

## REVISED CORPORATE PRESENTATION - NWR VIRTUAL CONFERENCE

Heavy Minerals Limited (ACN 647 831 833) (“**HVY**”, “**Heavy Minerals**” or the “**Company**”) would like to provide the attached revised corporate presentation. There was an omission of information in accordance with ASX LR 5.23 as well as missing pages.

This announcement has been authorised by the Non-Executive Chairman of the Company.

**Ends**

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**About Heavy Minerals Limited**

Heavy Minerals Limited (ASX: HVY) is an Australian listed industrial mineral exploration company. The Company's projects are prospective for industrial minerals including but not limited to garnet, zircon, rutile, and ilmenite. The Company's initial focus is the Port Gregory Garnet Project which has a JORC Mineral Resource estimate of 135 Mt @ 4.0% (THM) or 4.9 Mt Contained Garnet. The project has progressed to the Scoping Study stage which has shown the project to have an NPV<sub>8</sub> (real) of AUD\$253M and a 16-year mine life. The Company's other project is the Inhambane Heavy Mineral Sands Project in Mozambique which has an ilmenite dominated JORC Inferred Mineral Resource of 90 Mt @ 3.0% THM.

To learn more please visit: [www.heavyminerals.com](http://www.heavyminerals.com)





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FOCUSED ON

# Industrial Minerals

SEPTEMBER 2022 | ASX : HVY

Heavy  
**Minerals**  
LIMITED





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## Competent Person Statement

The information in this presentation that relates to Exploration Results, Exploration Targets and Mineral Resource estimates is based on and fairly represents information and supporting documentation prepared by Mr. Greg Jones (FAusIMM) who is a Non-Executive Director for Heavy Minerals Limited. Mr. Jones is a Fellow of the Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being reported on to qualify as a Competent Person as defined in the 2012 edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Mr. Jones has reviewed this report and consents to the inclusion in the report of the matters in the form and context with which it appears.

The information in this presentation that relates to the following: Production Targets, Processing, Infrastructure, Capital requirements and Operating Costs as announced 12 September 2022, Metallurgy as announced 15 August 2022, Mineral Resource Estimate (Port Gregory) as announced 2 May 2022, Exploration Results (Redhill) ) as announced 26 April 2022, Mineral Resource Estimate (Inhambane) as announced 6 December 2021 is available to view at [www.heavyminerals.com](http://www.heavyminerals.com). The Company confirms that a) it is not aware of any new information or data that materially affects the information included in these announcements; b) all material assumptions included in these announcements continue to apply and have not materially changed; and c) the form and context in which the relevant Competent Persons’ findings are presented in this presentation have not been materially changed from the announcements.



# Presentation Outline

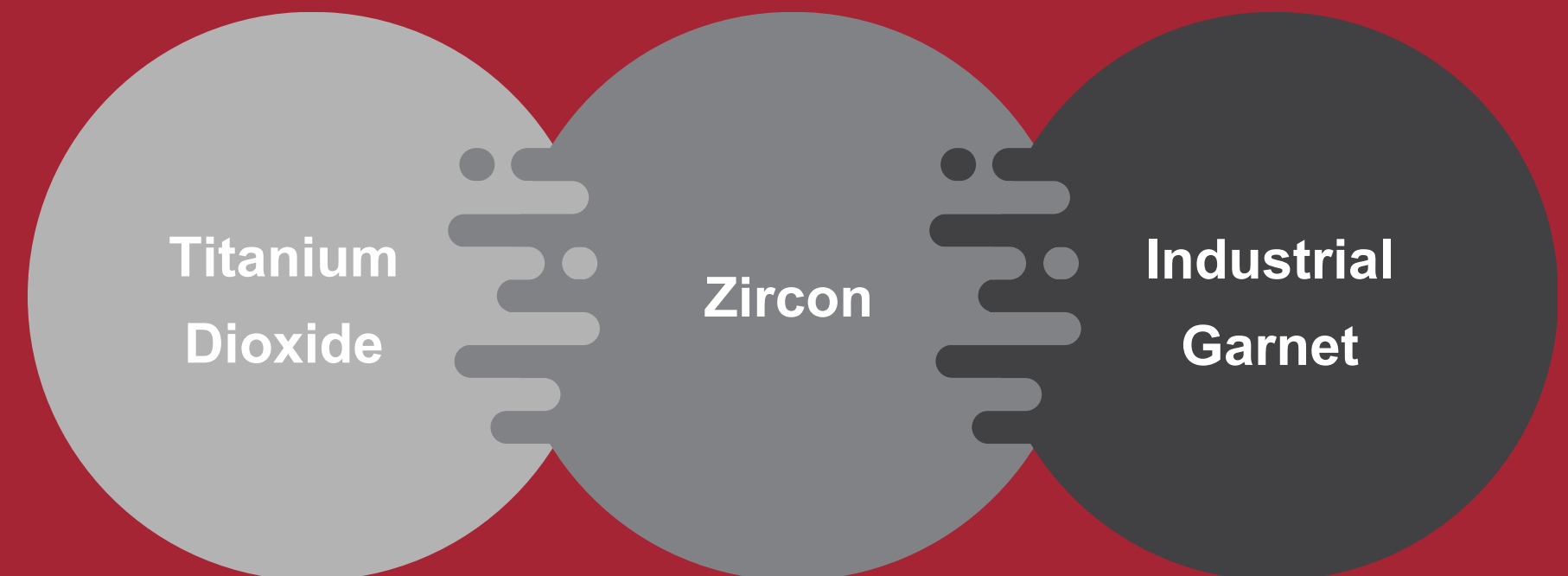
- Investment Highlights
- Capital Structure
- Board of Directors
- Projects Overview
- Port Gregory Project
- Scoping Study Results
- Simple Mining
- Garnet to 2030
- Red Hill Discovery
- Inhambane Mineral Sands Project
- Inhambane Mineral Resource
- Market Outlook – Mineral Sands

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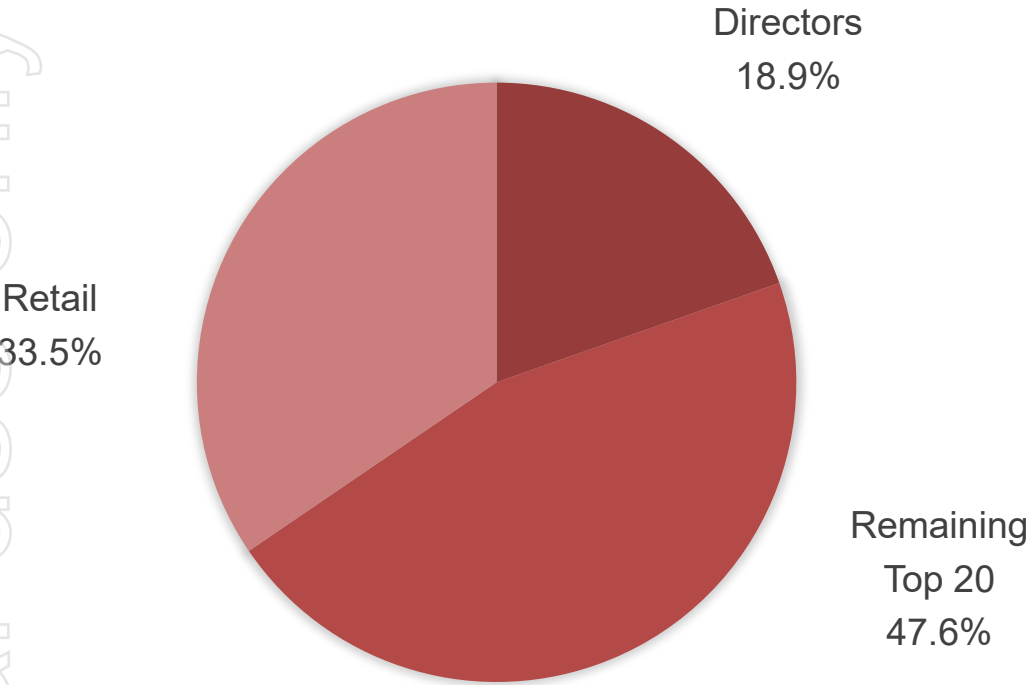
# Heavy Minerals Limited (HVY) is an Emerging Industrial Minerals Explorer with Projects adjacent to world class deposits in pro-mining jurisdictions

- Western Australia – Port Gregory Project: JORC Mineral Resource 135 MT @ 4.0% THM containing **4.9 Mt Contained Garnet**
- **Recently completed Scoping Study**
- Western Australia – Port Gregory Project adjacent to GMA mine, which supplies 30% of global Almandine Garnet<sup>1</sup>
- Mozambique – Inhambane Project: JORC Inferred Mineral Resource of 90 Mt @ 3% THM - Adjacent to Rio Tinto and Savannah Resources Heavy Mineral Sands Projects



<sup>1</sup>2021 USGS Mineral Commodity Summary

Capital Structure<sup>1</sup>



ASX CODE  
HVY

SHARES ON ISSUE<sup>1</sup>  
56.43M

MARKET CAP<sup>1</sup>  
\$9M

CASH<sup>2</sup>  
\$2.41M

DEBT<sup>1</sup>  
nil

EV<sup>3</sup>  
\$6.6M

Position	Holder Name		% IC
1	CHRISTOPHER ADAM SCHOFIELD	4,104,283	7.27%
2	GLENN SIMPSON	3,963,445	7.02%
3	MR KENNETH JOSEPH HALL	3,846,071	6.81%
4	J P MORGAN NOMINEES AUSTRALIA PTY LIMITED	3,775,000	6.69%
5	VALENS INTERNATIONAL PTY LIMITED	3,430,000	6.08%
6	BT PORTFOLIO SERVICES LIMITED <MR MATHEW JASON HILL A/C>	2,468,053	4.37%
7	GREG JONES	2,579,078	4.57%
8	MAURICE DOMINIC MATICH	2,050,000	3.63%
9	BNP PARIBAS NOMINEES PTY LTD <IB AU NOMS RETAILCLIENT DRP>	1,479,060	2.62%
10	MRS AMBER LESLEY MASTRANGELI	1,407,420	2.65%
Total Top 20		37,528,167	66.49%
Total Issued Capital - selected security class(es)			100.00%



<sup>1</sup>As at 14 September March 2022 , <sup>2</sup>As at 30 June 2022, <sup>3</sup>EV uses 30 June Cash position

# Board of Directors

## Adam Schofield

Non-Executive Chairman

Mr. Schofield is a mining company executive with over 20 years’ experience in the resources sector in Australia and Africa. He has significant experience in conducting feasibility studies and taking projects from feasibility stage into operations. He has extensive experience in Mineral Sands, Gold, REE, Copper, and Iron Ore. Adam is a Non-Executive Director of Kingfisher Mining Limited (ASX:KFM) and was previously Executive Director / CEO of Nelson resources Limited (ASX:NES).

## GREG JONES

Non-Executive Director

Over 25 years’ experience as a mineral sands Geologist with Iluka Resources in senior resource estimation/management roles and in the capacity of Competent Person for the reporting and management of Mineral Resources and Ore Reserves. Has helped develop a number of new discoveries into reportable Mineral Resources including Jacinth-Ambrosia. He is a 20+ year member of the AusIMM, holding the grade of Fellow, sitting on review committees and has co-authored multiple technical and resource estimation mineral sands papers. For the past eight years, Greg has held various consulting roles, firstly establishing GNJ Consulting Pty Ltd which specialised in geological, metallurgical and resource estimation consulting services to the mineral sands sector, then joining IHC Robbins where he is currently the Commercial and Business Development Manager.

## GLENN SIMPSON

Non-Executive Director

Mr. Simpson has been a Chartered Accountant for over 32 years, with global experience in accounting with a strong mining focus. His experience includes managing the Touché Ross & Co (Deloitte) practice in Bougainville, Papua New Guinea for 3 years and establishing his own large commercial accounting practice in West Perth & Kalgoorlie. Over the last decade, he established a large insurance broking and underwriting business from Perth that operated Nationally. These businesses were sold to a “national brand” underwriting and broking companies. He is a sophisticated investor and has been involved in many commercial / mining ventures including capital raising and business start-ups. He has also mentored many small cap companies.

## Port Gregory Garnet Project

(100 km North of Geraldton, Western Australia)

- 4.9 Mt contained Garnet (~5 years of Global demand)
- Upside potential along 50 km of underexplored coastline with 226 km<sup>2</sup> of contiguous tenure (largest Tenement holder) – including the recently discovered “**Red Hill Prospect**”
- Adjacent to world-class GMA Garnet mine and the Lucky Bay Mine (under construction)

## Inhambane Heavy Mineral Sands Project

(17 km Southeast of Inhambane, Mozambique)

- Inferred JORC Mineral Resource 90 million tonnes @ 3.0% THM (2.7 Mt HM)<sup>1</sup>
- Mining application pending
- Adjacent to HV power infrastructure
- Road Infrastructure and Port

Two projects with the potential to grow into globally significant mineral sands resources. Both Projects adjacent to Tier 1 Assets (GMA, RDG & Rio Tinto).



<sup>1</sup>HVY.ASX announcement 6<sup>th</sup> December 2021.



# Port Gregory Project



JORC Mineral Resource 135 MT @ 4.0% THM

4.9 Mt contained garnet (96% VHM fraction in THM)

Mineralisation open to the North and South with-in HVY’s 100% owned tenure (E70/5160 & E70/5934)

Mineralisation from surface – Potential free digging operation

Adjacent to world's largest garnet mine (GMA) and the Lucky Bay garnet mine (RDG.ASX)

## Notable properties of the Resource

- ✓ Large resource (4.9 MT)
- ✓ High Grade
- ✓ Shallow / mineralised from surface
- ✓ Thick mineralised intercepts (30m+)
- ✓ Open along strike within HVY tenure
- ✓ 90% garnet in THM
- ✓ Zircon / Rutile / Ilmenite credit
- ✓ 96% valuable heavy mineral (VHM) component of THM

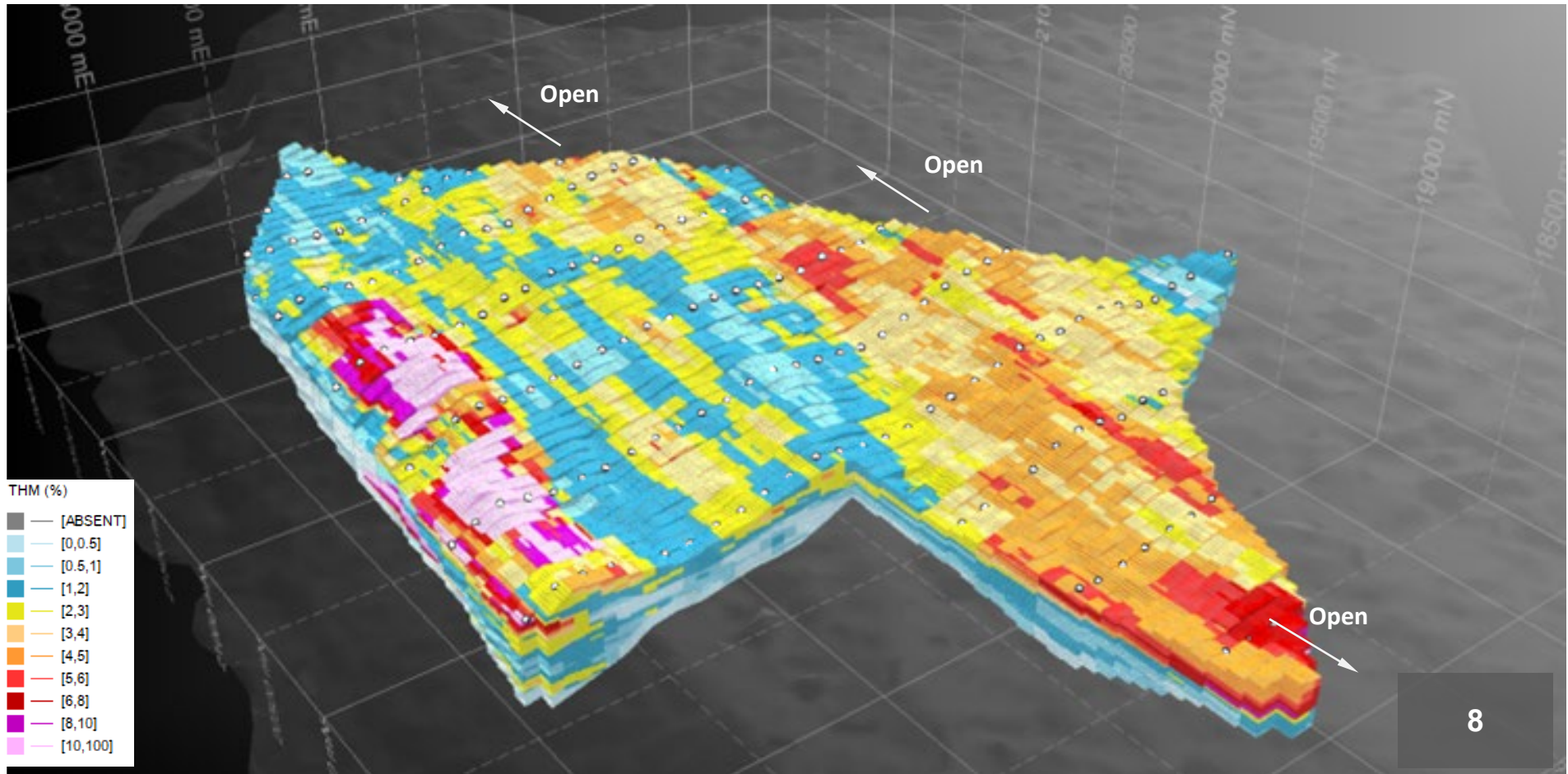
<sup>1</sup>HVY.ASX announcement 2<sup>nd</sup> May 2022.

Summary of Mineral Resource estimate <sup>(1)</sup> Classification	THM Assemblage <sup>(2)</sup>											
	Material (Mt)	In Situ THM (Mt)	In Situ Garnet (Mt)	THM (%)	SL (%)	OS (%)	Garnet (%)	Ilmenite (%)	Zircon (%)	Rutile (%)	Anatase (%)	Other (%)
Indicated	88	3.3	3.0	3.8	10	9	89	4	0.6	2	0.4	4
Inferred	47	2.1	1.9	4.5	10	11	91	4	0.5	1	0.2	3
Grand Total	135	5.4	4.9	4.0	10	10	90	4	0.6	1	0.3	4

### Notes:

- (1) Mineral Resource reported at a cut-off-grade of 2.0% THM.
- (2) Mineral assemblage is reported as a percentage of in situ THM content.

## Resource Block Model





# Scoping Study Results

AUD\$253M After Tax NPV	4.2 years Payback period	AUD\$1.59B LOM Revenue
33% After Tax IRR	AUD\$588M After Tax FCF	AUD\$110M CAPEX to Production

- Substantial NPV8 (real) of AUD\$253M relative to HVY market capitalisation of \$9.96M (at 18.5 cps)
- 16-year mine life with the potential to extend with further successful drilling (planned for 2022)
- Low CAPEX project due to proximity to existing Infrastructure and Geraldton, an Industrial hub with a population of over 30,000 people.
- Low OPEX and high margin project due to simplistic and standard processing requirements to reach final product
- Averaging 141 kt of garnet and 6 kt of ilmenite product per annum

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# Simple Mining

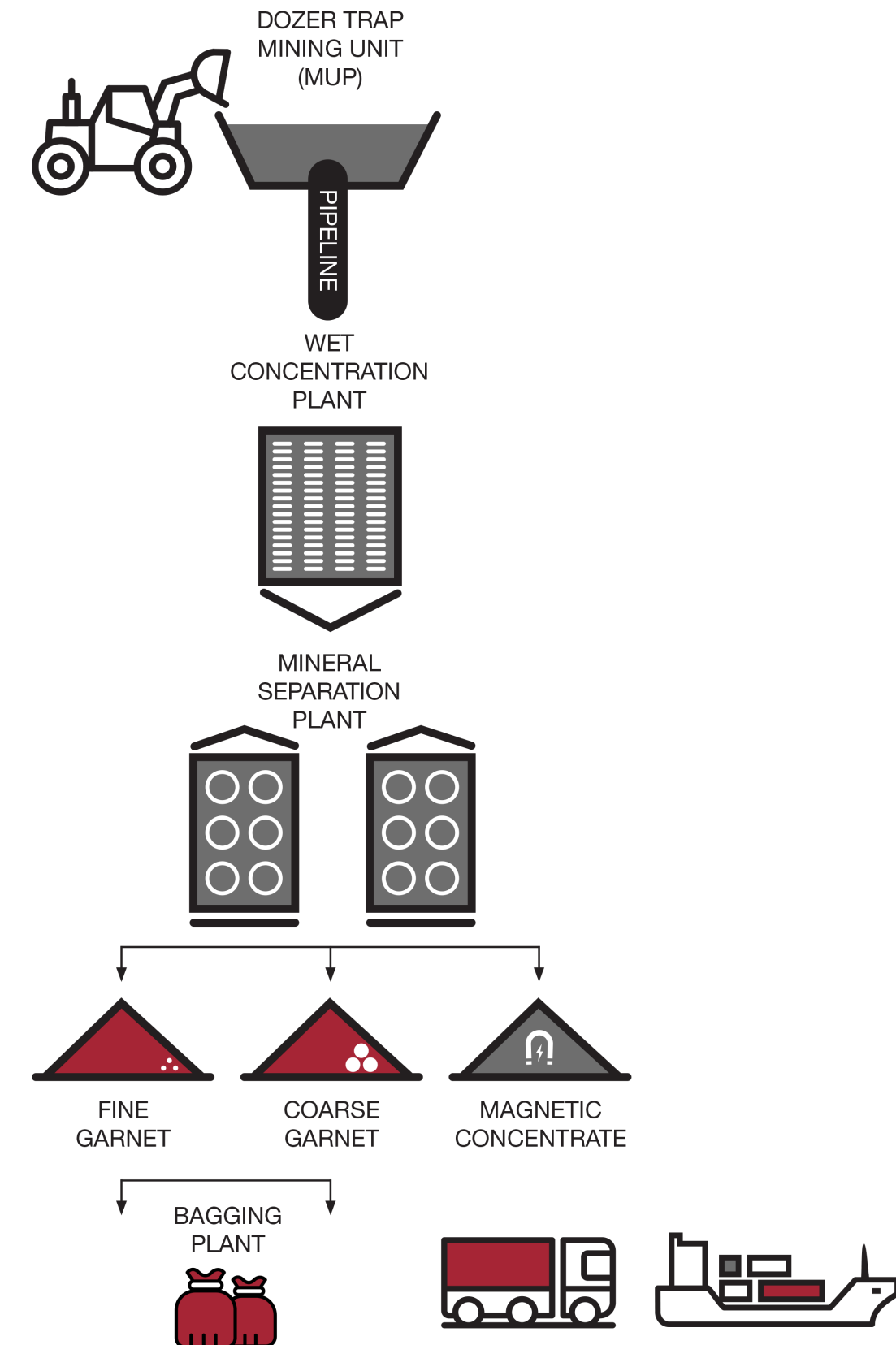
## Production Method

- Conventional dozer trap mining (MUP)
- 488 TPH to produce a slurry that is pumped to a Wet Concentration Plant (WCP)
- Heavy Mineral Concentrate (HMC) is produced via processing the sand fraction through a series of gravity spirals and up-current classifiers (UCC)
- HMC is transferred to the dry Mineral Separation Plant (MSP) where the HMC is further upgraded by removing material via magnetic separation
- Garnet material is screened, bagged, and shipped

## Production Sequence

- Two major mining areas to be selectively mined
- Initially mining on the eastern flank of the project for approximately 12 years
- Western flank to be mined for the remaining 4 years
- Life of mine is currently estimated at 16 years
- Resource is open to the north and south with potential for the mine life to be extended with successful drilling

## Production flow diagram





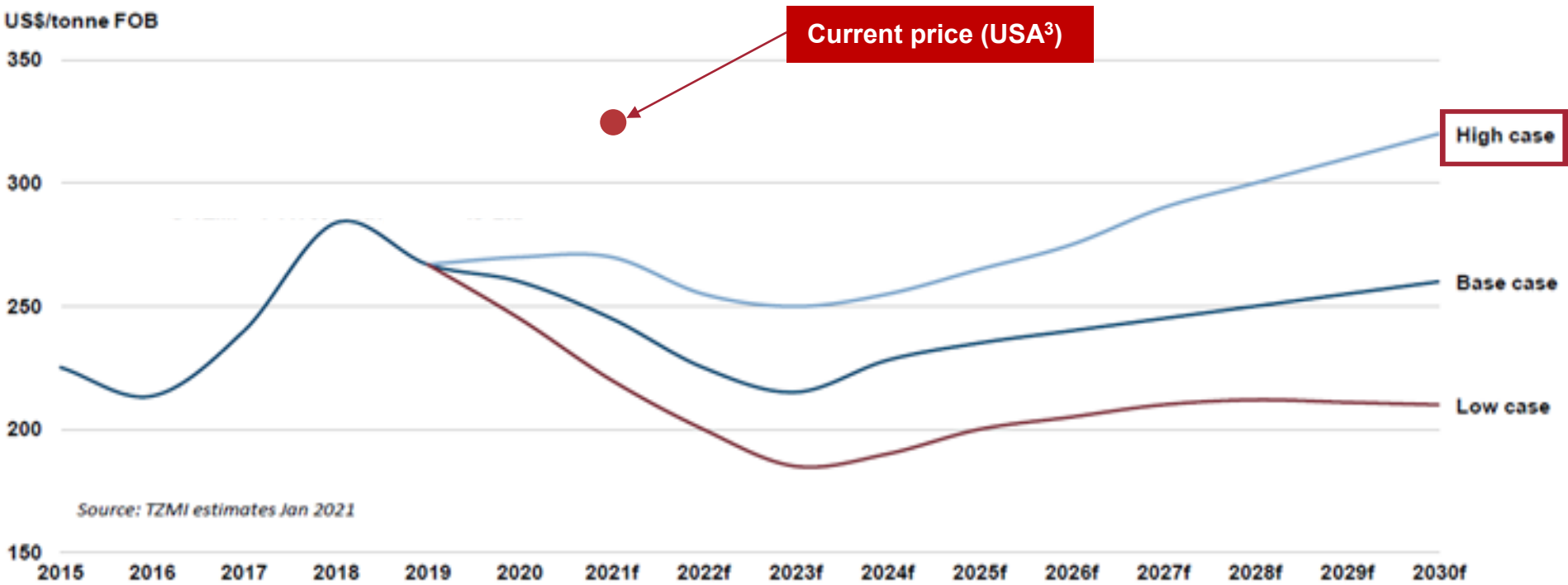
HVY’S unique opportunity is the significant and widening supply deficit forecast from 2022 onwards<sup>2</sup>

540 kt deficit in 2030 without new sources of supply

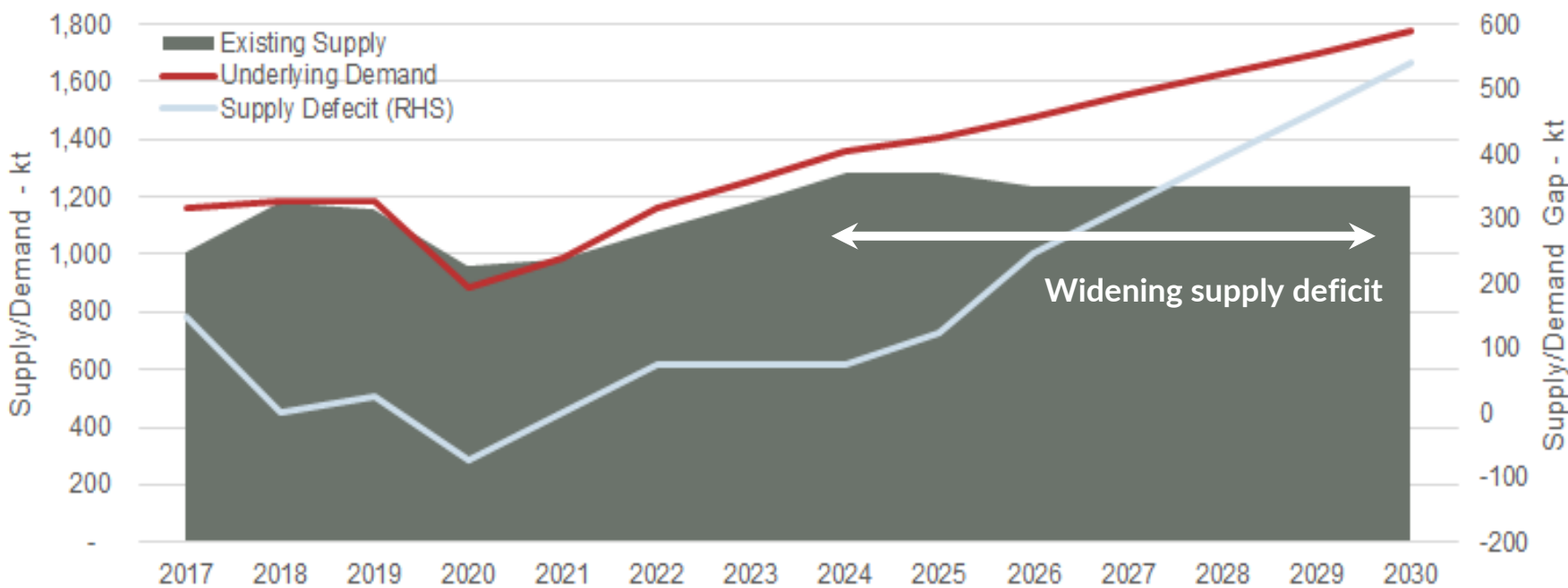
TZMI 2021 long-term forecast price of US\$210 per tonne (indexed to 2020) for unrefined product

USA 2021 average pricing trending well in excess of TZMI “High Case”<sup>3</sup>

Global average (nominal) Garnet price (unrefined)<sup>1</sup>



Garnet Supply / Demand Forecast<sup>2</sup>



<sup>1</sup>TZMI Garnet Market Data (Project 11759) Jan 2021, <sup>2</sup>TZMI Garnet Market Data (Project 11759) Jan 2021 & Internal forecasting, <sup>3</sup>USGS Minerals Handbook 2021 – Not converted to 2020 real dollars





HVY will continue exploration of its tenure for garnet and other industrial minerals

Red Hill prospect: 37 km south of Port Gregory Project

High grade garnet from surface

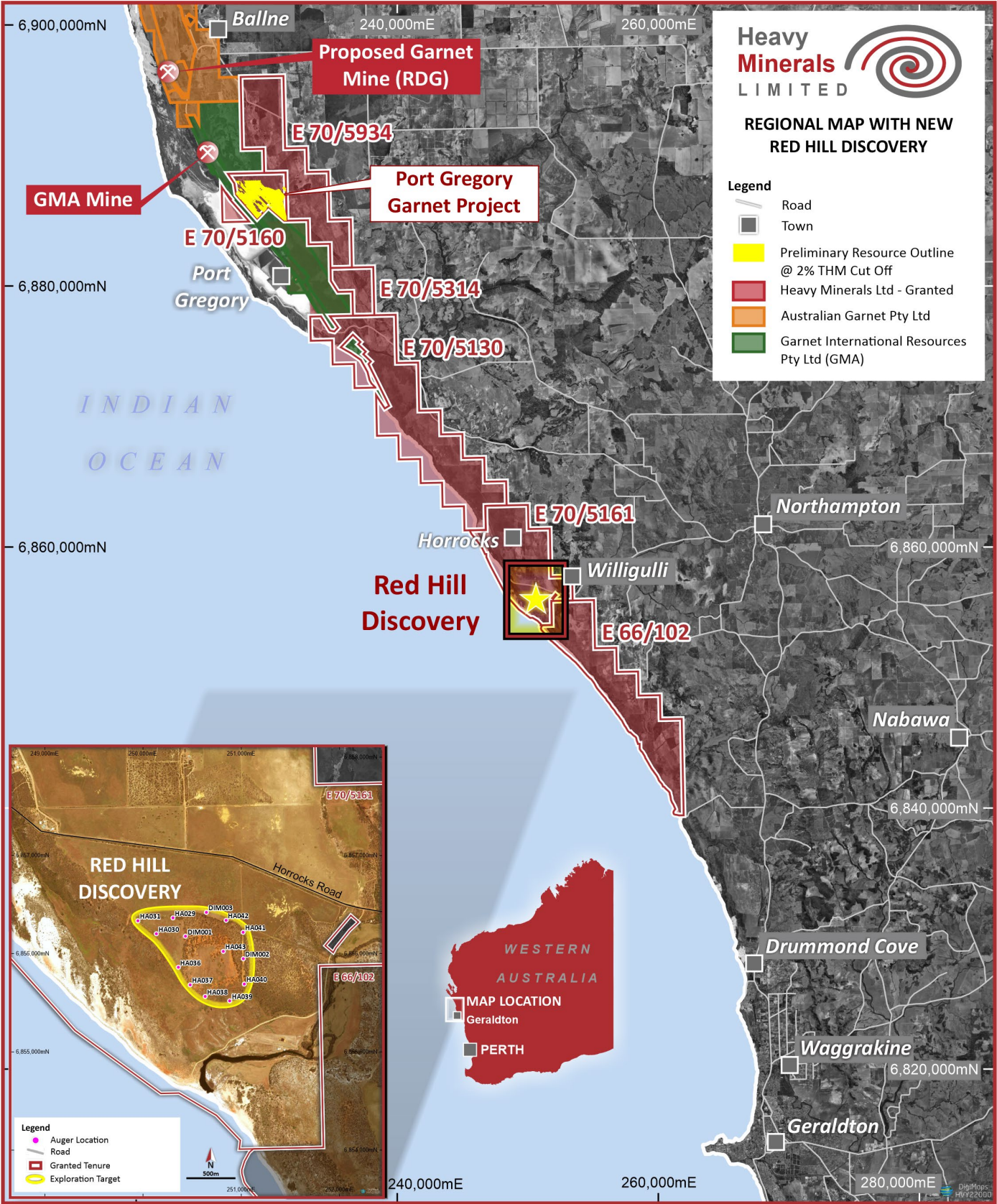
Analogous to the Port Gregory Project

High Priority Exploration target

AC drilling in Q3 2022

Red Hill highlights the prospectivity of HVY’s extensive and underexplored tenure package that stretches over 50 km along the coast in a homogeneous geological setting

Hole ID	GRADE (THM)	Interval (m) <sup>1</sup>
HA037	6.9%	2
HA040	4.8%	1.5
HA029	4.1%	2.3
DM001	5.7%	1



<sup>1</sup>HVY.ASX release 26<sup>th</sup> Apr 2022, all intervals are from surface



# Inhambane Mineral Sands Project

213.8 km<sup>2</sup> of tenure under mining application:

Adjacent to HV power, road and the Port of Inhambane.  
Mining Concession application lodged (25-year tenure),  
pending regulatory approvals

JORC Inferred Mineral Resource of **90 million tonnes @ 3.0% THM** (2.7 Mt contained HM)  
defined in a fraction of the concession. Sought after assemblage

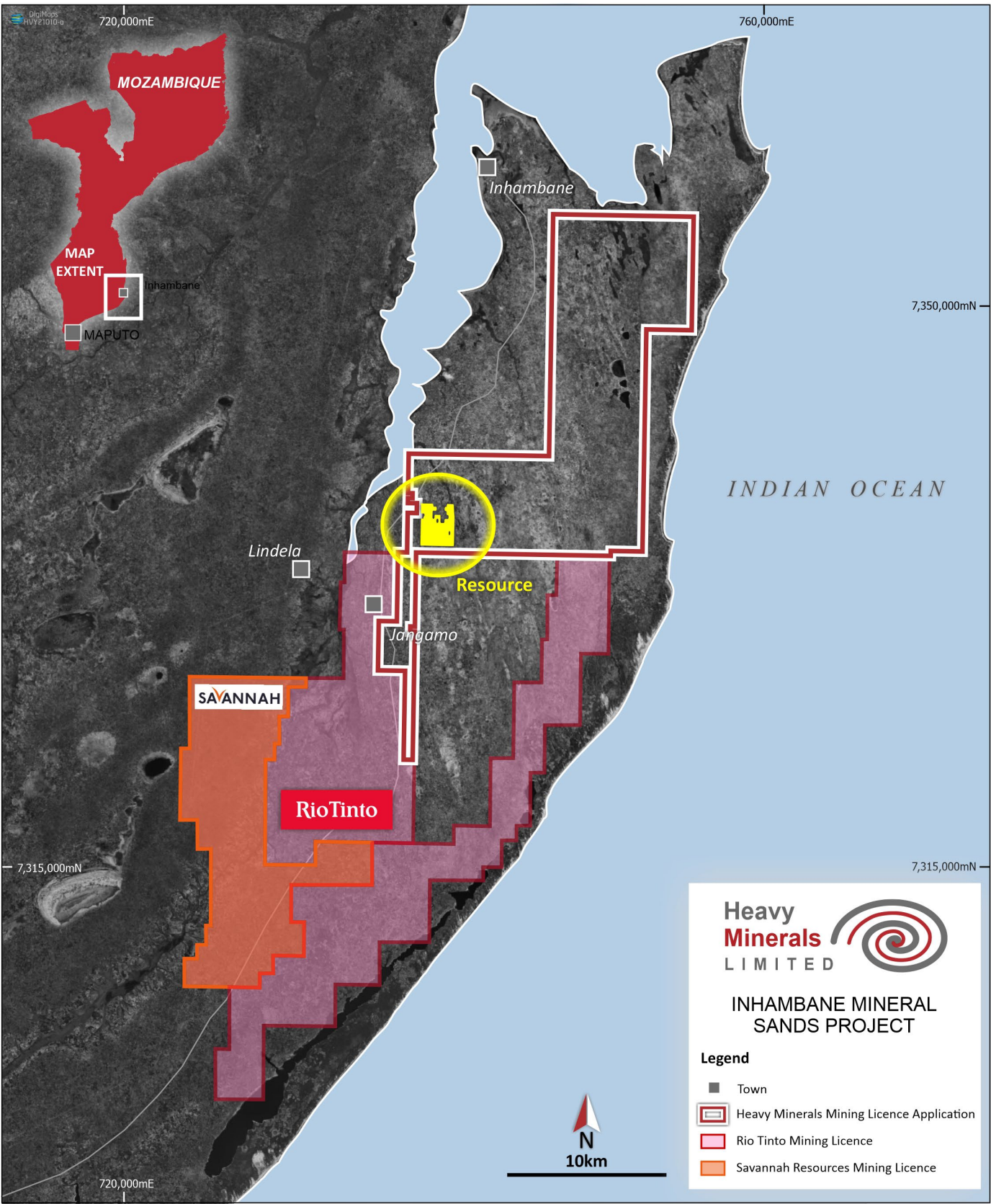
**Ilmenite** accounts for **90% of the world's consumption** of **titanium** minerals<sup>1</sup>



Adjacent to two Tier 1 Mineral Sands Projects:

**RioTinto**

**SAVANNAH**



<sup>1</sup>Iluka Resources Full Year 2020 Results Presentation



# Inhambane Mineral Resource

**Inhambane 2022 metallurgy results<sup>1</sup> – Highly marketable product suite (No roasting):**

**Primary ilmenite** containing 49.8% TiO<sub>2</sub>, 0.6% SiO<sub>2</sub>, 0.4% Al<sub>2</sub>O<sub>3</sub> and <0.1% Cr<sub>2</sub>O<sub>3</sub>

**Zircon** containing 66% ZrO<sub>2</sub> with < 500ppm U + Th

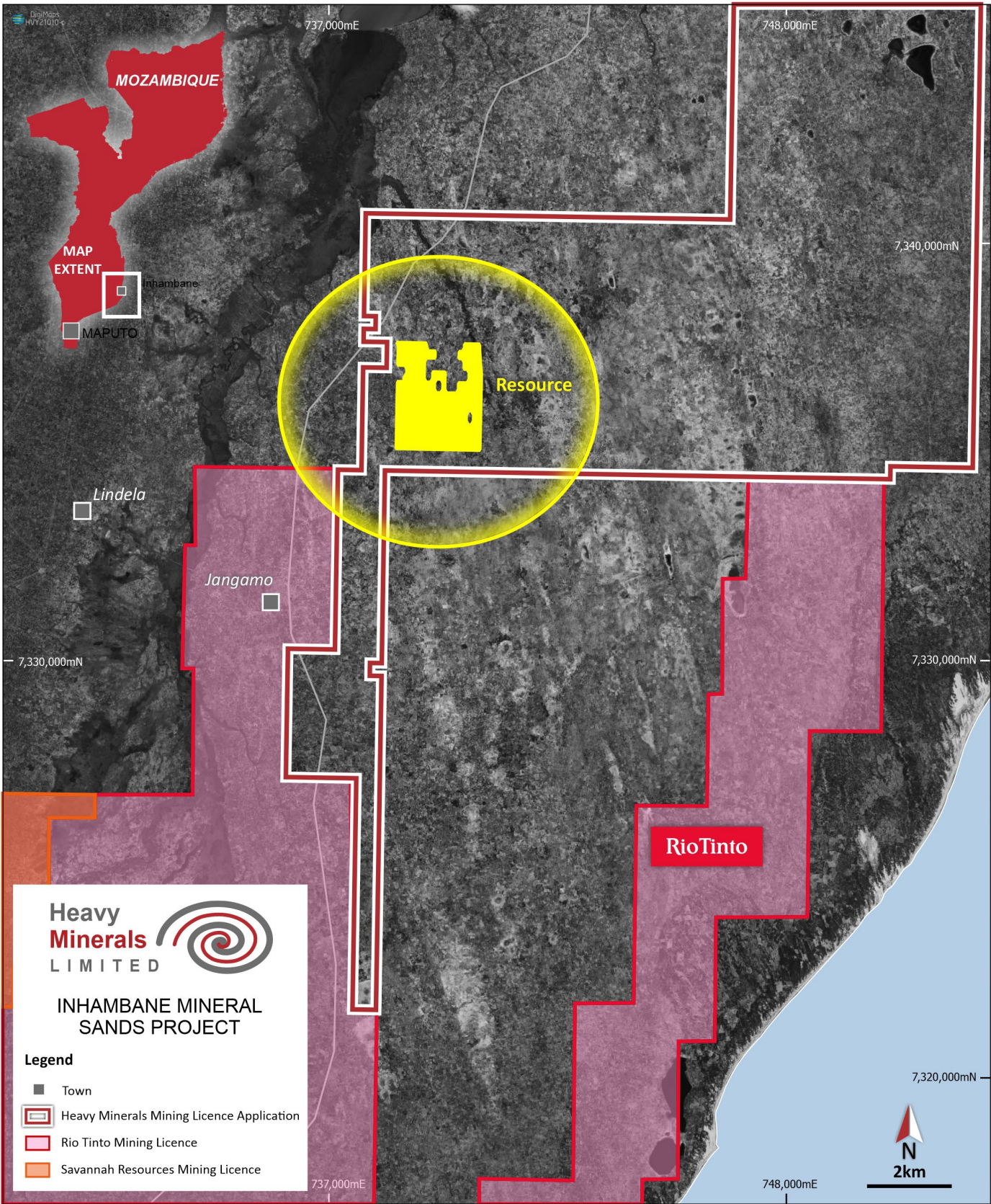
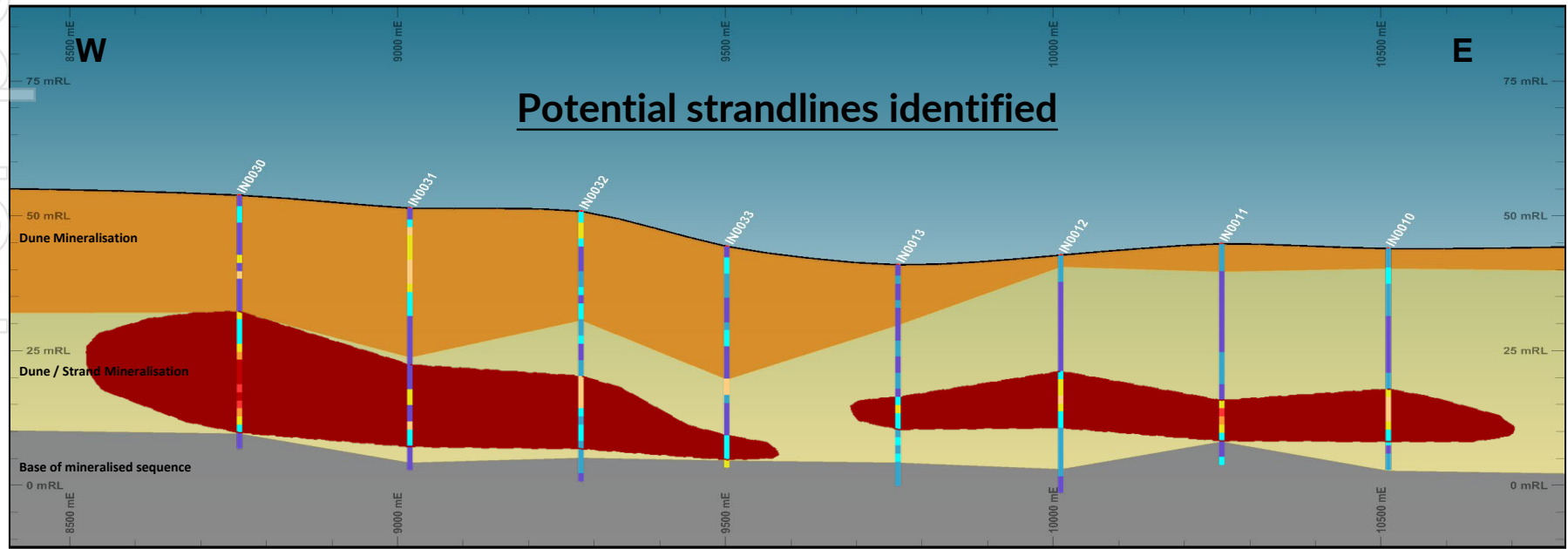
**High Titanium product** containing > 90% TiO<sub>2</sub>

MINERAL RESOURCE SUMMARY FOR INHAMBANE PROJECT AS AT DECEMBER 2021

Summary of Mineral Resources <sup>(1)</sup>						HM Assemblage <sup>(2)</sup>					
Mineral Resource Category	Material (Mt)	In Situ THM (Mt)	THM (%)	SL (%)	OS (%)	Altered Ilmenite (%)	Primary Ilmenite (%)	Rutile (%)	Leucoxene (HiTi) (%)	Zircon (%)	Others (%)
Inferred	90	2.7	3.0	5	0	29	31	2	4	5	29
Grand Total <sup>(3)</sup>	90	2.7	3.0	5	0	29	31	2	4	5	29

Notes:

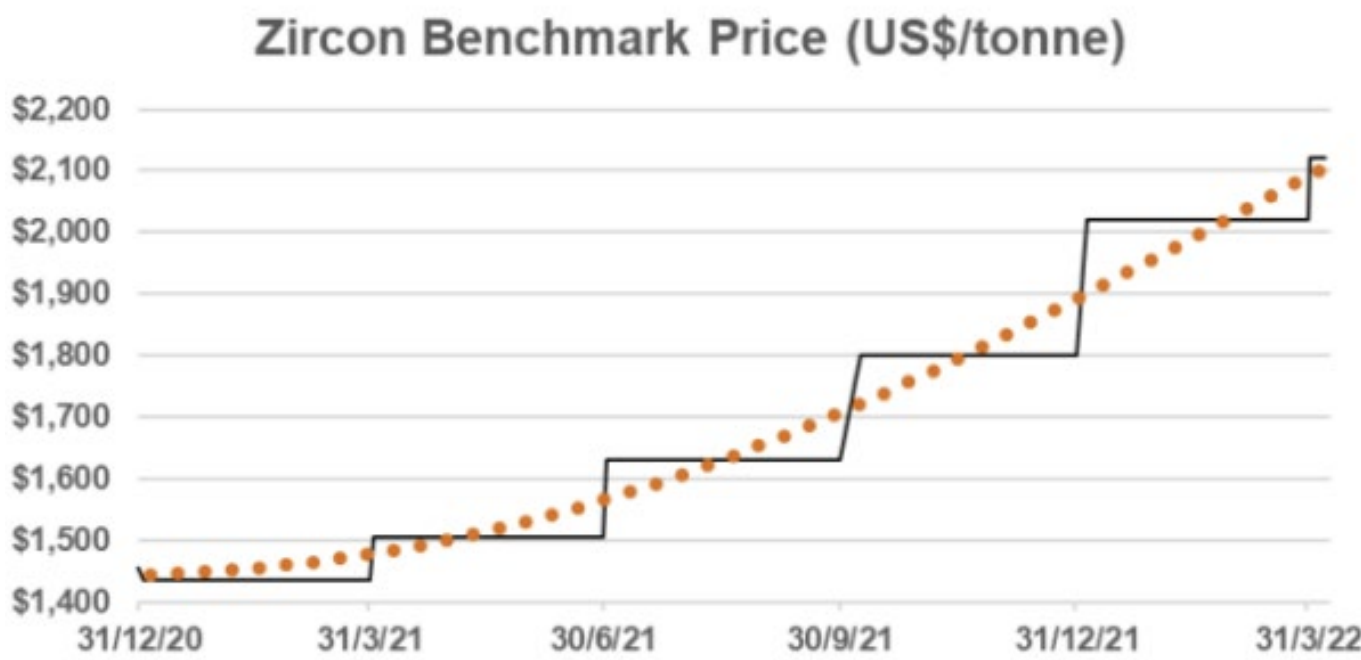
- (1) Mineral resources reported at a cut-off-grade of 1.7% THM.
- (2) Mineral assemblage is reported as a percentage of in situ THM content.
- (3) HVY has a 70% interest in the Inhambane heavy mineral sands project



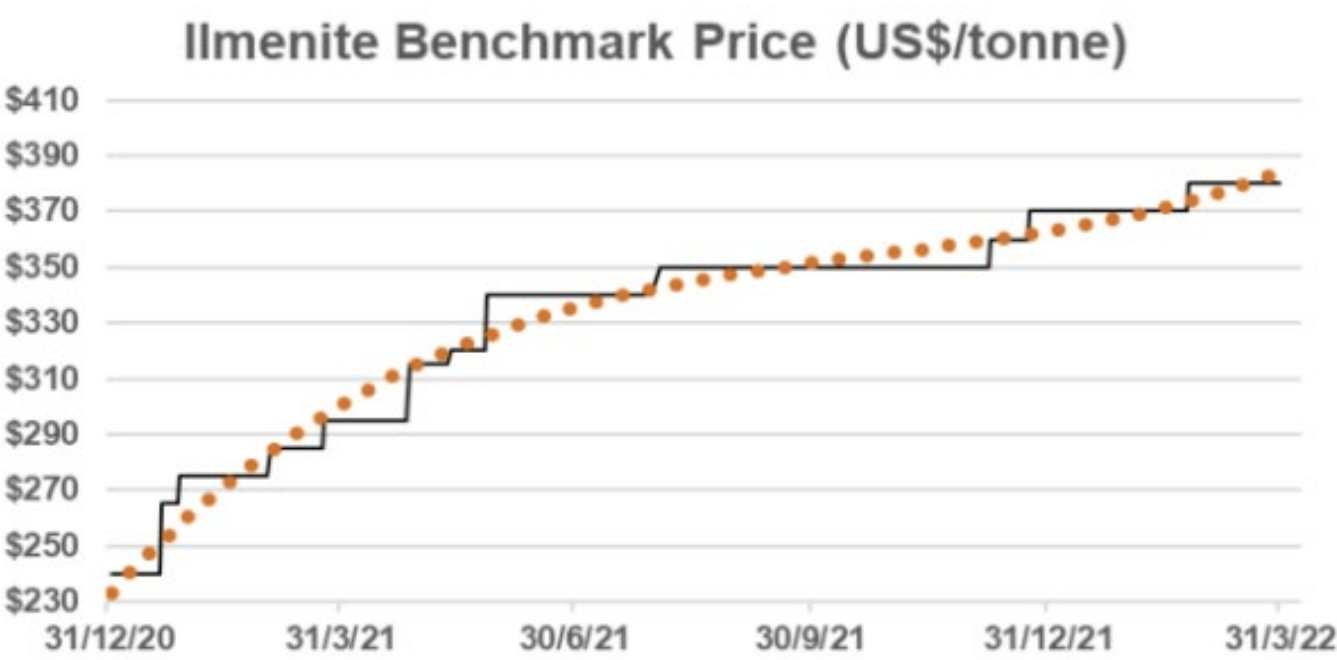
<sup>1</sup>HVY.ASX announcement 30<sup>th</sup> May 2022.



Heavy Mineral Sands Market Dynamics – Rapid uplift in pricing over the last 18 - 24 months



Existing producers are seeing an increase in pricing on the full suite of valuable heavy minerals (VHM) with strong gains seen since October 2020<sup>1</sup>



Full suite of valuable heavy minerals (VHM) have seen growth over the previous five years highlighting supply side constraints

<sup>1</sup>Image Resources (IMA.ASX) ASX release 29/04/2022





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