

The image shows three white wind turbines standing on a lush green forested hill. The scene is captured during sunset or sunrise, with a warm orange and yellow glow in the sky. The turbines are positioned at different heights and angles, creating a sense of depth. The background shows rolling hills under a hazy sky.

VIRIDIS

MINING & MINERALS

COLOSSUS IONIC CLAY PROJECT

*Unlocking a new frontier of Rare Earths in the
Poços De Caldas Alkaline Complex*

Company Presentation

February 2024

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Compliance Statement

This document contains information extracted from ASX market announcements reported in accordance with the 2012 edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves” (2012 JORC Code) and available for viewing at <https://viridismining.com.au/>. VMM confirms that it is not aware of any new information or data that materially affects the information included in any original ASX market announcements.

The release of this document on ASX has been authorized by the Board of Viridis Mining and Minerals Limited.

Competent Person Statement

Dr. José Marques Braga Júnior, the in-country Executive Director of Viridis' Brazilian subsidiary (Viridis Mining and Minerals Brazil Ltda), compiled and evaluated the technical information in this release and is a member of the Australian Institute of Geoscientists (AIG) (MAAusIMM, 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 'Australasian Code for Reporting of Regulation, Exploration Results, Mineral Resources, and Ore Reserves. Dr Braga consents to the inclusion in the report of the matters based on information in the form and context in which it appears.

All announcements referred to throughout can be found on the Company's website – viridismining.com.au.

CORPORATE SUMMARY

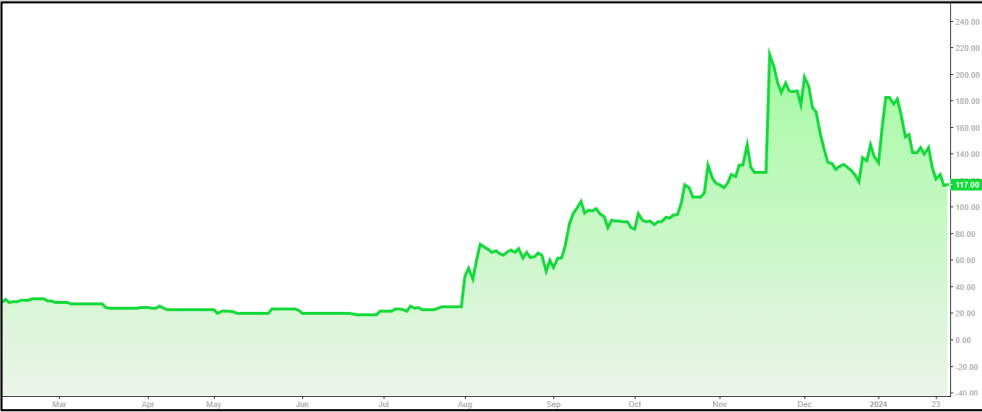


CAPITALISATION DATA

Current shares on Issue	49.1 million
Share Price ¹	\$1.14
Market Capitalisation (MC)	\$55.97 Million
BALANCE SHEET	
Cash Balance ¹	\$1.57 Million
Debt ¹	Nil

1. As at 31 January 2024

SHARE PRICE PERFORMANCE



CONTACT

Rafael Moreno

Chief Executive Officer

Carly Terzanidis

Company Secretary

✉ rafaelm@viridismining.com.au

✉ cosc@viridismining.com.au

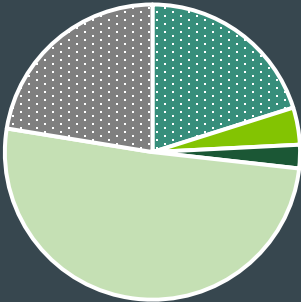
Company Website

<https://viridismining.com.au/>

Principal Office

Level 50,
108 St Georges Terrace
Perth, WA 6000

SHAREHOLDER BREAKDOWN



- Substantial Shareholders
- Remaining Top 20 Shareholders
- Ionic Rare Earths Strategic Investment
- Board & Management
- Other Shareholders

BOARD AND MANAGEMENT



Mr Rafael Moreno
Chief Executive Officer

Mr Moreno is a Chartered Professional Engineer with over 23 years' global experience in the mining & petrochemical industries. He has held executive & senior leadership roles at Argosy, Santos, & INPEX, specializing in execution of major capital projects and has extensive experience covering exploration, business development, commercial, offtake agreements involved with projects in Australia, Asia, Europe, S & N America.



Mr Agha Shahzad Pervaz
Executive Chairman

Mr Pervaz is an experienced corporate accountant, CFO and Company Secretary, with over 10 years' experience working with ASX listed companies. Mr Pervaz has previously held senior executive roles at Resonance Health Limited, Equinox Resources Limited and Battery Age Minerals Limited.



Mr Timothy Harrison
Non-Executive Director

Mr Harrison has over 23 years' of experience as a metallurgist and executive with an extensive record advancing resource companies through to project development. He has a successful track record in fields of processing and hydrometallurgy across multiple commodities, including technology metals experience. Previously, Mr Harrison held senior positions with BHP, WMC, Fluor, Ivanhoe Australia and is currently CEO/MD of Ionic Rare Earths Ltd.



Mr Faheem Ahmed
Non-Executive Director

Mr Ahmed holds a Bachelor of Engineering and Bachelor of Project Management and has over 6 years of experience in project evaluation, asset management, data analysis, lifecycle cost analysis and risk modelling including projects in the fields of infrastructure, mining, health and transport.



Mr Christopher Gerteisen
Non-Executive Director

Mr Christopher Gerteisen has over 25 years of experience as an economic geologist and executive with an extensive record of managing and advancing resource projects from discovery to start-up. Previously, he has held senior positions with Newmont, Sons of Gwalia, Oxiana, OZ Minerals, PanAust. He is currently CEO and Executive Director of Nova Minerals Limited.



Dr Jose Marques Braga Junior
Executive Director Brazil

Dr Braga is former Principal Geologist at CBMM. His 12 years of experience at CBMM has allowed him to gain a unique skillset in Niobium and Rare Earth mineral assets. Dr Braga oversaw and managed CBMM's full suite of geological activities including prospecting, metallurgy, modelling, mining, and administrative rights. He has authored multiple scholarly publications on alkaline-hosted Nb, REE, P deposits, saprolite and weathered ores in Brazil.

Dr Braga holds a Degree in Geological Engineering, a Master's in Mining Engineering, PhD in Geology and is a registered member of AusIMM with qualifications for mineral exploration and evaluation of supergene deposits of REE, Nb, P, Ba and Fe.



Dr Klaus Petersen
Executive Director Brazil & Country Manager

Dr Petersen is a seasoned geologist and mining executive with 35-years' experience across Iron, Gold, Copper, Manganese and Rare Earth projects in Brazil. Dr Petersen also co-founded several Australian, Brazilian and Canadian companies. Dr Petersen has built an extensive network with mining investors, financiers, governmental and environmental agencies which has allowed him to introduce and execute numerous successful transactions. Dr Petersen has spent significant time in Poços De Caldas over the last year and is very familiar with Ionic Clay Rare Earth hosting mineralisation in the Complex.

Dr Petersen is author of numerous academic publications in the field of geology. Dr Petersen holds a degree in Geological Engineering, Masters of Science in Mineralogy and Petrology, PhD in Mineralogy and Petrology and is a registered member of AusIMM.














RARE EARTHS MARKET

Developing a new supply chain
of Critical Metals



IONIC CLAYS | A DISRUPTIVE RARE EARTH OPPORTUNITY



	IONIC CLAYS	HARD ROCK
	<div></div>	<div></div>
MINING & EXPLORATION	<ul style="list-style-type: none">• Clay hosted soft material requiring no blasting• Mineralisation occurs at surface• Minimal stripping• Simple exploration with homogenous mineralisation	<ul style="list-style-type: none">• Requirement of blasting• Mineralisation can occur at depth requiring large amounts of stripping• Mineral body can be scattered and complex
PROCESSING	<ul style="list-style-type: none">• No crushing and milling• Simple “one-step” leaching• Leaching done using cheap salts such as Ammonium Sulfate or Magnesium Sulfate through ion-exchange mechanism• Ambient temperatures and pressures with minimal reagent consumption• No requirement for tailings dam	<ul style="list-style-type: none">• Uses crushing and milling• Complex multi-step metallurgy• Leaching agent combination of expensive strong acids such as Hydrochloric Acid• Requires very high temperatures, pressure and agitation• Requirement for tailings dam, floatation, cracking, roasting, re-leaching facilities
PRODUCT	<ul style="list-style-type: none">• High value Chemical Carbonate Product (90% + TREO grade)• Selective leaching with low La, Ce allowing high basket value• High payability	<ul style="list-style-type: none">• Mixed Rare Earth Concentrate (20-40% TREO grade) requiring secondary processing & refining• Low payability
ENVIRONMENTAL	<ul style="list-style-type: none">• Low Uranium and Thorium• No radioactive tailings• Progressive rehabilitation of mined areas	<ul style="list-style-type: none">• Presence of Uranium and Thorium waste• Large energy consumption with significant environmental and carbon footprint• Extensive mine rehabilitation required

✓ Fast to develop, low CAPEX, simple and environmentally friendly process

× Significant time and cost to develop, complex and energy intensive process

Poços De Caldas Alkaline Complex presents an opportunity to be the next South China Rare Earth Hub

“Significant investment by governments in the US, the EU and Australia is now going into rare earths...However, there must be further financial support throughout the supply chain to reduce dependence on China.” – Wood Mackenzie

WED 9 AUGUST 2023 | 20:05 | UPDATED ON THU 10 AUGUST 2023 23:13

Government signs partnership with Australian company to invest more than R\$1 billion in Poços de Caldas

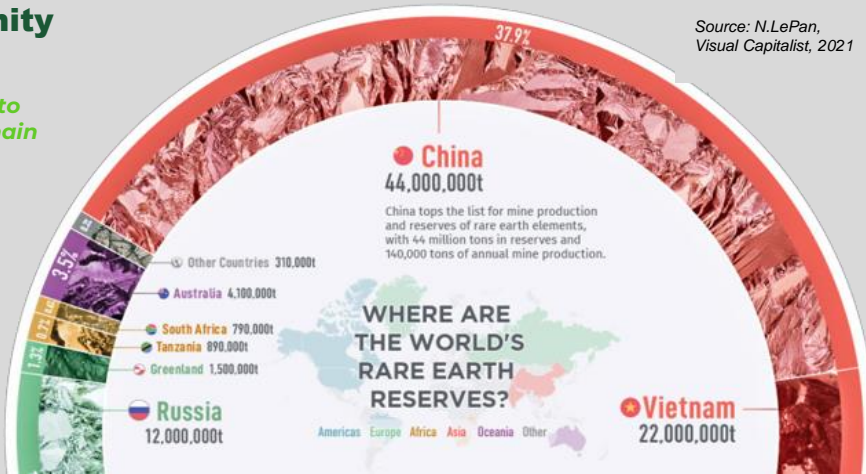
Australia joins Western alliance on critical minerals



Stuart McKinnon | The West Australian
Tue, 12 July 2022 1:02PM

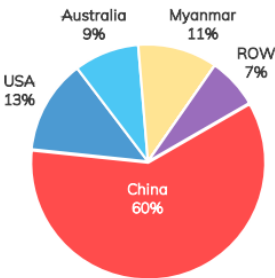
Stuart McKinnon

Source: N.LePan, Visual Capitalist, 2021

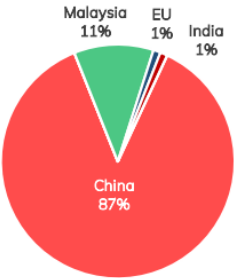


CHINA CONTROLS EACH STAGE

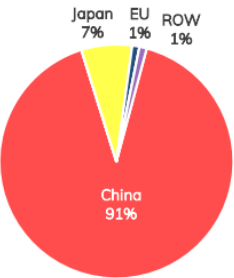
MINING



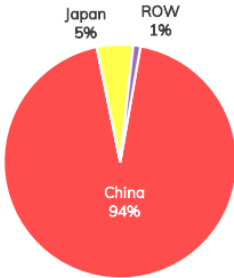
PROCESSING



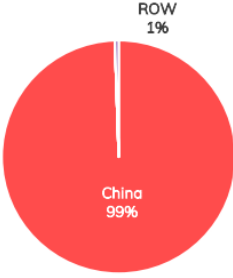
METALS



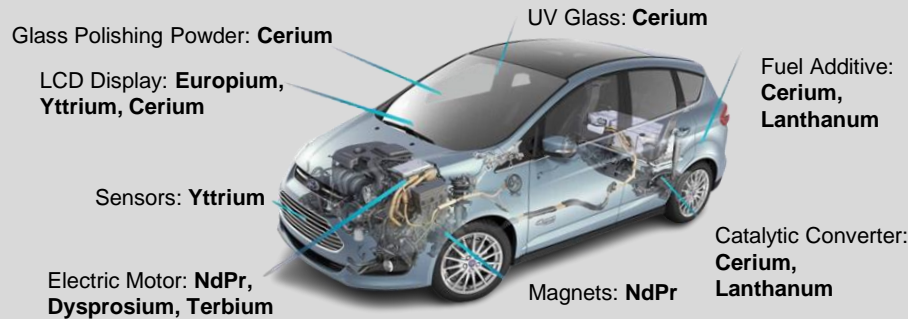
MAGNETS



RECYCLING



EACH HYBRID VEHICLE USES 4.5KG OF REE ON AVERAGE

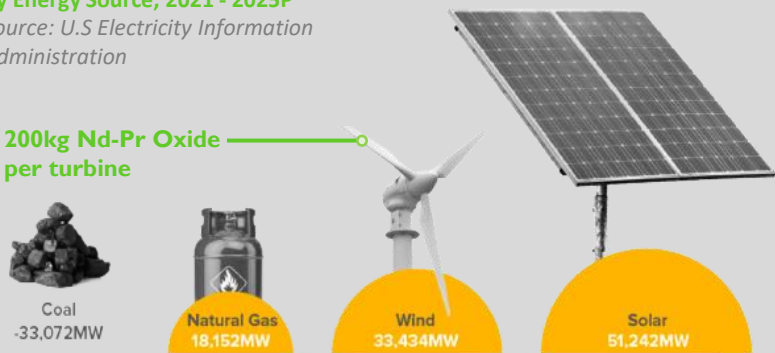


NET ELECTRIC CAPACITY ADDITIONS

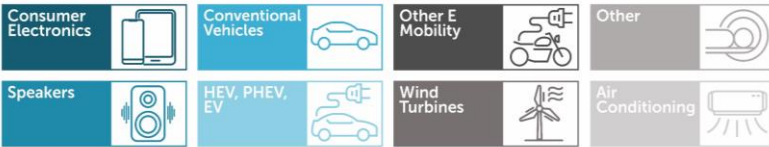
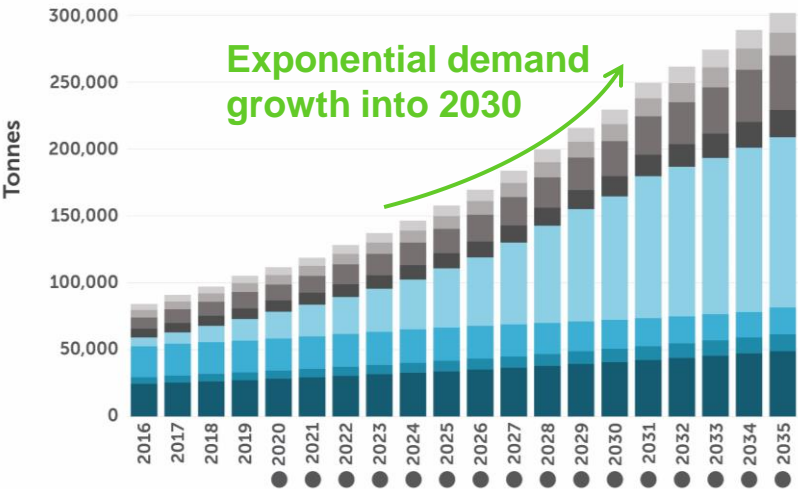
By Energy Source, 2021 - 2025P

Source: U.S Electricity Information Administration

200kg Nd-Pr Oxide per turbine



FORECAST NdFeB MAGNET CONSUMPTION



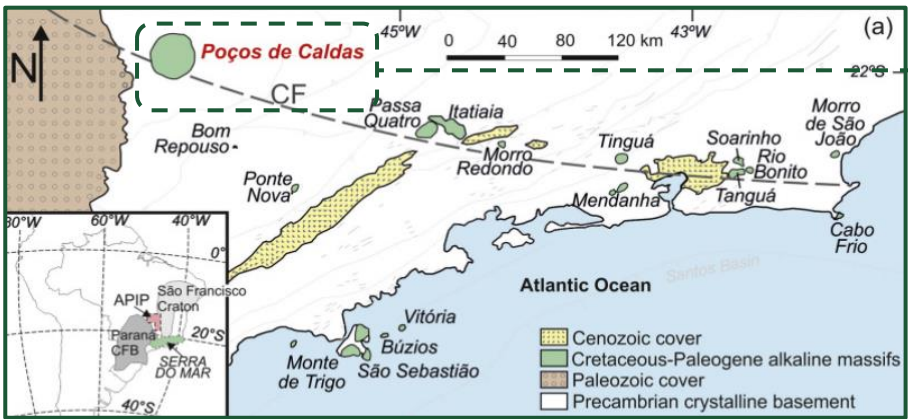
*'Other' includes MRI, elevator motor, magnetic separator, robotics and industrial applications.
Source: CRU – Rare Earth Report 2020

● Forecast

Poços De Caldas Alkaline Complex

Unlocking the true geological
potential of the Colossus Project

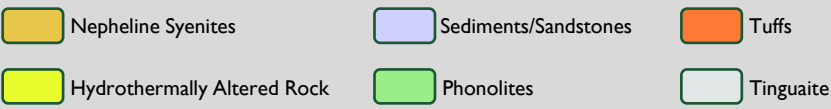
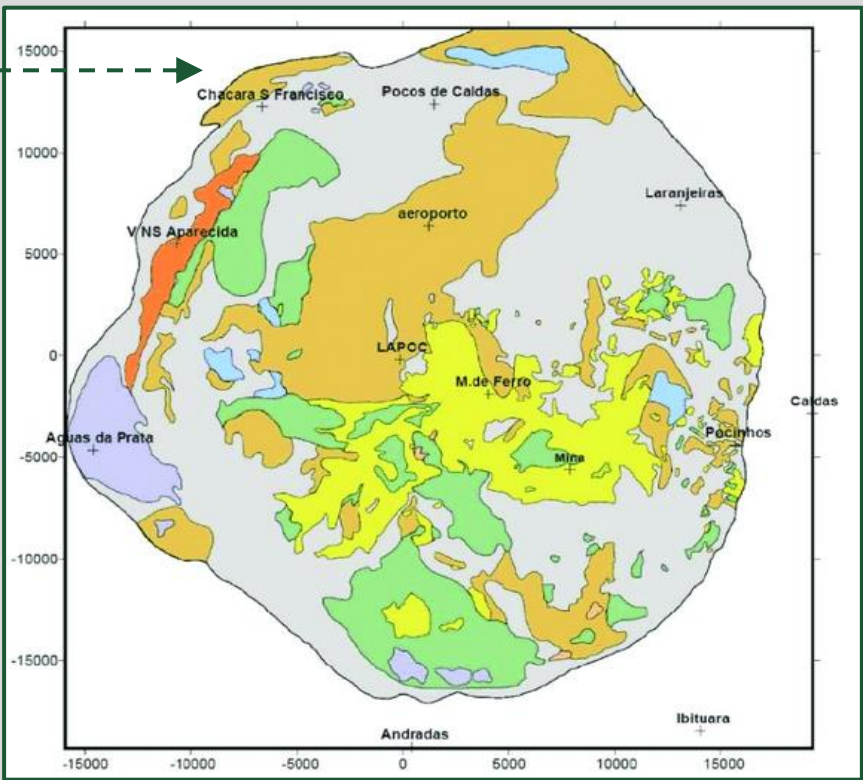


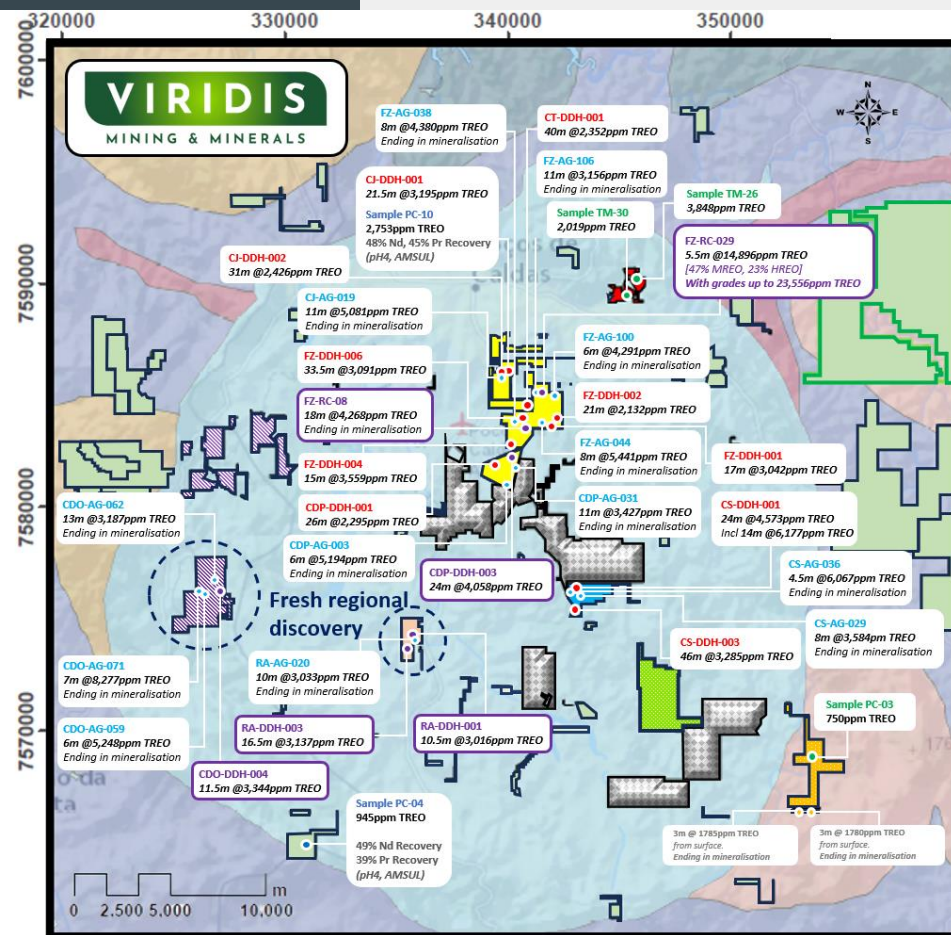


Poços De Caldas

Largest Alkaline Complex in Southern Hemisphere

- Located on the southern border of Minas Gerais ('Mining State'), Brazil – A Tier I Mining Jurisdiction
- Local community is supportive of mining operations with numerous bauxite, alumina, clay, peat mines and chemical plants. Ample infrastructure, paved roads and mining focused labour force
- The Alkaline Complex measures 33km in diameter and is homogenously mineralised with Rare Earths





Strategic Importance of Land Position

- Proven IAC REE geology in the Poços De Caldas (“PDC”) Alkaline Complex.
- Viridis secured a rare opportunity for a large consolidation of areas to develop a substantial Rare Earth Operation in PDC.
- Remainder of significant areas within the Complex which are available to consolidate into a single large contiguous project are held by major corporation such as Alcoa & CBA.
- Viridis to continue to appraise opportunities to expand its dominant footprint.

LEGEND



ASX: VMM Announcement dated 01 Feb 2024 ‘Spectacular Shallow Intercepts up to 23,556ppm TREO’

COLOSSUS PROJECT

Progressing from Grassroots
Exploration to Development





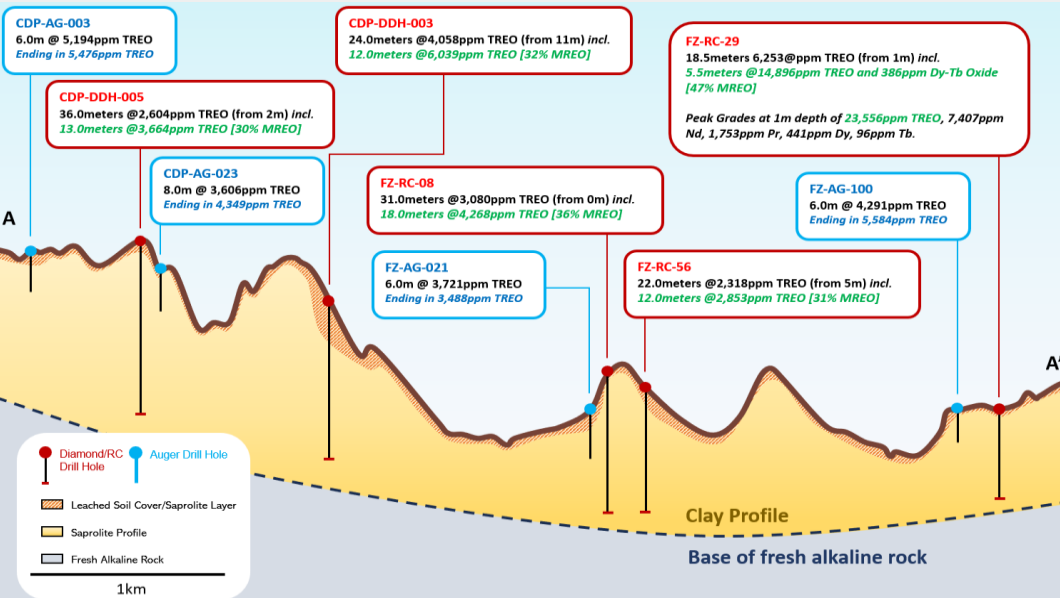
¹ ASX: MEI Announcement dated 01 May 2023, 'Caldeira REE Project Maiden Resource'

² ASX: VMM Announcement dated 20 Nov 2023, 7 Dec 2023, 3 Jan 2024 and 01 Feb 2024

Colossus Drilling

- Within the space of 6 months, Viridis has gone from a greenfield acquisition to delineating numerous areas >5,000ppm TREO within its Mining Licenses²
- Exploration fleet doubled to have 7-rigs running simultaneously through 2024.
- Over 40 full-time staff & contractors actively working on the Colossus asset to bring it through development stages to production – led by Dr. Jose Braga
- New assays will continuously be included into the resource model for the Colossus Maiden Resource Estimate due H1 2024

Viridis commitment to ambitious exploration plans has underpinned numerous discoveries, improved geological understanding and driven value for shareholders

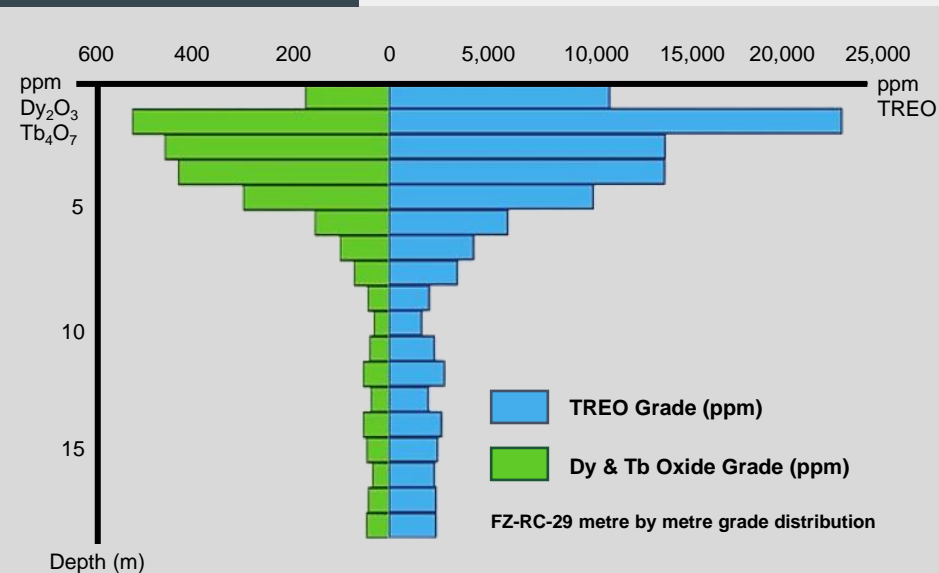


FAZENDA (FZ) & CAMINHO DAS PEDRAS (CDP) MINING LICENSES

- Mining Licenses granted in 1960s with a rich 60 year history of mining operations on these concessions for clays and bauxite.
- Located adjacent to existing Alcoa mining and processing operations. Granting easier access and ability to leverage nearby mining labor force, existing infrastructure and permitting.
- Northern Concessions now being re-explored and developed for Ionic Clay Rare Earths with world class intercepts from first 6months of exploration.
- Legislation will allow immediate conversion to a Rare Earths Mining License upon exploration completion.
- Mineralisation defined over 5-kilometres with multiple thick and high grade REE intercepts.

Significant Intercepts from Northern Concessions:¹

- FZ-RC-29: 5.5m at 14,896ppm [47% MREO] within 18.5m at 6,253ppm TREO
- FZ-RC-08: 18.0m at 4,268ppm [36% MREO] within 31.0m at 3,080ppm TREO
- FZ-DDH-06: 33.5m at 3,091ppm [28% MREO] within 48.5m at 2,662ppm TREO
- CDP-DDH-03: 12.0m at 6,039ppm [32% MREO] within 24.0m at 4,058ppm TREO
- CDP-DDH-05: 13.0m at 3,664ppm [30% MREO] within 36.0m at 2,604ppm TREO
- CDP-AG-01: 5.0m at 5,313ppm, ending in mineralisation of 6,646ppm TREO
- FZ-AG-044: 8.0m at 5,441ppm, ending in mineralisation of 8,291ppm TREO
- CJ-AG-019: 11.0m at 5,081ppm, ending in mineralisation of 7,790ppm TREO



- **First breakthrough confirmation of shallow Dysprosium and Terbium potential which can transform early mine life economics and cashflows at Fazenda Mining License.**
- **First 5.5m intercepting 5,486ppm Nd-Pr and 386ppm Dy-Tb Oxide**

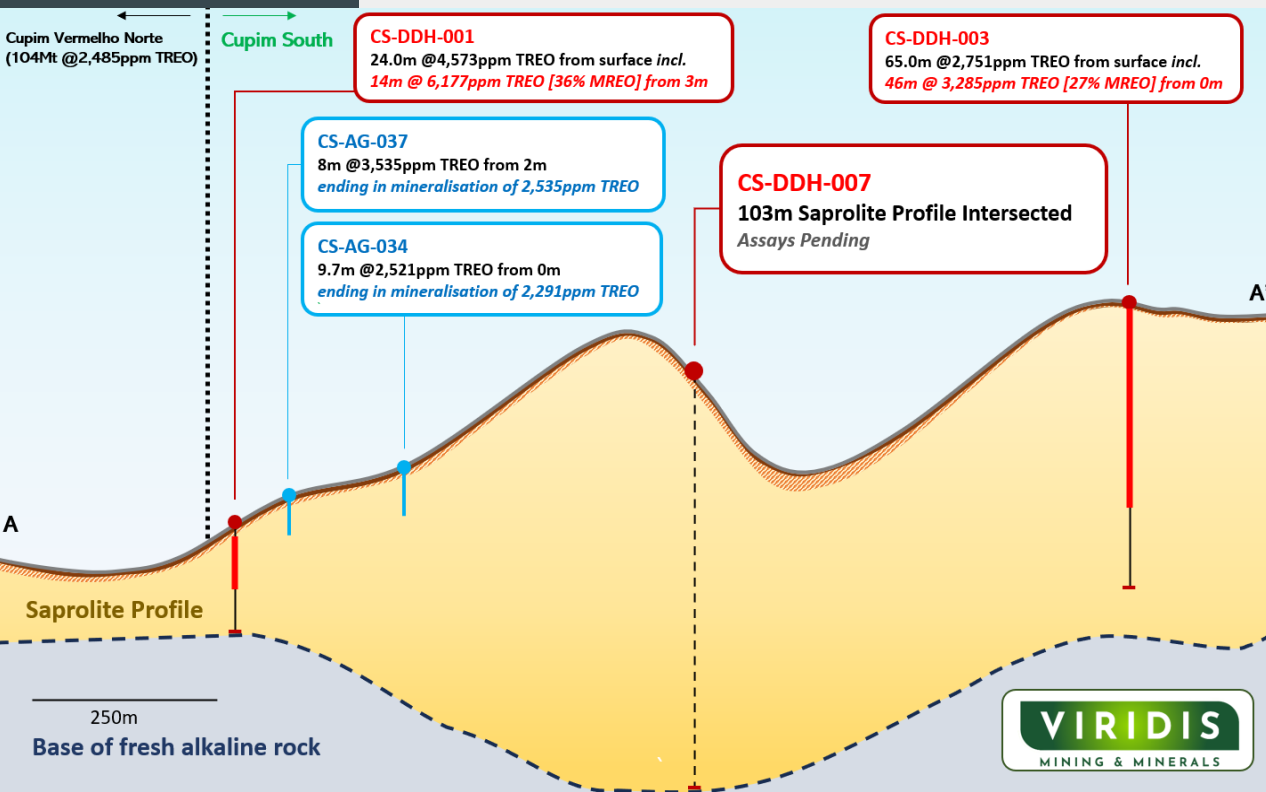
FAZENDA: Heavy Rare Earth Potential Uncovered¹

- **FZ-RC-029 returned 5.5m at 14,896ppm TREO within 18.5m at 6,253ppm TREO from 1m.**
 - ✓ Including 23,556ppm TREO: 7,407ppm Nd, 1,753ppm Pr, 441ppm Dy and 96ppm Tb Oxides at one metre depth
 - ✓ First time in the entire Alkaline Complex where over 500ppm Dy-Tb Oxide can be found even close to surface within the ionic portion of the mineralized body.
 - ✓ Viridis aims to follow up this spectacular hit through a 50 by 50m drill grid and testing the drill hole for confirmation of ionic leachability.
- **Not just about large intercepts, but quality distribution of high-value elements.**
 - ✓ Clays within this Alkaline Complex are rarely ionic once depths go below 30 metres.
 - ✓ Structural, hydrogeological and economic challenges with mining clays below 50 metres.
 - ✓ Hence Fazenda Mining License holds strategic importance within the entire Alkaline Complex due to the first discovery of high-grades HREOs occurring within first 5 metres.

¹ ASX: VMM Announcement dated 01 Feb 2024, 'Spectacular Shallow Intercepts up to 23,556ppm TREO'

CUPIM SOUTH | HOMOGENOUS & HIGH GRADE

VIRIDIS



Exploration Highlights

- Homogenous and high-grade mineralisation identified throughout Cupim South¹:
 - CS-DDH-001: 14.0m at 6,177ppm TREO within 24.0m at 4,573ppm TREO from 0m
 - CS-DDH-003: 46.0m at 3,285ppm TREO within 65.0m at 2,799ppm TREO from 0m
 - CS-DDH-005: 27.0m at 2,903ppm TREO within 62.5m at 2,218ppm TREO from 0m
 - CS-AG-036: 4.5m at 6,067ppm TREO ending in 6,034ppm TREO
- Highest grades and highest Nd-Pr oxide mineralisation occurs near surface.
- This concession plays a critical role in the Southern exposure for Colossus within the Alkaline Complex

¹ ASX: VMM Announcement dated 20 Nov 2023, 03 Jan 2024 and 19 Jan 2024



Viridis continues to evaluate numerous expansion opportunities of strategically valuable tenements which will form the runway for its continued exploration and discovery methodology.

Discoveries continue to happen within untested concessions across Colossus which is a testament of the homogenous mineralisation present across the complex.

Capão da Onça – Discovered Jan 2024^{1,2}:

- Underlying bedrock of Tinguaita Breccia appears to have created a high-grade corridor with multiple intercepts >3,500ppm TREO. Tinguaita Breccia is unique to only the Western Edge of the Complex which has led to remarkable auger results such as:
 - CDO-AG-059: 6m at 5,248ppm TREO, ending in 3,646ppm
 - CDO-AG-045: 4m at 6,870ppm TREO, ending in 3,918ppm
 - CDO-AG-071: 7m at 8,277ppm TREO, ending in 8,275ppm

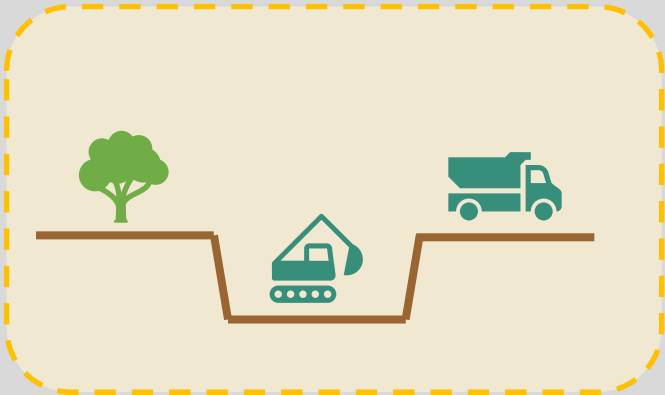
Ribeirão – Discovered Jan 2024²:

- Maiden assays from Ribeirão have returned a horizon 10-20m thick with consistent grades around 3,000ppm.
 - RA-AG-020: 10.0m at 3,033ppm TREO, ending in 3,630ppm
 - RA-AG-030: 8.0m at 3,083ppm TREO, ending in 4,868ppm
 - RA-AG-026: 11.0m at 2,885ppm TREO, ending in 6,066ppm
 - RA-DDH-003: 15.5m at 3,223ppm TREO within 24.0m at 2,678ppm TREO from 0.5m.
 - RA-DDH-001: 10.5m at 3,016ppm TREO within 21.0m at 2,418ppm TREO from 8m.

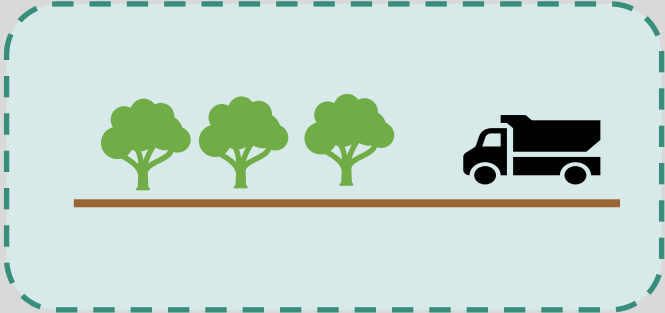
¹ ASX: VMM Announcement dated 03 Jan 2024, 'World-Class Rare Earth Discoveries Continue at Colossus'

² ASX: VMM Announcement dated 01 Feb 2024, 'Spectacular Shallow Intercepts up to 23,556ppm TREO'

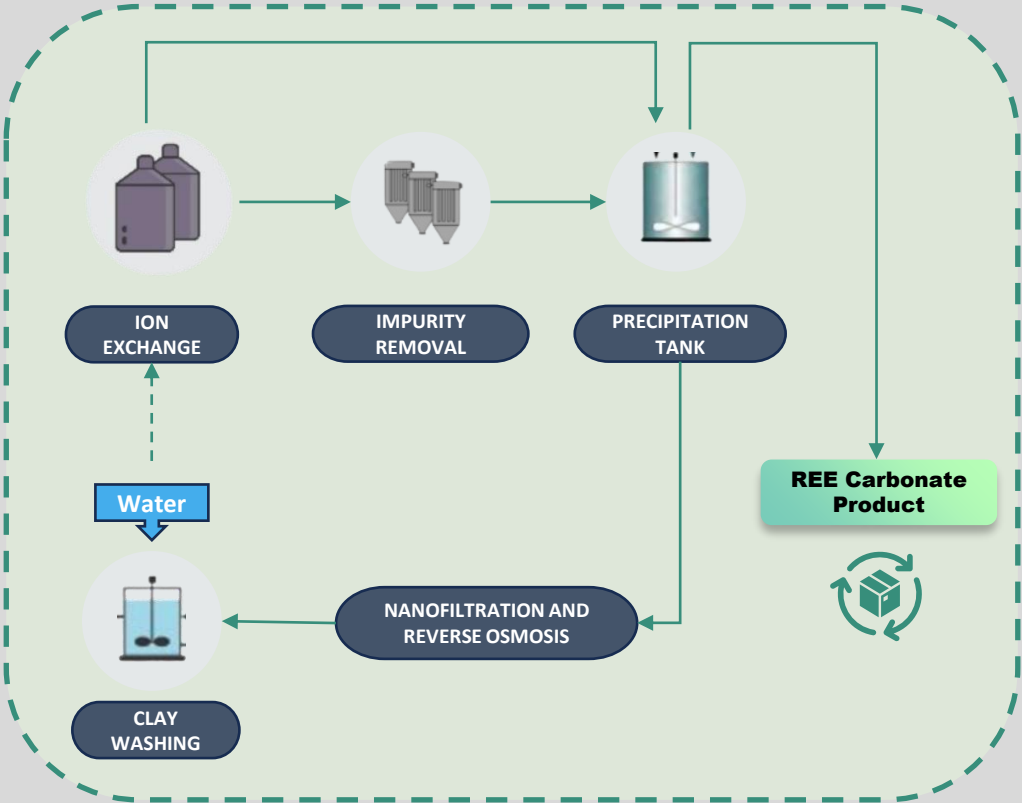
CLAY MINING



CLAY BACKFILL & REVEGETATION



ION EXCHANGE PROCESSING - ANSTO



	Ionic Clay ¹	“REE in Clay”	Hard Rock
LEACHING AGENT	Ammonia Sulfate (weak salt)	HCL, Nitric Acid, Sulfuric Acid, Aqua Regia	HCL, Nitric Acid, Sulfuric Acid, Aqua Regia
LEACHING TEMPERATURE	Room Temperature	50 – 80 Degrees	Up to 800°C
LEACHING PH LEVEL	3 to 5	< 2 (highly acidic)	< 2 (highly acidic)
LEACHING TIME	15 to 60 minutes	2 – 24 hours	2 – 24 hours

Viridis obtained exceptional recoveries through Ammonia Sulfate leaching at pH4, room temperature, with 30minutes leaching cycle and no sample preparation. This illustrates Colossus as a true Ionic Clay Project which will benefit from superior leaching and extraction economics.

¹ Review on the Development and Utilization of Ionic Rare Earth Ore, X. Luo, Y. Zhang, H. Zhou et al., 2022

The Ionic Advantage

- Despite lower grades & recoveries of Ionic Clay Rare Earths, the extraction of Ionic Clays is multi-folds cheaper from an operational and capital perspective.
- Key barrier to entry for Hard-Rock Rare Earth projects is start-up CAPEX. Hence, the low CAPEX Ionic Clays using simple extraction provides a highly economic & disruptive opportunity for Viridis.

Colossus Metallurgy

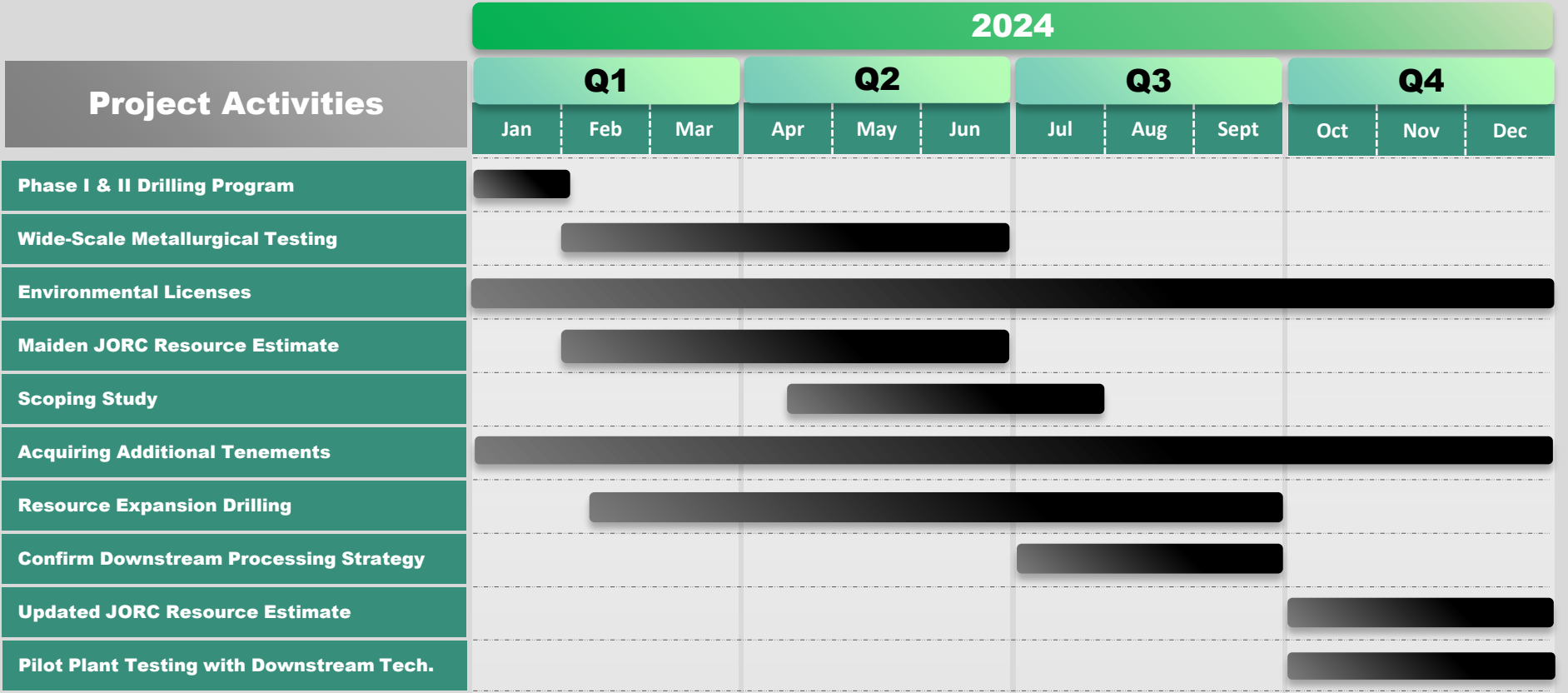
- Initial network at Colossus consisted of surface grab samples from “leached layer” sent for Ionic testing.
- Exceptional average recovery of 46% and 40% for Nd and Pr respectively with Ammonia Sulfate, with no sample preparation taken prior to sending to lab.
- Significant scope for optimisation as Viridis intends to complete deeper advanced metallurgical testing.
- Preliminary results have proven Colossus hosts an IAC Project from multiple grab samples.



INVESTMENT HIGHLIGHTS

Right asset, right location with
a fast-moving team

ANTICIPATED PROJECT MILESTONES & WORK PROGRAM



INVESTMENT HIGHLIGHTS

VIRIDIS

- Poços De Caldas is unparalleled in terms of geology, for both size & grade of Ionic Rare Earths.
- Preliminary met-work from multiple grab samples of Saprolite returned Ionic Mineralisation.
- Alkaline Complex homogenously enriched in Rare Earths and is gaining global recognition.
- Samples underwent NO drying or crushing prior to laboratory analysis and were taken from the leached layer. This indicates significant upside for metwork optimisation during secondary testing.
- Highest grade for Ionic Clays globally.

Secured last major opportunity in PDC

- Second major mover into the Poços De Caldas ("PDC") Alkaline Complex.
- Binding agreements signed to acquire REE rights covering an area of ~228km² in and around the PDC Complex
- Remaining concessions which could potentially be consolidated into a major REE Project are held by major corporations focussed on Bauxite & Alumina.

World Class Geology

Significant Exploration Upside

- Drilling to date has only tested a portion of concessions at depths.
- Western prospect has returned highest auger grades to date at Colossus, where Viridis aims to test at full depths with RC and Diamond rigs.
- Over 100 holes awaiting assays with 7 drill rigs on site.

True Ionic Clay Project

Fast-Moving Team

- Highly experienced Project Execution CEO and In-Country team to advance Colossus at a rapid pace.
- Dr Braga led CBMM's entire geological team. Dr Petersen is a geology veteran in Brazil with significant experience in Ionic Clays hosted within the PDC Alkaline Complex.
- Consistent news flow with Maiden Resource Estimate underway and Scoping Study to commence in H1 2024.

THANK YOU

Further Enquiries:

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