres spacing. This grid spacing provides a detailed exploration framework suitable for the area of interest. It aims to assist in defining our initial resource and offer a foundational understanding of the geological and grade continuity in the targeted zone.* • *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.* • *The sampling intervals for each drill hole are indicated in Appendix A.*
Orientation of data about geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of crucial mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• *All drill holes were vertically oriented, which is deemed appropriate given the nature of the deposit. The deposit in question is a supergene deposit with a much larger areal extent than the thickness of the mineralised body. This type of deposit tends to be horizontally extensive with relatively consistent thickness.* • *Given the vast area extent of the deposit and its relatively consistent thickness, vertical drilling is best suited to achieve unbiased sampling. This orientation allows for consistent intersecting of the horizontal mineralised zones and provides a representative view of the overall geology and mineralisation.* • *There is no indication that drilling orientation has introduced any sampling bias about the crucial mineralised structures. The drilling orientation aligns well with the deposit's known geology, ensuring accurate representation and unbiased sampling of the mineralised zones. Any potential bias due to drilling orientation is considered negligible in this context.*
Sample security	• *The measures taken to ensure sample security.*	• *All samples were collected by field personnel and carefully packed in labelled plastic bags. Once packaged, the samples were transported directly to the SGS-GEOSOL or ANSTO laboratories. The samples were secured during transportation to ensure no tampering, contamination, or loss. Chain of custody was maintained from the field to the laboratory, with proper documentation accompanying each batch of samples to ensure transparency and traceability of the entire sampling process. Using a reputable laboratory further reinforces the sample security and integrity of the assay results.*
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• *As of the current reporting date, no external audits or reviews have been conducted on the sampling techniques, assay data, or results obtained from this work. However, internal processes and checks were carried out consistently to ensure the quality and reliability of the data.*

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership, including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• *All samples were acquired from tenements owned by Viridis Mining and Minerals Ltd, following an agreement from the Varginha Parties. Specifically:* *Fazenda Prospect:* • *ANM 009.031/1966* *Area: 446.66 hectares* *Status: Mining Licence* *Location: Northen Concessions* *Caminho das Pedras Prospect:* • *ANM 007.737/1959* *Area: 182.71 hectares* *Status: Mining Licence* *Location: Northen Concessions* *Carijo Prospect:* • *ANM 830.113/2006* *Area: 137.36 hectares* *Status: Mining Application* *Location: Northen Concessions*
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,*

Criteria	JORC Code explanation	Commentary
		a thorough understanding and exploration of such geologies becomes paramount. The unique geological setting of the Poços de Caldas complex presents both opportunities and challenges, making further detailed study and research essential for sustainable exploitation.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results, including a tabulation of the following information for all Material drill holes:* ○ *Easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *Dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	*The list of drill holes and samples considered in this work can be found in Appendix A.* • *Diamond Drilling:* *Total number of holes: 4* • *Auger Drilling:* *Total number of holes: 2*
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*

Criteria	JORC Code explanation	Commentary
		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	• *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.*	• *On the metallurgical front, the scope with ANSTO will continue to determine optimal conditions for key processing aspects of the flowsheet. In parallel, infill drilling at Cupim South Extensions remains on track and will support an updated resource estimate in Q4-2024. Finally, Viridis looks forward to completing its Scoping Study in the coming months and continuing its critical permitting activities.*