



McLAREN
MINERALS

McLaren Minerals (ASX:MML) McLaren Mineral Sands Project

On the Fast Track to Production
and Unlocking Global Demand

December 2024



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COMPETENT PERSON STATEMENT

The information in this Presentation that relates to mineral resources, exploration results and exploration targets for the silica sand Projects is based on and fairly represents information and supporting documentation compiled by Richard Maddocks who is a full-time employee of Auranmore Consulting and is a Fellow of the Australasian Institute of Mining and Metallurgy. Auranmore Consulting has been engaged as an independent consultant to the Company and Richard Maddocks has sufficient experience which is 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 Exploration Results, Minerals Resources and Ore Reserves (JORC Code). Auranmore Consulting consents to the inclusion of the information in this Presentation that relates to mineral resources, exploration results and exploration targets for the silica sand Projects in in the form and context in which it appears.

The information in this report that relates to Heavy Mineral Resources is based on, and fairly reflects, information compiled by Mr David Williams, a Competent Person, who is an employee of ERM and a Member of the Australian Institute of Geoscientists (RPGEO). Mr Williams has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources, and Ore Reserves (JORC Code). Mr Williams consents to the disclosure of information in this announcement in the form and context in which it appears.

The information in this report that relates to Metallurgical results is based on, and fairly reflects, information compiled by Mr Mitch Ryan, a Competent Person, who is an employee of IHC Mining. Mr Ryan has sufficient experience relevant to the Metallurgical test work that was undertaken to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources, and Ore Reserves (JORC Code). Mr Ryan consents to the disclosure of information in this announcement in the form and context in which it appears.

The Company confirms that there is no new information or data that materially affects the mineral resource estimates announced on 30 June 2022 and 5 August 2024, and that all assumptions underpinning the estimate continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

This presentation has been approved by the Board of Directors



Corporate Snapshot



Campbell Smyth

Non-Executive Chairman

Campbell's professional career has been in the provision of advice to fund management, capital markets and the corporate finance sector. This experience has been with most major markets, primarily the ASX, and listed and unlisted companies in North America and Europe.



Simon Finnis

Managing Director

Simon is a mining professional with 35+ years experience, including ten years operating in the minerals sands industry. He led the Pooncarie Mineral Sands Project from feasibility to production and was CEO of the US\$650m Grand Cote Mineral Sands Project in Senegal. Simon also served as CEO of Metro Mining, overseeing delivery of the Bauxite Hills Project in Queensland.



Peter Secker

Non-Executive Director

Peter is a Mining Engineer with 40+ years experience, overall developing five greenfield projects in Australia and globally, including building, commissioning and operating the TiWest Mineral Sands project Project at Cooljarloo, WA. Peter has been a CEO of public companies since 1990 and has raised more than \$2Bn of debt and equity.



Andrew Haythorpe

Executive Director

Andrew is a venture capitalist with nearly 30 years' experience establishing start-up enterprises in a variety of sectors. He has held a number of Company Chair and Board positions, as well as being CEO of several successful listed minerals and resources organisations.

Capital Structure

Cash (as at 30 September 2024)	A\$554K
Shares on Issue	103.2M
Options and Performance rights	8M
Share Price (as 6/12/2024)	A\$0.04
Market Capitalisation	A\$4.1m

Share Price Performance



Accelerating Growth: Focused on Titanium/Heavy Minerals



New Core Focus:

- Transitioning from silica sand to **Heavy Mineral Sands (HMS)**, specifically targeting titanium minerals for key industrial applications.



McLaren Mineral Sands Project, WA:

- Flagship project with inferred and indicated resource of **280Mt @ 4.8% Heavy Mineral** deposit.
 - Positioned to meet the growing requirement for Titanium Minerals.
 - **Pre-Feasibility Study (PFS)** underway, targeting completion during Q2 2025.



New Leadership Team:

- Assembled an experienced team with a proven track record in developing and delivering large-scale mineral sands projects globally.
- Focused on fast-tracking McLaren into production, leveraging deep expertise in mining operations and project management.



Strategic Positioning:

- Well-placed to capitalise on the growing global demand for feedstock into the pigment (TiO₂) market, particularly in Asia.

McLaren Mineral Sands Project, WA - Highlights

Large Heavy Mineral Sands Deposit:

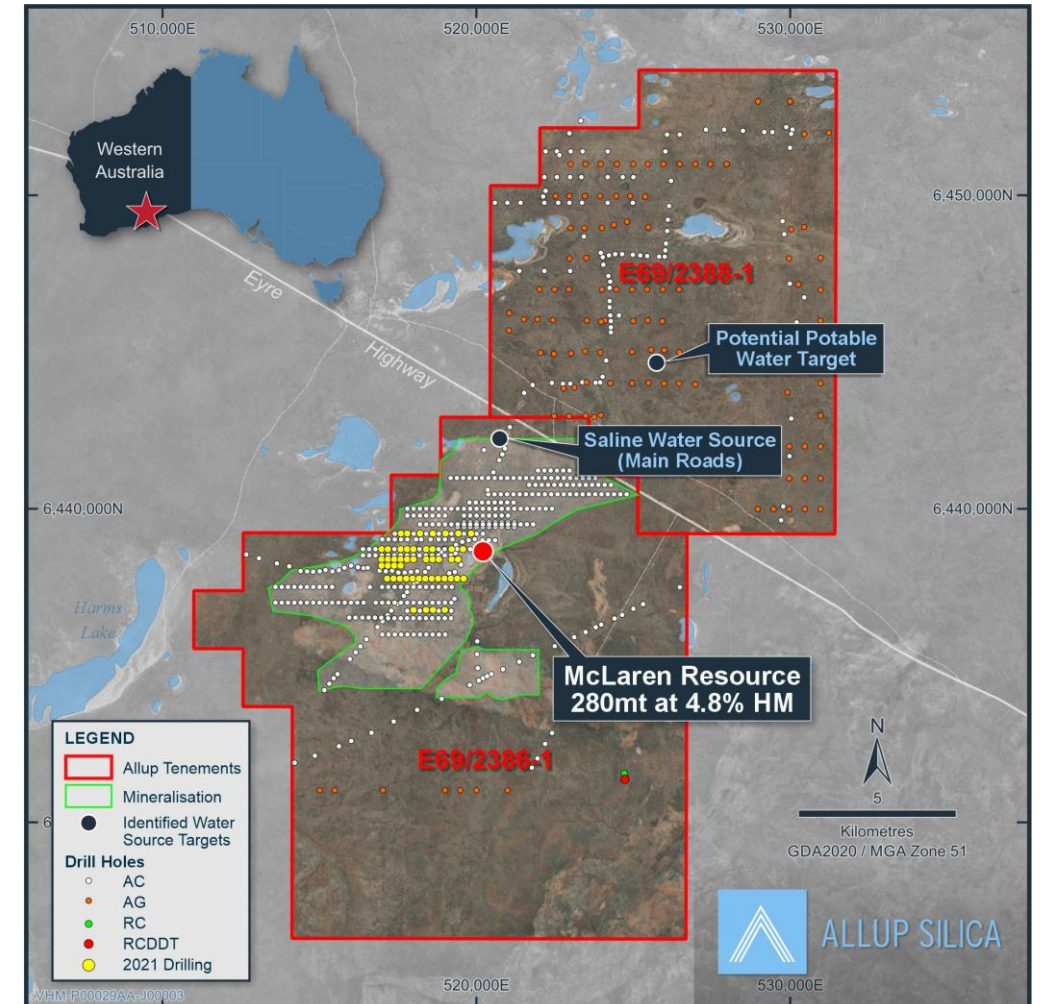
- Inferred and Indicated Resource of 280 Mt @ 4.8% Heavy Mineral Resource
- Topsoil/subsoil <1m then mineralisation - 15 to 35m thickness
- Deposit likely to be compatible with high tonnage mining strategy, with potential for low-cost operations through contracted services.
- Previous drilling - no induration or water encountered.

Strategic Location, Crown Land:

- E69/2386 and E69/2388 cover 333 km² with widespread mineralisation outside the known resource.
- Located 5km south of the Eyre Highway, 420km by road to Esperance Port
- 40km west of Balledonia Roadhouse – accommodation & meals, airstrip

Separation Technology:

- Previous test work on 14t bulk sample undertaken by IHC in 2018
- Traditional separation techniques appropriate for McLaren, including:
 - Feed Preparation: Hydro Cyclones and thickeners for efficient slimes removal.
 - WCP (Wet Concentrator Plant): Spirals using gravity to separate heavy minerals.
 - CUP (Concentrate Upgrade Plant): Magnetic separation to produce two concentrate streams.



McLaren Project: Significant Resource Already Defined

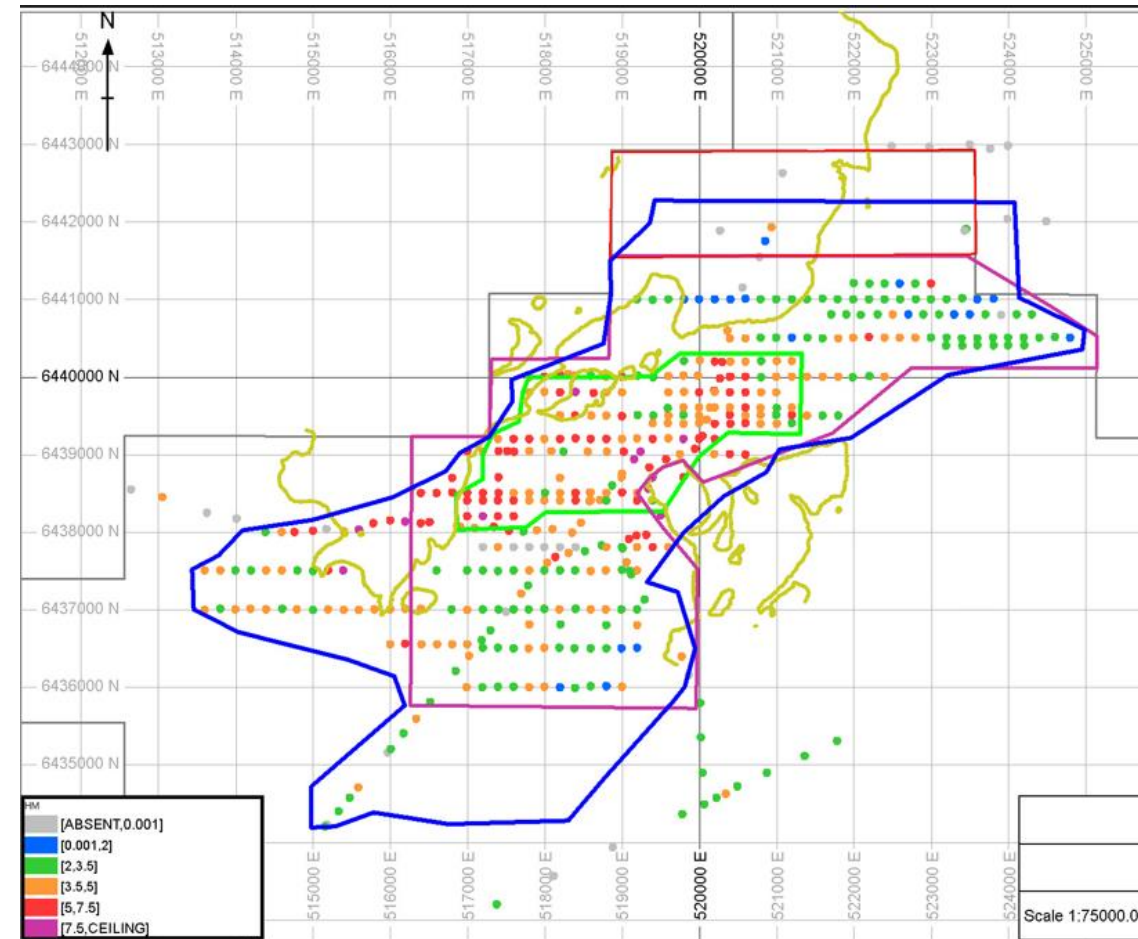
- **280 Mt @ 4.8% Heavy Mineral** Indicated and Inferred JORC Resource (CSA Global), 2% cutoff
- Key minerals are **Ilmenite**, with lesser amounts of **Rutile**, **Leucoxene** and **Zircon**
- Mineralisation from surface - 15 to 35m thickness
 - Exceptional grade continuity and thickness at >2%
 - 48%+ TiO₂ quality Ilmenite

JORC classification	Tonnes (Mt)	HM grade (%)	In-situ HM tonnes (Mt)	Slimes (%)	Ilmenite (% of HM)	Rutile (% of HM)	Leucoxene (% of HM)	Zircon (% of HM)
Indicated	79	6.0	4.7	25.0	30.4	0.7	1.9	0.6
Inferred	201	4.4	8.8	25.4	29.0	0.7	2.1	0.6
Total	280	4.8	13.5	25.3	29.4	0.7	2.0	0.6

JORC classification	Tonnes (Mt)	HM grade (%)	Ilmenite tonnes (in situ) (kt)	Rutile tonnes (in situ) (kt)	Leucoxene tonnes (in situ) (kt)	Zircon tonnes (in situ) (kt)
Indicated	79	6.0	1,440	32	90	26
Inferred	201	4.4	2,550	60	182	54
Total	280	4.8	3,980	92	272	80

ERM Australia Consultants Pty Ltd (ERM), formerly CSA Global prepared a Mineral Resource estimate update for the McLaren heavy mineral sands (HMS) deposit. The purpose of the Mineral Resource estimate update was to incorporate assay and mineralogical analysis results received since the previous Mineral Resource estimate was completed in 2015. The Mineral Resource estimate is presented in Table 1 reported above a cut-off grade of 2% Heavy Mineral (HM) and less than 30% Slimes. The model has been classified as Indicated and Inferred in accordance with the JORC Code. The Mineral Resource estimate is an update to the Mineral Resource estimate prepared by CSA Global in 2015. Refer to ASX announcement dated 5 August 2024.

Footnote
Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The JORC Code, 2012 Edition. Prepared by: The Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC).



McLaren Development Strategy



Pre-Feasibility Study:

Company target to develop a Resource of 200Mt in the JORC Indicated category, with following characteristics:

- Simple dozer and trap mining planned
- Medium sized, 10Mtpa spiral concentration plant to produce up to 400,000tpa of ilmenite in concentrate.
- Focus is on a lower-cost Capex design to fast-track mine development.

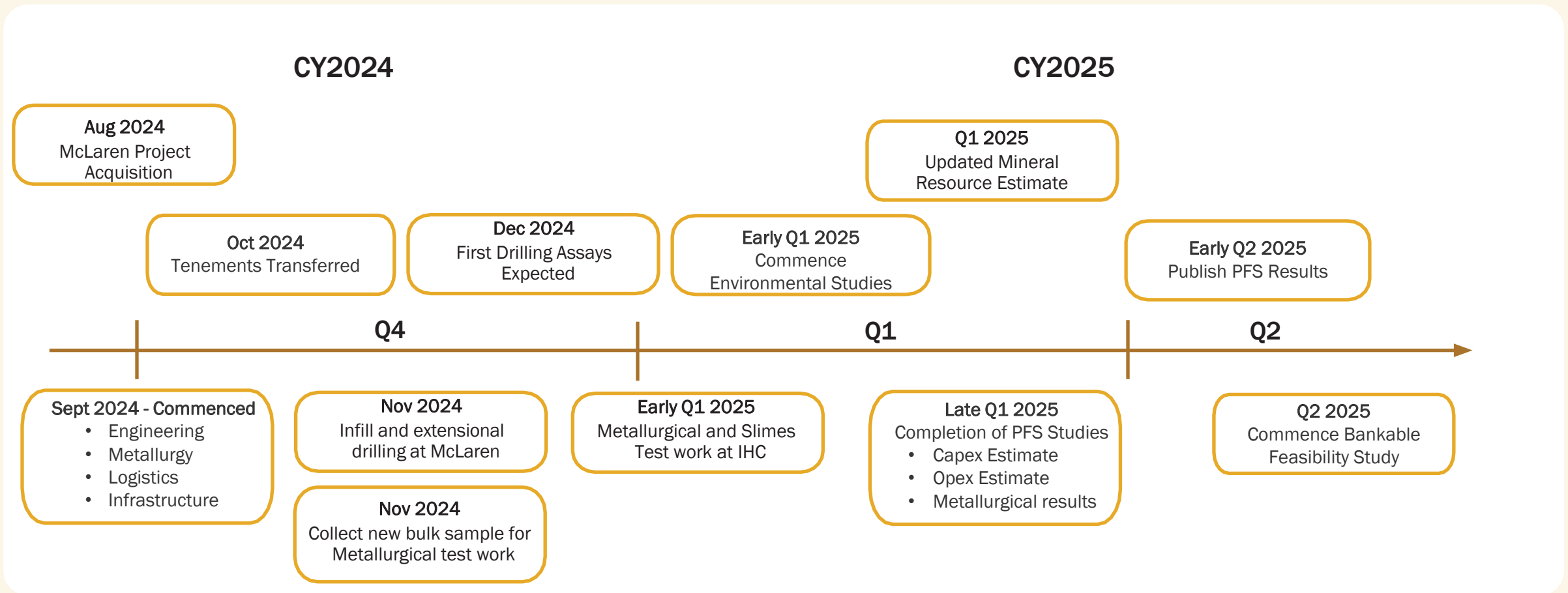
Key Focus Areas:

- **Test Work:** Slimes test work to develop a conceptual management system.
- **Engineering:** Develop flowsheet for separation efficiency
- **Water Source:** Identification of suitable water sources, saline or fresh, for processing
- **Infrastructure:** Determine transport routes, accommodation needs, and other infrastructure requirements
- **Offtake Discussions:** Early discussions with potential buyers.



Image: Machinery shown in the picture does not belong to Allup Silica – photograph courtesy of Piacentini & Son

Fast-Tracking McLaren: Key Milestones to Unlock Titanium Production



Ilmenite: A Key Driver in TiO₂ Production

What is Ilmenite?

Primary Source of TiO₂: Ilmenite is a titanium-iron oxide mineral and the main source of titanium dioxide (TiO₂), essential for many industrial applications.

Key Applications :

- **Pigment Production:** Used to produce TiO₂ pigments, used in paints, coatings, plastics, and paper for their brightness and opacity.
- **Titanium Metal:** Essential for aerospace, automotive, and medical industries due to its high strength-to-weight ratio and corrosion resistance.
- **Welding:** Used in the production of welding electrodes and rods.
- **Steel Processing:** Used in high-performance steel alloys.

Global Market Overview:

- **Major Producers:** Australia, India, Mozambique, and Ukraine are among the top producers of high-grade ilmenite, with TiO₂ content ranging from 46% to 58%.*
- **Top Exporters:** Australia's Iluka Resources, Rio Tinto, and India's VV Minerals, among others.*

Market Outlook:

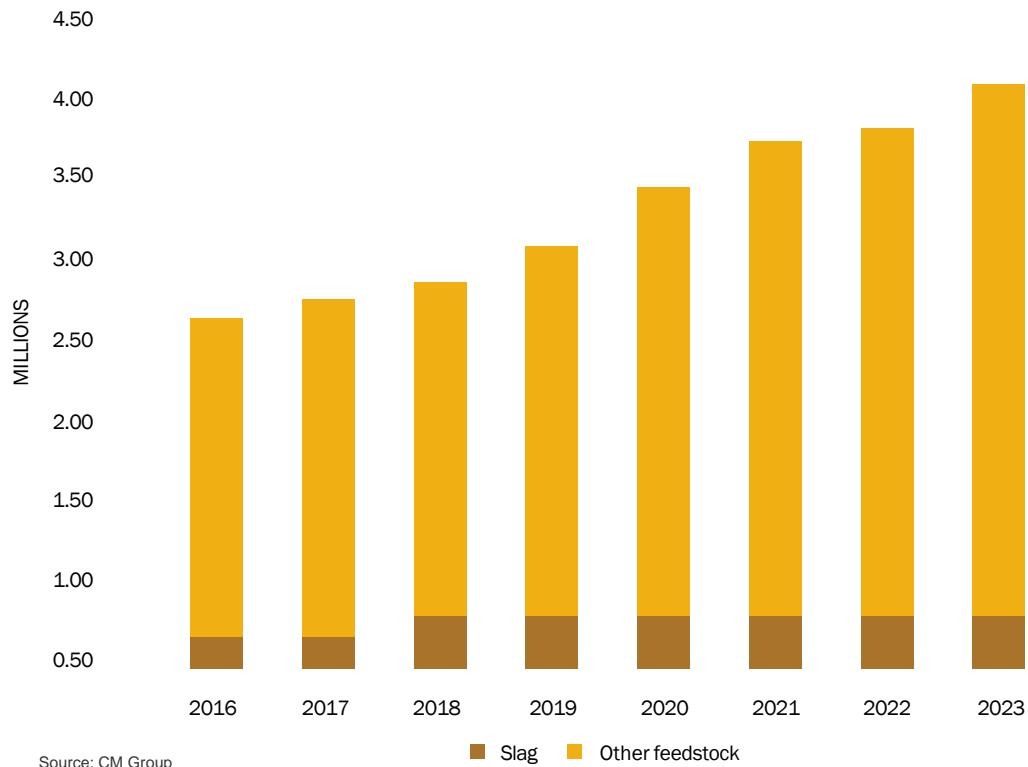
- **Price Increases:** is expected to reach **USD 15.61 billion by 2030**, expanding at a CAGR of 3.9% from 2023 to 2030, according to a new report by Grand View Research, Inc.**
- **Growing Demand:** As industries expand, especially in the Asia-Pacific region, the demand for ilmenite and titanium dioxide is projected to increase significantly, driven by:
 - **Urbanisation and Industrialisation:** Particularly in emerging markets, leading to greater demand for paints, coatings, and industrial materials.
 - **Aerospace and Automotive:** The growing need for lightweight, durable materials in high-performance applications.
 - **Supply Deficits Expected:** Despite increasing production efforts, declining grades and stockpiles, combined with rising demand, could lead to supply deficits, further driving up prices and creating opportunities for new entrants in the market.

*Source: CM Group

** Source: [Ilmenite Market Growth & Trends](#)

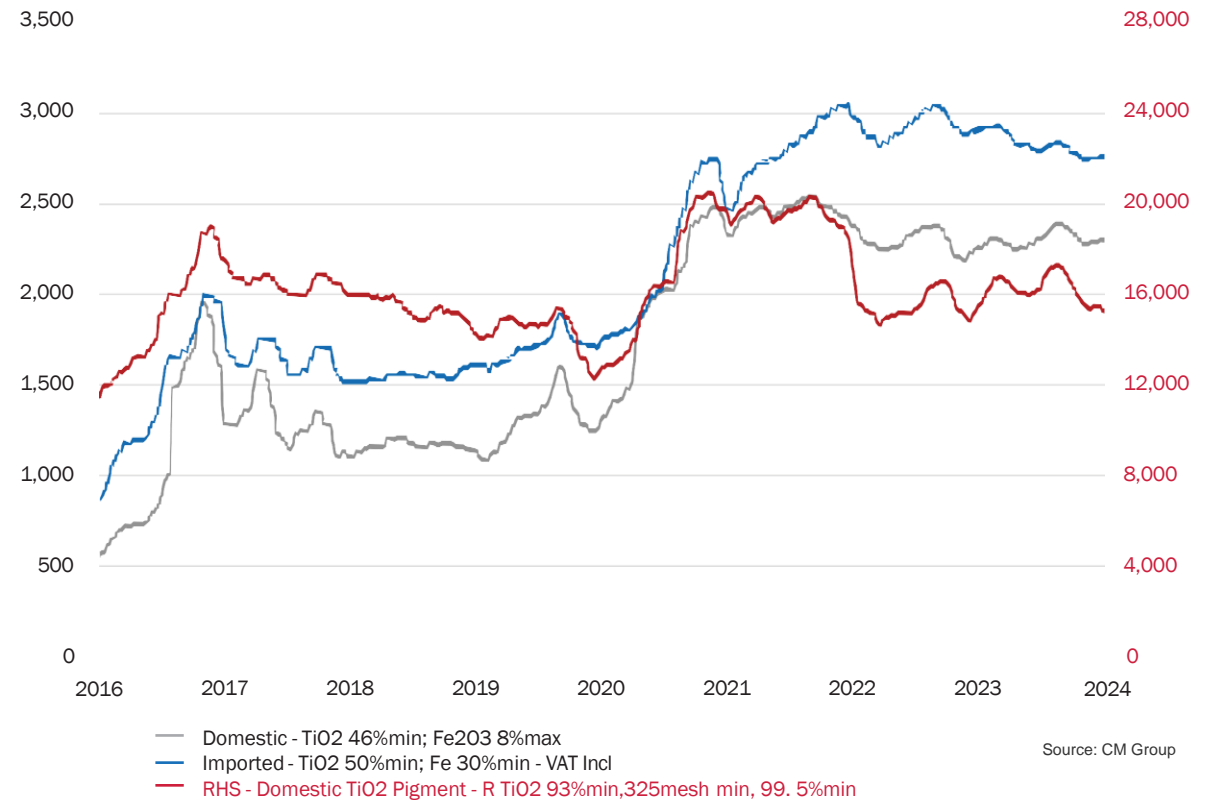
Global mineral sands market: Growth and Price appreciation underway

Tonnes of Chinese TiO₂ Pigment Production

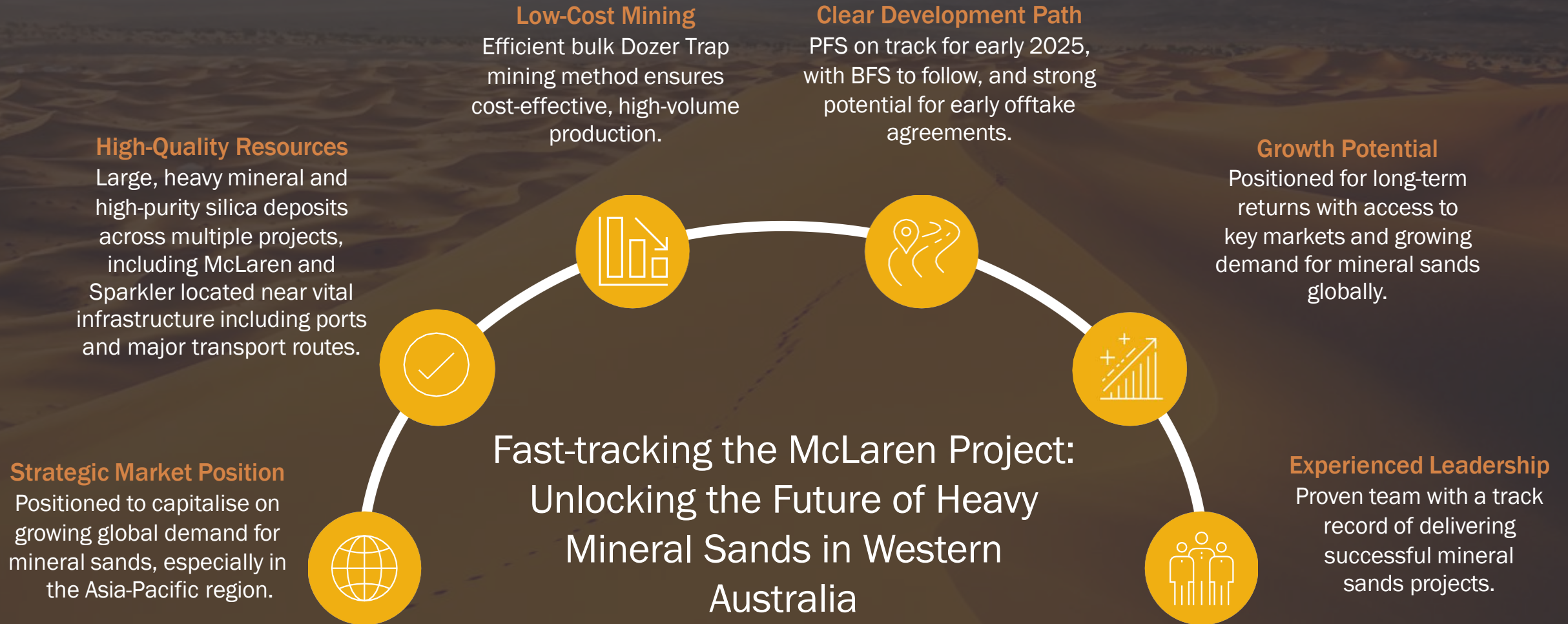


Ilmenite Concentrate and TiO₂ Pigment Price

(2016 - 2024 YTD, RMB/t, VAT Incl)



Investment Summary



Entitlement Offer has Closed – Shortfall being Placed

Entitlement Offer Results:

Total Shares Offered (with rounding)	46,880,862
New Shares accepted and issued	9,428,362
Total Funds Raised	\$329,992.70
Shortfall to be allocated:	37,452,500

Offer Price: \$0.035 per share, a 12.5% discount to the last closing price of \$0.04

Purpose of Funds:

- McLaren Project Pre-Feasibility Study: \$1,022,471 (62.3%)
- Exploration and Tenement Fees: \$60,000 (3.7%)
- Corporate & Working Capital: \$500,000 (30.5%)
- Offer Costs: \$58,385 (3.5%)

Shortfall Offer: Directors reserve the right to place any shortfall, open for up to 3 months post-closing





McLAREN

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Contact us

Simon Finnis

Managing Director

t: +61 418 695 138

e: simon.finnis@allupsilica.com

Registered Office

C/- Argus Corporate Partners Pty Ltd

Level 4, 225 St Georges Terrace Perth WA
6000

e: team@allupsilica.com

Media and Investor Relations

Kristin Rowe

t: 0404 889 896

e: kristin@nwrcommunications.com.au



Additional Slides

Silica Sands Projects, Western Australia



1 - ASX Announcement 30 June 2022
 2 - ASX Announcement 28 March 2024
 3 - ASX Announcement 4 November 2024

- Multiple project locations with high quality resources
- Economical distance to ports with potential export capacity

Sparkler Highlights

- In-situ grades up to 99.3% SiO₂¹
- Bulk Sample beneficiated to 99.8% SiO₂ and 100 ppm Fe₂O₃.²
- **70 million inferred tonnes at 96.84% SiO₂ and 0.34% (3400ppm) Fe₂O₃ in-situ bulk mineral resource.**¹
- **37 million inferred tonnes at 99.66% SiO₂ and 0.02% (200ppm) Fe₂O₃ in sand fractions (0.106mm – 0.6mm).**¹
- **25 million inferred tonnes at 99.67% SiO₂ and 0.03% (300ppm) Fe₂O₃ in coarse sand fractions (+0.6mm).**¹
- **4 million inferred tonnes at 97.70% SiO₂ and 0.41% (4,100ppm) Fe₂O₃ in fine sand fractions (+0.45mm – 0.106mm).**¹

Dune Buggy

- 15km from Esperance Port
- Unique silica sand and calcium carbonate

Pink Bark

- 100km from Esperance Port by Road
- Significant uranium results up to 232ppm U₃O₈ and REE up to 980ppm for total TREE of 1,212ppm.³
- 1,985ppm total rare earth oxide (TREE) in fresh bedrock from drill hole PB019³
- Sampling confirms ISO brightness, grain size, and mineralogy, indicating a marketable kaolin product comparable to Australian deposits, with potential for co-product silica.³
- Graphite-rich bedrock intersected in the south of E63/2371.³

Cabbage Spot

- Easy access to Highway 1 and to Port
- High quality silica up to 99.4% SiO₂ in situ. Elevated Low Fe₂O₃

