

MAGNETITE

M I N E S



Expansion Study Razorback High Grade Iron Ore Project

March 2022

Disclaimer

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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.

Staged Development of a new iron ore province - the Braemar

South Australia

▶ **Favourable business setting**

- with growing iron ore demand,
- premiums for high grade products and
- limited new supply.

▶ **Large Razorback resource** with **world-class infrastructure** and **favourable mining jurisdiction.**

▶ **Low-capital, long-life** development is readily fundable with high returns⁵.

▶ **Experienced team** systematically assembling the building blocks for a sustainable and attractive business.

Corporate Overview



CAPITAL STRUCTURE

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



NON-PROCESS
INFRASTRUCTURE



ENVIRONMENTAL
CONSULTANT

HATCH PROCESSING



Large Resource, Long Life

The Braemar and Razorback

LARGE, ACCESSIBLE MINERAL RESOURCES

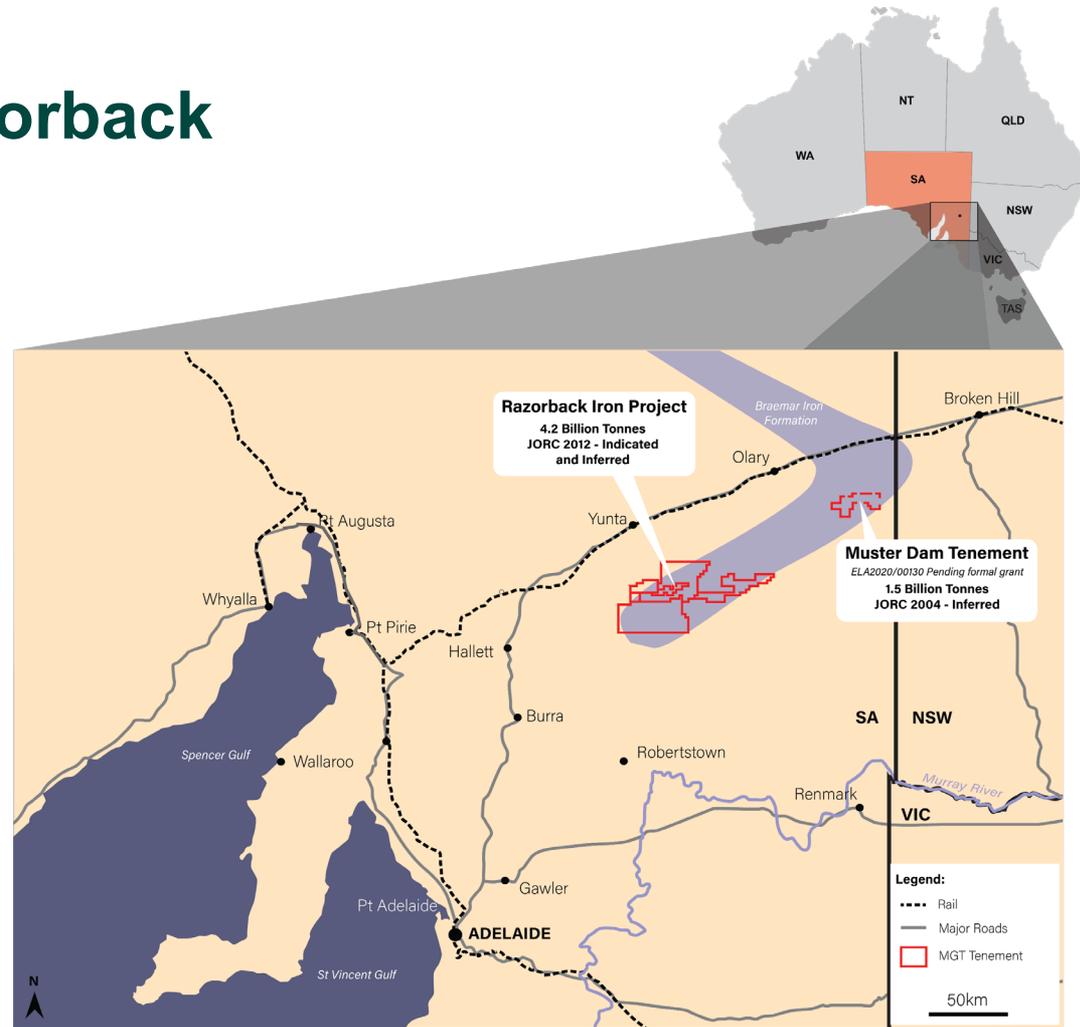
- Company Mineral Resources of 5.7Bt including Muster Dam^{1,2,3,4}
- 240km to Adelaide from Razorback.

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.



The Iron Ore Market

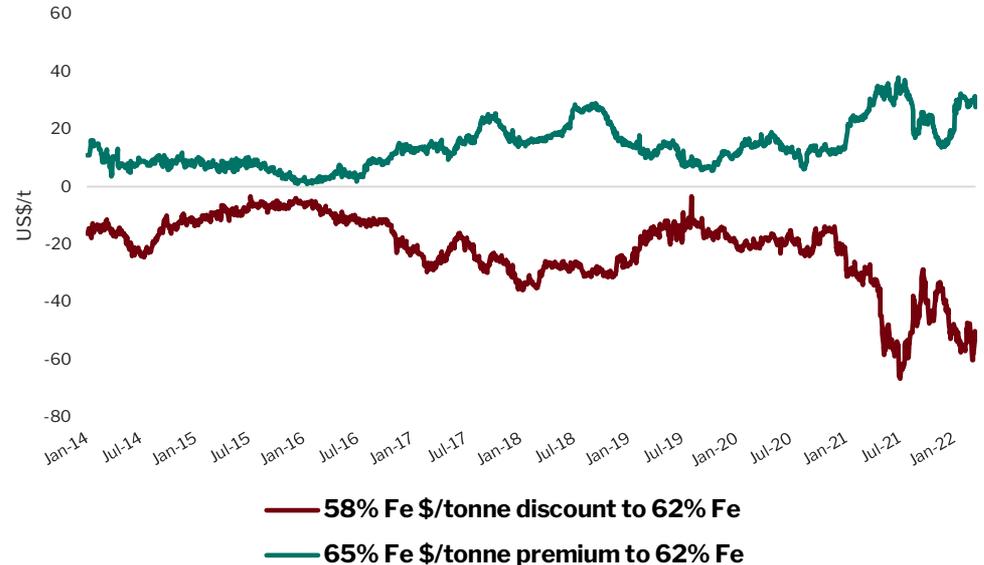
Lower-emissions steel from high-grade ore

“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>

Unlocking the Braemar

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 production 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.

Expansion Study Overview

✓ **COMPLEMENTARY to the current DFS**

- 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 higher 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 IRR 33%)

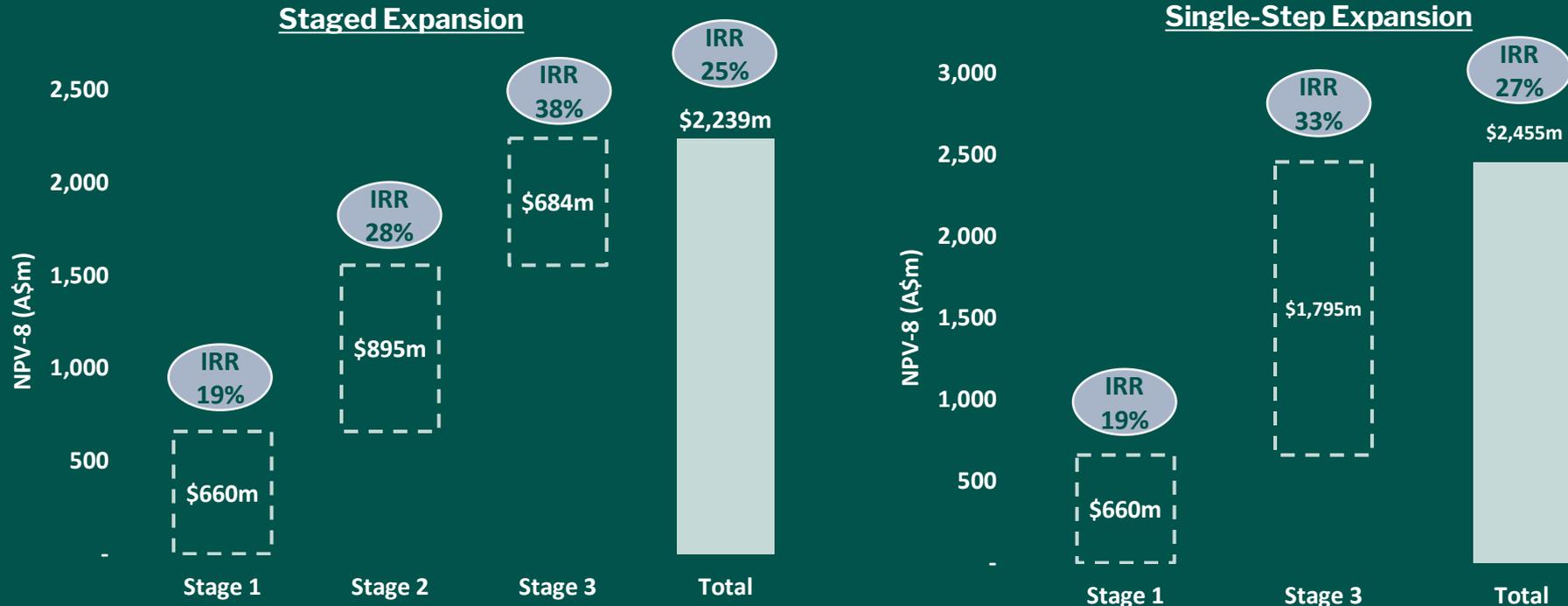
Key operational and financial metrics

	Unit	Staged Expansion	Single-Step Expansion	PFS Plant Optimised ¹
Iron ore price (62% Fe)	US\$/t	110	110	110
AUD:USD exchange rate ²	:	0.71	0.71	0.71
Model duration	Years	33	32	30
LOM ore	Mt	1,365	1,365	461
LOM concentrate	Mt	193	193	68
LOM strip ratio	t : t	0.13	0.13	0.10
LOM yield	%	14.4	14.4	14.7
Nominal plant feed at scale	Mtpa	46.5	46.5	15.5
Average annual product at scale	Mtpa	6.7	6.8	2.2
Development capital	A\$m	1,985	1,985	665
Average net cashflow	A\$m	459	491	127
Post-tax NPV	A\$m	2,239	2,455	660
Post-tax IRR	%	25%	27%	19%
All-in breakeven ³	US\$/t	41	40	53

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

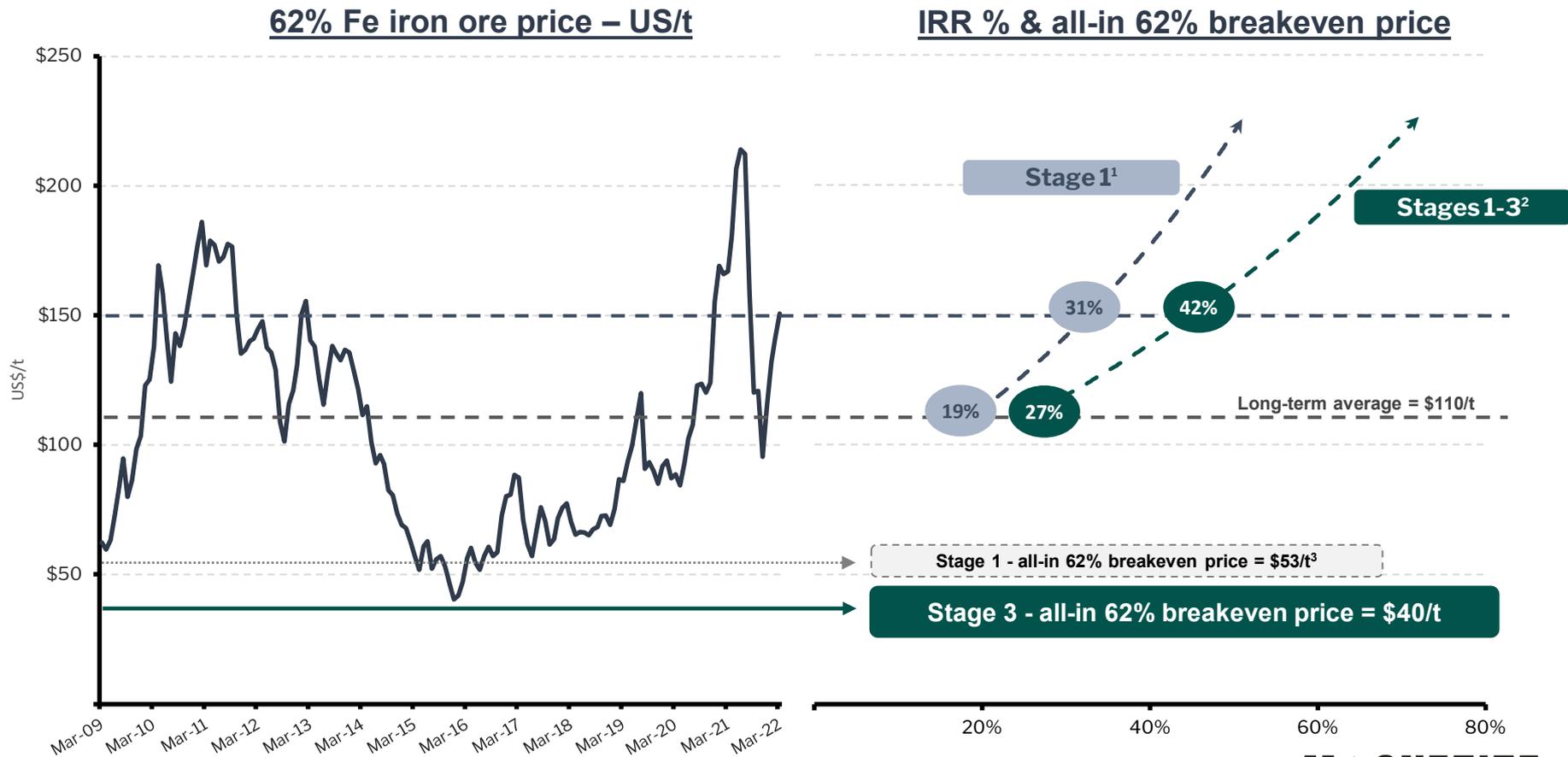
Leveraging Scale, Enhancing Value



- Superior returns in both expansion cases
- Single-Step Expansion outperforms Staged Expansion by bringing scale-driven benefits forward three years
- Contingencies of 20-25% applied to capital costs

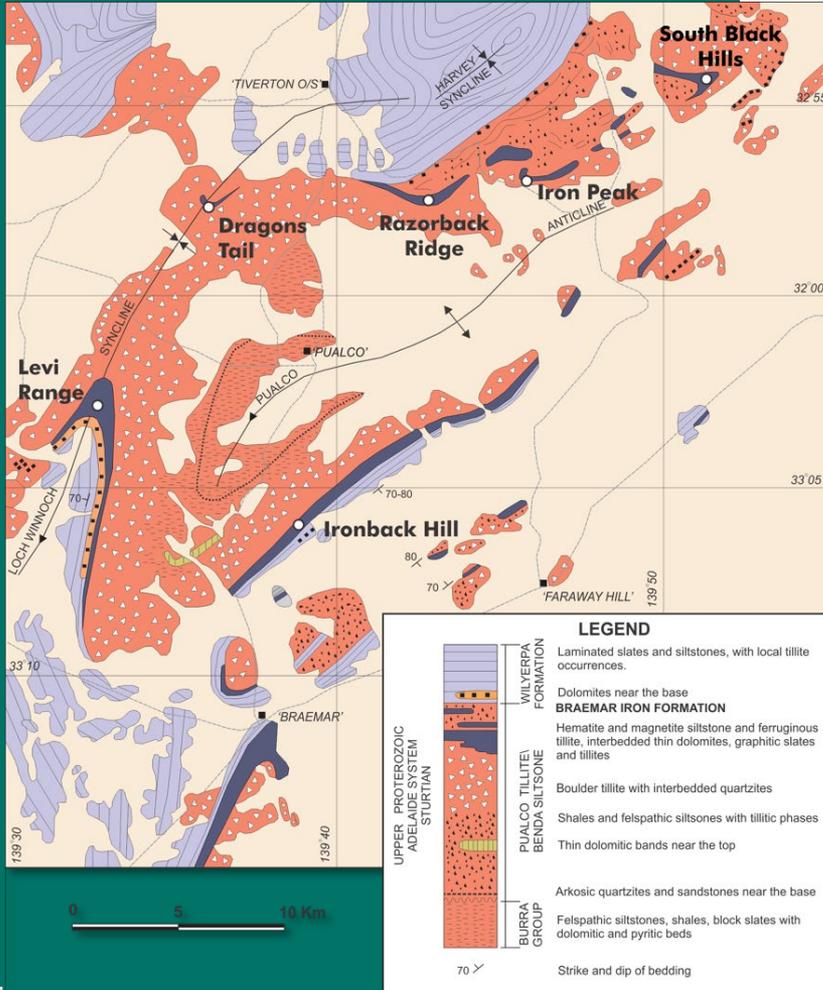
Significant Upside Potential

Robust Economics



1. Stage 1 equivalent to PFS Plant Optimised case
 2. Single-Step Expansion case
 3. The same metric at an AUD:USD exchange rate of 0.75 is US\$58/t

Geology



RAZORBACK IRON ORE PROJECT

- 100km Braemar strike untested
- Simple dipping tabular body, outcropping
- Very consistent over kilometres of strike

STRATIGRAPHY

- Whitten (1970) – Braemar 7 sedimentary packages. Units A-G
- Total thickness 480-780m
- Units A, B, D and G are economic interest
- Unit B forms prominent Razorback Ridge

NEW GEOLOGICAL INTERPRETATION

- New interpretation of the grade distribution and enabled detailed evaluation of selective mining options
- Geophysical logging data has allowed discrete high-grade horizons to be traced over kilometres of strike length
- Ability to trace mineralisation lends the deposit to potential selective mining scenario

Mining

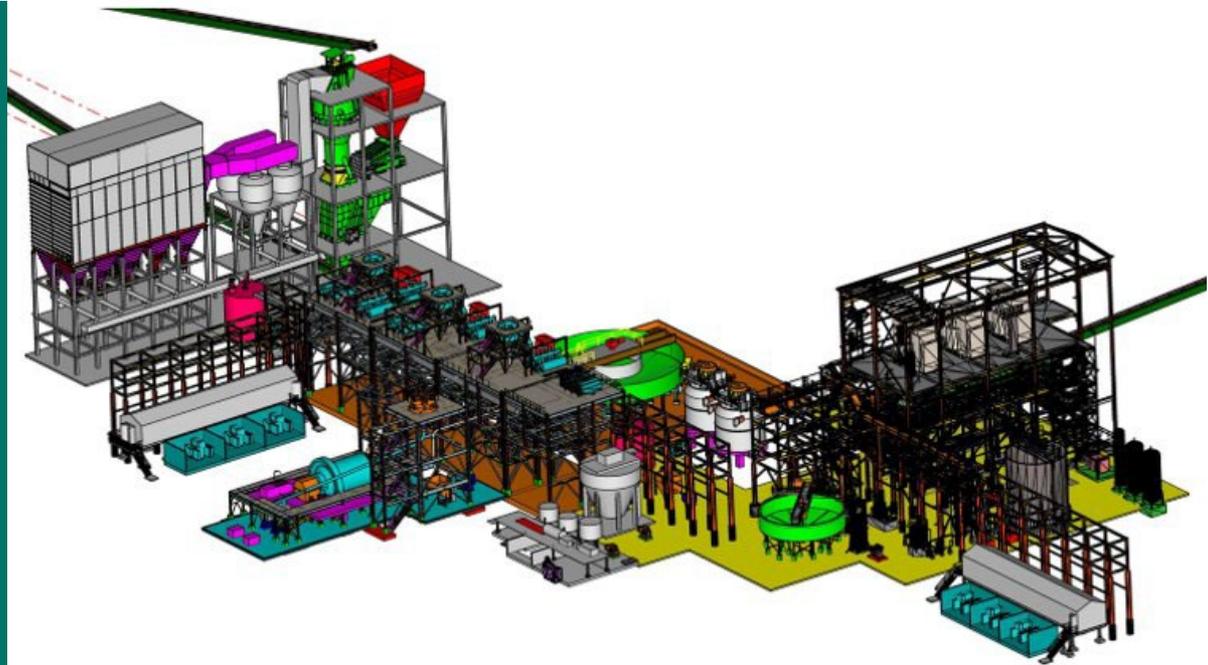


- Expansion mining schedules modelled **ROM ore** of **1.4 billion tonnes** based on indicative and inferred resources
 - 93% from Probable Ore Reserves in the first 10 years
 - 83% from Indicated Mineral Resources over ~30-year mine life
- **Life-of-mine strip ratio** of 0.13 vs 0.10 despite triple the resource mined
- **Life-of-mine mass recovery** of 14.4% based on selected cut-off of 9%
- 12. ➤ Further upside from inclusion of **Iron Peak deposit** in future simulations



Processing

- 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
- Product specifications unchanged from PFS studies
- A final product of **P80 40 microns** is estimated - DFS metallurgical and processing testwork ongoing



Razorback Iron Ore Project indicative product specifications

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

Minimal Capital Existing Infrastructure



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

➤ Strong investment case for **constructing a rail loop** once in production

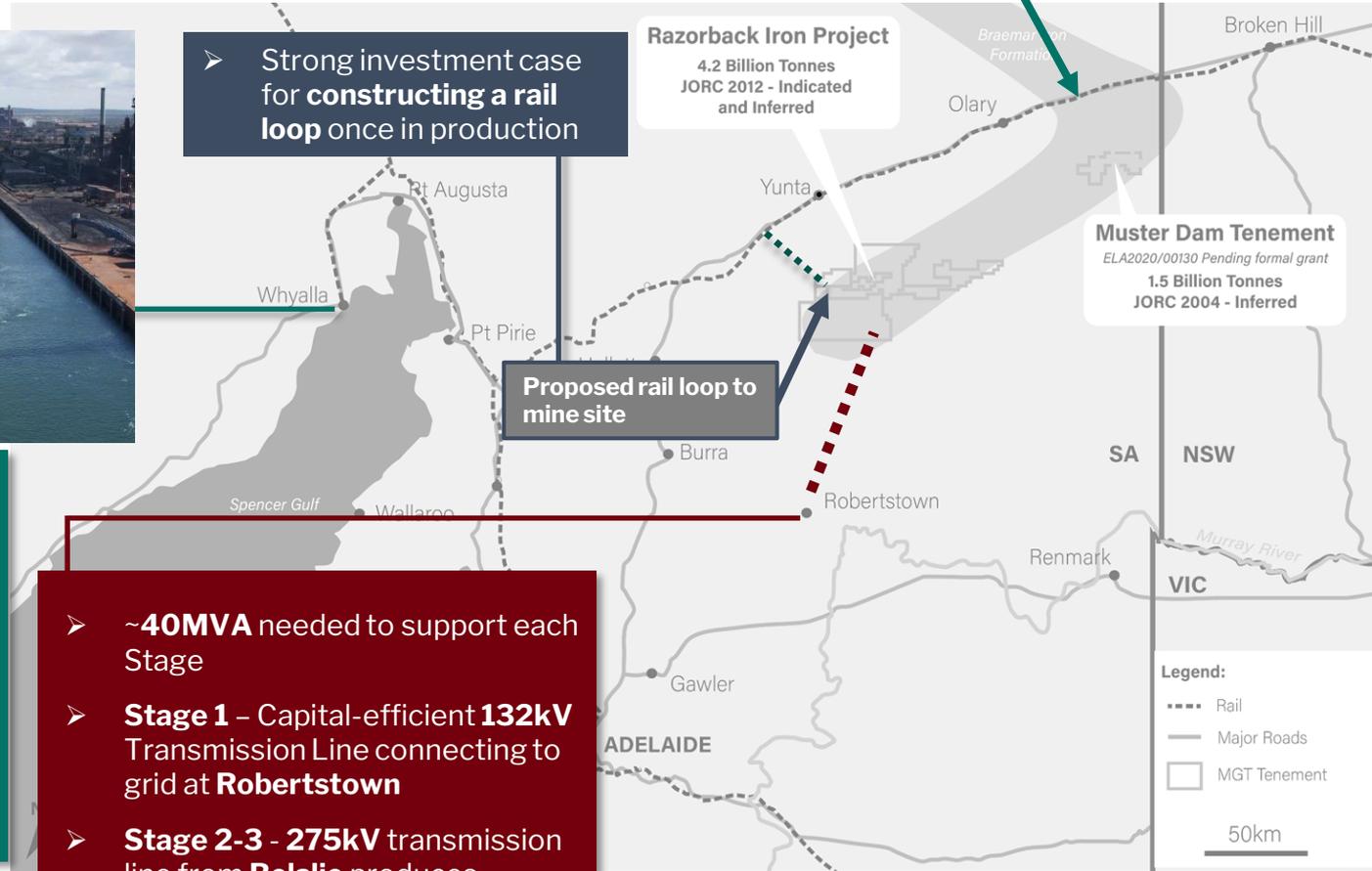
Razorback Iron Project
4.2 Billion Tonnes
JORC 2012 - Indicated
and Inferred

Crystal Brook-Broken Hill railway connects to Whyalla Port

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

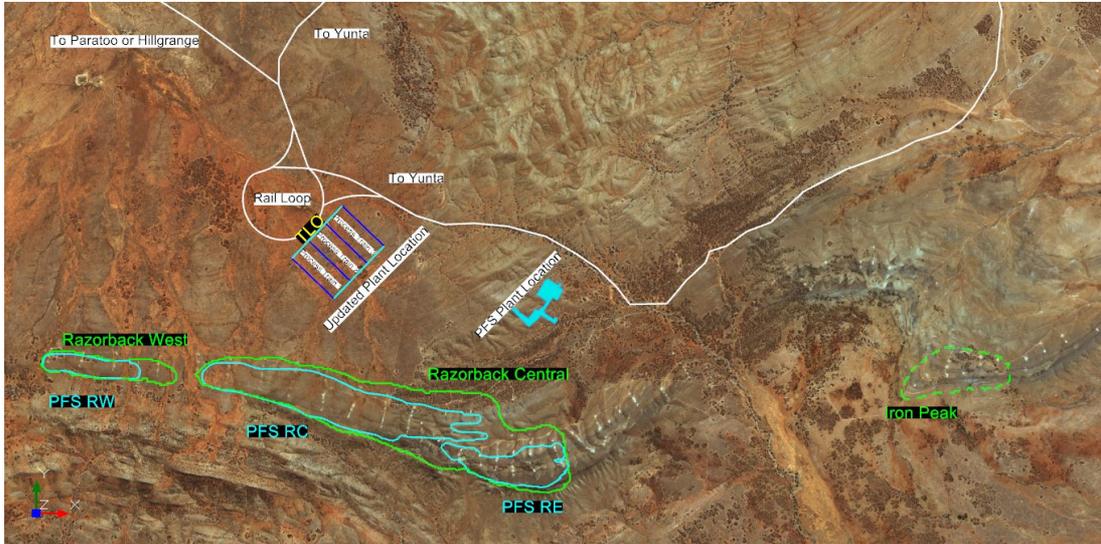
Proposed rail loop to mine site

- ~**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** produces minimal line losses



Expansion Potential

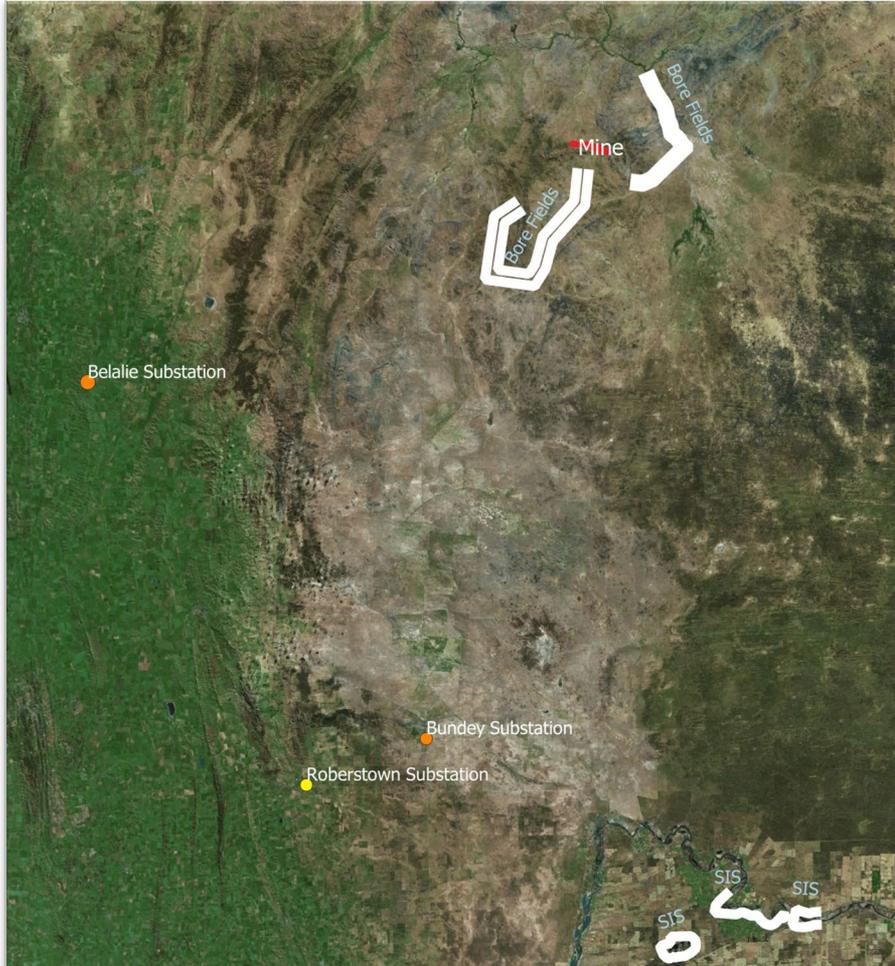
Existing Infrastructure



- **GHD** designed a rail loop and spur line tying into the ARTC-owned railway at Hillgrange enabling concentrate to be **delivered directly** from the plant to the **Port of Whyalla**.
- Rail capital costs estimated to **AACE Class 5** level.
- **Material savings** in opex from replacing road haulage with rail.
- At **>4Mtpa** production, the rail loop is estimated to be **paid back in five years**.



Expansion Potential Power & Water



POWER

- Robertstown unable to support expansion without significant investment
- **275kV transmission line from Belalie**
 - High voltage supports Stages 2 & 3 and produces minimal line losses
- Access to **competitive energy** with high renewables content
- Several nascent renewable energy projects being tracked

WATER

- Each stage requires ~**5GL/y** with majority for processing
- Three options identified within the **South Australian Murray Basin**:
 1. Eastern bore field
 2. **Murray Basin saline wastewater offtake**
 - Provides optimal volume and reliability factors for the provision of process water for expansion stages
 3. Murray Basin groundwater

Expansion Potential

Environment, Social and Governance (ESG)

- **Power** is anticipated to be sourced from the South Australian grid, forecast to be 97% renewables-powered by 2025⁷, delivering an expected **low scope 2 emissions profile**.
- **Premium high-grade product** supports the steelmaking subsector targeting **low scope 3 emissions profiles**.
- The preferred water supply for the expansion project is a **wastewater** source with no current productive use
- Increased opportunities for **greater local participation** including procurement and workforce development.
- Enduring relationships with **First Nations** communities built on transparency, accountability and respect



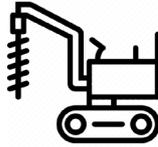
Next Steps

Delivering Premium Iron Ore to High Demand Markets



DELIVERING THE DFS -
work programs underway

- **Planning and engagement of key engineers**
- **Baseline permitting and mining lease studies**
- **Heritage and cultural studies, early stakeholder engagement**
- **Hydrogeological studies**



ADVANCE RAZORBACK
DRILLING programs

- **Hydrology – confirming water resource**
- **Metallurgical – sample recovery and test work programs**
- **Mineral Resource - infill and expansion.**



FINANCE

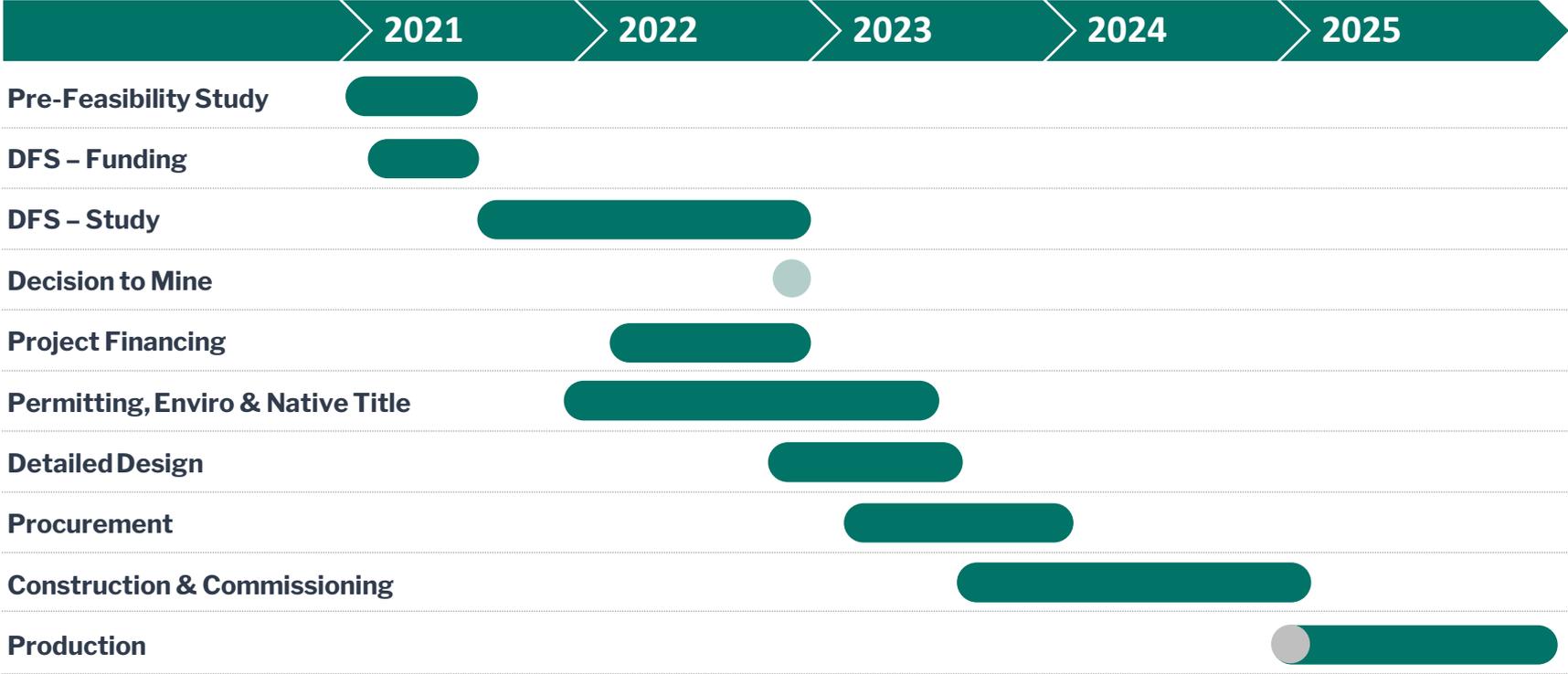
- **Meeting key lender requirements**
- **Debt finance, modelling and metrics**
- **Developing relationships with potential financiers**
- **Assessing possible strategic partnerships**



EXPANSION OPTIONALITY
demonstrated

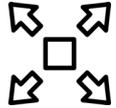
- **Future infrastructure requirements for expansion factored into Project design**
- **Further study work for expansion to commence once DFS is complete**
- **Focus on realising initial ~\$2bn Project value**

Indicative Development Schedule*



*Schedule subject to review as part of DFS currently underway

Delivering Premium Iron Ore to High Demand Markets



LONG LIFE
with **OPTIONALITY**

Large 5.7bn tonne resource with expansion potential^{1,2,3,4}

- ▶ **Expansion Study**⁶ - results confirmed significant upside potential of scaling up Razorback and the advantages of an intergenerational resource.



LOW INITIAL PROJECT CAPITAL

Staged Razorback development 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 product⁵

- ▶ **Higher** than any of the routinely quoted iron ore indices.



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.

Contact Details

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Australia

www.magnetitemines.com





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

Board Members & Management



Peter Schubert
EXECUTIVE CHAIRMAN & CEO

Peter was appointed Executive Chairman of Magnetite Mines on 3 Sep 2018. 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.



Mark Eames
BA Metallurgy (Hons) MBA MAUSIMM
TECHNICAL DIRECTOR

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.



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.

Board Members & Management



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



Stephen Weir

B.Eng Hons (Mech), Grad Dip. Appl. Fin. SIA
CHIEF DEVELOPMENT OFFICER

Most recently Stephen was Managing Director at RFC Ambrian where he provided corporate finance advice over a twenty year period to clients in the mining and energy sectors. Prior to that his career spans construction management of high-speed bulk material handling equipment, minerals and coal processing (John Holland), project management of technology introduction, Equipment and Industrial Services (Brambles) and Project Finance (Bankers Trust).



Trevor Thomas

MEarthSci (Hons) MAIG, MAUSIMM
GENERAL MANAGER (GEOLOGY)

Trevor is a long-term employee of Magnetite Mines with over 14 years experience as an exploration and resource development geologist. Over 12 years, he has been responsible for the project management of technical studies for the PFS and prior Scoping Studies and was responsible for the delivery of the Project's maiden Ore Reserve, Mineral Resource estimates and acquisition of the Muster Dam Iron Ore Project.



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