ASX: VMM MARKET ANNOUNCEMENT

Maiden Mixed Rare Earth Carbonate ('MREC') Product from Southern Complex

Southern Complex MREC produced via a simple low-cost flowsheet, delivers industry-leading recoveries and lowest impurity product for an Ionic Adsorption Clay Project

ASX Release: 12 December 2024

Highlights

- **Delivery of Maiden Mixed Rare Earth Carbonate from Southern Complex presents outstanding results to position Colossus as a world-leading Ionic Adsorption Clay ('IAC') Project.**

- **Viridis engaged the Australian Nuclear Science and Technology Organisation ('ANSTO') to execute a detailed work program on a 41kg bulk sample from its Southern Complex (Cupim South and Centro Sul) to form ideal conditions in a practical flowsheet design that produces an MREC product from clay.**

- **ANSTO test work delivers the highest known recoveries for all the valuable Magnetic Rare Earth Oxides ('MREO')[A] in an MREC product, using a low-cost ammonia-based flowsheet with leaching performed at pH4.5, 0.3M Ammonia Sulphate ('AMSUL'), room temperature and 30-minute residence time.**

- **MREC precipitation from ore to the final product achieved exceptional MREO recoveries:**
  - **Recovery of Praseodymium (Pr): 77%**
  - **Recovery of Neodymium (Nd): 79%**
  - **Recovery of Dysprosium (Dy): 65%**
  - **Recovery of Terbium (Tb): 69%**
  - **OVERALL MREO RECOVERIES FROM ORE TO MREC: 78%**

- **58% Total Rare Earth Oxide ('TREO')[B] in the final MREC product, including MREO/TREO ratio of 38%. Southern Complex now demonstrates the ability to continue supporting a long-life operation without compromising basket value, recoveries or production profile, giving exceptional mine plan optionality.**

- **The superior proportion of MREOs in the MREC product delivers a premium and high-quality basket value, whereby MREOs account for 93% of the overall value in the MREC.**

- **Southern Complex MREC presents the lowest level of impurities globally known for a public IAC project of only ~0.7%, demonstrating a superior high-value product that will support meaningful discussions with offtake partners.**

- **The phenomenal results from this MREC production from both Northern Concessions and Southern Complex have Colossus on track to deliver a premium MREC product from multiple concessions supporting a long-life and high recovery operation, ranking Colossus amongst the leading rare earth projects globally in multiple aspects:**
  - Groundbreaking MREO recoveries (78%) from ore to MREC, with an exceptional 38% MREO/TREO ratio.

[A] Magnetic Rare Earth Oxides ('MREO'): $Dy_2O_3 + Nd_2O_3 + Pr_6O_{11} + Tb_4O_7$

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

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- Superior basket value based on a simple and low OPEX and CAPEX flowsheet, demonstrated using a higher pH (4.5) and 40% lower Concentration (0.3M), significantly reducing reagent usage.
- Low levels of radionuclides and gangue element impurities forming a superior MREC product.

Chief Executive Officer, Rafael Moreno commented:

"The Company is ecstatic with these best-in-class results, and more importantly, we have now executed critical de-risking metallurgical testing campaigns for both our Northern and Southern group of concessions, which is the foundation of the Company development strategy.

The extensive testing was completed to ensure we had all the appropriate data to build a robust flowsheet design, but coming out the other side with these industry-leading results has put Colossus firmly at the top of Rare Earth projects globally with a long-life, high-grade mine plan and exceptional recoveries.

Our exploration focus has always been to build a resource base with a high concentration of MREOs in our feed ore, and not to chase TREO, as we know the basket value is essentially only linked to the MREO/TREO ratio and hence so are the project economics. So, to achieve exemplary MREO recoveries of 78%, which maximises the MREO/TREO ratio in the MREC, with a flowsheet designed based on low cost, benign pH and readily available reagents, is a game changer in the rare earth space, and highlights why Colossus has the potential to re-set the cost curve.

Just as important as the high recoveries are the exceptionally low levels of radionuclides and gangue elements in our MREC product, which are an important catalyst for the ongoing offtake discussions.

The end of the MREC testing program is only one of several key near-term critical milestones for the Company, as we look forward to lodging the first of our three environmental permits, issuing an updated mineral resource estimate, and the much anticipated scoping study."

Figure 1: *Dry MREC final product from Southern Complex Bulk Sample*

Viridis Mining and Minerals Limited ('Viridis' or 'Company') is pleased to report the results of its maiden MREC metallurgical test work from Southern Complex, conducted on a 41kg bulk sample from Cupim South and Centro Sul, **which has achieved the highest recoveries of TREO and MREO in an MREC product, using this form of low-cost flowsheet as the basis for the test work along with the lowest levels of impurities.**

ANSTO completed numerous metallurgical tests under different conditions with variables in reagent choice and concentration, slurry density, pH level and residence time. The large array of test work has made a breakthrough in the metallurgical characteristics of the Southern Complex, **showing improved recoveries at a higher pH while reducing AMSUL consumption by 40%**, drastically improving the economic implications and potential of the Colossus Project in terms of both CAPEX / OPEX and basket value.

MREC Metallurgy Testing Program – Southern Complex

The test program conducted by ANSTO was based on a simple, low-cost, and proven flowsheet using the same reagent conditions as the Northern Concessions MREC, as presented in Figure 2. The objective of the scope was to identify the recovery profiles for the entirety of the initial mine plan at Northern Concessions ('NC') and Southern Complex ('SC') using the same plant. The flowsheet for both MREC products (NC, SC) aims to mimic the practical and anticipated production profile for Colossus while considering optimal conditions for desorption, target rare earth elements ('REE') recovery, reagent type and consumption, impurity dissolution, and potential impacts of these conditions on the effectiveness of impurity removal efficiency and product quality.

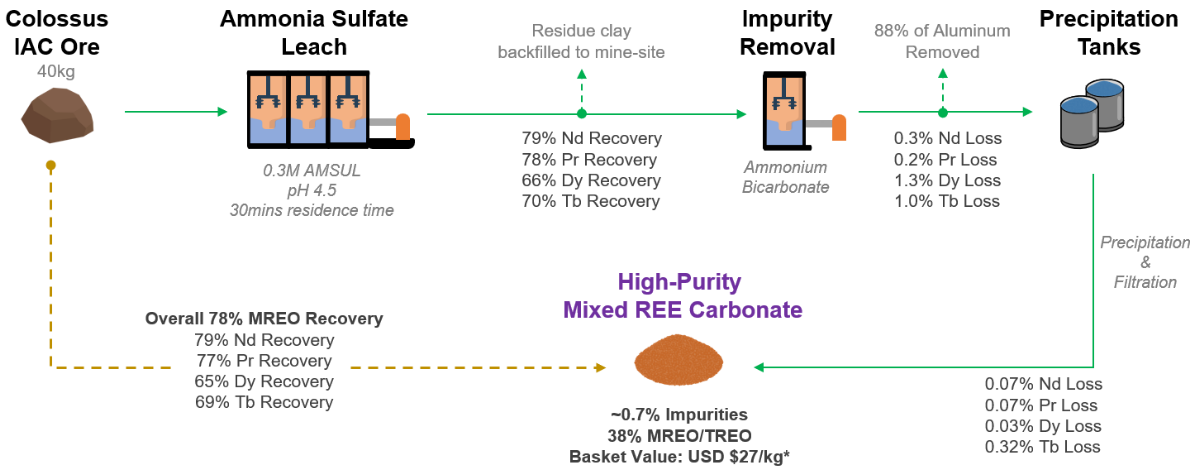

***Figure 2:** Simplified, low-cost, proven Process Flowsheet based on ANSTO's true ionic adsorption clay metallurgy. *Basket value based on Shanghai Metals Market prices dated 11th December 2024.*

With these results, Viridis has demonstrated exceptional recoveries from both ends of the Colossus Project, allowing optionality in the mine plan to provide high MREO grade feed over a long-life operation. This displays **the Southern Complex ability to support the continuation of the high MREO feed ore, without any compensation for basket value while improving recoveries (and production rate) and providing a lower impurity product.**

The initial diagnostic leach test program results were presented in the Company's announcement on 14 November 2024. They provided clear guidance on the robustness of the front end of the flowsheet design, with high recoveries recorded across all testing conditions, including exceptional recoveries using 40% less Ammonia Sulphate at a higher pH, in line with the Northern Concessions. All this demonstrates the superior OPEX present in leaching Colossus ore through significantly lowering reagent consumption without compromising MREO recoveries[1].

Since the Southern Complex Bulk Sample diagnostic leaching results[3], ANSTO has subsequently completed an exhaustive testing program looking at various leach slurry test conditions to confirm desorption efficiency at realistic production slurry densities for the Colossus plant design. The key losses of MREO in the Southern Complex MREC in comparison to the diagnostic leaching results was through increasing the slurry density, while **impurity removal, washing and precipitation steps recorded net losses of ~1% MREO**, which is an outstanding outcome.

The results exemplify the exceptional metallurgical characteristics of the Colossus ore, which appear unique to the Northern Concessions and Southern Complex. These results are groundbreaking in terms of Colossus' recoveries and flowsheet efficiency and firmly establish the Project as the premier REE development asset globally:

- Highest known MREO recoveries from Colossus Ore to final MREC:
  - 76% net MREO recovery for Northern Concessions
  - 78% net MREO recovery for Southern Complex
- Premium basket value and MREC product due to world-leading MREO contents:
  - ~39% MREO content in MREC for Northern Concessions
  - ~38% MREO content in MREC for Southern Complex
- Unparalleled leaching recoveries within practical flowsheet conditions for heavy Rare Earths (Dy, Tb):
  - 68% net recovery Dy-Tb for Northern Concessions
  - 66% net recovery Dy-Tb for Southern Complex
- World-leading impurity levels
  - ~1% impurity levels in MREC for Northern Concessions
  - ~0.7% impurity levels in MREC for Southern Complex
- MREC produced using a leaching agent of pH4.5 and 0.3M AMSUL, supporting reduced OPEX and lower reagent consumption compared to all peers.

Results

Southern Complex Head Assay Data

The Southern Complex 41kg bulk composite test completed by ANSTO had three random sub-samples prepared to test for head assay data. These returned an average of 4,561ppm TREO and 1,506ppm MREO[1] (Table 1), a testament to the overall higher MREO contents seen within the Colossus resource, leading to a more valuable MREC end-product.

Southern Complex Maiden MREC Final Results

The maiden MREC product at ANSTO delivered the highest known recoveries for all the valuable MREO (Nd, Pr, Dy, Tb) in an MREC product, using a low-cost ammonia-based flowsheet with leaching performed at pH4.5, 0.3M AMSUL, room temperature and a 30-minute residence time.

The impurity removal and MREC precipitation unit operations involve increasing the pH from 4.5 to 7.5 at room temperature and atmospheric pressure. These near-neutral, tight pH band and benign operating conditions have reduced the reagents required in the process design and support a very low OPEX operation. This is mainly due to the higher starting pH of 4.5 in the leaching step, which naturally leads to fewer impurities being desorbed into the solution while requiring fewer reagents to increase the pH for precipitation.

MREC precipitation from clay ore to the final MREC product achieved world-leading MREO recoveries of 78%, which is attributed to:

- **Recovery of Praseodymium (Pr): 77%**
- **Recovery of Neodymium (Nd): 79%**
- **Recovery of Dysprosium (Dy): 65%**
- **Recovery of Terbium (Tb): 69%**
- **Ore to MREC Net MREO Recovery: 78%**

Within the Southern Complex MREC, the MREC has an exceptional grade of 58% TREO (remainder being carbonate), with an even more impressive recovery of net recovery MREOs of 78%. This has led to the MREOs forming 38% of the TREO in the MREC, as shown in Table 1 below.

Most impressively, the table highlights that after the AMSUL leaching step, there are minimal losses of REEs throughout the entire flowsheet to produce a final saleable MREC product, which is groundbreaking.

Southern Complex	Head Assay (ppm)	Leaching Recovery (%)	MREC Recovery (%)	MREC TREO Composition	Spot Price Assumption (USD $/kg)	Basket Value Distribution
	Composite Average	0.3M $(NH_4)_2SO_4$ pH4.5 for 0.5hr	Ore to final MREC preciptation			
La_2O_3	1,806	78%	**78%**	48.2%	0.55	$0.27
CeO_2	645	3%	**3%**	0.6%	1.00	$0.01
Pr_6O_{11}	352	78%	**77%**	8.7%	58.67	$5.09
Nd_2O_3	1,094	79%	**79%**	27.9%	57.85	$16.12
Sm_2O_3	128	77%	**77%**	3.1%	2.07	$0.06
Eu_2O_3	32	76%	**75%**	0.7%	26.86	$0.20
Gd_2O_3	84	78%	**78%**	1.9%	21.97	$0.43
Tb_4O_7	10	70%	**69%**	0.2%	776.94	$1.73
Dy_2O_3	51	66%	**65%**	1.1%	226.57	$2.52
Ho_2O_3	9	66%	**65%**	0.2%	63.66	$0.12
Er_2O_3	24	63%	**61%**	0.4%	40.98	$0.18
Tm_2O_3	3	57%	**54%**	0.1%	0.01	$0.00
Yb_2O_3	17	52%	**50%**	0.3%	13.77	$0.04
Lu_2O_3	2	52%	**49%**	0.0%	716.21	$0.27
Y_2O_3	304	67%	**66%**	6.7%	5.72	$0.38
TREO	**4,561**	**66%**	**66%**	**100%**	**Basket Value of MREC, USD $/kg**	**$27**
MREO	**33%**	**78%**	**78%**	**38%**		
MREO (ppm)	**1,506**					

Table 1: *Southern Complex individual Rare Earth Element assays, rare earth oxide ('REO') recovery rates from Ore to MREC, distribution of REO in MREC (by weight) and theoretical basket value of MREC product based on current pricing. MREO = Nd, Pr, Dy, Tb Oxides. Spot Price assumption was based on Shanghai Metal Markets prices on 11th December 2024. Note: The MREC Recovery (%) column includes any losses from impurity removal, washing and MREC precipitation.*

Southern Complex Impurity Levels

The benign pH levels and operating conditions have produced an exceptionally high-purity MREC product, with the lowest globally known impurity levels of ~0.7%, as shown in Table 2.

These results were essentially achieved due to the unique characteristics of the Southern Complex, which is able to show better leaching recoveries at a higher pH of 4.5 and lower concentration of 0.3M AMSUL. This benign and less acidic reagent results in fewer impurities being desorbed into the solution throughout the flowsheet.

These exceptional results demonstrate that MREC produced from the Southern Complex is in a league above IAC peers with world-leading impurity levels. It is the purest MREC product the Viridis team has witnessed. These impurity levels are favourable for the ongoing offtake discussions, with downstream refiners looking for MREC products with low impurities to reduce their costs when refining MREC into individual rare earth oxides.

	VMM (Northern Concessions)	VMM (Southern Complex)	MEI
Leaching Agent	Ammonia Sulphate **pH4.5**	Ammonia Sulphate **pH4.5**	Ammonia Sulphate pH4
Impurity Removal Agent	Ammonium Bicarbonate	Ammonium Bicarbonate	-
Precipitation Agent	Ammonium Bicarbonate	Ammonium Bicarbonate	-
Impurities			
Calcium (Ca)	0.05%	0.09%	0.55%
Aluminium (Al)	0.37%	0.33%	0.36%
Nickel (Ni)	0.26%	0.01%	0.29%
Zinc (Zn)	0.02%	<0.01%	0.19%
Silica (Si)	0.07%	0.07%	0.14%
Iron (Fe)	0.01%	<0.01%	0.11%
Uranium (U)	0.0079%	0.0025%	0.0057%
Thorium (Th)	<0.001%	<0.00001%	0.00004%
Magnesium (Mg)	<0.017%	<0.02%	-
Sodium (Na)	0.18%	<0.07%	-
Others	0.06%	0.11%	0.40%
Total	**1.04%**	**0.72%**	**2.00%**

Table 2: *Impurity composition by weight (%) in oxides within maiden MREC produced from Northern Concessions bulk sample[2] compared with impurity levels reported by other ASX companies within their MREC. Note for VMM Southern Complex, Fe, Mg, Na, Zn, Th impurity fell below detection limit, hence real impurity is likely <0.7%. See references on page 11 of this announcement for complete details.*

Industry Comparison

The MREC production through the entire flowsheet aims to replicate Colossus's initial production profile and practical plant operating conditions. This is a significant milestone for the Colossus Project, which not only demonstrates that the same flowsheet design can be applied to both the Northern Concessions and Southern Complex but also the same operating conditions can generate high-value and exceptional recoveries. Ultimately, this gives Viridis an option to continue its high MREO grade mine plan into the South, allowing the Southern Complex to support a longer life operation without compromising the recoveries and basket value.

The results show numerous aspects where Colossus exceeds peers from start to finish of the flowsheet. These vital aspects, which are unique to the Colossus orebody, have been uncovered through systematic and detailed testing by ANSTO across a vast range of conditions, generating insights on breakthrough characteristics that will materially change the CAPEX and OPEX of the final flowsheet design, including:

- Highest known MREO recoveries from Colossus Ore to final MREC:
    - 76% net MREO recovery for Northern Concessions
    - 78% net MREO recovery for Southern Complex
- Premium basket value and MREC product due to world-leading MREO contents:
    - ~39% MREO content in MREC for Northern Concessions
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- Unparalleled leaching recoveries within practical flowsheet conditions for heavy Rare Earths (Dy, Tb):
    - 68% net recovery Dy-Tb for Northern Concessions
    - 66% net recovery Dy-Tb for Southern Complex
- World-leading impurity levels
    - ~1% impurity levels in MREC for Northern Concessions
    - ~0.7% impurity levels in MREC for Southern Complex
- MREC produced using a leaching agent of pH4.5 and 0.3M AMSUL, supporting reduced OPEX and lower reagent consumption compared to all peers.

Furthermore, having two separate MREC tests allows for a higher confidence in the design basis used to develop the Scoping Study. This provides assurance on the recovery characteristics of the ore to be processed through the Colossus production facility, rather than making a broad-based assumption that the recoveries, basket value and production profile from the Northern Concessions will apply to the Southern Complex. The Company now has a thorough understanding of the recovery profile on both sets of Mining Licenses, which provides substantial data to optimise the mine plan and plant design and significant optionality between the North and South to deliver a robust scoping study with higher degree of accuracy.

Southern Complex Basket Value

The recovered distribution of MREO in the MREC product has delivered a premium basket value attributable to negligible losses in Nd and Pr from leaching through to MREC precipitation, alongside exceptional leaching recoveries of Dy and Tb. Furthermore, this was achieved using an environmentally friendly, low-cost ammonia-based flowsheet.

This maiden MREC testing program demonstrates the unique value proposition at Colossus of having an asset with high MREO grades and recoveries on the ultimate basket value. Table 3 below provides further detail on the current theoretical basket value for Viridis' maiden MREC compared to IAC industry peers, with price assumptions for rare earth oxides taken from Shanghai Metals Market, dated 11th December 2024.

Peer Comparison of True ASX IAC Projects that have produced MREC (see references on page 11 of this announcement for further information):

		VMM - Northern	VMM - Southern	MEI	IXR
Head Grade TREO		4,472	4,561	4,439	848
Head Grade MREO		1,420	1,506	~1,015	213
Leaching	Agent	Ammonia Sulphate	Ammonia Sulphate	Ammonia Sulphate	Ammonia Sulphate
	Time	30 minutes	30 minutes	30 minutes	-
	pH	**4.5**	**4.5**	4	2
	Molar	**0.3**	**0.3**	0.5	1
Mixed Rare Earth Carbonate MREO Recovery		**76%**	**78%**	**73%**	**34%**
Price Assumption (USD $/kg) *SMM 11th December 2024*		**Final REO Contents of MREC**			
0.55	La2O3	44.53%	48.16%	57.60%	17.80%
1.00	CeO2	2.43%	0.56%	1.40%	11.30%
58.67	**Pr6O11**	**8.33%**	**8.67%**	**8.60%**	**5.00%**
57.85	**Nd2O3**	**29.15%**	**27.86%**	**22.00%**	**21.20%**
2.07	Sm2O3	3.19%	3.08%	2.40%	3.69%
26.86	Eu2O3	0.83%	0.73%	0.60%	0.75%
21.97	Gd2O3	2.11%	1.94%	1.50%	4.22%
776.94	**Tb4O7**	**0.26%**	**0.22%**	**0.20%**	**0.62%**
226.57	**Dy2O3**	**1.18%**	**1.11%**	**0.80%**	**3.82%**
63.66	Ho2O3	0.21%	0.19%	0.10%	0.76%
40.98	Er2O3	0.47%	0.44%	0.30%	2.23%
0.01	Tm2O3	0.05%	0.05%	0.01%	0.27%
13.77	Yb2O3	0.29%	0.28%	0.10%	1.63%
716.21	Lu2O3	0.04%	0.04%	0.01%	0.25%
5.72	Y2O3	6.93%	6.66%	4.50%	26.50%
MREO Content		**39%**	**38%**	32%	31%
Basket Value (USD $/kg)		**$28**	**$27**	$23	$35
Impurities		**1.04%**	**0.72%**	2.00%	-

Table 3: *Individual Rare Earth Element assays, recovery rates and final REO distribution in the MREC product. The subsequent basket value of the MREC developed from the Northern Concessions[2] and Southern Complex was calculated using prices on the Shanghai Metals Market dated 11th December 2024. MREO = Nd, Pr, Dy, Tb Oxides.*

MEI reference – Meteoric Resources NL, ASX: MEI announcement dated 29 February 2024, "First Mixed Rare Earth Carbonate (MREC) Produced at Caldeira". Note: The MREO head grade has been deduced based on MREO content and recoveries of the final MREC product to back-solve the original MREO head grade approximation.

IXR references – Ionic Rare Earths Ltd ASX: IXR announcements dated 4 August 2020 "Good Metallurgical Results from Makuutu Eastern Zone", 20 March 2023 "Makuutu Definitive Feasibility Study", 24 March 2023 "Clarification on Makuutu DFS".

The Southern Complex MREC is a critical input into the Scoping Study, which marks the end of a thorough metallurgical testing work program required for the process engineering design. Viridis continues to work on the impending resource upgrade for the Colossus Project, which will then be fed into the scoping study. In parallel, Viridis intends to continue ongoing drilling and further metallurgical optimisation work as it moves through the Prefeasibility Study ('PFS') stage.

The Southern Complex MREC highlights unique and exceptional qualities, including improving recoveries using more benign reagents, an incredibly low impurity level, and significant MREO content, which subsequently will lead to a far lower OPEX / CAPEX operation along with a highly efficient and long-life premium production profile of critical MREOs (Nd, Pr, Dy, Tb)

These results will underpin the operating conditions used as the basis of the Scoping and Prefeasibility Studies. Based on these outstanding MREC results and proven flowsheet design generated by ANSTO, it means there will be a material improvement within the initial production profiles at Colossus from both Northern Concessions and Southern Complex, which have shown potential to generate a substantial high-value production profile over numerous years.

This demonstrates that the Colossus initial feed profile has the geological and technical capability to produce more Nd, Pr, Dy, and Tb Oxides (contained in an MREC) for each Tonne of ore processed than any known IAC project globally.

Based on the Ore to MREC recoveries and proven flowsheet developed as part of this testing campaign by ANSTO, the Southern Complex has the potential to recover a net of 1,147 tonnes of **MREO (Nd, Pr, Dy, Tb Oxides) for each million tonnes of ore that goes through a plant designed on this flowsheet from ANSTO.** These results are essential in displaying the exceptional potential production profile at Colossus, on top of the ability to retain premium basket values due to low impurities and a world-leading MREO basket.

**Note: Estimated Production TREO Tonnes per 1Mt processed = 1Mt x TREO Head Grade x TREO Recovery into MREC. Estimated Production of MREO Tonnes per 1Mt processed = TREO Tonnes Produced x Weight Distribution in MREC i.e. For Southern Complex, the estimated TREO Production from 1Mt processing is calculated = 1 x 4,561 x 66% = 3,030 Tonnes TREO contained in MREC*

i.e. For Southern Complex, the estimated Neodymium Production from 1Mt processing is calculated = 3,030 x 27.86% (weight of Neodymium in final MREC as seen in table 3) = 844 Tonnes Neodymium

Likewise, the estimated MREO Production from 1Mt processing is calculated = 3,030 x 37.87% (weight of MREO in final MREC as seen in table 3) = 1,147 Tonnes MREO

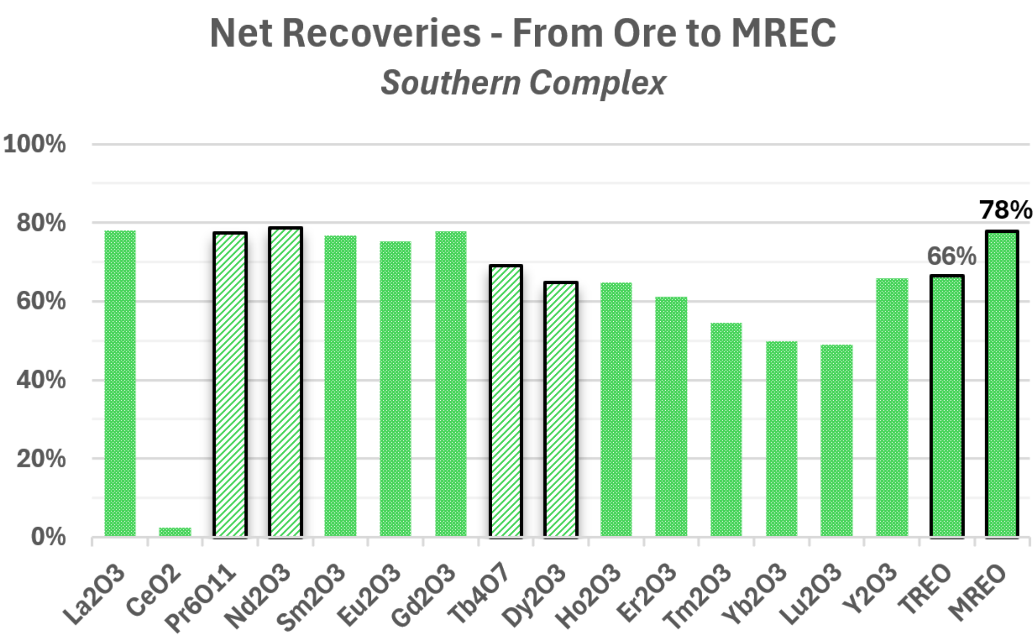

Figure 3: *Graphic chart of net recoveries achieved from the MREC at Southern Complex for each Rare Earth Element*

<u>Summary of Metallurgical Work conducted by Viridis to date:</u>

Sampling Details					*Testwork Conditions*						*Net Recoveries*		
Date	**Tenement**	**Batch No.**	**Testwork**	**Samples**	**Lab**	**Agent**	**Concentration**	**pH**	**Temp.**	**Duration**	**Nd-Pr**	**Dy-Tb**	**MREO**
Phase I - 20th March 2024	Cupim South	CS-DDH-001	Meter-by-Meter Leaching	11.9 meters	ANSTO	AMSUL	0.5M	4	Ambient	0.5hr	80	66	80
Phase II - 18th April 2024	Northern Concessions	BS1NC	Bulk Sample Leaching	29	SGS	AMSUL	0.5M	4	Ambient	0.5hr	63	65	64
	Cupim South	BS1CS	Bulk Sample Leaching	19		AMSUL	0.5M	4	Ambient	0.5hr	67	53	67
	Capao Da Onca	BS1CDO	Bulk Sample Leaching	22		AMSUL	0.5M	4	Ambient	0.5hr	59	59	59
	Ribeirao	BS1RA	Bulk Sample Leaching	21		AMSUL	0.5M	4	Ambient	0.5hr	59	49	58
Phase III - 17th July 2024	Northern Concessions	BS2NC	Bulk Sample Leaching	36	ANSTO	AMSUL	0.5M	4	Ambient	0.5hr	76	65	75
	Northern Concessions		Bulk Sample Leaching	36		AMSUL	0.3M	4.5	Ambient	0.5hr	73	64	73
	Northern Concessions		Bulk Sample Leaching	36		AMSUL	0.1M	4.5	Ambient	0.5hr	73	60	73
	Northern Concessions		Bulk Sample Leaching	36		MAGSUL	0.3M	4.5	Ambient	0.5hr	77	64	76
Phase IV - 24th September 2024	Northern Concessions	BS2NC	**Ore to Final MREC Recovery (Entire Flowsheet)**	36	ANSTO	**AMSUL**	**0.3M**	**4.5**	**Ambient**	**0.5hr**	**76**	**68**	**76**
Phase V - 14th November 2024	Southern Concessions	BS3SC	Bulk Sample Leaching	35	ANSTO	AMSUL	0.5M	4	Ambient	0.5hr	82	67	82
	Southern Concessions		Bulk Sample Leaching	35		AMSUL	0.3M	4.5	Ambient	0.5hr	83	67	83
	Southern Concessions		Bulk Sample Leaching	35		AMSUL	0.2M	4.5	Ambient	0.5hr	81	65	80
Phase VI - 12th December 2024 (This announcement)	Southern Concessions	BS3SC	**Ore to Final MREC Recovery (Entire Flowsheet)**	35	ANSTO	**AMSUL**	**0.3M**	**4.5**	**Ambient**	**0.5hr**	**78**	**66**	**78**

Table 4: *Summary of all metallurgical procedures and test-work completed across Colossus. Please refer to respective announcements for each date to see full details[3]. The green text highlights preferred reagent conditions to be used at Colossus.*

Southern Complex Bulk Sample Details

The Bulk Composite Sample used to generate the final MREC was formed using 41kg of ionic clay from Cupim South and Centro Sul. It consisted of 35 samples from 26 drill holes spanning an area of 5.66 km^2, with ~88% of the Bulk Sample material coming from previously untested metallurgy.

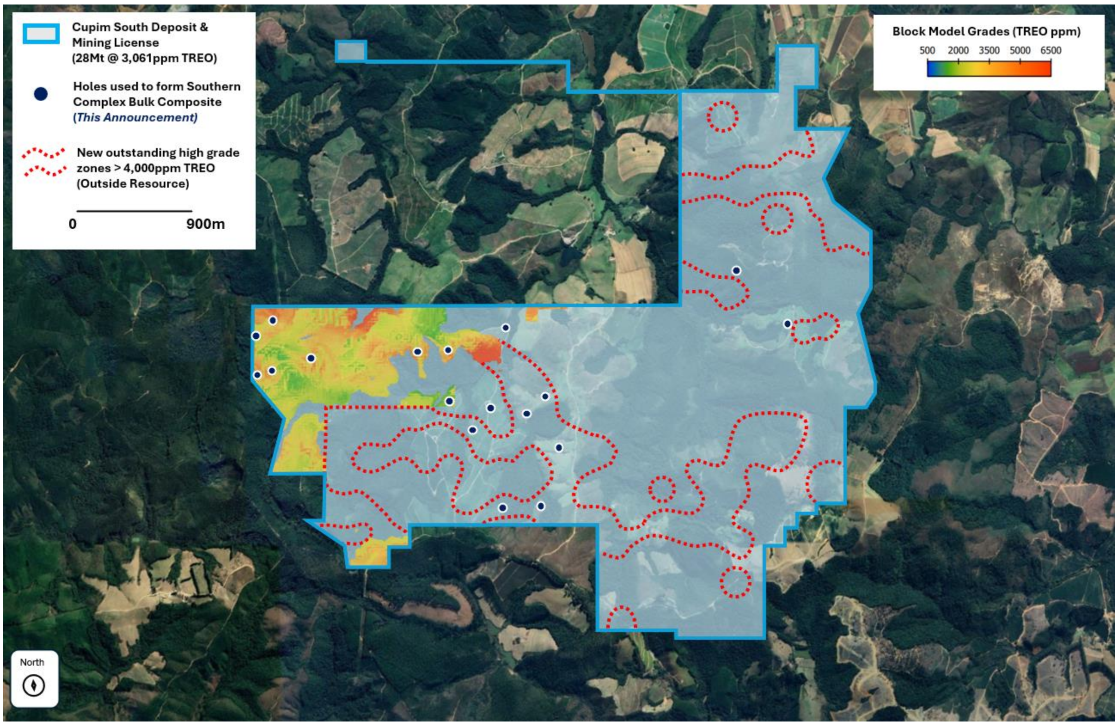

Figure 4: *Location of holes within Cupim South used to form the Southern Complex MREC. Hole CS-AG-0307 was from the Northern Extension of Cupim South, ~2.5km North of this image[5].*

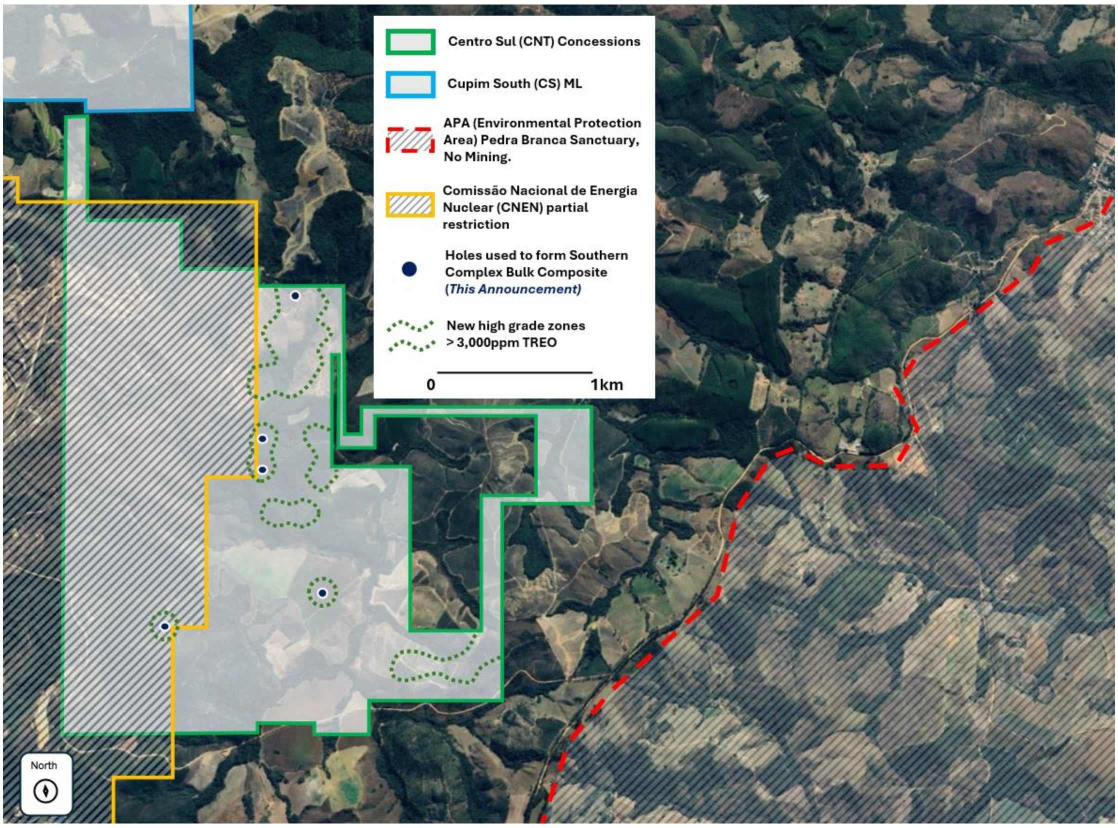

Figure 5: *Location of holes within Centro Sul used to form the Southern Complex MREC. Note Hole CNT-AG-0168 & CNT-AG-0165 were from the SW Extension of Centro Sul, ~5km SW of this image.*

Future Work

Having completed the maiden MREC from the Southern Complex, Viridis is focussed on finalising the Environmental Impact Assessment for the Preliminary Environmental Licence ('LP') submission. It has kicked off the resource update with BNA Mining Solutions and detailed mine planning for the Northern Concessions. Once all this is completed, it expects to be able to issue the Scoping Study in Q1 2025.

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.

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 5: *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[4].*

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 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. *ASX: VMM announcement dated 17 July 2024, "Significant Breakthrough in Colossus Metallurgical Testing"*
2. *ASX: VMM announcement dated 24 September 2024, "Colossus Maiden Mixed Rare Earth Carbonate (MREC) Product"*
3. *ASX: VMM announcement dated 14 November 2024, "Southern Complex Achieves Highest Ever Ionic Recoveries"*
4. *ASX: VMM announcement dated 30 October 2024, "Globally Significant Maiden MRE for Colossus IAC Project"*
5. *ASX: VMM announcement dated 4 December 2024, "Exceptional Step-Out Intercepts Continue at Cupim South"*

Table 2 References and Calculations:

1. *Head grade for VMM – ASX: VMM announcement dated 17 July 2024, "Significant Breakthrough in Colossus Metallurgical Testing", Table 2*
2. *Note within VMM impurities, the levels of Thorium and Magnesium were below detection limit, hence the overall impurity based on those elements for Colossus in reality is lower than 1.04%*
3. *Impurities for MEI – ASX: MEI announcement dated 29 February 2024, "First Mixed Rare Earth Carbonate (MREC) Produced at Caldeira", refer to Table 2 on Page 5*

Table 3 References and Calculations (also see references directly below Table 3 on page 7 of this announcement):

1. *The prices used to calculate the basket value were based on individual REO prices from Shanghai Metals Market dated 11th December 2024.*
2. *The "Head Grade MREO" for the composite used to produce MEI's MREC has not been provided in the MEI announcement and was reverse approximated based on recovery figures provided as below:*
   a. *Head Grade of Composite = 4,439ppm TREO (ASX: MEI Announcement dated 29 February 2024, "First Mixed Rare Earth Carbonate (MREC) Produced at Caldeira", refer to Page 6)*
   b. *TREO recovery into MREC = 53% (ASX: MEI announcement dated 29 February 2024, "First Mixed Rare Earth Carbonate (MREC) Produced at Caldeira", refer to Table 1 on Page 4)*
   c. *Hence assumed TREO grade recovered into MREC = 4,439 x 0.53 = 2,353ppm TREO*
   d. *MREO/TREO ratio in MREC = 31.5% (ASX: MEI announcement dated 29 February 2024, "First Mixed Rare Earth Carbonate (MREC) Produced at Caldeira")*
   e. *Hence assumed MREO grade in MREC = TREO*0.315 = 2,353*0.315 = 741ppm MREO*
   f. *Recovery of MREO into MREC = 73%*
   g. *Hence assumed Head Grade MREO = (MREO in MREC)/0.73 = 741/0.73 = ~1,015ppm MREO*
   h. *Note that these do not account for rounding errors and hence can only be taken as an approximation.*
3. *The "Impurities" for MEI were calculated by summing impurity figures from ASX: MEI announcement dated 29 February 2024, "First Mixed Rare Earth Carbonate (MREC) Produced at Caldeira." Refer to Table 2 on Page 5.*

4. *The Head Grades and recoveries for IXR were calculated from the average MREC distribution figures provided in the Stage 1 definitive feasibility study ('DFS') plan in ASX: IXR announcement dated 20 March 2023, "Makuutu Definitive Feasibility Study", refer to Figure 12 on page 17, and ASX: IXR announcement dated 24 March 2023, "Clarification on Makuutu DFS". Calculations have been provided below:*

IXR - Stage 1 DFS Average	Nd	Pr	Dy	Tb	TOTAL MREO	
Head Grade (ppm)	150	42	18	3	213	(A)
Recovery into MREC	33%	28%	49%	45%		
Recovered Grade (ppm) in MREC	50	12	9	1	71	(B)
			IXR - MREO recovery into MREC (B ÷ A)		34%	

5. *Molar concentration for IXR has been taken from the ASX: IXR announcement dated 4 August 2020, "Good Metallurgical Results from Makuutu Eastern Zone." It has been assumed that the Stage 1 DFS was done under similar molar concentration and pH2 (whereby the leaching pH has been provided within the DFS, as per the ASX: IXR announcement dated 20 March 2023, "Makuutu Definitive Feasibility Study", refer to Page 13).*

APPENDIX A: DRILL LOCATIONS

Coordinates of holes used to form Southern Complex Bulk Composite and subsequent MREC

All holes were drilled vertically.

Hole Number	Northing	Easting	Elevation (m)	Type	Final Depth (m)	ANM_ID
CS-AG-10	7576277	343969	1377	AG	13.00	833.560/1996
CS-RC-0071	7576295	344193	1344	RC	37.00	833.560/1996
CS-AG-29	7576231	343120	1411	AG	11.00	833.560/1996
CS-AG-36	7576371	342697	1398	AG	9.50	833.560/1996
CS-RC-0096	7576097	342785	1423	RC	27.00	833.560/1996
CS-AG-37	7576508	342840	1401	AG	9.70	833.560/1996
CS-AG-32	7576082	342706	1409	AG	11.00	833.560/1996
CS-AG-0221	7575894	344955	1330	AG	7.00	830.464/1982
CS-AG-0186	7576878	346494	1357	AG	12.00	830.464/1982
CS-AG-0220	7575757	344808	1303	AG	8.00	830.464/1982
CS-AG-0173	7575047	344654	1375	AG	9.00	830.464/1982
CS-AG-0240	7575616	344380	1331	AG	17.00	830.464/1982
CS-AG-0280	7576467	344672	1250	AG	9.00	830.464/1982
CS-AG-0241	7575761	344521	1325	AG	15.00	830.464/1982
CS-AG-0155	7575053	344948	1344	AG	10.00	830.464/1982
CS-AG-0093	7574907	345935	1380	AG	7.50	830.464/1982
CS-AG-0307	7581032	346167	1309	AG	9.00	806.604/1973
CS-AG-0131	7576465	346931	1411	AG	11.00	830.464/1982
CS-AG-0176	7575463	345090	1339	AG	14.00	830.464/1982
CNT-AG-0019	7572825	347380	1238	AG	11.00	830.711/2006
CNT-AG-0168	7568650	340785	1296	AG	8.00	832.025/2009
CNT-AG-0114	7570629	346573	1284	AG	10.00	830.850/2024
CNT-AG-0165	7568858	340977	1296	AG	7.00	832.025/2009
CNT-AG-0063	7571821	347173	1335	AG	8.00	830.711/2006
CNT-AG-0072	7571635	347202	1320	AG	6.00	830.711/2006
CNT-AG-0110	7570828	347581	1242	AG	12.00	830.711/2006

APPENDIX B: SAMPLES USED

Hole samples used to form Southern Complex Bulk Composite

All holes were drilled vertically.

Bulk Sample	Concession	Hole ID	Sample No	Sample ID	From	To	Weight (kg)
SOUTHERN COMPLEX BULK COMPOSITE	Cupim South	CS-AG-10	1	CS-AG-10-5	4	5	1.2
	Cupim South	CS-AG-10	2	CS-AG-10-6	5	6	1.2
	Cupim South	CS-RC-0071	3	CS-RC-0071-004	2	3	1.2
	Cupim South	CS-AG-29	4	CS-AG-29-7	3	4	1.2
	Cupim South	CS-AG-29	5	CS-AG-29-9	4	5	1.2
	Cupim South	CS-AG-29	6	CS-AG-29-11	5	6	1.2
	Cupim South	CS-AG-36	7	CS-AG-36-6	5	6	1.2
	Cupim South	CS-AG-36	8	CS-AG-36-9	8	9	1.2
	Cupim South	CS-RC-0096	9	CS-RC-096-017	14	15	1.2
	Cupim South	CS-AG-37	10	CS-AG-37-4	3	4	1.2
	Cupim South	CS-AG-37	11	CS-AG-37-5	4	5	1.2
	Cupim South	CS-AG-37	12	CS-AG-37-9	8	9	1.2
	Cupim South	CS-AG-32	13	CS-AG-32-8	7	8	1.2
	Cupim South	CS-AG-0221	14	CS-AG-0221-004	6	7	0.6
	Cupim South	CS-AG-0186	15	CS-AG-0186-006	8	10	1.2
	Cupim South	CS-AG-0186	16	CS-AG-0186-004	4	6	1.2
	Cupim South	CS-AG-0220	17	CS-AG-0220-004	4	6	1.2
	Cupim South	CS-AG-0173	18	CS-AG-0173-006	8	9	1.2
	Cupim South	CS-AG-0240	19	CS-AG-0240-003	4	6	1.2
	Cupim South	CS-AG-0155	20	CS-AG-0155-003	4	6	1.2
	Cupim South	CS-AG-0280	21	CS-AG-0280-006	8	9	0.8
	Cupim South	CS-AG-0241	22	CS-AG-0241-004	4	6	1.2
	Cupim South	CS-AG-0155	23	CS-AG-0155-002	2	4	1.2
	Cupim South	CS-AG-0093	24	CS-AG-0093-004	4	6	1.2
	Cupim South	CS-AG-0307	25	CS-AG-0307-004	4	6	1.2
	Cupim South	CS-AG-0131	25	CS-AG-0131-006	8	10	1.2
	Cupim South	CS-AG-0176	26	CS-AG-0176-004	6	8	1.2
	Centro Sul	CNT-AG-0019	28	CNT-AG-0019-006	8	10	1.2
	Centro Sul	CNT-AG-0168	29	CNT-AG-0168-005	6	8	1.2
	Centro Sul	CNT-AG-0114	30	CNT-AG-0114-004	4	6	1.2
	Centro Sul	CNT-AG-0114	31	CNT-AG-0114-006	8	10	1.2
	Centro Sul	CNT-AG-0165	32	CNT-AG-0165-004	6	7	1.2
	Centro Sul	CNT-AG-0063	33	CNT-AG-0063-004	6	8	1.2
	Centro Sul	CNT-AG-0072	34	CNT-AG-0072-003	4	6	1.2
	Centro Sul	CNT-AG-0110	35	CNT-AG-0110-006	8	10	1.2
					Total Weight (Kg)		**41.00**

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 Reverse Circulation 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 1-2m in advance. They were logged, photographed, and subsequently bagged in plastic bags, and each sample was identified.* ***Reverse Circulation drill holes:*** • *Samples were collected and identified from every 1 metres of the RC rig.* • *All samples were sent for preparation to the contracted laboratory (SGS) in Vespasiano-MG, Brazil.*
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. Final depths were recorded according to the length of rods in the hole.* ***Reverse Circulation:*** • *RC drilling was conducted using an Atlas Copco EXPLORAC R50 RC Machine configured with a 4.75-inch diameter. The drill site preparation included clearing, levelling the ground, and delineating the drilling area. The RC rig conducted drilling within each hole and terminated upon intercepting transitional material or fresh rock. RC drilling was used predominantly in a systematic manner, forming a grid with 200m spacing. Samples were collected from every 1 metres of the RC rig and sent for preparation to the contracted laboratories, ALS or SGS.*
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 1-2m interval drilled. Recoveries generally ranged from 75% to 100%. If estimates dropped below 75% recovery in a 1-2m interval, the field crew aborted the drill hole and redrilled the hole.* ***Reverse Circulation recovery:*** • *Every 1m sample is collected in plastic buckets and weighed. Each sample averages approximately 15kg, which is considered acceptable given the hole diameter and the specific density of the material. 99% of the samples had more than 85% recovery.*
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	*Geological 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 1-2m and photographed. The description is made according to tactile-visual 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.*

Criteria	JORC Code explanation	Commentary
		Reverse Circulation drilling: • *A geologist logs the material at the drill rig or core facility. Logging focuses on the soil (humic) horizon, saprolite/clay zones, and transition boundaries. Other parameters recorded include grain size, texture, and colour, which can help identify the parent rock before weathering.* • *Due to the nature of the drilling, logging is done at 1m intervals. 1m samples weighing approximately 15kg are collected in a bucket and presented for sampling and logging.* • *The chip trays of all drilled holes have a digital photographic record and are retained at the core facility in Poços 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 35 samples taken from 26 drill holes, including 2 RC and 24 auger holes. The weight of each sample ranged from 600g to 1.2kg, with an average weight of 1.1kg per sample. This homogenisation process was carried out at the ANSTO laboratory.* ***Powdered Auger and RC 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.* ***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 (~22°C). 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.*	*ANSTO conducted the assay data and laboratory tests for the Colossus Project, focusing on producing a Mixed Rare Earth Carbonate (MREC). The primary objective of the work was to develop and optimise a low-cost, simple desorption process followed by a two-stage precipitation process to produce a marketable MREC from composite samples of ionic adsorption clay.* ***Flowsheet for MREC Production:*** *The process included the following key steps:* *1. Desorption: Leaching was performed using ammonium sulphate (0.3M) at pH 4.5, room temperature, and a 30-minute residence time.* *2. Impurity Removal: A two-stage precipitation process using ammonium bicarbonate increased the pH from 4.5 to 7.1 under ambient conditions.* *3. MREC Precipitation: Ammonium bicarbonate was used as a precipitating agent to produce the final MREC product.* ***Materials and Products Analyzed:*** *- Raw Material: Ionic clay composite samples from the Southern concessions of the Colossus Project.* *- Final Product: MREC with 66% recovery of TREO containing 38% of MREO and impurity levels ~0.7%.* *- Byproducts: Residual liquids from the desorption and precipitation stages were analysed to assess impurity removal efficiency.* ***Laboratories and Analytical Techniques**:*

Criteria	JORC Code explanation	Commentary
		- ANSTO: Conducted most of the process tests and analyses using the following techniques: - ***XRF** for major elements, including Al, Ca, Fe, K, Mg, Mn, Na, Si, and others.* - ***ICP-OES** for in-house analysis of major elements.* - ***ICP-MS** for rare earth elements, including Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Nd, Pr, Sc, Sm, Tb, Th, Tm, U, Y, and Yb.* *- ALS Geochemistry Laboratory: Performed external analysis of rare earths and radionuclides using lithium tetraborate fusion digest followed by ICP-MS.* *These tests confirmed the high quality of the MREC product, which recovers MREOs well, has low impurity levels, and complies with market requirements.*
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.*	*The sampling and assaying procedures for the Colossus Project were independently verified through multiple stages of quality control. The verification process involved:* • *Independent Review: All assay results from the ANSTO laboratory were cross-checked against industry standards. The laboratory followed rigorous internal protocols for duplicate testing and cross-verification to ensure accuracy.* • *Duplicate Sampling: Multiple duplicate samples were collected and assayed to verify consistency in results. Head assays and test work were replicated to confirm the reliability of REE content, showing minimal variance between samples.* • *External Verification: In addition to internal ANSTO tests, some samples were sent to the ALS Geochemistry Laboratory for independent analysis using ICP-MS. The results from both laboratories showed a strong correlation, further confirming the reliability of the assay data.* • *Reproducibility: Diagnostic leach tests and desorption assays were repeated under identical conditions to verify reproducibility. The consistency of the results across different stages of testing supports the accuracy of the sampling and assaying methods used.* • *These verification measures confirm the reliability and integrity of the sampling and assaying processes for the Colossus Project.* *The only adjustments to the data were to transform 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, 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*

Criteria	JORC Code explanation	Commentary
		considered: Dy_2O_3, Nd_2O_3, Pr_6O_{11}, and Tb_4O_7.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	***RC 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 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.* • ***The RC drilling*** *was also 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.* • *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 Group, Irmãos Martins and São Domingos Minerdom. Specifically:* • *ANM 833.560/1996* *Area: 154.20hectares* *Status: Mining Application* • *ANM 830.464/1982* *Area: 783.00 hectares* *Status: Mining Licence* • *ANM 830.340/1979* *Area: 161.86 hectares* *Status: Mining Licence* • *ANM 830.711/2006* *Area: 168.74 hectares* *Status: Exploration Licence* • *ANM 830.850/2024* *Area: 319.07 hectares* *Status: Exploration Licence*
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 endeavours 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 resembles 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.*

Criteria	JORC Code explanation	Commentary
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.* • *RC drilling:* *Total number of holes: 2* • *Auger Drilling:* *Total number of holes: 24*
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 carried out 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 supergene deposit's mineralised zones, which have a larger areal extent than thickness. This orientation ensures unbiased sampling of the mineralisation. Due to the geometry of the mineralisation and the vertical drill holes, downhole lengths closely represent the true widths of the mineralised zones, though further studies would enhance precision. In cases of potential discrepancies between downhole lengths and true widths, they are noted as "downhole length, true width not known".*
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	*The data presented in this report helps readers better understand the information. Various diagrams and supplementary information are included in the document, enhancing the clarity and accessibility of the geological findings and exploration results.*
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• *The data presented in this report strives to provide a transparent and holistic view of the exploration activities and findings. All the information, ranging from sampling techniques, geological context, prior exploration work, and assay results, has been reported comprehensively. Where relevant, cross-references to previous announcements have been provided to ensure continuity and clarity. Including diagrams, such as geological maps and tables, supports a more in-depth understanding of the data. It's noteworthy to mention that while positive results have been highlighted, the nature of the samples, particularly their origin from either saprolitic clays or bauxite, has been distinctly reported to ensure a balanced view. In essence, this report faithfully represents the exploration activities and findings without any undue bias or omission.*
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• *There is no additional substantive exploration data to report currently.*

Criteria	JORC Code explanation	Commentary
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.*	• *Having completed the maiden MREC from the Southern Complex, Viridis is focussed on finalising the Environmental Impact Assessment for the Preliminary Environmental Licence ('LP') submission. It has kicked off the resource update with BNA and detailed mine planning for the Northern Concessions. Once all this is completed, it expects to be able to issue the Scoping Study in Q1 2025.*