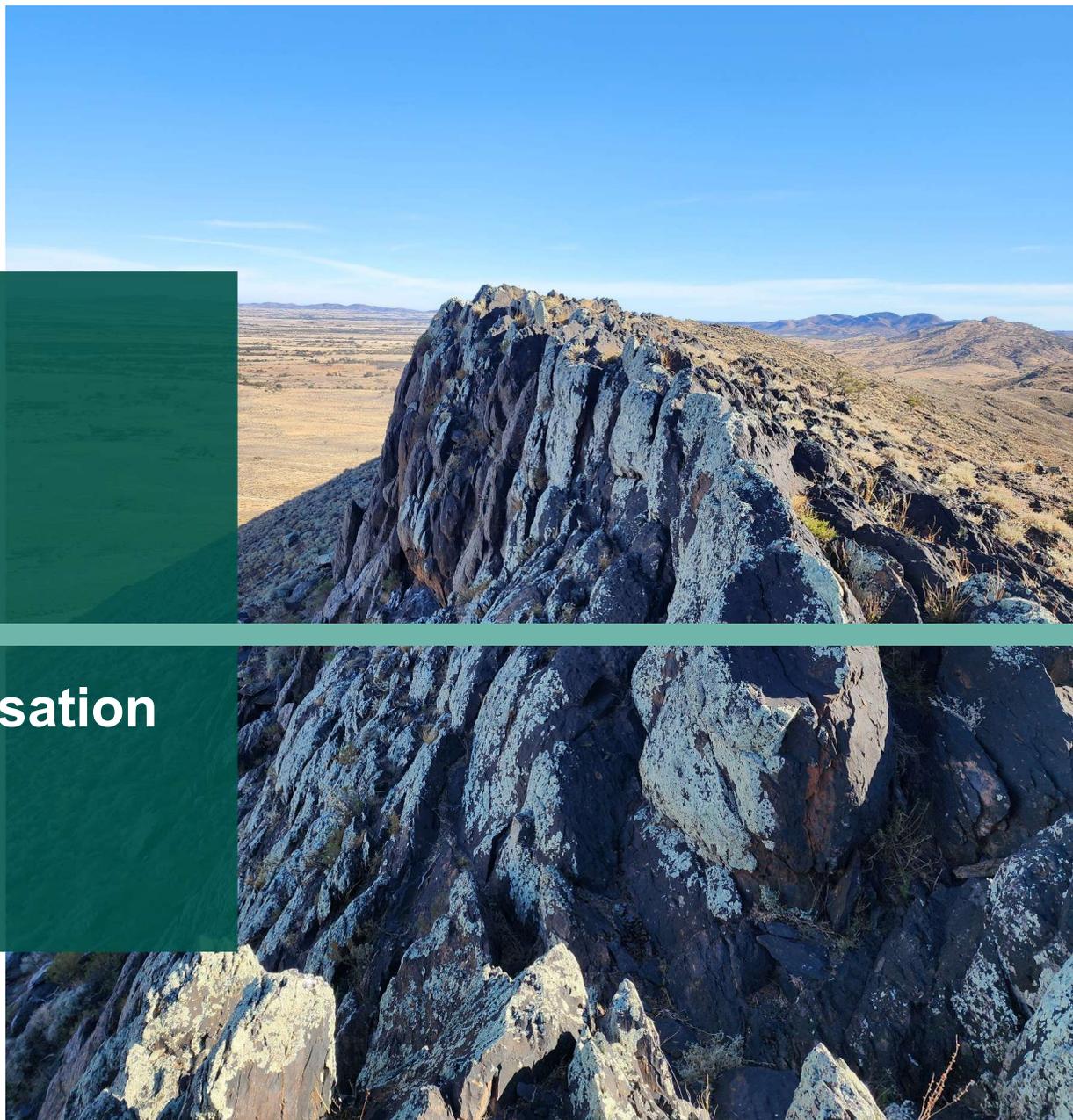




# Premium Iron Ore

... for steel sector decarbonisation

September 2024



## IMPORTANT NOTICE

The purpose of this presentation is to provide general information about Magnetite Mines Limited ("MGT"). It is not recommended that any person makes any investment decision in relation to MGT based on this presentation. This presentation contains certain statements which may constitute "forward-looking statements". Such statements are only predictions and are subject to inherent risks and uncertainties which could cause actual values, results, performance or achievements to differ materially from those expressed, implied or projected in any forward-looking statements.

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## ADDITIONAL INFORMATION

This presentation should be read in conjunction with MGT's Annual Report at 30 June 2023 together with any announcements made by MGT in accordance with its continuous disclosure obligations arising under the Corporations Act 2001 (Cth). Any references to resources estimations should be read in conjunction with MGT's Mineral Resources statement for its magnetite projects at 9 June 2023 and subsequent releases to the Australian Securities Exchange as referenced.

MGT confirms that it is not aware of any new information or data that materially affects the information included in its ASX announcement made on 9 June 2023 and, in the case of estimates of mineral resources and ore reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. All amounts within this presentation are stated in Australian Dollars consistent with the functional currency of MGT, unless otherwise stated. Tables contained within this presentation may contain immaterial rounding differences.

All references used in this presentation are included on Slide 20.

## ACKNOWLEDGEMENT OF COUNTRY

Magnetite Mines, our shareholders and our stakeholders acknowledge the Ngadjuri People as the Traditional Owners of the lands on which the Razorback Iron Ore Project is located. We respect their continuing custodianship of this Country, and their spiritual and cultural beliefs and practices.

# Magnetite Mines (ASX:MGT)

*Developing Razorback: Expansive, premium-grade iron ore project in a tier 1 location*



## The Company



### Focused on 100% owned Razorback Iron Ore Project

- Transformed Board & Management
- 6Bt in Resources, 2Bt in Ore Reserves<sup>1,2,3</sup>
- Progressing through Definitive Feasibility Study

### Rare, premium-grade Magnetite iron ore now needed

- Critical new supply for decarbonised 'green' steelmaking
- Currently only 6% of seaborne iron ore trade<sup>4</sup>
- Forecast 200 Mtpa deficit by 2050<sup>5</sup>

## The Opportunity



### Steelmakers are looking now

- Heads of Agreement in place with JFE Shoji (Japan)
- Potential for DFS funding support
- Project will support JV with one or more partners



### Supportive SA and Federal government

- SA Gov commenced Expression of Interest process for green iron production by 2030<sup>6</sup>
- Federal government industry consultation process for green metals completed<sup>7</sup>



### Substantial re-rating potential

- Project set for long life cash generation
- Very low market cap relative to project value
- Partnering and other milestones ahead should close the gap



# WHAT'S NEW: Recent Announcements

*Advancing funding, partnering and project de-risking*



## 1. Heads of Agreement signed with JFE Shoji Australia (8 July 2024)

- JFE Shoji Australia Pty Ltd (JFE) is a Group company of JFE Holdings, which incorporates JFE Steel, Japan's second largest steel maker.
- Non-binding agreement forms basis for MGT and JFE to negotiate transaction for JFE to provide DFS funding
- In exchange, JFE will be entitled to 10% of Razorback Project Stage 1 production offtake on commercial terms for 15 years from year 3 of the mine life
- MGT and JFE are aiming to execute Definitive Agreements by 31 January 2025

## 2. Memorandum of Understanding signed with ZEN Energy (18 July 2024)

- ZEN Energy Pty Ltd (ZEN) is an Australian Renewable Energy Company with shared interests in the development of a Green Iron industry in South Australia
- Non-binding MOU forms basis on which MGT and ZEN will negotiate one or more binding transactions with the following possible elements:
  - Energy offtake agreement between MGT and one or more of ZEN Energy's renewable energy projects;
  - Farm-in, offtake, co-venturing or partnering arrangements between MGT and ZEN Energy in connection with the Razorback Project;
  - Participation in future Green Iron projects

## 3. 'Green Iron' grade concentrates produced using seawater (22 July 2024)

- MGT have achieved pioneering laboratory test results demonstrating the potential to produce 'Green Iron' feed grade concentrates largely using seawater
- Concentrate grades of 69.9% Fe and less than 2.0% silica + alumina have been attained; suitable for green iron making and similar to results using fresh water
- Potential to significantly improve Razorback Project economics; reducing the need for fresh water and costs associated with a large desalination plant

# Corporate overview (ASX:MGT)

Recent corporate transformation in readiness to develop project



## Market Cap

**\$25M**

(Share price \$0.24 at 30 Aug 2024)

## Cash

**\$1.2M**

(30 Jun 2024)

## Shares on Issue: 102.3M

Top 20 (excl B &M)	30.4%
Board & Management:	4.7%
Other shareholders:	64.9%

## Listed Options: 10.83M

## Unlisted Options: 6.5M

## Unlisted Performance Rights: 2.92M

## Board



### Jim McKerlie Chair of the Board

BA Economics (Hons), Dip Fin Mgt, FCA, FAICD

- International CEO and public company director
- Chaired four IPOs, deep experience in tech. / energy sectors
- Former Chair of Drillsearch and Beach Energy



### Simon Wandke Non-executive Director

BA Psych Mkt (Comm), GDip Corp Finance

- 40+ years mining and minerals industry experience
- Highly accomplished C-suite leader
- Former EVP and Global CEO of ArcelorMittal Mining



### Paul White Non-executive Director

MBA, MAICD

- Background of driving organisational performance
- Former CEO of ASX-listed Brisbane Broncos
- Executive experience with Anglo American and Xstrata



### Peter Schubert Non-executive Director

- Track record of developing resources sector businesses
- Magnetite Mines Executive Chairman Sep-18 to May-22
- Magnetite Mines Interim CEO Mar-21 to May-22



### Dr Carmen Letton Non-executive Director

BA Min.Eng (Hons), PhD, Mineral Economics, MAusIMM

- 35+ years' global mining experience
- Former head of asset strategy development at Anglo American
- Previous senior roles at BHP, Rio Tinto, Newmont and Newcrest

## Management



### Tim Dobson Chief Executive Officer

BAppSc (Ext.Metallurgy), GAICD, FAusIMM

- 35 years extensive international mining experience
- Track record of operating and transforming major projects
- ASX CEO & international senior executive leadership roles



### Simon Smith Chief Financial Officer

BCom, Accounting & Finance, CA

- CFO with 30+ years international experience
- Led equity and debt capital raisings of over A\$500 million
- Oversaw \$340m project financing of Woodlawn Zn Cu Mine



### Gemma Brosnan GM – External Affairs

BA Journalism (Hons), DipInvRel (AIRA)

- Corporate communications and investor relations professional
- 20+ years extensive experience in UK & Australia.
- Commenced career as journalist with London Evening Standard.



### Trevor Thomas Study Director

MEarthSci (Hons), MAIG, MAusIMM

- 14 years exploration & resource development geologist
- Lead for project management of all technical & feasibility studies
- Delivered Razorback Maiden Ore Reserve; acquired Muster Dam



### Allan Kane GM – Sustainability

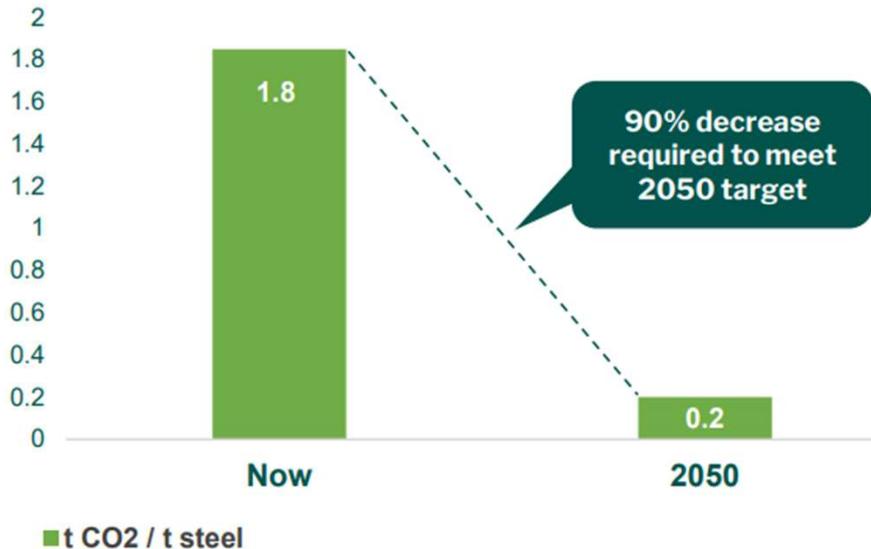
BEnvMgmt (Hons), GradCert ProjMgmt

- 15 years broad resources sector experience
- Lead for sustainability and corporate ESG framework
- Previous roles with SA Department for Energy and Mining

# Challenging steel decarbonisation targets have been set

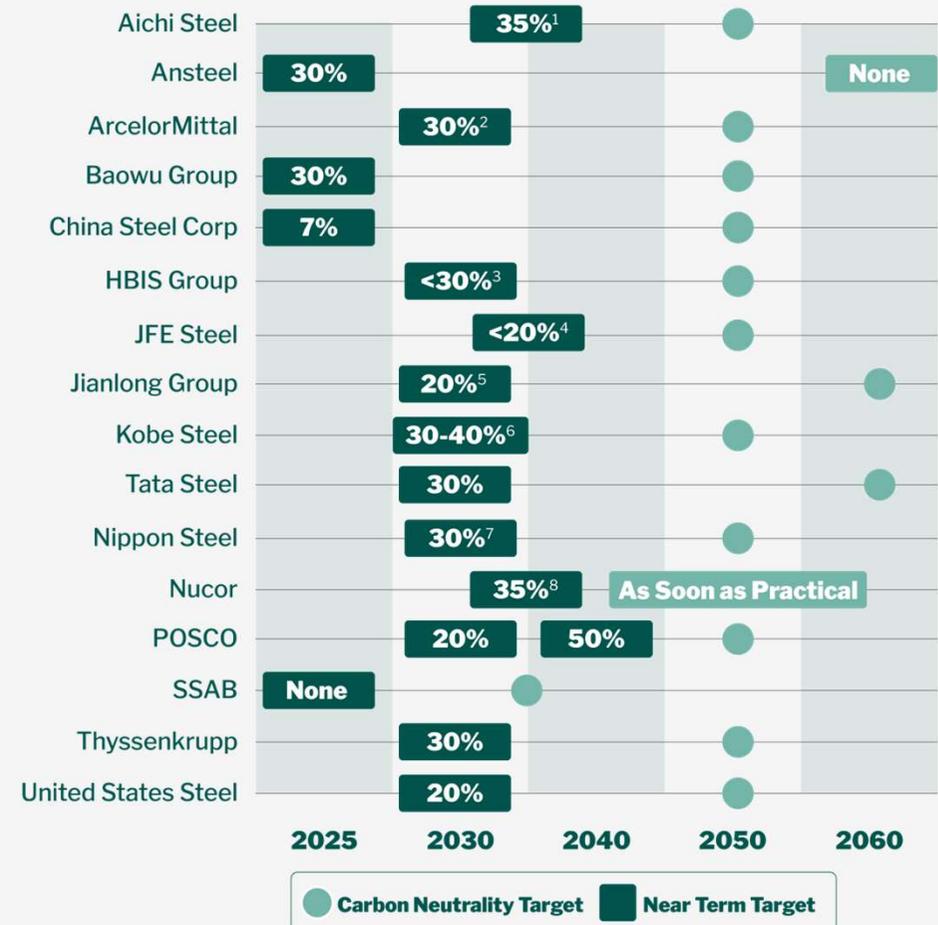
Steel industry now committed and making transition investment decisions

## Steel industry produces 8% of global carbon emissions



Source: World Economic Forum, Steel industry net-zero tracker

## Major steel producer carbon reduction targets

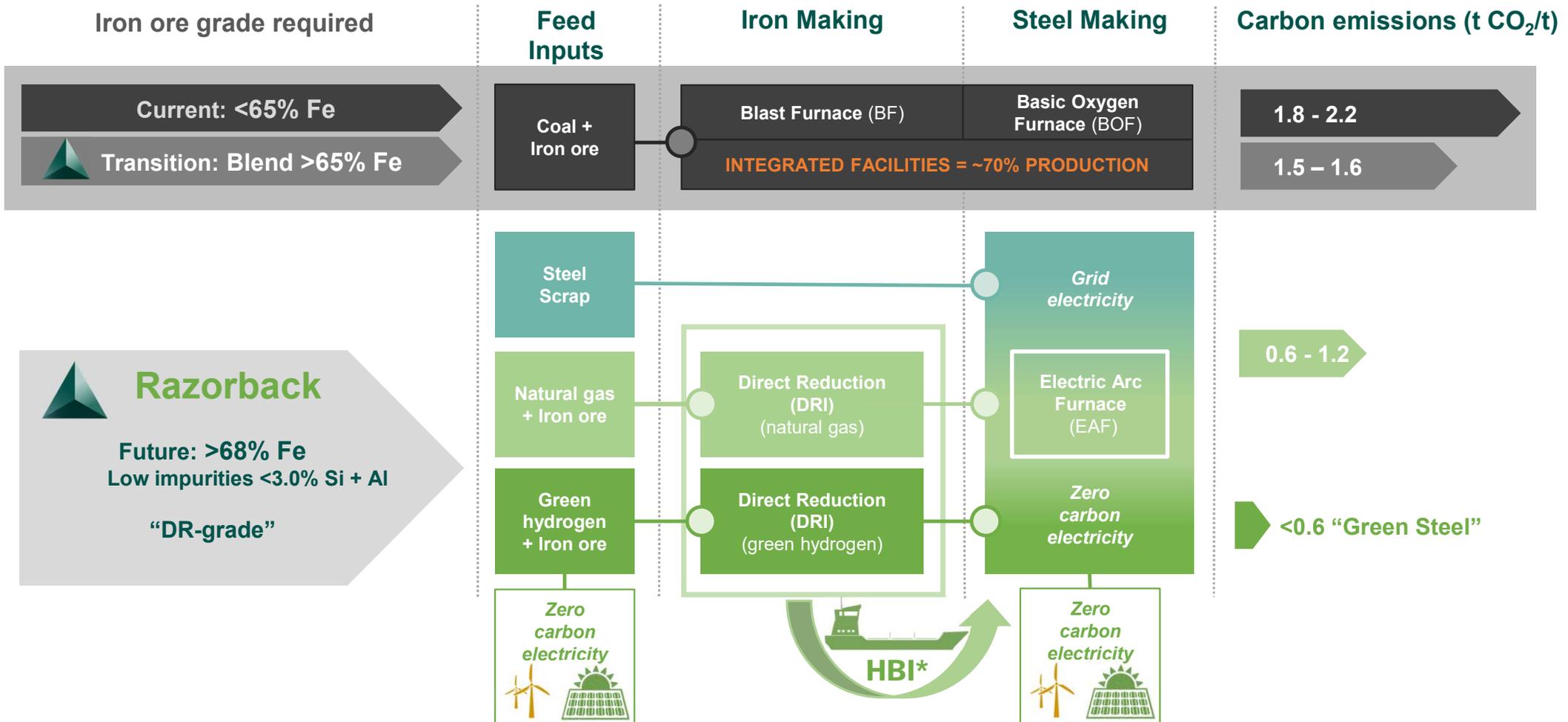


Source: Company filings 1. by 2030 compared to 2013 levels | 2. by 2030 over 2018 | 3. by FY2030 compared to 2022 | 4. by FY2030 compared to FY2013 5. lower by 2033 | 6. by 2030 from 2013 levels | 7. by 2030 compared to 2013 levels | 8. by 2030 using 2015 baseline

# The transition away from coal has commenced

Razorback to supply high-grade, low-impurity iron ore for replacement technologies

## Coal-using blast furnaces replacement to EAFs has commenced and forecast to accelerate



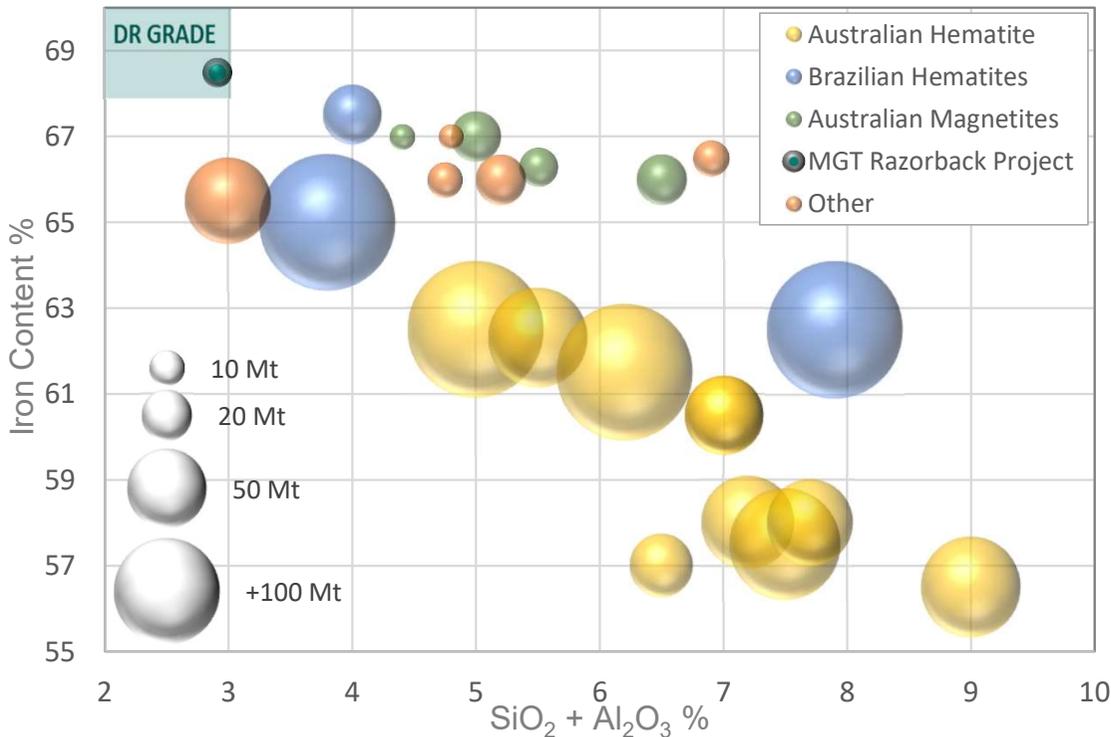
\*Hot Briquetted Iron (HBI) is a transportable form of direct reduced iron

# New premium-grade iron ore supply critical to transition

Razorback Project one of very few projects globally positioned to meet new demand

Razorback >68% Fe concentrates positioned in DR-grade range\*

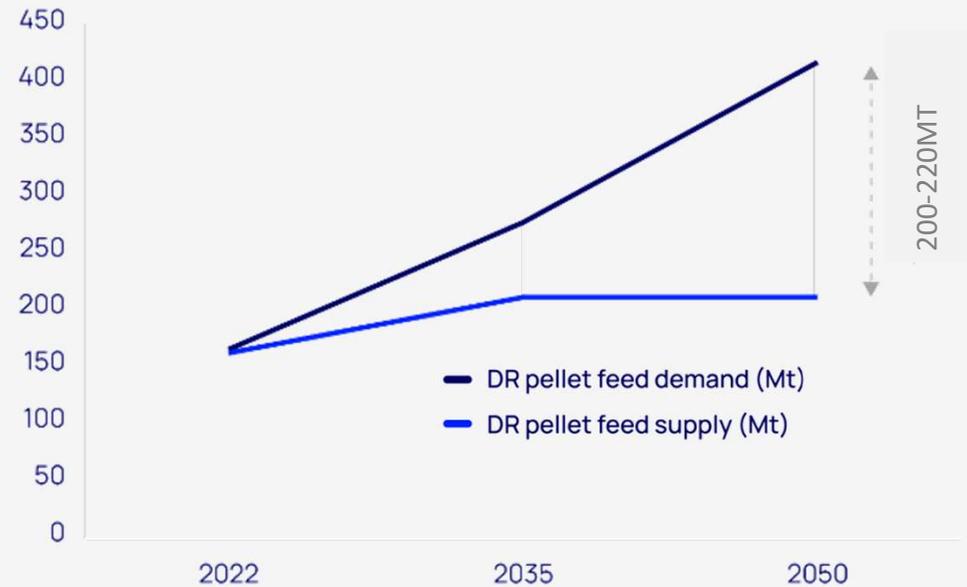
Exported Iron Ore – Fe Grade Comparison



Source: Dazmin Consulting

\* Initial Razorback Project production phase target concentrate specification, subject to further testwork

## High-grade iron ore demand-supply gap to increase



Source: Wood Mackenzie, "Metalmorphosis": How decarbonisation is transforming the iron and steel industry (Oct 23)

# Australia is now recognising the green iron opportunity

*Realising the economic advantage of Australia's world-leading renewables*



*“The Malinauskas Labor Government will officially begin its search for partners to kickstart South Australia’s Green Iron and Steel industry, cementing the state’s position as a green iron powerhouse.”*

**Peter Malinauskas MP**

Premier of South Australia

27 February 2024



*“The Australian Government has identified green metals as a priority industry for a Future Made in Australia, specifically production of low emissions iron, steel, alumina and aluminium.”*

**Ed Husic MP**

Australian Federal Industry Minister

31 May 2024

# The South Australia advantage

SA is leading the way to a future green iron economy

## Attracting international investment



**Magnetite +  
Renewable Energy +  
Green Hydrogen**

- ✓ **Tier 1, geopolitically stable location**
- ✓ **Access to labour markets**
- ✓ **Abundant magnetite resources**
- ✓ **100% renewable energy on grid by 2027**
- ✓ **SA Govt commenced green iron EOI process**
- ✓ **Federal Govt industry consultation completed**

## Value adding

Australia's opportunity can be realised through collaboration and investment in green iron hubs



Razorback DR-grade ore essential supply to each step in the value chain

# Razorback: Expansive, soft, outcropping iron ore

South Australia's Braemar Iron Formation – a globally significant magnetite province



## The Braemar advantage

- **Outcropping** ore: very low strip ratio
- Siltstone-hosted iron ore, not BIF\*
- **Soft** relative to WA magnetite ores
- Concentrates to premium grade iron ore
- **Undeveloped**, low intensity pastoral country

## 6 Billion Tonnes in Resources

- **2,000km<sup>2</sup>** total iron ore tenements
- **110km** strike length
- **4.5Bt** Razorback Resource<sup>1,a</sup> (JORC 2012 Indicated & Inferred)
- **1.5Bt** Muster Dam Resource<sup>2</sup> (JORC 2012 Inferred)

## 2 Billion Tonnes in Reserves

- **2.0Bt** Razorback Ore Reserves<sup>3</sup> (JORC 2012 Probable)

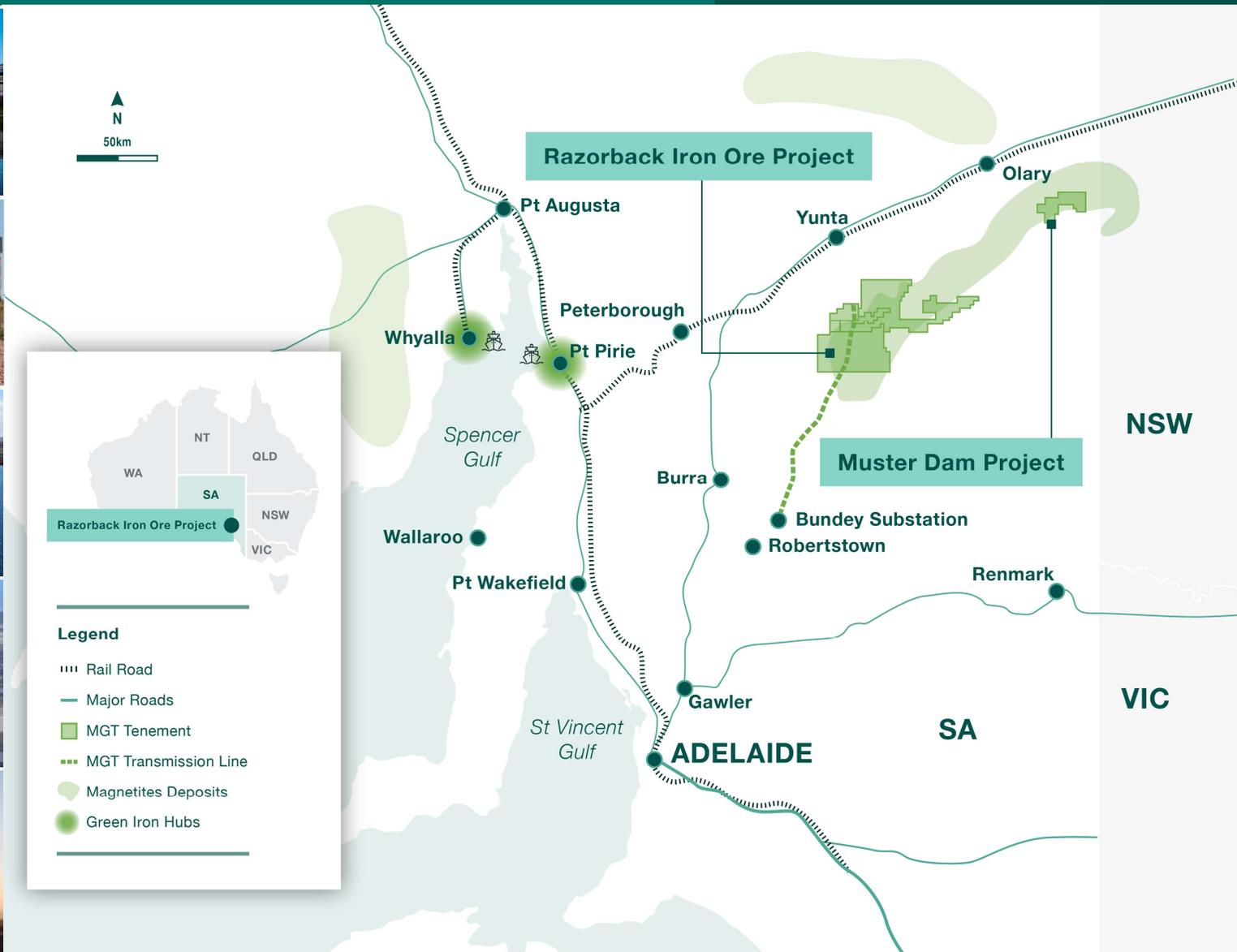
All 50km from open-access rail

\*BIF: Banded Iron Formation, common host geology for West Australian magnetite deposits  
a. Combined Razorback, Iron Peak & Ironback Hill Mineral Resource Estimates

# Outstanding project location in the undeveloped Braemar

Close to potential future green iron hubs at Whyalla & Port Pirie

Adelaide 240km	
Open-access rail ~50km	
Whyalla Port 315km	
Port Pirie 180km	
Grid Power 100% renewable by 2027 ~125km	



# Low risk conventional project configuration

Well-proven mining practices and processing technologies



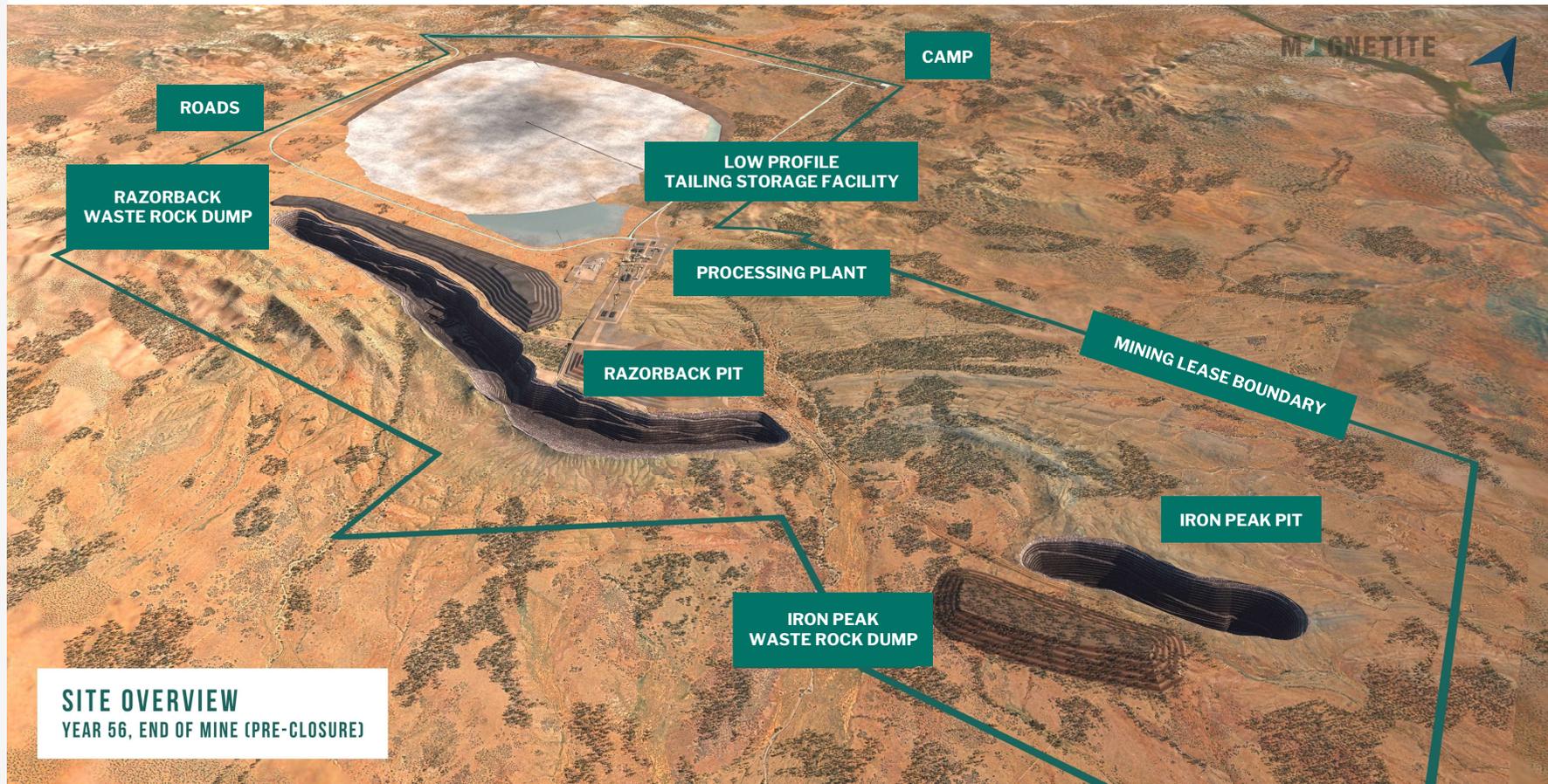
Open cut mining



Magnetic separation



Truck haulage to rail siding



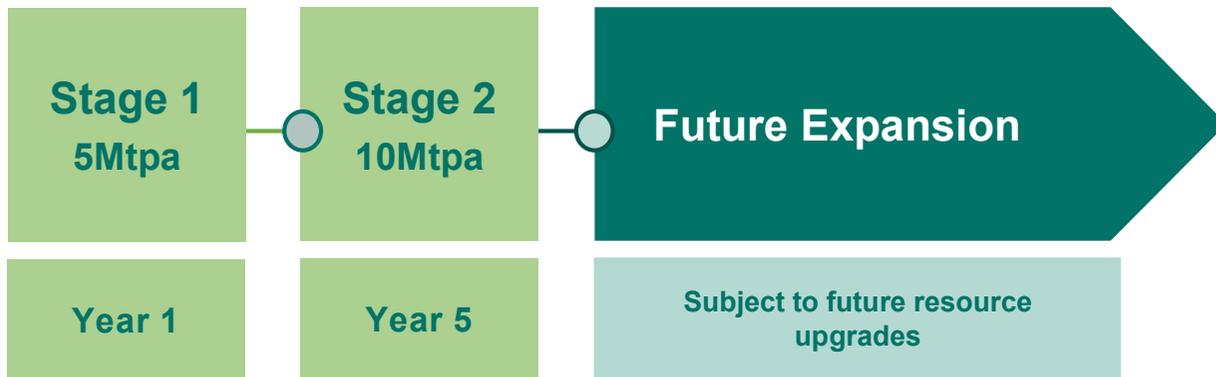
**SITE OVERVIEW**  
YEAR 56, END OF MINE (PRE-CLOSURE)

# Positive Razorback Project Optimisation Study economics

Results leading to larger scale production and staged expansion strategy



## Staged development pathway manages risk



## Respected consulting partners



## Key project metrics<sup>4</sup>

Physical Metrics	Unit	Base Case	Expansion Option
Concentrate production rate	dry Mtpa	5	10
Life of mine	Years	91	39
Mining rate (first 10 years)	Mtpa	57	91
LOM strip ratio	tt	0.35	0.35
Nominal plant feed at scale	Mtpa	25	67
Financial Metrics	Unit	Base Case	Expansion Option
Value-in-use price premium <sup>a</sup>	US\$/t	41	41
Value-in-use operating cost (62% Fe eq.) <sup>b</sup>	US\$/t	46 - 55	39 - 48
Pre-production capital <sup>c</sup>	US\$B	1.0 - 1.3	2.3 - 2.8

a. Value-in-use price premium is the forecast 2027 quality adjustment premium over and above the 62% iron ore index reference price as calculated by Wood Mackenzie for Razorback Project concentrate specification.

b. Value-in-use operating cost (62% Fe eq.) represents the total operating cost per tonne of concentrate produced for the first ten years of operations at scale, inclusive of freight, royalties, lease costs and sustaining capital, with the value-in-use price premium (see a. above) subtracted, enabling direct comparison with the benchmark 62% iron ore index reference price.

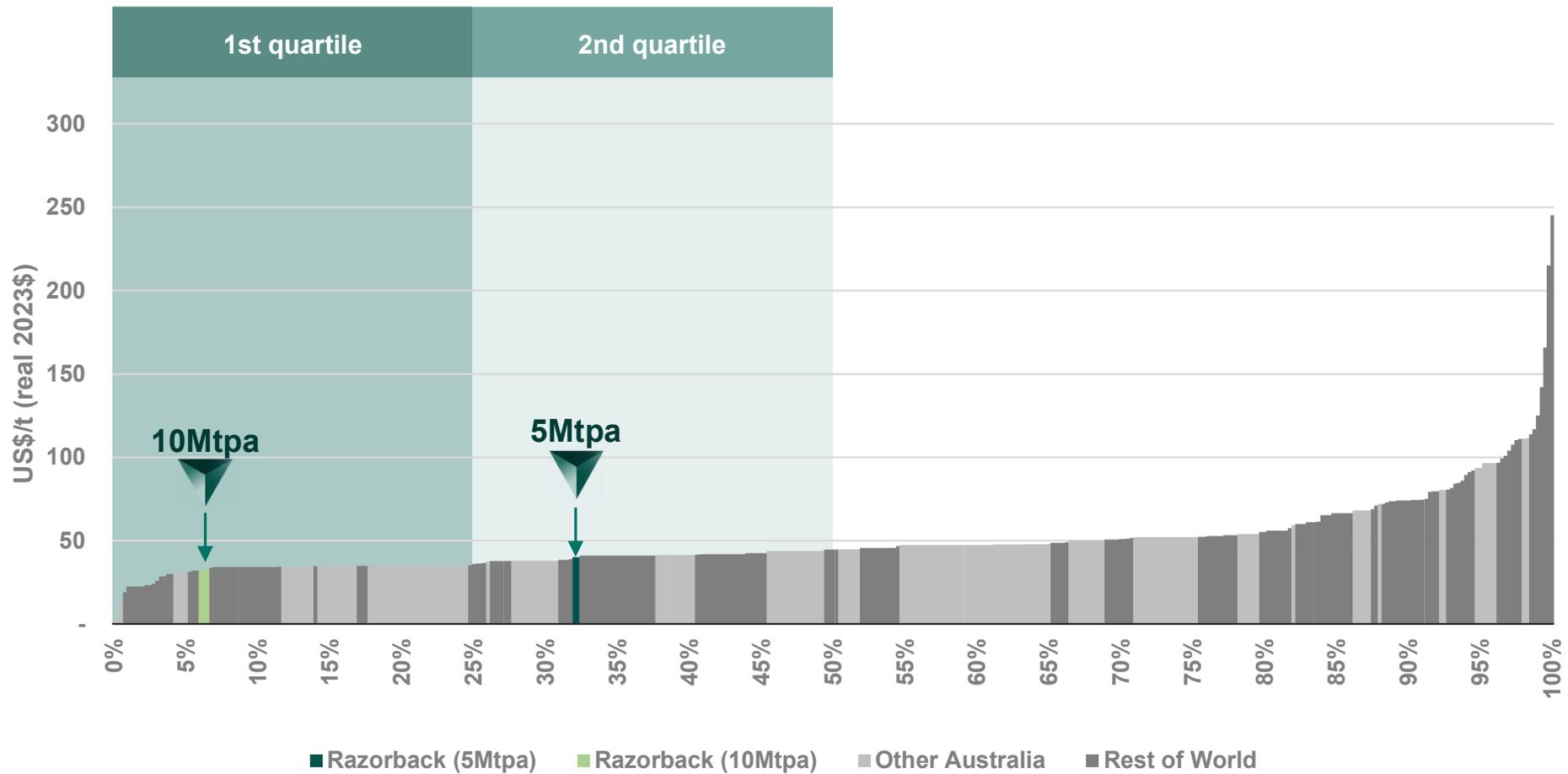
c. Pre-production capital represents the capital expenditure required to achieve production. For the Expansion Option, pre-production capital is the combined total for both initial and expanded production stages.

# Razorback Project economics globally-competitive

Highly-competitive cost base on a standardised basis



**Wood Mackenzie 2027 VIU-adjusted (62% Fe eq.) cost curve (US\$/t)<sup>a,b</sup>**



a) Adjusts cost base for product premium or discount based on grade / specification relative to 62% Fe index  
 b) Operating costs per [Iron Peak Strengthens Razorback Project Economics](#) ASX Release June 9, 2023



# Razorback Project financing approach

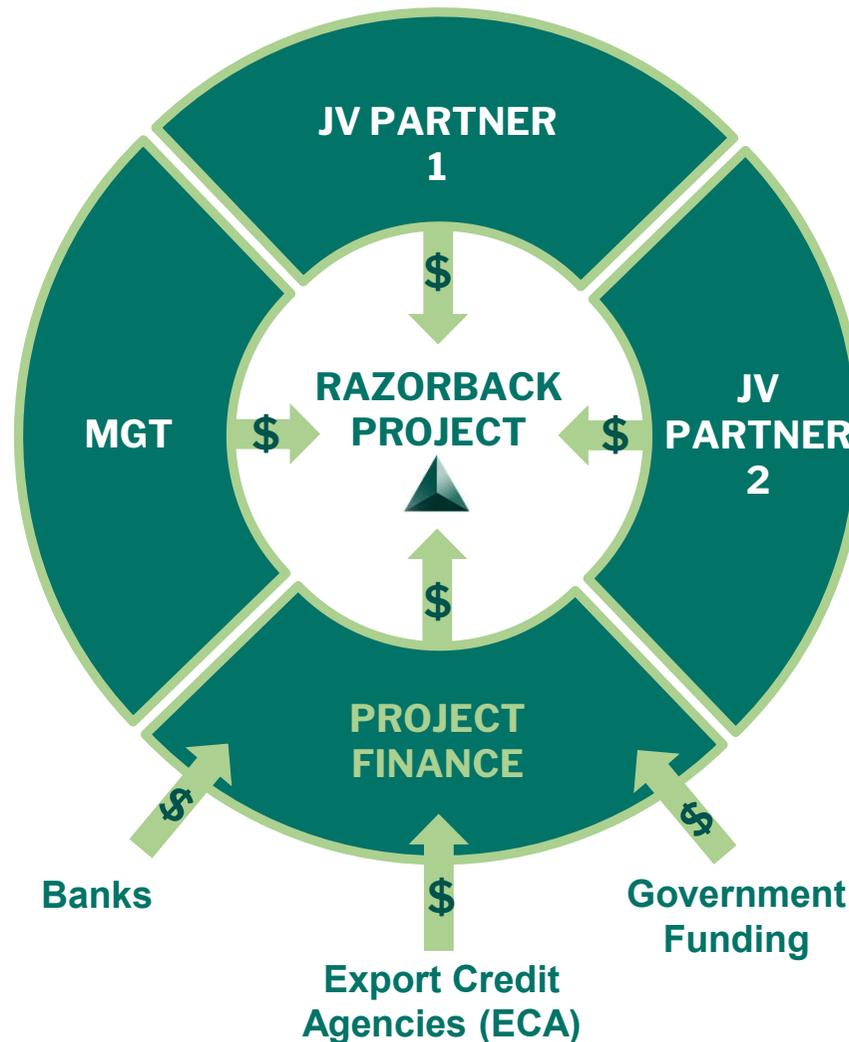
Joint venture with motivated offtakers



## Joint Ventures (JV)

- Well-proven model for big Australian iron ore projects over many decades
- Shares capital burden and project risk amongst the parties
- Enables access to low-cost capital, reducing dilution to MGT shareholders

## UNINCORPORATED JOINT VENTURE (JV)



## Potential partners

- World-class asset has attracted many global steel industry players
- JFE Heads of Agreement signed July 2024
- Assessment in progress:
  - Virtual data room access
  - Site visits
  - Due diligence
  - Ongoing discussions

# MGT's bespoke sustainability platform

*Elevating future ESG outcomes through early action and commitment*



**Partnering Agreement with Ngadjuri Nation**



**MoU with Port Pirie Regional Council**



**Grid-connected local renewable energy**

## foresight

### Environmental sustainability

- Enabling future low-carbon steel production (green steel)
- Accessing 100% renewable energy on SA grid<sup>5</sup>
- Focus on responsible water use

### Accountable governance

- Globally-recognised assurance / disclosure standards adopted
- Amplified Board and Executive sustainability accountability
- South Aust – Top 20 globally in Fraser Institute Policy Perception Index<sup>9</sup>

### Social & community inclusion

- Partnering agreement signed with Ngadjuri Nation<sup>6</sup>
- 3,500ha of baseline cultural heritage surveys at site completed
- Social and economic impact MOUs with District Council of Peterborough & Port Pirie Regional Council<sup>7,8</sup>

### People & culture

- Increasing employee engagement via cultural alignment & training
- Commitment to R&D (HILT CRC)
- Zero reportable incidents in 2023

# Magnetite Mines

## Decarbonisation Tailwind

- Premium-grade iron ore needed now to enable 'green' iron & steelmaking
- State/federal governments now assessing new green iron industry opportunity

## Outstanding Project Credentials

- Tier 1 location
- Close to port & rail
- 6 billion tonnes in Resources<sup>1,2,3</sup>
- 2 billion tonnes in Ore Reserves<sup>1</sup>

## Progressing to Development

- Partnering in progress; HOA signed with JFE
- Experienced Board & management in place
- Progressing through Definitive Feasibility Study

## Substantial re-rating potential

- Project set for long life cash generation
- Very low MGT market cap relative to project value
- Project milestones ahead should close the gap

**ASX:MGT**

## References

1. ASX Announcement – 09/02/23 – Iron Peak Mineral Resource Significantly Improved
2. ASX Announcement – 03/11/22 - Muster Dam Mineral Resource Estimate
3. ASX Announcement – 09/06/23 - Iron Peak Deposit Maiden Ore Reserve
4. ASX Announcement – 09/06/23 - Iron Peak Strengthens Razorback Project Economics
5. ASX Announcement – 23/02/23 - Renewable grid power for Razorback Project
6. ASX Announcement – 21/12/23 - Historic Partnering agreement signed with Ngadjuri Nation
7. ASX Announcement – 05/05/23 - Landmark Community MOU Signed for Razorback
8. ASX Announcement – 13/02/24 Partnership Positions Port Pirie as Future Green Iron Hub
9. [Fraser Institute Annual Survey of Mining Companies 2023](#)



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# Appendix 1

## Mineral Resources and Reserves<sup>1,3</sup>

Razorback Iron Ore Project (Razorback & Iron Peak deposits combined) <sup>a</sup>								
Classification	Tonnes (Mt)	Mass Rec %	Fe %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	P %	LOI %	Magnetite %
Indicated	1,675	15.95	18.36	48.02	8.06	0.18	5.46	15
Inferred	1,570	16.09	17.74	48.6	8.23	0.18	5.53	15.6
<b>Sub-total</b>	<b>3,245</b>	<b>16.02</b>	<b>18.06</b>	<b>48.3</b>	<b>8.15</b>	<b>0.18</b>	<b>5.49</b>	<b>15.3</b>

Results presented at 11% eDTR cutoff

Ironback Hill <sup>*b</sup>								
Classification	Tonnes (Mt)	Mass Rec %	Fe %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	P %	LOI %	Magnetite %
Inferred	1,187	-	23.2	44.4	7.2	0.21	5.4	12.9

No cut-off applied to results

Muster Dam Iron Ore Project <sup>*c</sup>								
Classification	Tonnes (Mt)	Mass Rec %	Fe %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	P %	LOI %	Magnetite %
Inferred	1,550	15.2	18.7	49.6	8.8	0.2	2.8	-

Results presented at 10% eDTR cutoff

Combined Mineral Resource Estimate								
Classification	Tonnes (Mt)	Mass Rec %	Fe %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	P %	LOI %	Magnetite %
Inferred and Indicated	5,982	-	19.4	48.1	8.2	0.2	4.8	-

Results presented as weighted averages of items A, B and C

Razorback Iron Ore Project Ore Reserve <sup>*</sup>			
Classification	Ore (Mt)	Mass Rec %	Concentrate
Probable	1,977	14.6	68.5

Ore Reserves are a sub-set of Razorback Iron Ore Project Indicated Mineral Resource Estimate.\*The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements below, and in the case of estimates of Mineral Resources and Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements 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 announcements. Tonnages and grades presented above are estimates of in-situ rock characteristics.