

# MAGNETITE

M I N E S



## Mines and Money Conference - London

May 2022

# Disclaimer

## IMPORTANT NOTICE

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## ADDITIONAL INFORMATION

This presentation should be read in conjunction with the Annual Report at 30 June 2021 together with any announcements made by MGT in accordance with its continuous disclosure obligations arising under the Corporations Act 2001. Any references to resources estimations should be read in conjunction with MGT's Mineral Resources statement for its Magnetite projects at 30 June 2021 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 the relevant market announcement and, in the case of estimates of mineral resources, 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.

## 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.

# Question reliability of iron ore forecasts

## Peak steel in 2015?

“China’s steel production has already hit a peak, or to put it another way, it has hit a turning point.”

**Zhang Guangning, Chairman of CISA, Feb 2015**

“Concerns raised as China steel enters ‘peak zone’”

**FT, Feb 2015**

“the increasing market consensus is that China is at or close to reaching the maximum level of steel output and demand”

**Reuters, Feb 2015**

## Iron ore oversupply?

“BHP Billiton is expecting at least another ten years of iron ore oversupply before the market balances out.”

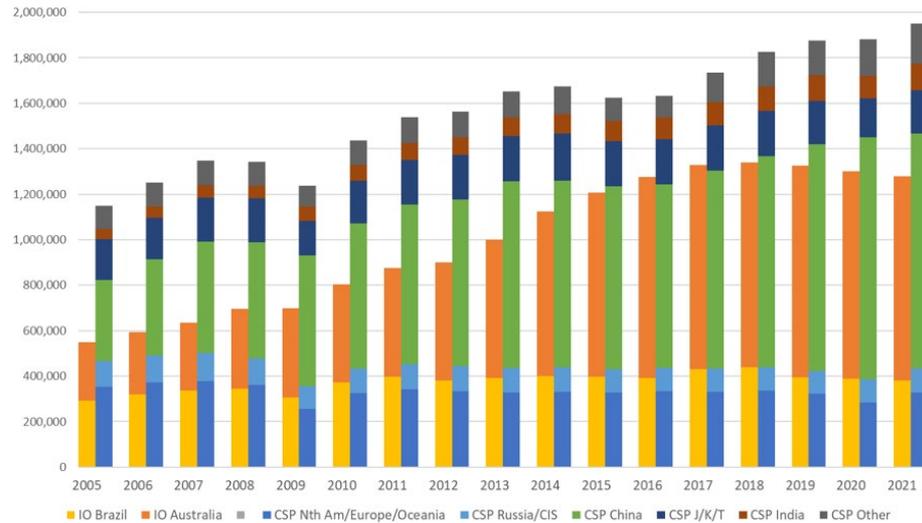
**mining.com, Jun 2016**

“There are many iron ore mining projects in the investment pipeline, and considerable capacity is likely to be added over the next two to three years. We estimate that at least 145 million mt and perhaps as much as 370 million mt of new capacity will come on stream in the period up to and including 2017.

**Anton Löf and Magnus Ericsson, E&MJ, Nov 2015**

# Strong fundamentals, especially for high-grade

Since 2015, steel production growth outstripping iron ore supply from majors...



Source: World Steel Association

...Driving iron ore prices well above consensus forecasts



Source: Fastmarkets MB

Premium Grade in Demand

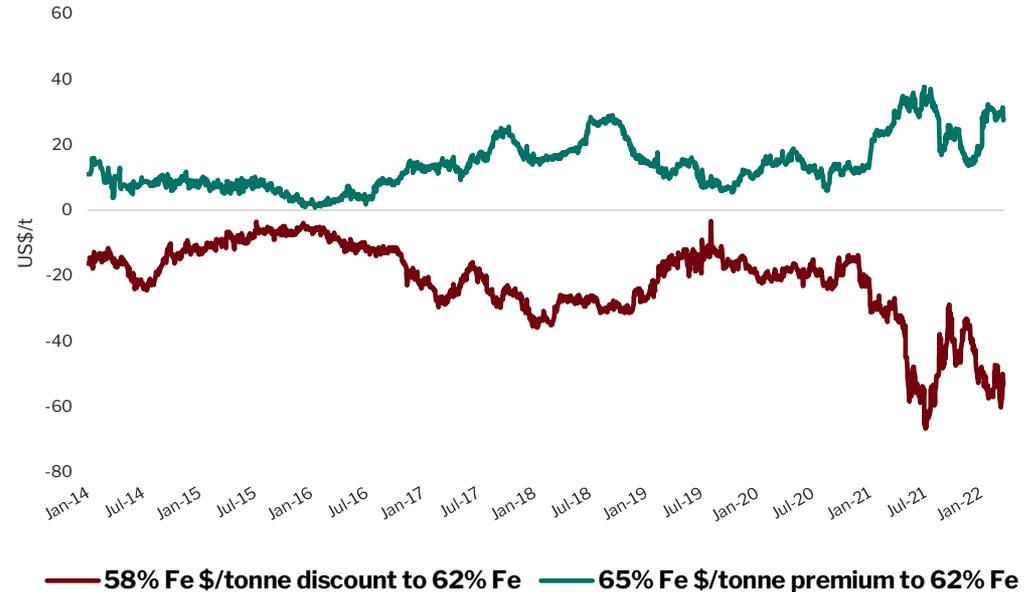
# Premium Grade is a Major Advantage

*“To succeed in decarbonizing the global steelmaking industry there needs to be a greater recognition of how much the iron ore supply base needs to change. Vast volumes of existing production will need to be replaced by higher-grade supply, first to meaningfully reduce CO2 emissions from the prevailing BF/BOF technology, and later to meet the demands of a DRI sector at least an order of magnitude larger than it is today”*

**PETER HANNAH**  
FASTMARKETS/METAL BULLETIN

<https://www.fastmarkets.com/article/3974510/iron-ores-critical-role-in-decarbonizing-steelmaking>

**Fastmarkets iron ore index grade spreads (US\$/tonne)**



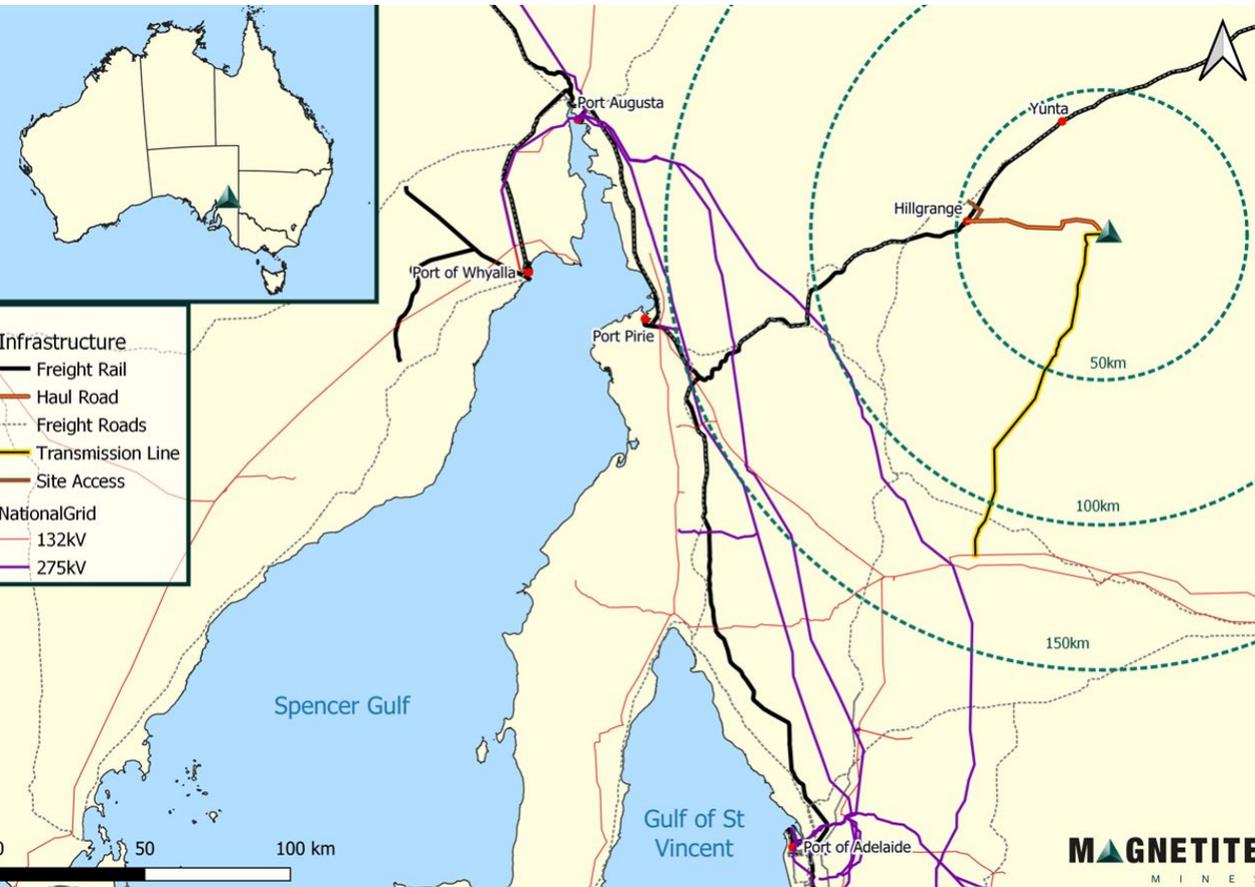
## CRU

*“Steelmakers need to adopt best practices that prioritise decarbonisation with existing assets. Some of these best practices include installation of energy efficient technology, optimisation of the blast furnace (BF) burden (e.g. with high-grade ore)”*

<https://www.crugroup.com/knowledge-and-insights/insights/2021/decarbonisation%0B-challenges-in-the-steelmaking-industry>

Large Resource, Long Life

# The Braemar and Razorback



## LARGE, ACCESSIBLE MINERAL RESOURCES

- Company Mineral Resources of 5.7Bt including Muster Dam<sup>1,2,3,4</sup>
- Soft ore amenable to crushing & grinding (8-10 kwh/tonne)
- 240km to Adelaide from Razorback.

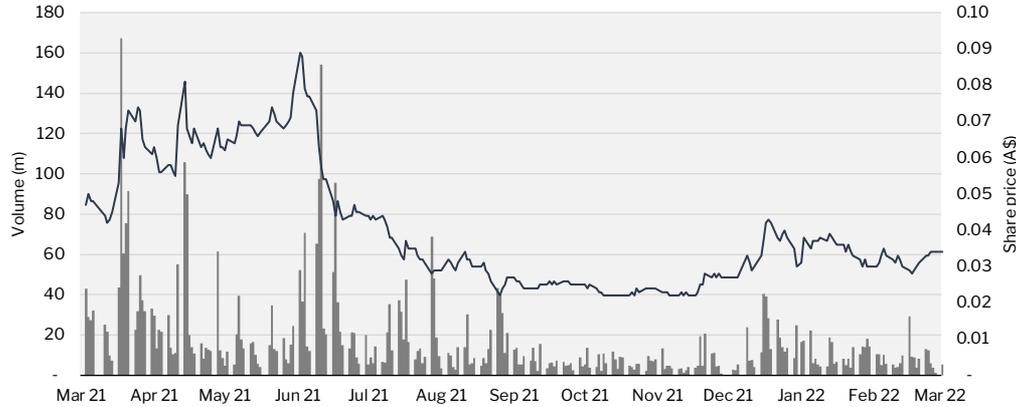
## ESTABLISHED INFRASTRUCTURE NEARBY

- Heavy freight open access rail.
- High voltage powerlines connected to main Australian grid.
- Operational iron ore port with capacity.

## FAVOURABLE REGION

- Supportive and stable government in a tier 1 jurisdiction.
- Low intensity pastoral country.

# Corporate Overview



## OTHER SHAREHOLDERS

## TOP 20

## BOARD AND MANAGEMENT



**Mark Eames**  
BA Metallurgy (Hons)  
MBA MAUSIMM  
CHAIR OF THE BOARD

Mark has a successful track record in the global minerals industry in exploration, evaluation, development, acquisitions, operations, marketing and senior corporate management. He is a qualified metallurgist with extensive experience in Australia and overseas and has held senior roles working with the iron ore businesses of Glencore, Rio Tinto and BHP.



**Peter Schubert**  
NON-EXECUTIVE DIRECTOR

Peter has a track record of identifying, growing and developing businesses with a focus on the resources sector, with over 30 years of direct experience in international and domestic markets. He was the Executive Chairman of Magnetite Mines from Sep 2018 to May 2022 and Interim CEO from Mar 2021 to May 2022.



**Malcolm Randall**  
Dip Applied Chem, FAICD  
NON-EXECUTIVE DIRECTOR

Malcolm has more than 46 years' of extensive experience in corporate, management and marketing in the resources sector, including more than 25 years with the Rio Tinto group of companies. His experience has covered a diverse range of commodities including iron ore, potash brine, uranium, mineral sands and coal ark.



**Jim McKerlie**  
BA Economics (Hons) Dip Fin Mgt  
NON-EXECUTIVE DIRECTOR

Jim has an extensive career as an international chief executive and as a public company director including Chairman of Drillsearch for 8 years and of Beach Energy. He has chaired four IPOs and has depth of experience in technology and energy sectors. He is a Fellow of both the Australian Institute of Company Directors and the Institute of Chartered Accountants.



**Paul White**  
Master of Business Administration  
NON-EXECUTIVE DIRECTOR

Paul has a track record of driving organisational performance and delivering superior outcomes in both corporate and board positions. He was the CEO of ASX-listed Brisbane Broncos until March 2021, a position he held for a decade. Prior to this, Paul gained substantial executive experience with global mining companies including Anglo American and Xstrata

## CAPITAL STRUCTURE

<b>Shares</b>	3,159 M
<b>Unlisted Options</b>	153.1M (various – avg. \$0.03)
<b>Share Price*</b>	A\$0.034
<b>Market Cap*</b>	A\$107M

\*As at 25 Mar 2022



NON-PROCESS  
INFRASTRUCTURE



PROCESSING

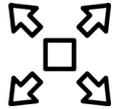


ENVIRONMENTAL



MINING

# Delivering Premium Iron Ore to High Demand Markets



## Long Life with Optionality

**5.7bn tonne resource with expansion potential** <sup>1,2,3</sup>

- ▶ **Expansion Study** - results confirmed significant upside potential of scaling up Razorback and the advantages of a multi-decade resource.



## Low Initial Project Capital

**Staged development approach with ESG advantages**

- ▶ **Mining/Strip** – minimal stripping.
- ▶ **Power** – East coast grid power.
- ▶ **Infrastructure** – existing rail and port access.
- ▶ **Low emissions** – renewable power and low emissions product.



## High Grade Product

**68% Fe product** <sup>5</sup>

- ▶ **Higher grade** than any of the routinely quoted iron ore indices.
- ▶ **Limited supply** – resource depletion, declining product grades and environmental pressures



## Delivering

**First ore on ship planned for late 2024/early 2025**

- ▶ **Tier 1 Jurisdiction** – supportive government.
- ▶ **High-quality Team** – extensive iron ore and project experience.
- ▶ **Highly competitive costs**

# Minimal Capital Existing Infrastructure



- 50km purpose built private all weather haul road and rail siding

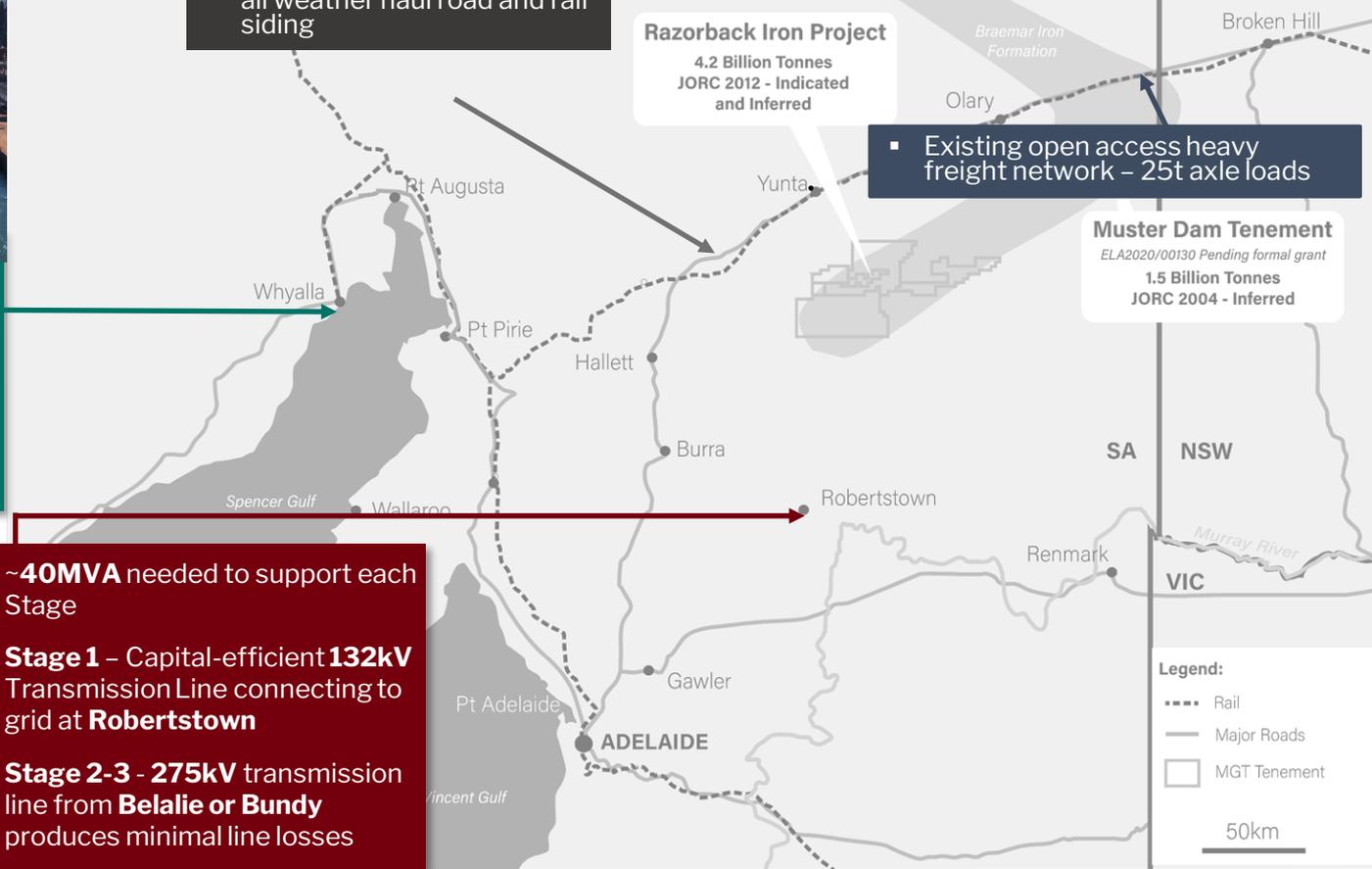
## Razorback Iron Project

4.2 Billion Tonnes  
JORC 2012 - Indicated  
and Inferred

- Existing open access heavy freight network – 25t axle loads

## Muster Dam Tenement

ELA2020/00130 Pending formal grant  
1.5 Billion Tonnes  
JORC 2004 - Inferred



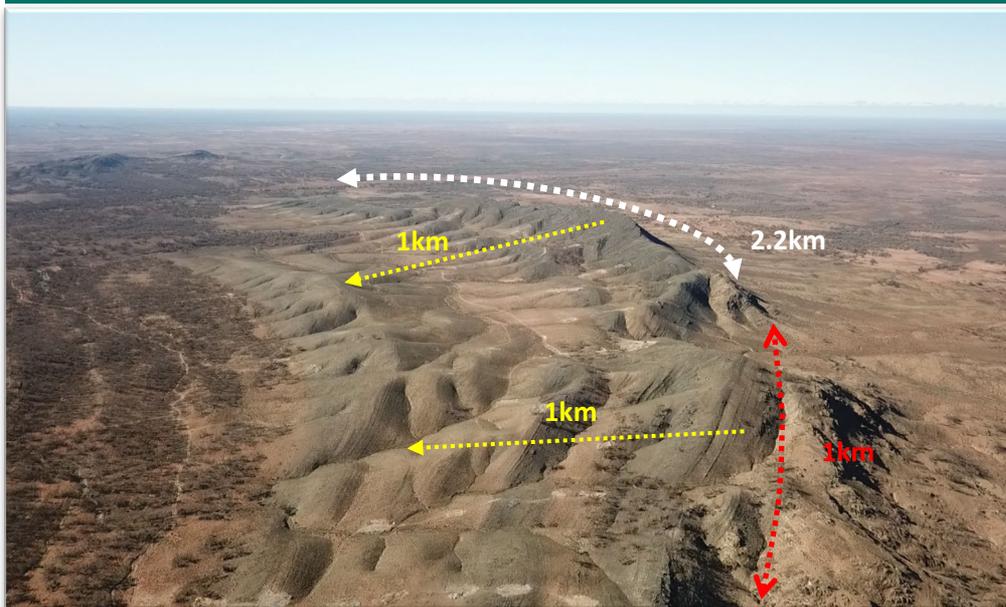
- **Whyalla Port** expected to have capacity for increased throughput
- Benefit of existing rail access infrastructure and trans-shipment operations into **Capesize vessels**.



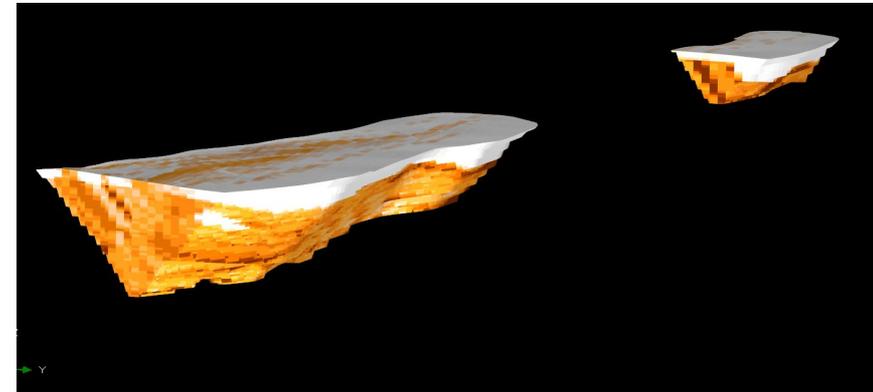
- ~**40MVA** needed to support each Stage
- **Stage 1** – Capital-efficient **132kV** Transmission Line connecting to grid at **Robertstown**
- **Stage 2-3** - **275kV** transmission line from **Belalie or Bundy** produces minimal line losses

# Simple Mining with Head Grade Upside

- Ore mined from surface – minimal pre-strip<sup>5</sup>
- Ore haul for initial box cut all downhill, flat waste dumps
- Low PFS strip ratio of 0.10:1
- Grade uplift potential from selective mining and/or ore sorting
  - Lateral stratigraphic continuity
  - New geophysics regressions under investigation plus high-resolution sampling and analysis



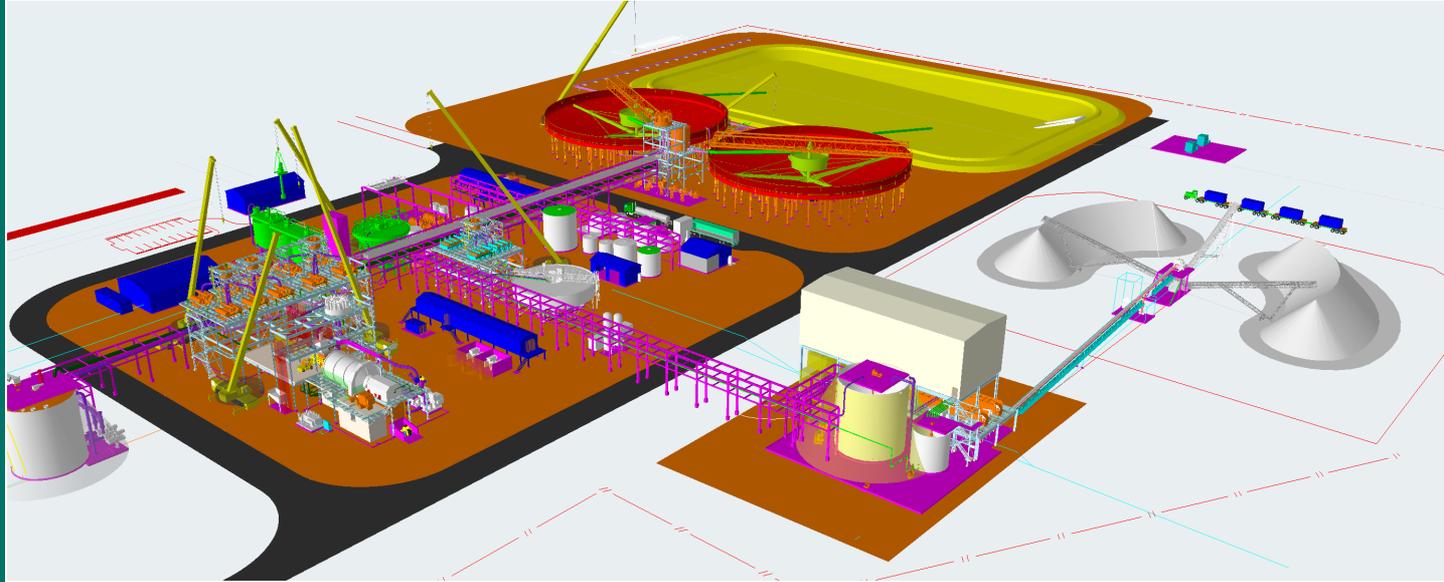
Razorback Ridge



Pit shell optimisation diagram

# Processing to 68% product grade

- 15.5Mtpa processing module layout **designed by Hatch** with 3Mtpa production capacity
- Capital cost estimated to **AACE Class 5** level
- Economies of scale and scope** in capital and operating costs
- A final product of **P80 40 microns** is estimated - DFS metallurgical and processing testwork ongoing



Schematic design of wet-plant processing plant by Hatch, design subject to change.

## Razorback Iron Ore Project indicative product specifications

	Particle size (P80)	Mass recovery	Fe %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	P %	S %
Concentrate	40µm	16%	67.5-68.5%	3.9-4.6%	0.4-0.5%	0.02%	0.003%

# Environment, Social and Governance (ESG)



- Higher-grade ores produce lower-emission steel



- Investigating the presence of bat species (order: Chiroptera) within the mining area. One specimen located during the survey was the Lesser long-eared bat (*Nyctophilus geoffroyi*, LC).

- During March we hosted a Ngadjuri heritage team as they began the process to record the regional cultural heritage values. Over 1,100ha of Country walked and surveyed, with follow up surveys planned.



## Expansion Potential

# Attractive, Staged Development Pathway

### STAGE 1

15.5Mtpa plant capacity  
= 3Mtpa capacity

### STAGE 2

31.0Mtpa plant capacity  
= 5Mtpa capacity

### STAGE 3

46.5Mtpa plant capacity  
= 7Mtpa capacity



**A STAGED DEVELOPMENT APPROACH** offering outstanding returns with future expansion options

- DFS based on 3Mtpa of capacity and minimum upfront capital
- Substantial resources support further optionality and long mine life



**ATTRACTIVE ECONOMIES OF SCALE**, additional cash flow and enhanced shareholder value

- Competitive \$US40/t all-in 62% Fe iron ore breakeven price.
- Two-year payback on incremental expansion



**PREMIUM PRODUCT** for the transitioning steel industry

- 68% high-grade product is attractive to steelmakers
- A growing population, continued urbanisation, and developing economies drive demand.

# Compelling Economics Highlights

## ✓ STAGED DEVELOPMENT PATHWAY

- DFS based on 3Mtpa of capacity and minimum upfront capital
- Expansion Study assessed benefits of increasing production following this initial Stage 1 development

## ✓ HIGH-QUALITY & ROBUST engineering

- Disciplined, technically-led approach to resource development
- Data and analysis based on 2021 PFS studies from best-in-class consultants (Hatch, GHD)

## ✓ LARGE RESOURCE supports long-term production

- 87% of production in first ten years of expansion cases from Probable Ore Reserves
- Expansion cases based on run-of-mine ore of 1.4bn tonnes equivalent to just 32% of Razorback's 2012 JORC

## ✓ ATTRACTIVE PATHWAY

- Scale leads to capital and operating economies
- NPV8 of \$2.5B with overall returns of 27% post tax (incremental expansion ungeared post tax IRR 33%)
- Contingencies of 20-25% applied to capital costs

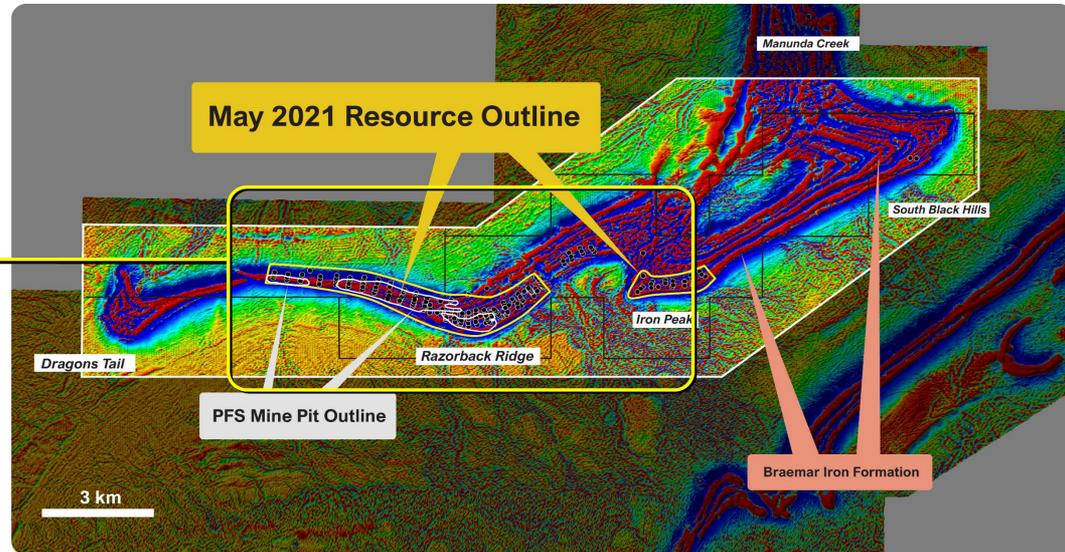
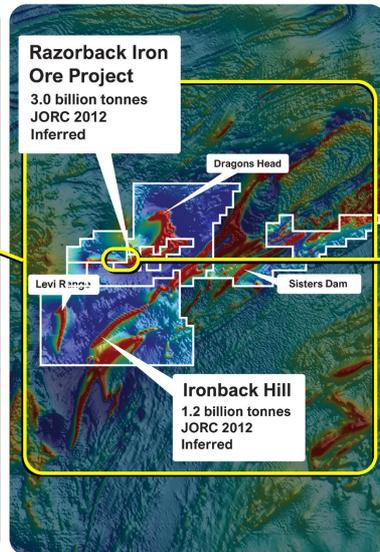
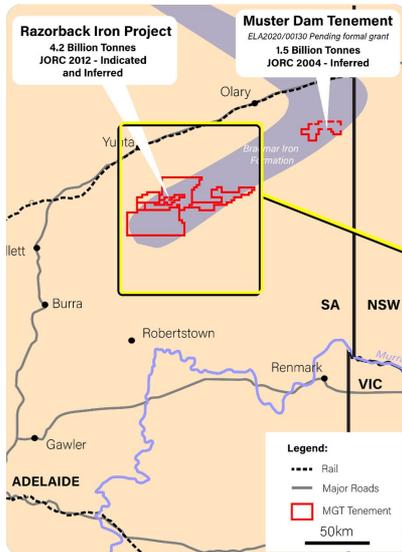
## Key operational and financial metrics

	Unit	PFS Plant Optimised <sup>1</sup>	Staged Expansion	Single-Step Expansion
		Stage 1	Stage 1,2, 3	Stage 1, 3
Model duration	Years	30	33	32
LOM ore	Mt	461	1,365	1,365
LOM concentrate	Mt	68	193	193
LOM strip ratio	t : t	0.10	0.13	0.13
LOM yield	%	14.7	14.4	14.4
Nominal plant feed at scale	Mtpa	15.5	46.5	46.5
Average annual product at scale	Mtpa	2.2	6.7	6.8
Development capital	A\$m	665	1,985	1,985
Average net cashflow	A\$m	127	459	491
Post-tax NPV	A\$m	660	2,239	2,455
Post-tax IRR	%	19%	25%	27%
All-in breakeven <sup>3</sup>	US\$/t	53	41	40

1. As the Plant Optimised case provided the basis of design for Stage 1 of the Expansion Study case, it is the most logical reference case
2. The average AUD:USD exchange rate in the three months to February 2022 was 0.7165
3. The 62% Fe iron ore price at which the NPV-8 of post-construction net cash flows equals zero, calculated at the commencement of the last stage of production

# Large Resource, Long Life Unlocking the Braemar

## Stage 1 Relies On Only



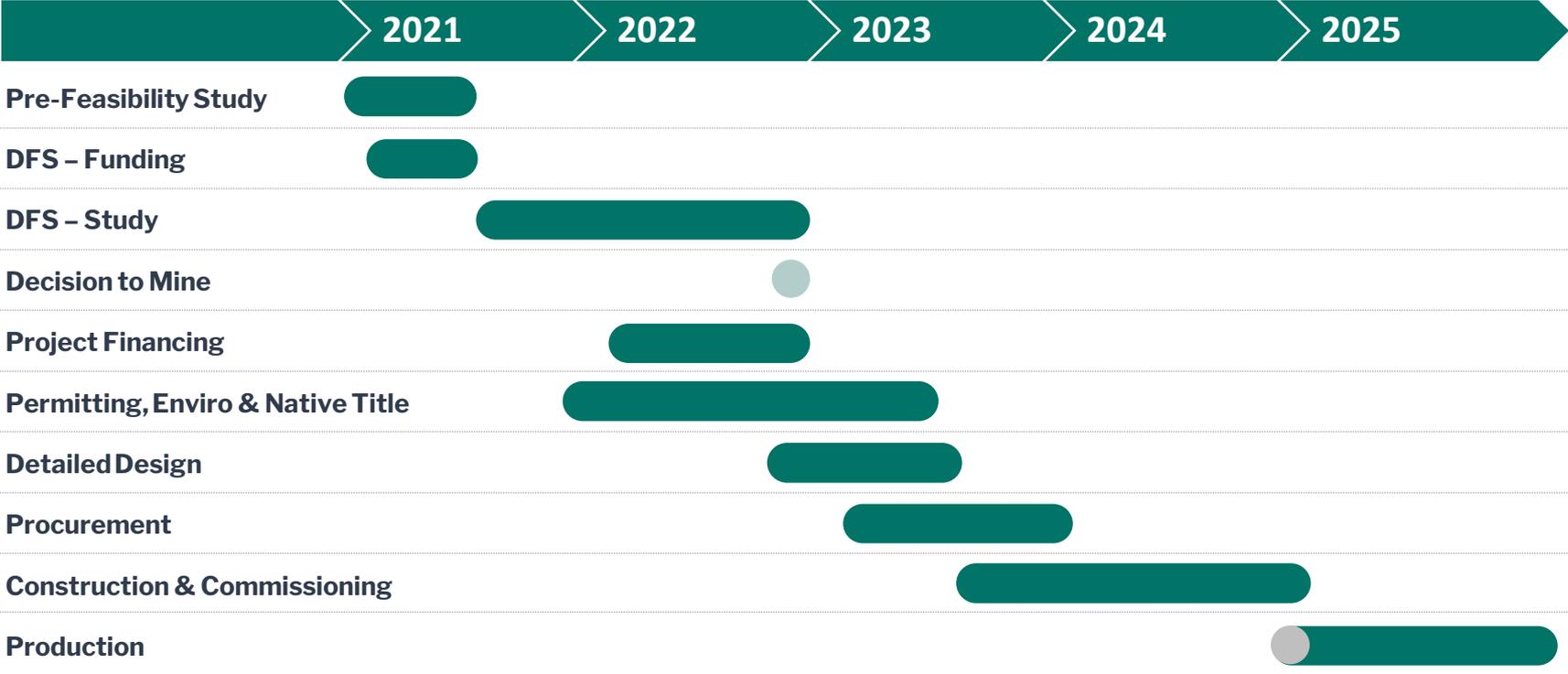
### Magnetite Resource and Reserves (JORC Code 2012)\*

Resource	Ore (Mt, dry)	Mass Rec (eDTR%)	Fe%	SiO2%	Al2O3 %	P%	LOI%	Magnetite %
<b>Razorback Iron Project</b>								
Indicated	1,500	15.6	18.5	47.9	8.0	0.18	5.4	15.0
Inferred	1,500	16.0	18.0	48.3	8.2	0.18	5.5	15.9
<b>TOTAL</b>	<b>3,000</b>	<b>15.8</b>	<b>18.2</b>	<b>48.1</b>	<b>8.1</b>	<b>0.18</b>	<b>5.5</b>	<b>15.5</b>
<b>Ironback Hill</b>								
Inferred	1,187		23.2	44.1	7.2	0.21	5.4	12.9
Razorback Iron Ore Project Ore Reserve		Ore (Mt)	Mass Recovery		Concentrate (Mt)			
<b>Probable</b>		<b>472.7</b>	<b>14.5</b>		<b>68.5</b>			

Razorback at 11% eDTR cut-off. Ironback Hill at 0% Fe cutoff. Ore Reserves are a subset of Mineral Resources.

\*In addition to Magnetite Resource and Reserves (JORC Code 2012), the Muster Dam Iron Project holds a historical (JORC 2004) Inferred Resource of 1.5 billion tonnes.

# Indicative Development Schedule\*

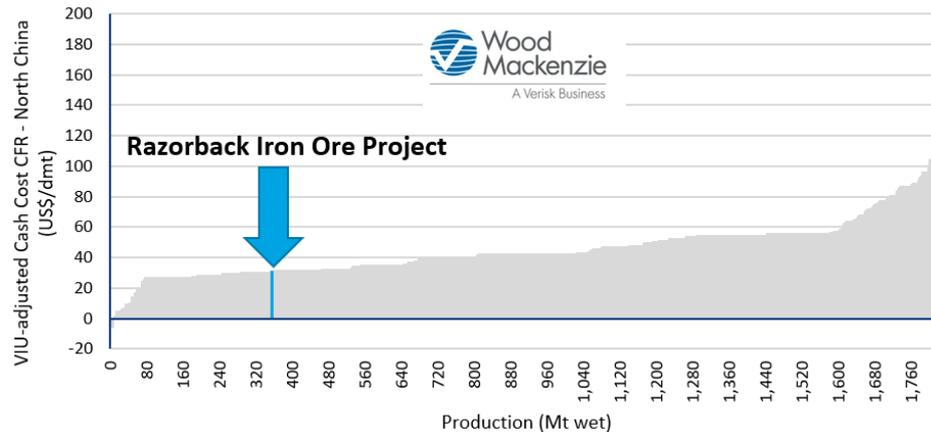


\*Schedule subject to review as part of DFS currently underway

Competiting on cost curve

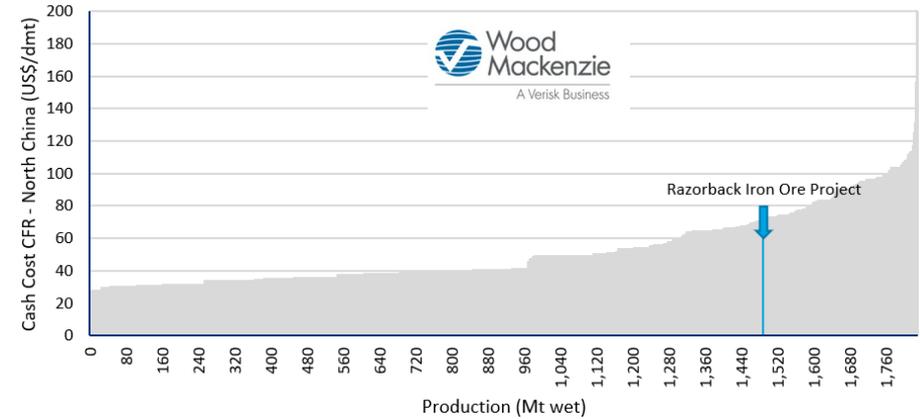
# First Quartile competitor on a value/margin basis

**VIU-adjusted total cash cost curve - CFR North China**



Source: Wood Mackenzie, Magnetite Mines

**Total cash cost curve - CFR North China**

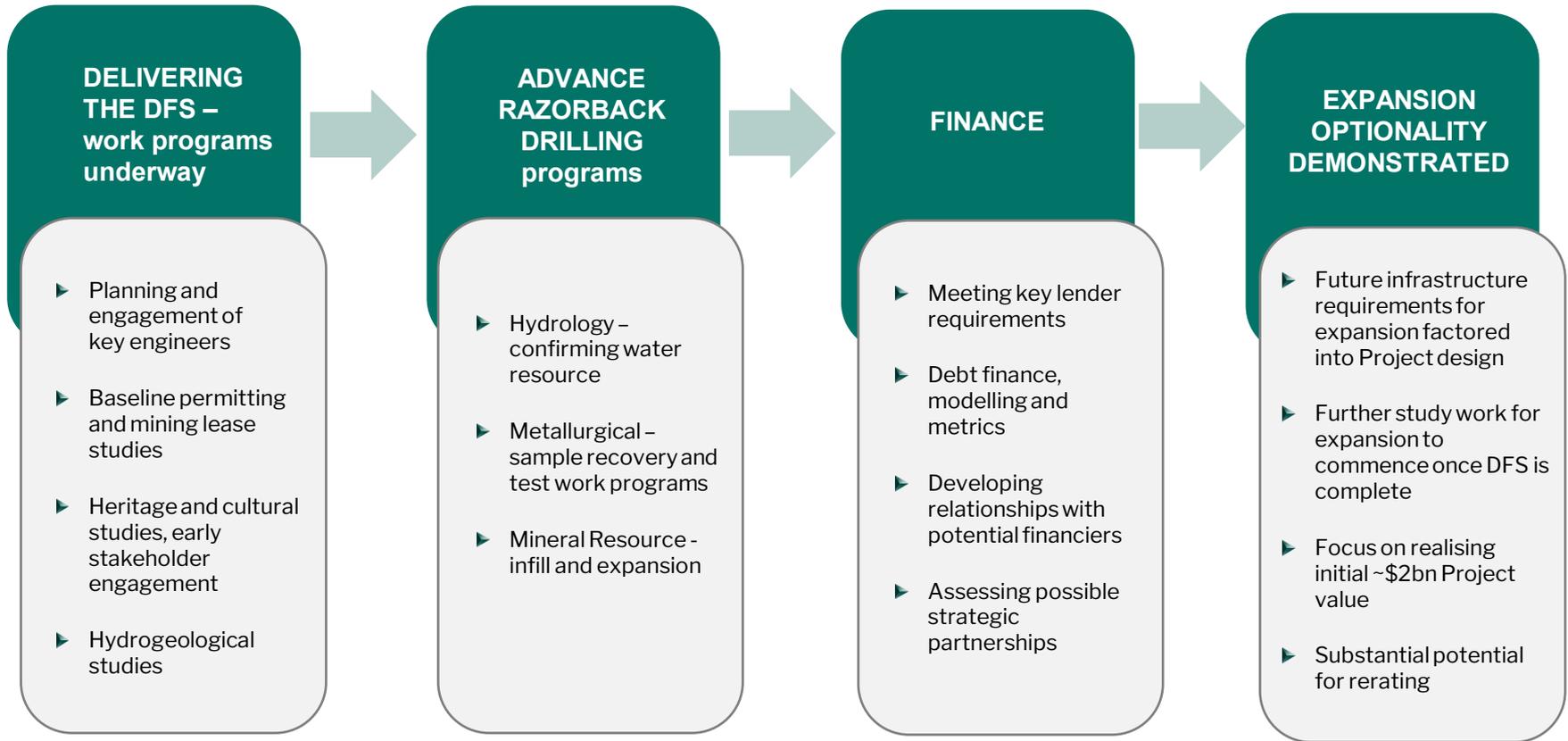


Source: Wood Mackenzie, Magnetite Mines

Wood MacKenzie's Value-In-Use (VIU) cost curve takes into account the premium or discount a product receives based on its grade and specification. Cash costs calculated in 2022 dollars.

## Next Steps

# Delivering Premium Iron Ore to High Demand Markets



### CONTACT DETAILS

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## References

1. ASX Announcement – 24/05/21 – Razorback Iron Project Mineral Resource Upgrade
2. ASX Announcement – 20/11/18 – Ironback Hill Deposit – JORC 2012 Resource Update
3. ASX Announcement – 01/03/21 – Muster Dam Iron Project Tenements awarded to Magnetite Mines
4. ASX Announcement – 30/06/21 - Maiden Ore Reserve for the Razorback Iron Project
5. ASX Announcement – 05//07/21 – Positive PFS Results for Razorback Iron Project
6. ASX Announcement – 21/03/22 – Magnetite Mines Confirms Benefits of Expansion at Razorback
7. Australia's emissions projections 2021, Australian Government Department of Industry, Science, Energy and Resources - Oct 2021



# Appendix



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