



# Developing Critical Mineral Assets



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**To support global technology, energy and defence supply chains by developing high quality critical mineral assets.**



# Overview



## Major land position

- 2,500 km<sup>2</sup> Murray Basin
- Growing critical metals hub with advanced mineral sands and rare earth projects

## Large resource at Goschen Central Project

- Remains open.
- Over 600Mt.
- Strong monazite, xenotime and zircon assemblage.

## Rapid progress at Goschen Central Project

- Scoping studies complete.
- Bulk metallurgical testwork program complete.
- Product quality testing complete.

## Exposure to key critical minerals

- Titanium
- Zirconium
- Rare earth elements
  - Strong assemblage of Heavy rare earth elements.

## Victorian Critical minerals roadmap.

- Goschen Central highlighted.
- Geopolitical tensions reinforce western supply chains of critical and strategic minerals.

## Downstream rare earth processing technology

- Strong ESG credentials over alternate methods.

# Critical minerals



## Advantages of the Wimmera (WIM) style mineral sand deposits:

- ✓ Strong assemblage of zircon, and key characteristics to achieve the higher value, **premium grade**, a key feedstock for zirconium production.
- ✓ **Strong assemblage of monazite and xenotime** – naturally occurring minerals, with concentrations of up to 60% total rare earth oxides (TREO).
- ✓ TREO contains a strong assemblage of the key light and heavy rare earths **Nd, Pr, Dy and Tb**
- ✓ **Simplified processing flowsheets**, utilising physical separation via screening and gravity spirals to achieve saleable concentrates.
- ✓ Relatively **low capital expenditure** vs hard rock rare earth element deposits.

## Zirconium

Zirconium or zirconium-bearing minerals is **critical for national security, clean energy, and technological innovation** due to its role in:

- Clean energy (nuclear power)
- National defence (missiles, submarines)
- Advanced manufacturing

## Titanium

Is a **critical mineral** due to its essential role in high-performance applications; aerospace, defence, and clean energy combined with potential supply risks.

## Rare Earth Elements

are **critical minerals** due to their vital role in advanced technologies; clean energy, defence, and electronics and their highly concentrated global supply chain.

60	65	66	59
Nd	Tb	Dy	Pr
Neodymium	Terbium	Dysprosium	Praseodymium

# Electrification and robotics to drive demand



Total global rare earth oxide consumption is anticipated to increase **five-fold by 2040** at a Compound Annual Growth Rate (CAGR) of 5.4%<sup>1</sup>.

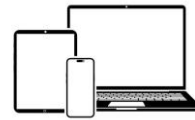
**Permanent Magnets** are the most significant driver. Neodymium-iron-boron (NdFeB) magnets, which rely on rare earths like neodymium, praseodymium, dysprosium, and terbium, are essential for:



**Wind Turbines:** The increasing use of REPM direct-drive generators in wind turbines, offering significant efficiency benefits, is a key driver. A 3MW direct-drive wind turbine requires 1 to 2 tonnes of REPM<sup>3</sup>.



**Electric Vehicles (EVs):** The exponential increase in EV production demands more rare earth minerals for electric motors, with each EV requiring 2kg to 5kg of REPM (2 to 4x the quantity of a typical ICE vehicle).



**Consumer Electronics:** Laptops, smartphones, and flat-screen TVs continue to utilise rare earths for components.



**Advanced Air Mobility (AAM):** Drones and electric vertical-takeoff-and-landing (eVTOL) aircraft are emerging as significant demand drivers<sup>2</sup>.



**Robotics:** Industrial and consumer service robots are projected to become the **single largest demand driver for NdFeB magnets by 2040**<sup>1</sup>.

1 - <https://www.adamasintel.com/new-report-rare-earth-magnet-market-outlook-to-2040/>

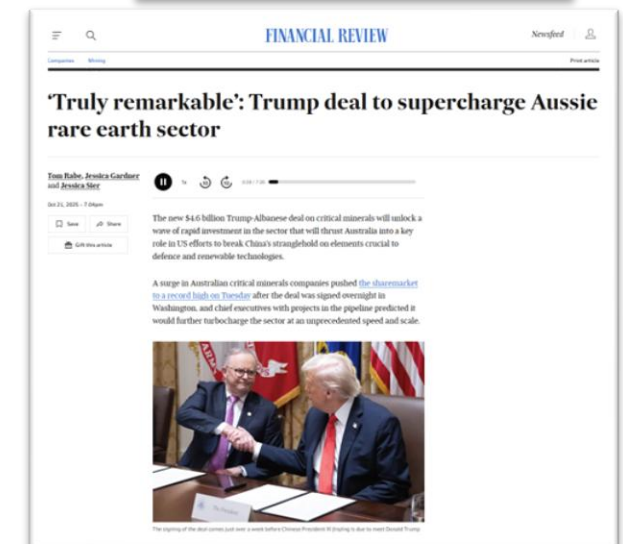
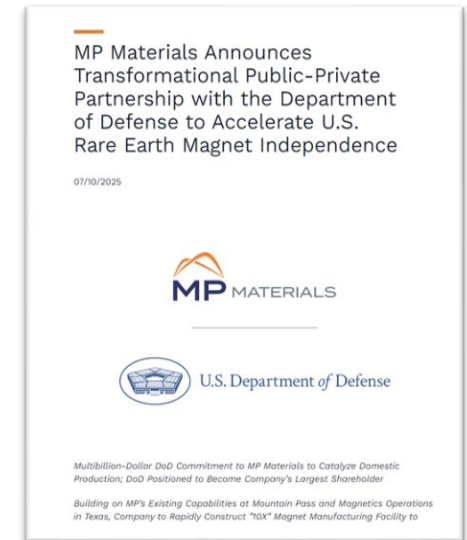
2 - <https://www.sfa-oxford.com/knowledge-and-insights/critical-minerals-in-low-carbon-and-future-technologies/uavs-drones-and-critical-minerals/>

3 - <https://lynasrareearths.com/products-our-products/how-are-rare-earths-used/wind-turbines/>



# Strategic Value

- **A\$183M investment by Energy Fuels** into Astron Corp (ASX:ATR) - offtake and investment for rare earth mineral concentrate from the Donald Mineral sands project, \$183M AUD investment.
- ***“Australian Government to underwrite the development of critical mineral projects through the establishment of a strategic reserve..”***
- **US Department of Defence underwrites MP Materials and establishes a price floor** commitment of \$110 per kilogram for NdPr products.
- **‘Truly remarkable’: Trump deal to supercharge Aussie rare earth sector**



<https://mpmaterials.com/news/mp-materials-announces-transformational-public-private-partnership-with-the-department-of-defense-to-accelerate-u-s-rare-earth-magnet-independence>

<https://www.afr.com/politics/federal/government-to-stockpile-critical-minerals-to-safeguard-supply-20250423-p5ltsq>

<https://www.cruxinvestor.com/posts/energy-fuels-and-astron-form-joint-venture-to-develop-donald-rare-earth-project-in-australia>

<https://www.afr.com/companies/mining/truly-remarkable-trump-deal-to-supercharge-aussie-rare-earth-sector-20251021-p5n41d>

# REE Projects aren't all alike



	Mineral Sands		Hardrock	Ionic Clay hosted
<b>Formation</b>	Formed by the weathering and erosion of primary hardrock deposits, followed by fluvial and/or marine transport and concentration of heavy minerals (including REE-bearing ones) in ancient or modern shorelines		Primarily magmatic (e.g., carbonatites, alkaline igneous rocks, peralkaline systems) or hydrothermal processes.	Formed by intense in-situ weathering (laterization) of REE-rich parent rocks (e.g., granites, volcanic rocks) in humid, subtropical climates.
<b>REE Occurrence</b>	In monazite, xenotime grains with Ti/Zr minerals		Discrete minerals (monazite, bastnaesite, xenotime)	Adsorbed onto clay particles (ion-exchangeable)
<b>Major REE Type</b>	Light & Heavy REEs in monazite/xenotime		Light REEs (Nd, Pr, La)	Heavy REEs (Dy, Tb, Y)
<b>Grades</b>	Low - Moderate		High	Low - Moderate
<b>Processing complexity (Beneficiation)</b>	Low	ACDC SS – Phase 1 – Rare Earth Mineral Conc. (REMC)	High	Low
<b>Processing complexity (Chemical)</b>	High	ACDC SS – Phase 2 – Mixed Rare Earth Oxide (MREO)	Very High	Low
<b>Recovery Rate of REE</b>	Moderate to high		Moderate to high	Moderate
<b>Capital Costs</b>	Medium		Very high	Low to Medium
<b>Operating Costs</b>	Beneficiation - Low Chemical – Medium to High		High	Low to Medium
<b>Advantages</b>	Beneficiation processing simple and proven Dual product revenue stream REMC is highly desirable product		Large scale High Grade	Lower capital and operating requirements Lower waste management requirements
<b>Disadvantages</b>	Waste management from chemical processing		Complex processing High Capital requirements Waste management	Low Grade, high throughput Processing flowsheet yet to be proven

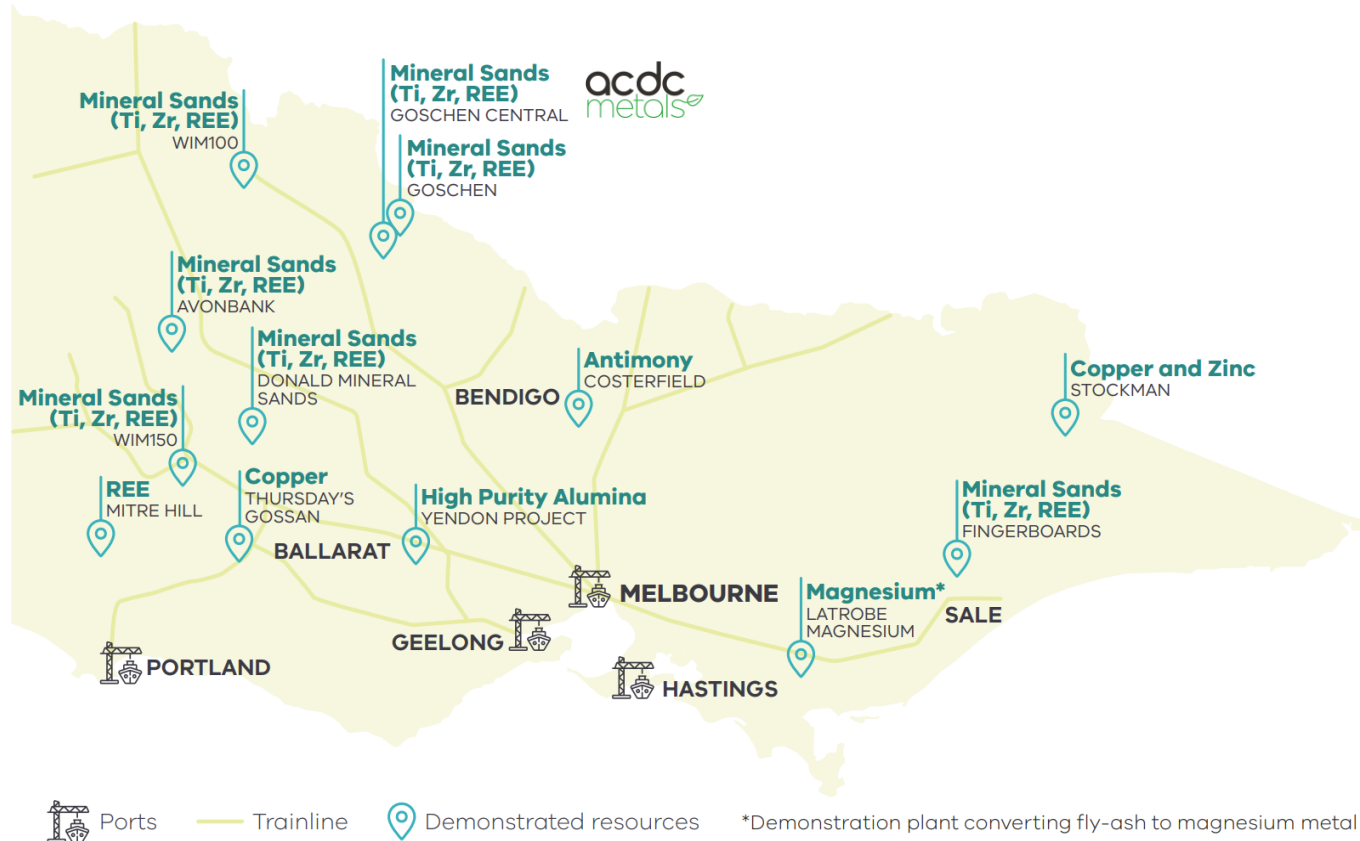
**Mineral sands projects provide dual product revenue streams.** A mature well understood mineral sands market, coupled with the strategic optionality of rare earths.



# Goschen Central - an advancing Project



## Victoria's Demonstrated Critical Mineral and Strategic Material Resources



## Last 12 months

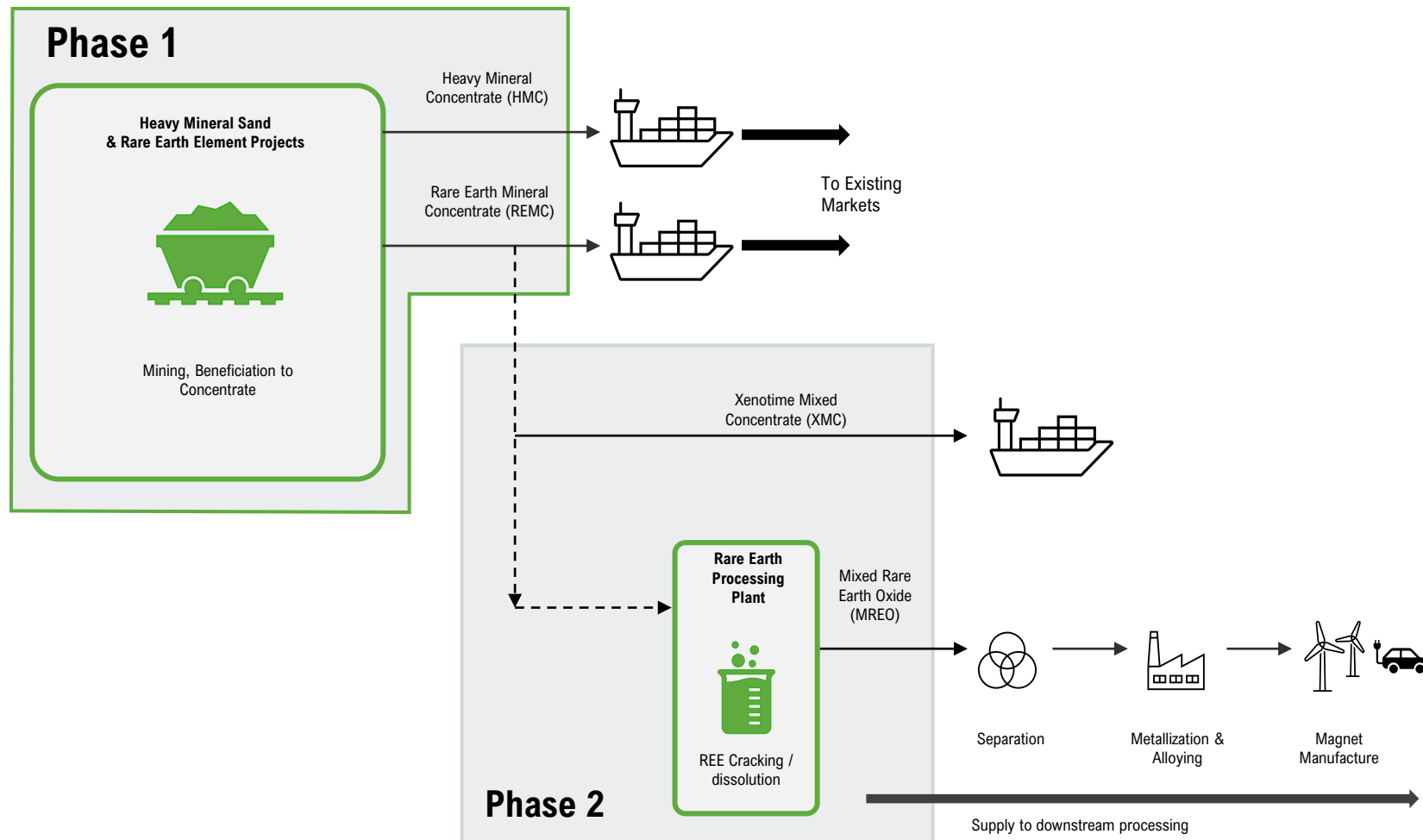
- ✓ 1.6 Tonne Metallurgical testwork program complete.
- ✓ Key Metallurgical data obtained for further development.
- ✓ Marketing study completed.
- ✓ JORC Resource update.
- ✓ Scoping Study complete.
- ✓ Retention licence application in progress
- ✓ Identified on Victorian Government Critical Minerals Roadmap.
- ✓ Further mineralogy to define high grade domains

## Next Steps

- Further resource development, Scoping Study mine plan utilises just 15% of total resource:
  - Further conversion of inferred tonnes
  - Extension resource drilling in high grade zone
- ANSTO program on Phase 1 REMC product

ASX announcement – Victorian Government supports Critical minerals projects - 13 December 2024.

# Goschen Central Scoping Study



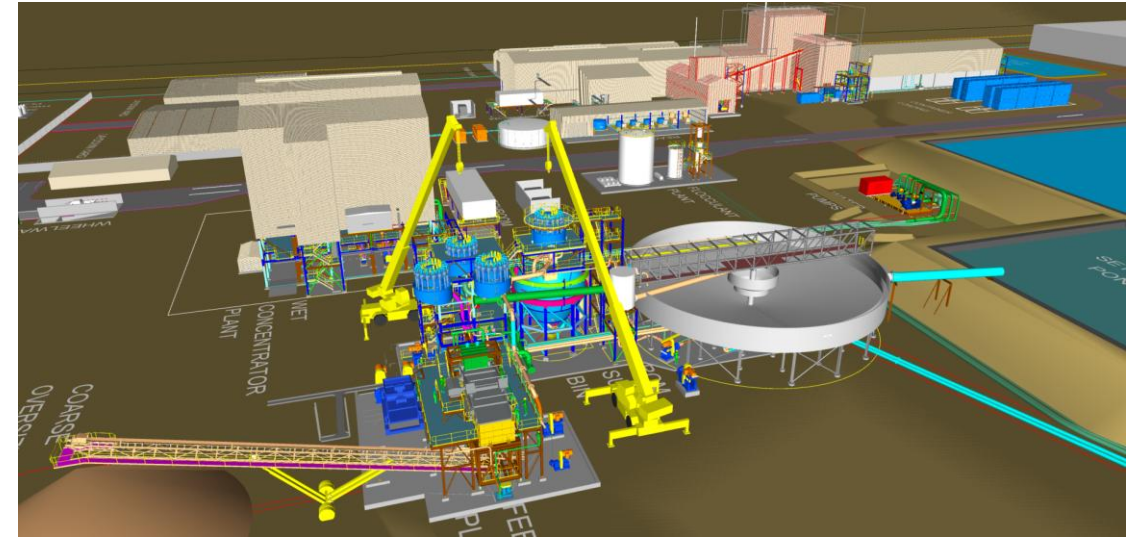
## Potential Production

- ~ **115,000 (dmt/a) of Heavy Mineral Concentrate** on average for first 5 years.
- ~ **1,408,000 (dmt)** of Heavy Mineral Concentrate for life of mine.
- ~ **6,800 (dmt/a) of Rare earth mineral concentrate (REMC)** on average for first 5 years in Phase 1 scenario.
- Phase 2 will process REMC to produce ~**3,200 dmt/a of Mixed Rare earth oxide** and ~ **500 dmt/a of highly desirable Xenotime mixed concentrate (containing heavy rare earths)**.

# Goschen Central Scoping Study



- Robust economics:
  - Phase 1: Pre-tax **NPV8 A\$287M IRR 23%**.
  - Phase 1 & 2: Pre-tax **NPV8 A\$384M IRR 24%**.
  - **Breakeven NdPr price of US\$32/kg** over life of Project\*.
    - Spot: US\$60-65/kg, US DoD price floor: US\$110/kg
- 14-year life of mine, 6 Mtpa nameplate capacity:
  - **82% of resource** in the indicated category.
- CAPEX:
  - Phase 1 ~A\$310M incl. contingency of 10%.
  - Phase 2 A\$119M incl. contingency of 10%.
- Phase 2 – Rare earth processing plant:
  - utilises ‘caustic crack’ process and is vertically integrated with mine operation.
  - nameplate capacity of 7,000 tonnes per annum can support supplementary monazite supply from 3<sup>rd</sup> party sources.
  - Bespoke process provides strong ESG advantages over competing technologies.



## Contributing consultants



\*Breakeven is NPV=0, HMC pricing remains at base case in this scenario of \$512/t  
 ASX announcement – Outstanding Economic Potential with Goschen Central Study - 12 June 2025.  
 ASX announcement – Met. Testwork Program completed for Goschen Central – 17 February 2025.

# Goschen Central Project – Mineral Resource

## Significant Progress:

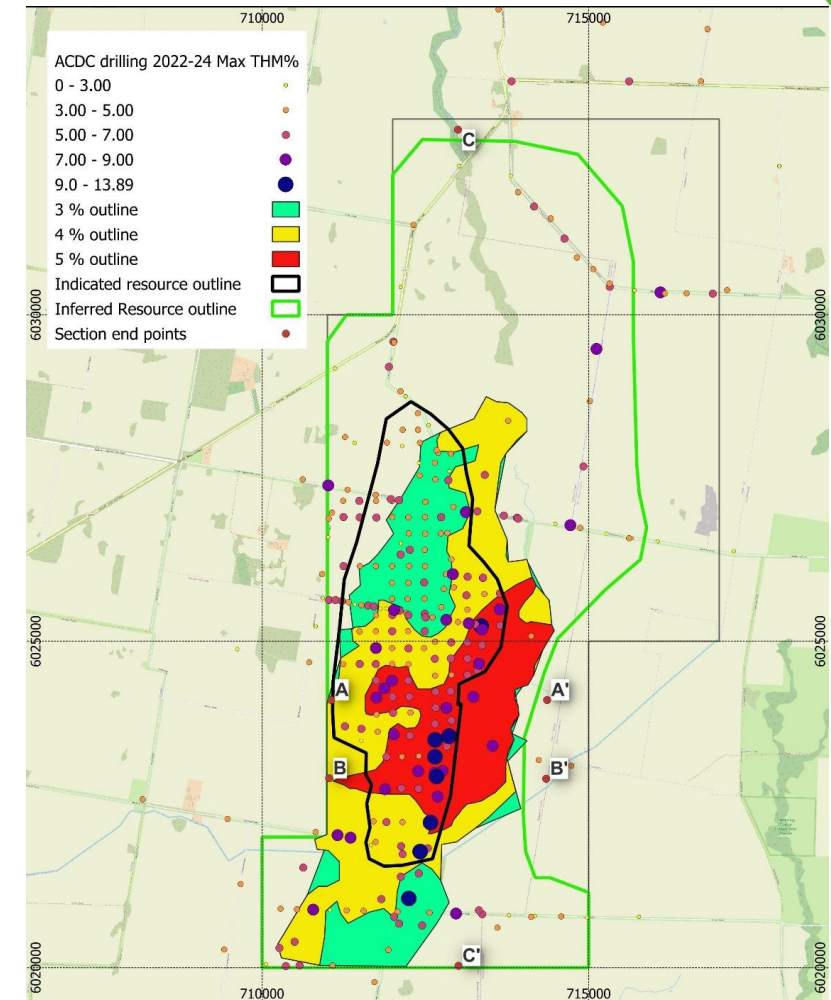
- **Significant increase in grade, heavy mineral tonnes** and geological confidence of the Goschen Central resource.
- Indicated resource classification has increased significantly:
  - Tonnes have increased by **over 60% from 130Mt to 210Mt**.
  - Grade has **increased by 18%** to 2.3% total heavy minerals (THM).
  - In-Situ Total rare earth oxide (TREO) grade has **increased by over 13%** to 684ppm.
- Mineral Resource Estimate **over 600 Mt**.
- **Resource remains open** to the north, south and east.

## Updated Mineralogy:

- Results received from high grade zone show an **attractive REE-titanium** mineral distribution within total heavy mineral (THM) content:
  - Zircon 25.4%
  - Rutile 12.7%
  - Monazite 3.4%
  - Xenotime 0.8%
- Magnetic REE contained in **monazite and xenotime** from the high-grade zone demonstrates attractive heavy and light REE content:
  - Praseodymium 1060ppm
  - Neodymium 3990ppm
  - Terbium 116ppm
  - Dysprosium 693ppm

Planning for next drill campaign underway, to test continuation of high-grade zone to the east and south.

ASX Announcement – ACDC Metals Delivers Significant Upgrade at Goschen Central - 3 December 2024.  
 ASX Announcement – New Mineralogy from Goschen Central Shows High Magnetic REE Content - 22 October 2025.



acdc  
metals

Goschen Central Resource

0 2 4 km



# Goschen Central next steps



## **Drilling**

- Based on the results of the 2024 Q4 mineral resource update, there are key areas that remain open and untested. The program will be design to test extension of the high grade zone to the east and south.

## **Resource upgrading**

- Incorporating further drilling planned in CY2026 and the recently completed mineralogy that has demonstrated a stronger assemblage in the high grade domain.

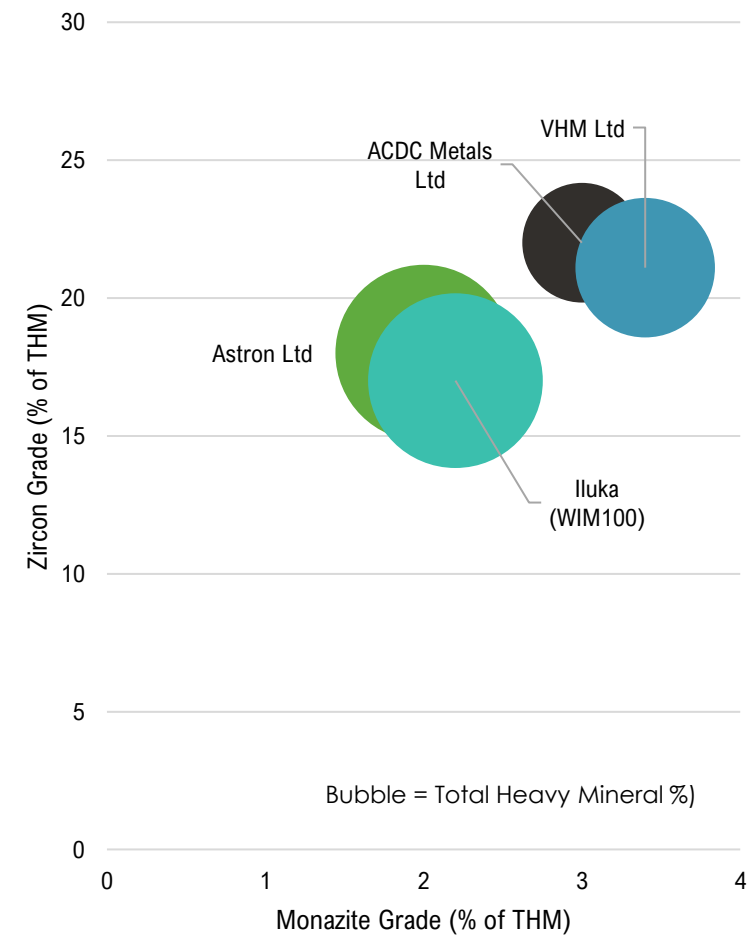
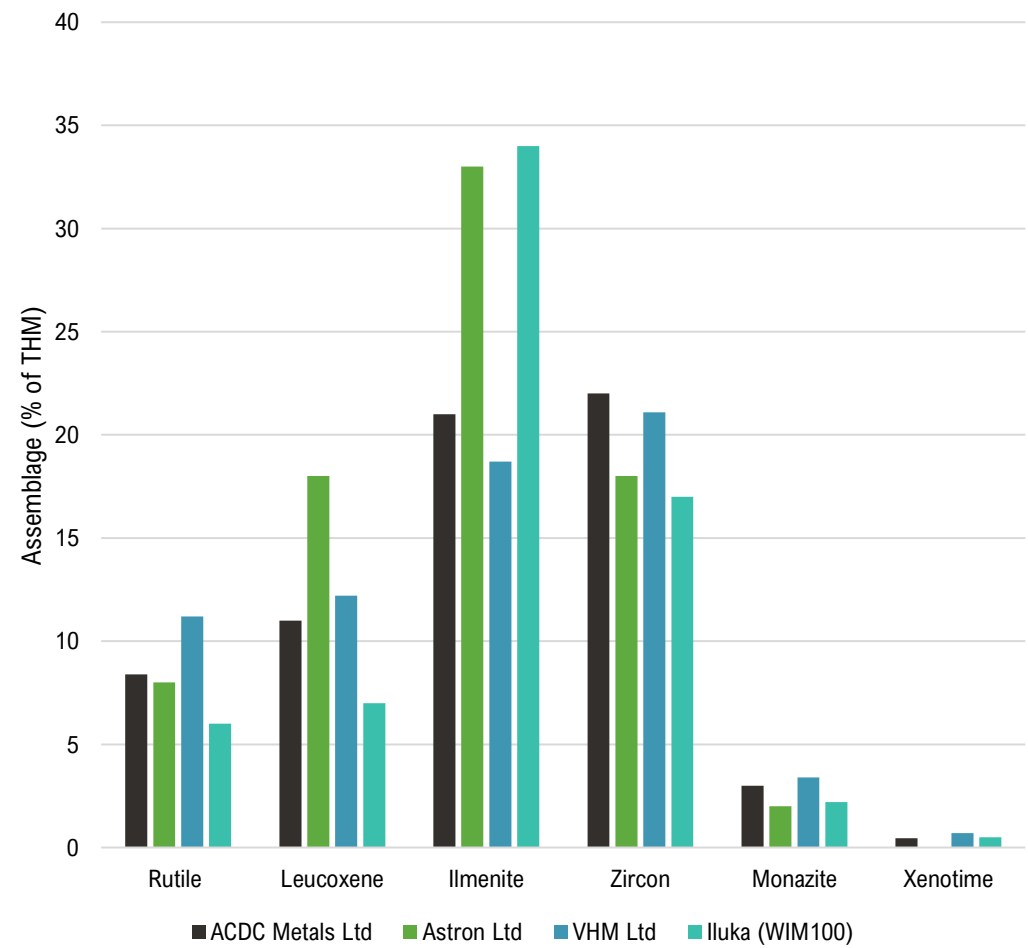
## **Product quality testing**

- planning is underway to conduct a hydrometallurgical testwork program at ANSTO, that will utilise rare earth mineral concentrate (REMC) (representing product from phase 1) and target production of mixed rare earth carbonate (MREO).
- This will validate the quality of product and potential recoveries of light and heavy rare earth oxides.
- The testwork program will enable continued discussions with potential offtake partners and project investment opportunities.

## **Retention Licence**

- The retention licence application remains in progress and on track Q1 CY2026.

# Goschen Central resource compares well against peers



## Results

- Key minerals of focus:
  - **Zircon**
  - **Monazite**
  - **Xenotime**
- High assemblage of magnet rare earth oxides
  - **Pr 4.1%**
  - **Nd 14.1%**
  - **Dy 2.4%**
  - **Tb 0.4%**

Refer to appendix A for full comparison tables

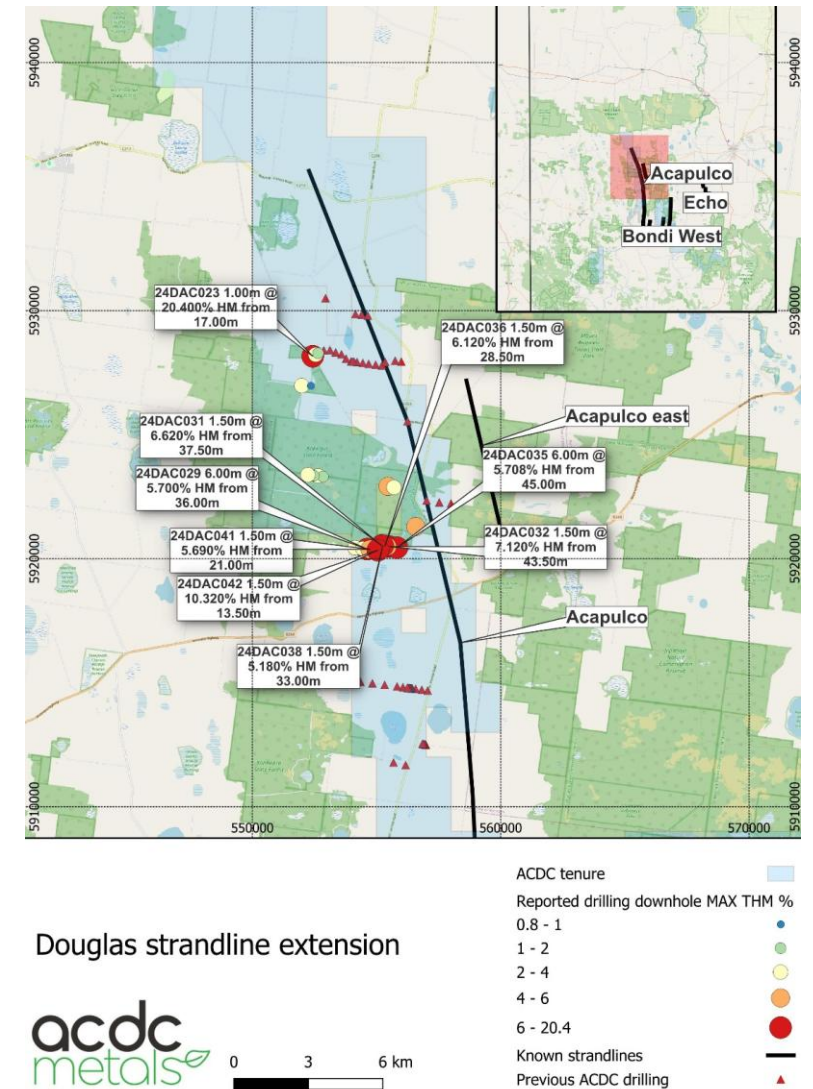


# Douglas Project

Targeting high grade strands in an active region of significant discoveries and mining.

- Tenements EL7908, EL7544 cover over 265km<sup>2</sup>
- Drilling in 2023 and 2024 totalled over 3,300 metres.
- High grades up to 20% total heavy minerals (THM) intersected.
- Mineralised thickness of up to 33m from shallow depth.
- Comparable grades and thickness to the nearby Bondi strandline system which was mined by Iluka Resources.
- 2024 campaign consisted of 48 holes, highlights include:
  - **21.0m @ 4.73% THM** from 21.0m, including **4.5m @ 11.34% THM** from 21.0m and **1.5m @ 18.15% THM** from 24m (24DAC012).
  - **33.0m @ 3.19% THM** from 9.0m, including **7.5m @ 7.91% THM** from 19.5m and **1.5m @ 15.28% THM** from 24m (24DAC013).
  - **25.0m @ 2.1% HM from 17.0m, including 1m @ 20.4% HM from 17.0m (24DAC023).**

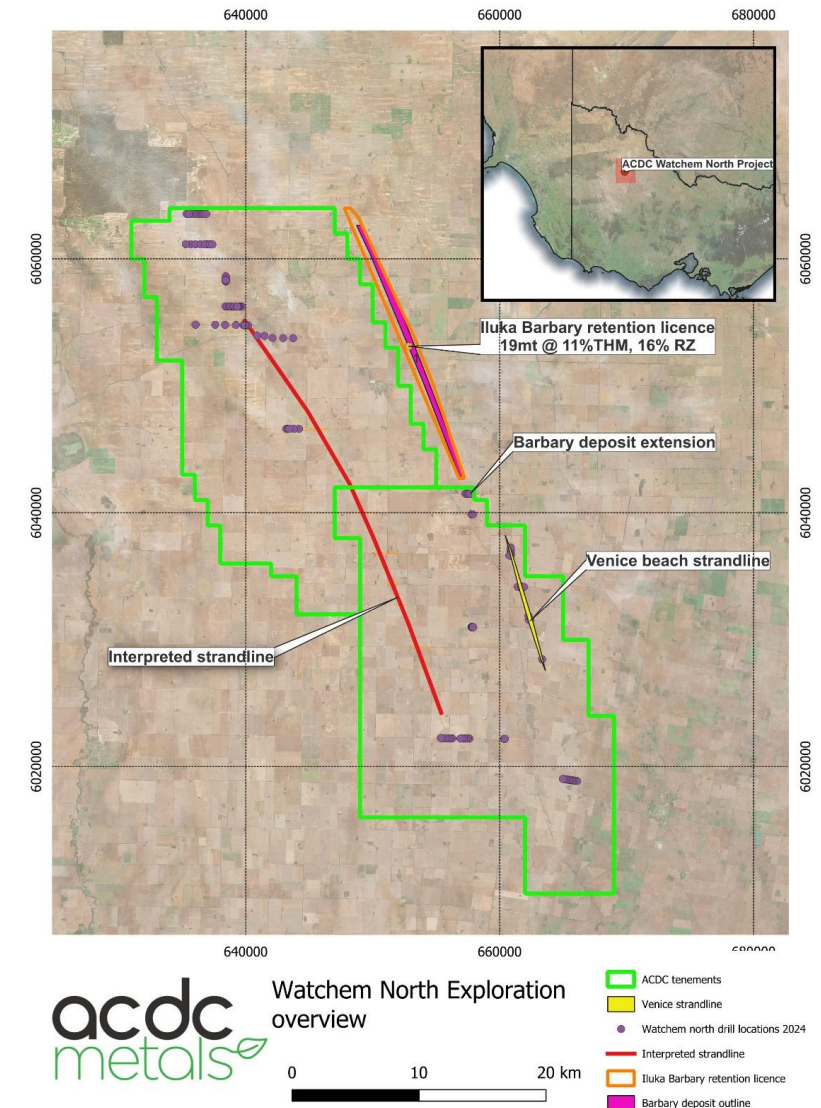
2024 drilling results refer to ASX announcement 7 May 2024.  
2024 drilling results refer to ASX announcement 26 August 2024.



# Watchem North Project

Targeting high grade strands in an active region of significant discoveries.

- Tenements EL7685, EL7687 cover over 952km<sup>2</sup>
- Venice Beach Strandline discovered at Watchem North. Shallow, high-grade, heavy mineral sand strandline with a 9km strike length, including 6m at 37.9% Total Heavy Mineral (THM).
- A second potential strandline interpreted over a 35km strike length.
- Drilling suggests a third strandline, interpreted to be an extension of Iluka's Barbary heavy mineral sand resource.
- Drilling highlights from the Venice Beach strandline include:
  - **6.00m @ 37.9% THM** from 6.00m (24WN046).
  - **4.50m @ 29.2% THM** from 6.00m (24WN026).
  - **3.00m @ 20.3% THM** from 4.50m (24WN047).
  - **4.50m @ 19.3% THM** from 4.50m (24WN035).



2024 drilling results refer to ASX announcement 4 June 2024.  
2024 drilling results refer to ASX announcement 26 August 2024.



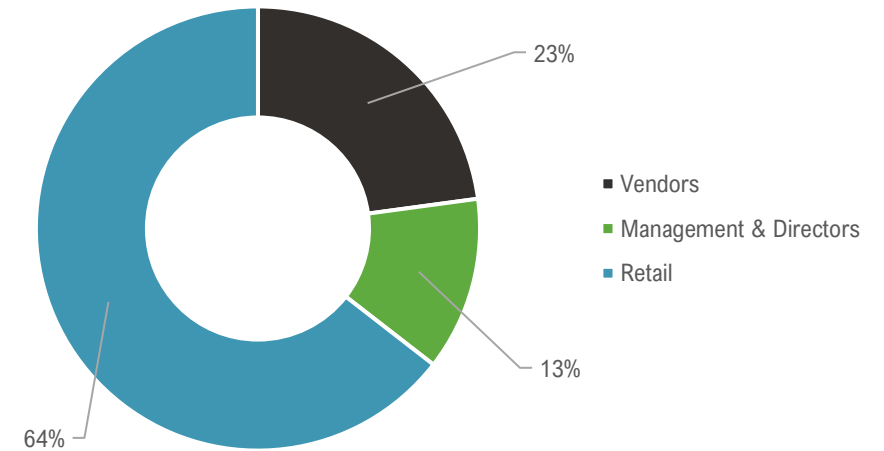
# Corporate Structure



## Capital Structure

Shares on issue	74,775,130
Share price (24 Nov 2025)	\$0.063
Market Capitalisation	\$4.7 M
Cash (Q3 CY2025)	\$1.98 M
Debt	Zero
EV	\$2.7 M
Options	
Other, \$0.30 expiring Jan 26	9,550,000

ACDC Share Register



- ASX listed January 2023
- ASX ticker: ADC
- Registered Office Melbourne VIC
- TOP 20 accounts for ~**60%** of shares on offer

# Experienced Board & Management Team



**Tom Davidson**  
**Chief Executive Officer**  
Engineer & Development



**Andrew Shearer**  
**Non-Executive Director and Chair**  
Geologist & Corporate



**Mark Saxon**  
**Executive Director**  
Geologist & Corporate



**Ivan Fairhall**  
**Non-Executive Director**  
Engineer & Corporate



**Richard Boyce**  
**Non-Executive Director**  
Finance & Governance



**Kent Balas**  
**Exploration Manager**  
Geologist



**Adrien Wing**  
**Corporate Secretary**  
Governance

# Investment Summary



- ✓ **Strong team** with history of project development
- ✓ **Cash balance of \$1.98m** to execute plan
- ✓ Exposure to **critical minerals**
- ✓ **Downstream processing** optionality
- ✓ **Proven** exploration and project development strategy

## Upcoming News flow

- Goschen Central REMC testwork program at ANSTO, producing MREC
- Goschen Central resource development
- Retention Licence application for Goschen Central Project
- The company continues to assess strategic business opportunities that align with company objectives



## Contact

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TELEPHONE: 1300 288 664

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# Appendix A - Peer comparison data



## Mineral Assemblage

		% of HM						
	Grade HM%	Rutile	Leucoxene	Ilmenite	Zircon	Monazite	Xenotime	TREO
ACDC Metals Ltd	2.2	8.4	11	21	22	3	0.45	2.7
Inferred	2.1	8.1	12	20	21	2.8	0.45	2.5
Indicated	2.3	9.1	10	22	24	3.4	0.45	2.9
Astron Ltd	4.8	8	18	33	18	2	-	-
Inferred	4.7	9	17	33	19	2	-	-
Indicated	4.6	8	18	32	18	2	-	-
Measured	5.5	9	19	31	21	2	-	-
VHM Ltd	3	11.2	12.2	18.7	21.1	3.4	0.7	2.44
Inferred	2.7	12	15.7	12.8	20.4	3.4	0.7	2.49
Indicated	3.2	10.2	8.5	24.5	20.4	3.4	0.7	2.34
Measured	5.7	10.8	9	24.7	29.9	4.3	0.8	2.72
Iluka (WIM100)	4.7	6	7	34	17	2.2	0.5	-
Inferred	4.4	5	7	33	16	2.1	0.4	-
Indicated	4	6	7	33	17	2.3	0.5	-
Measured	5.3	6	7	34	17	2.1	0.5	-

1. Astron Ltd – ASX announcement - <https://astronlimited.com.au/wp-content/uploads/2025/01/20250131-ASX-Quarterly-Activities-Report-Q4-2024-Final.pdf>
2. VHM Ltd - ASX announcement - <https://wcsecure.weblink.com.au/pdf/VHM/02912571.pdf>
3. Iluka Ltd – ASX announcement - <https://www.iluka.com/media/t5nctvdr/wim100-mineral-resource-estimate-update.pdf>

# Appendix B – JORC Tables - Company Mineral Resource



## 620Mt Goschen Central Project Mineral Resource Estimate

Classification	Tonnes (Mt)	Total HM %	Slimes %	Oversize %	% of total HM Mineral Assemblage					
					Rutile	Leucoxene	Ilmenite	Zircon	Monazite	Xenotime
Indicated	210	2.3	21	4.3	9.1	10	22	24	3.4	0.45
Inferred	410	2.1	21	4.2	8.1	12	20	21	2.8	0.45
<b>Total</b>	<b>620</b>	<b>2.2</b>	<b>21</b>	<b>4.2</b>	<b>8.4</b>	<b>11</b>	<b>21</b>	<b>22</b>	<b>3.0</b>	<b>0.45</b>

Classification	% of total HM Rare Earth Oxides																
	Y2O3	La2O3	CeO2	Pr2O3	Nd2O3	Sm2O3	Eu2O3	Gd2O3	Tb2O3	Dy2O3	Ho2O3	Er2O3	Tm2O3	Yb2O3	Lu2O3	TREO	TREO - CeO2
Indicated	0.50	0.48	1.0	0.12	0.42	0.077	0.0040	0.077	0.011	0.073	0.016	0.050	0.007	0.052	0.008	2.9	1.9
Inferred	0.43	0.42	0.9	0.11	0.36	0.067	0.0033	0.066	0.010	0.063	0.014	0.043	0.006	0.045	0.007	2.5	1.6
<b>Total</b>	<b>0.45</b>	<b>0.44</b>	<b>0.9</b>	<b>0.11</b>	<b>0.38</b>	<b>0.071</b>	<b>0.0036</b>	<b>0.070</b>	<b>0.011</b>	<b>0.066</b>	<b>0.014</b>	<b>0.045</b>	<b>0.007</b>	<b>0.048</b>	<b>0.008</b>	<b>2.7</b>	<b>1.7</b>

### Notes

1. Mineralisation reported above a cut-off grade of 1.0% total heavy minerals (HM).
2. The Mineral Resource has been classified and reported in accordance with the guidelines of the JORC Code (2012).
3. Total HM is from within the +38 µm to 1 mm size fraction and is reported as a percentage of the total material. Slimes is the +38 µm fraction and oversize is the +1 mm fraction.
4. Estimates of the mineral assemblage (rutile, leucoxene, ilmenite, zircon, monazite and xenotime) and are presented as percentages of the total HM component, as determined from XRF, ICP-MS and QEMScan analysis. QEMScan data used the following breakpoints are used for definition of the titania minerals: rutile >98% TiO2, leucoxene: 70 to 98% TiO2 and ilmenite: 45 to 70% TiO2.
5. Rare Earth Oxides are from XRF data and are presented as percentages of the total HM component.
6. All tonnages and grades have been rounded to reflect the relative uncertainty of the estimate, thus sum of columns may not equal.

\*The Mineral Resource estimate was prepared and first disclosed in the ASX release dated 3 December 2024