



## ASX Announcement

30 June 2021

# *Maiden Ore Reserve for the Razorback Iron Project*

### Highlights

- Maiden Ore Reserve (JORC 2012) totals 473 million tonnes of iron ore at Probable classification
- Ore Reserve contains 68.5 million tonnes of iron ore concentrate (for a 30+ year mine life, based on 31% of the available Indicated Mineral Resources)
- Ore Reserve supports positive Pre-Feasibility Study findings (final assurance checks for the PFS results are underway, including a third-party review of the integrity and accuracy of the financial model, and the results will be released as soon as that is complete)
- Ore Reserve incorporated into Pre-Feasibility Study findings
- Derived from schedules that form the basis of a technically and economically viable project, after taking account of material relevant Modifying Factors, in the opinion of the third-party Competent Person

### Razorback Iron Project Ore Reserve

Magnetite Mines Limited (ASX:MGT)(the Company) is pleased to announce a maiden Ore Reserve estimate for its 100% owned South Australian Razorback Iron Project (the Project). The maiden Ore Reserve estimate for the Project has been derived from the recently updated Mineral Resources<sup>1</sup> by generating schedules with an estimated tonnage and grade which, in the opinion of the Competent Person, form the basis of a technically and economically viable project, after taking account of material relevant Modifying Factors. The term 'economically mineable' as used in the JORC 2012 guidelines implies that, in the judgement of the Competent Person, extraction of the Ore Reserves has been demonstrated to be both economic and viable using reasonable technical and financial assumptions. These assumptions have been provided by the Company, by various consulting and advisory groups commissioned by the company, and by Orelogy Mine Consulting and have been reviewed by the Competent Person. Studies have confirmed a mine plan and production schedule that are technically achievable and economically viable and from which the Ore Reserves are derived.

Ore Reserves represent a high level of confidence in the economic extraction of Mineral Resources and are reported in preparation for the Pre-Feasibility Study<sup>2</sup> results, which is presently being finalised and due imminently.

**Chairman and CEO Peter Schubert commented:**

*The Ore Reserves statement is the culmination of many months of meticulous and dedicated work by our team and is an important validating step. These JORC Ore Reserves are based on experienced third party Competent Person confirmation that the Razorback resource forms the basis of a technically and economically viable project.*

*The Ore Reserves are based on schedules that have been limited to 30+ years and utilise just 31% of the available Indicated mineral resources and some 16% of the total defined JORC resources which were previously announced on 24 May 2021<sup>1</sup>. These unutilised resources have the potential to support either a longer operating life or an expanded scale of operations, but before they can form the basis of a future reserve increase further work at PFS level or better would be required to meet the requirements of the JORC Code.*

**Competent Persons Statement**

The information in this report that relates to Ore Reserves is based on and fairly represents information and supporting documentation compiled by Ross Cheyne, BEng (Mining) a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM). Ross Cheyne is a director and Principal Mining Consultant of Oreology Mine Consulting Pty Ltd and is consulting to Magnetite Mines Limited. Ross Cheyne has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activities being undertaken 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' (JORC 2012). Ross Cheyne consents to the inclusion in the report of the matters based on his information in the form and context in which they appear. The Ore Reserve estimates have been compiled in accordance with the guidelines defined in the JORC Code.

**This report has been authorised for release to the market by the board.**

**For further information contact:**

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Executive Chairman  
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**References**

1. ASX Announcement – 24/05/21 - Razorback Iron Ore Project Mineral Resource Upgrade
2. ASX Announcement – 18/06/21 – Commencement of PFS and Appointment of Expert Advisors
3. ASX Announcement – 13/09/16 – Metallurgical Update – Positive Results
4. ASX Announcement – 16/02/21 – Advancing Essential Infrastructure for the Razorback Project
5. ASX Announcement – 14/09/20 – Permitting and Environmental Studies Initiated

## **ORE RESERVES AT RAZORBACK HIGH GRADE IRON ORE CONCENTRATE PROJECT**

### **SUMMARY OF REPORTING CRITERIA**

The maiden Ore Reserves are classified as 'Probable' Ore Reserves following JORC 2012 guidelines, which are based on a portion of Indicated Mineral Resources at the Razorback Iron Project<sup>1</sup>. The Probable Ore Reserves estimate has been undertaken by mining consultants Oreology Mine Consulting after consideration of all relevant mining, metallurgical, social, environmental, statutory and financial aspects of the Project.

The mining configuration for this Ore Reserve case assumes an owner operator truck and shovel based mining operation that delivers run of mine (ROM) ore to a 12.8 million tonne processing plant, designed to produce a nominal 2 million tonnes of concentrate per year at a grade of 67.5% Fe. The concentrate will be trucked along private haul roads for 44km to a rail siding where it will be transported via rail to port at Whyalla for export.

The material assumptions which support the Ore Reserve estimate are based on Pre-Feasibility Study (PFS) results which are currently being finalised. The assumptions specific to the Ore Reserve estimation are summarised below and are further disclosed within JORC Table 1 included as Appendix 1 to this announcement.

#### **Criteria Used for the Classification of Ore Reserve**

Ore Reserves were estimated only on the Indicated portion of the Mineral Resource Estimate. The Ore Reserve was based on an open pit optimisation of the May 2021 Mineral Resource block model utilising appropriate modifying factors, followed by detailed mine design and mining production schedules. The Ore Reserve has been classified as Probable based on guidelines specified in JORC Code (2012) subject to mine designs, modifying factors and economic evaluation. The Ore Reserve estimate for the Razorback Iron Project as at June 2021 is outlined in Table 1 below:

*Table 1. Razorback Iron Project Ore Reserve estimate*

<b>Reserve Classification</b>	<b>Tonnes (Million)</b>	<b>Mass Recovery</b>	<b>Tonnes of Concentrate (Million)</b>
<b>Probable*</b>	472.7	14.5	68.5

*\*Ore Reserves are a subset of Mineral Resources*

#### **Mining Methods and Assumptions**

The Razorback Iron Project consists of several adjacent prospects all comprising of the magnetite/hematite mineralised Braemar Iron Formation. The deposit outcrops, forming a prominent topographic cuesta/ridge which is amenable to low stripping open pit mining methods. The Ore Reserve is based on a conventional open pit mining operation utilising a drill, blast, load and haul production cycle to supply ore to a processing plant at a rate of 12.8 Mtpa. The resulting schedule for the Project generates a Life of Mine (LOM) stripping ratio of just 1:0.16 (ore to waste). More importantly the stripping ratio in the first five (5) years of production is only 1:0.20 (ore to waste), indicating there is effectively no pre-stripping requirement associated with initial development. This provides an opportunity for a low cost, staged development of the Razorback Iron Project. Mining of high-grade Mineral Resources near surface has been prioritised and this exploits the low stripping ratio mining scenario available at the Project.

The selected mining method, mine designs and scheduled extraction sequence are tailored to suit orebody characteristics, minimise dilution and ore loss, defer waste movement, utilise planned process plant capacity and expedite cash generation in a manner that is both safe and achievable. Mine planning activities for the Razorback Iron Project, being pit optimisation, mine design, scheduling and mining cost modelling, was completed in collaboration with Orelogy Mine Consulting Pty Ltd. This work, together with other studies, has allowed the design of the site layout including final pit and waste dump designs, low grade stockpile designs, site haul roads and growth media stockpiles.

Pit geometry is based on the 2013 Geotechnical review of the 2013 PFS completed by Golder Associates. Based on the Golder recommendations the following pit wall geometry was chosen; a wall angle of 75° berm width of 8.5m; a bench height of 20m. A blasting height of 10m is planned, with the benches excavated in 2 x 5m mining flitches to improve ore selectivity.

The Mineral Resource block model includes an estimated Davis Tube Recovery (eDTR) grade item which corresponds to the mass recovery to concentrate. Based on test work results, it is assumed that the grade of the concentrate is constant at 67.5% Fe. Utilising the economic modifying factor applied in the pit optimisation process, an average eDTR cut-off grade of 5.8% eDTR was calculated (refer to Appendix 1). The Ore Reserve includes allowances for mining ore loss and dilution. The LOM schedule separates ROM ore into a high grade (HG) and low grade (LG) ore stream, with a lower dilution and ore loss applied to the high-grade component on the basis that it is diluted with low grade material carrying grade rather than barren waste. Consequently, the HG material has dilution and ore loss applied at 1% and 1% respectively whereas the LG component has 5% dilution and 5% ore loss applied.

The Ore Reserve as developed by mining consultants Orelogy Mine Consulting, is based on the economic extraction of the Razorback (central) and Razorback West (adjacent west) Mineral Resources. Mining costs were built up from first principles utilising up-to-date equipment costs (CAPEX and OPEX) sourced from original equipment manufacturers (OEM's).

## Processing Methods and Assumptions

There has been considerable previous metallurgical test work completed for the Razorback Iron deposit. In 2020 the Company commissioned additional metallurgical test work including high resolution geometallurgical mineralogical and textural analysis and additional Davis Tube Recovery (DTR) testwork which has confirmed the results of previous testwork. This work has been reviewed by engineering consultants Hatch and independently reviewed by process engineer, Dr. Richard Peck.

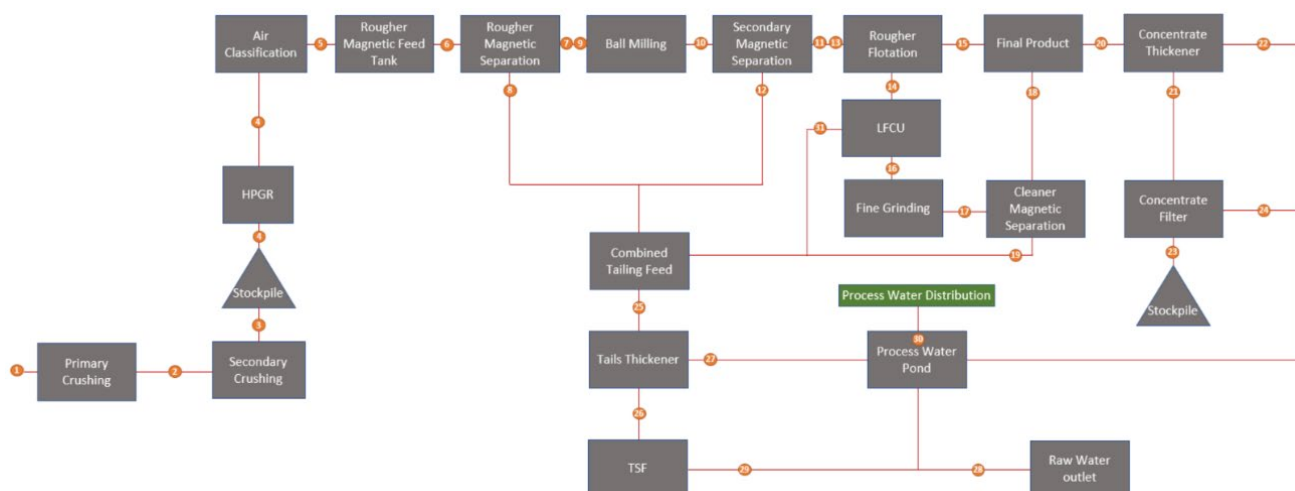


Figure 1. Schematic Razorback Iron Project Flowsheet as produced by Hatch

The metallurgical and process engineering work was undertaken by engineering consultants Hatch to refine the flowsheet, which was then used to generate a AACE Class 4 estimate with suitable accuracy for inclusion to PFS levels estimates for capital cost. The selected flowsheet was based on conventional gyratory crushing/cone crushers followed by air separation and HPGR grinding. Separation is based on conventional magnetite separation using LIMS followed by fine grinding and flotation. Following LIMS processing, conventional pressure filtration will be used to dewater the resulting high grade product to an 8% moisture content. The average final grind size of P80 40 microns is expected targeting a 67.5% to 68.5% Fe final concentrate product<sup>3</sup>.

Tailings is directed to a wet tailing impoundment from which process water is recovered. The Tailings Storage Facility (TSF) design and placement studies were completed by engineering consultants Hatch to ANCOLD standards and considers multiple, dispersed TSF's placed proximal to mining operations. The TSF's utilise available topography at the Project for their design with processing by-products, waste ore and borrow pits contemplated as construction materials. Mine closure and rehabilitation assume profiling and seeding of the TSF's based on high settling and local evaporation rates.

### **Ore Reserve Estimation Methodology**

A WHITTLE optimisation was completed on the Razorback and Iron Peak mineral resource block models. The optimisation utilised mining modifying factors accounting for the following typical mining activities:

- Load and haul activities
- Drilling and blasting activities
- Support and ancillary activities
- Stripping and clearing
- Road building
- High grade ore rehandle (via FEL)
- Low grade ore rehandle (via FEL and truck)
- Personnel including operational, maintenance, technical and management/supervision
- Mining related fixed and general costs.

These costs were inclusive of all costs associated with equipment operating, equipment capital, blasting products and consumables.

Modifying factors were also applied for:

- Processing costs (Hatch) including, but not limited to, allowances for power, water, consumables, labour, site and corporate G&A and tenement rental.
- Road, rail and shipping costs
- Price inclusive of royalties and product premiums

Allowances for heavy equipment capital were included in first-principle mining operating costs. No other allowance for sustaining capital were include in the operating costs. The selection of an optimisation pit shell was based on a targeted 30+ year mine-life. Extending the mine life far beyond 30 years showed diminishing economic returns and was therefore considered inconsequential for the PFS.

The optimisation generated three distinct pit shells within the Razorback deposit: Razorback West, Razorback Central (formerly part of Razorback Ridge) and Razorback East (formerly part of Razorback Ridge). The optimised shell selected represented a revenue factor of just 0.62, providing a robust basis for the Ore Reserve estimation.

Once the pit shell was selected, final pit designs were generated for the three mining areas. To facilitate targeting of high value, low strip ore in the early years of the schedule, three approximate internal stages in the Razorback Central pit were developed based on smaller optimisation shells. Maptek's Evolution Strategy™ was utilised to generate the annual LOM schedule. This tool utilises advanced evolutionary algorithms to determine an optimised elevated cut-off grade strategy to maximise project value. As the processing path generates a concentrate product at a fixed grade and therefore fixed value, the mass recovery to concentrate (as represented by the eDTR grade) is optimised to maximise concentrate production in the early years. This approach results in the stockpiling of a considerable quantity of low-grade ore over the life of the project (approx. 100Mt or 20% of total ore feed). The result is an average feed grade of approx. 15.8% eDTR over the first 10 years of the project against a Life of Mine average of 14.5%. However, as the Razorback orebody is very consistent in terms of eDTR grade variability, the potential to significantly improve value through "high-grading" is limited. Details of the Life of Mine schedule physicals are provided in Figure 2 and Figure 3.

Indicative haulage profiles were produced for each stage mining area and these were analysed using TALPAC™ simulation software to produce truck hours and fuel burn profiles on an annual basis. The out of pit hauls were broken into the following categories: waste dumps; low grade ore stockpiling, high-grade ore stockpiling and direct tip ore to crusher. The plant location was chosen for its proximity to the bulk of the ore body, its suitability for access via the various pits and its access to the concentrate haul road. The locations of the waste dumps were selected based on the proximity to top of pit, location of underlying resource and the slope of the surrounding topography. The low-grade stockpile locations were chosen for their proximity to the process plant.

### **Economic Assumptions and Analysis**

A mining and processing strategy was developed based on consideration of annual processing plant throughput rate of 12.8 Mt of ore. This was considered in conjunction with assumptions on the availability of capital and the long-term iron ore market. This equates to a base-case concentrate production of approx. 2 million tonnes per year.

Capital costs have been completed with a -20/+20% accuracy. Operating costs are considered to be, to a -25%/+25% level of accuracy. A discount rate of 8% (real) has been used for financial modelling. This number was selected as a generic cost of capital and is considered suitable for project funding and economic forecasting. The financial model includes all project level operating costs as well as initial and sustaining capital costs. The initial capital of approximately A\$572 million is spread over the three years prior to concentrate production and represents the capital expenditure for the Ore Reserves case.

The Magnetite Mines corporate financial model generates an after-tax project NPV of A\$296 million inclusive of allowances for depreciation as completed for the Ore Reserve case. This does not represent the go-forward optimized case that the Company anticipates moving forward.



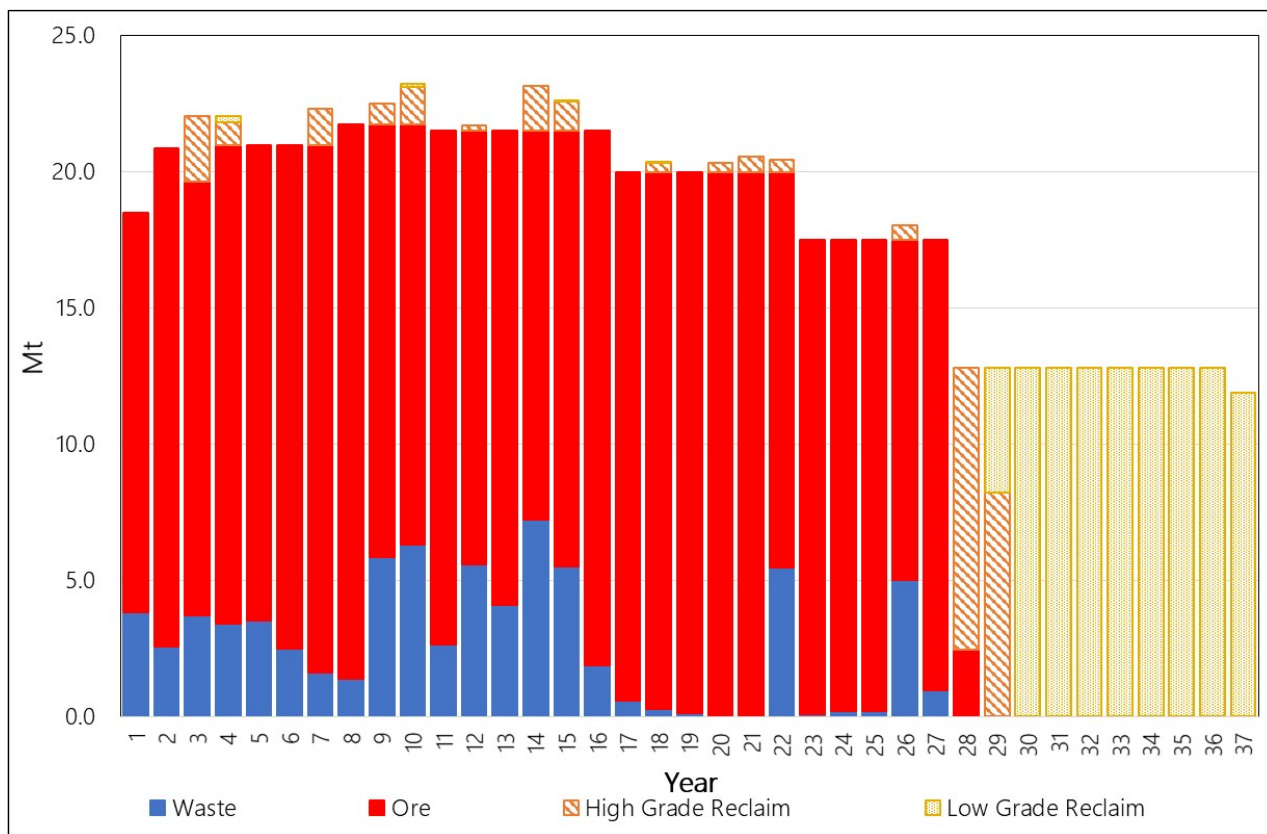


Figure 2. Razorback Iron Project Ore Reserve Mine Schedule – Total Material Movement

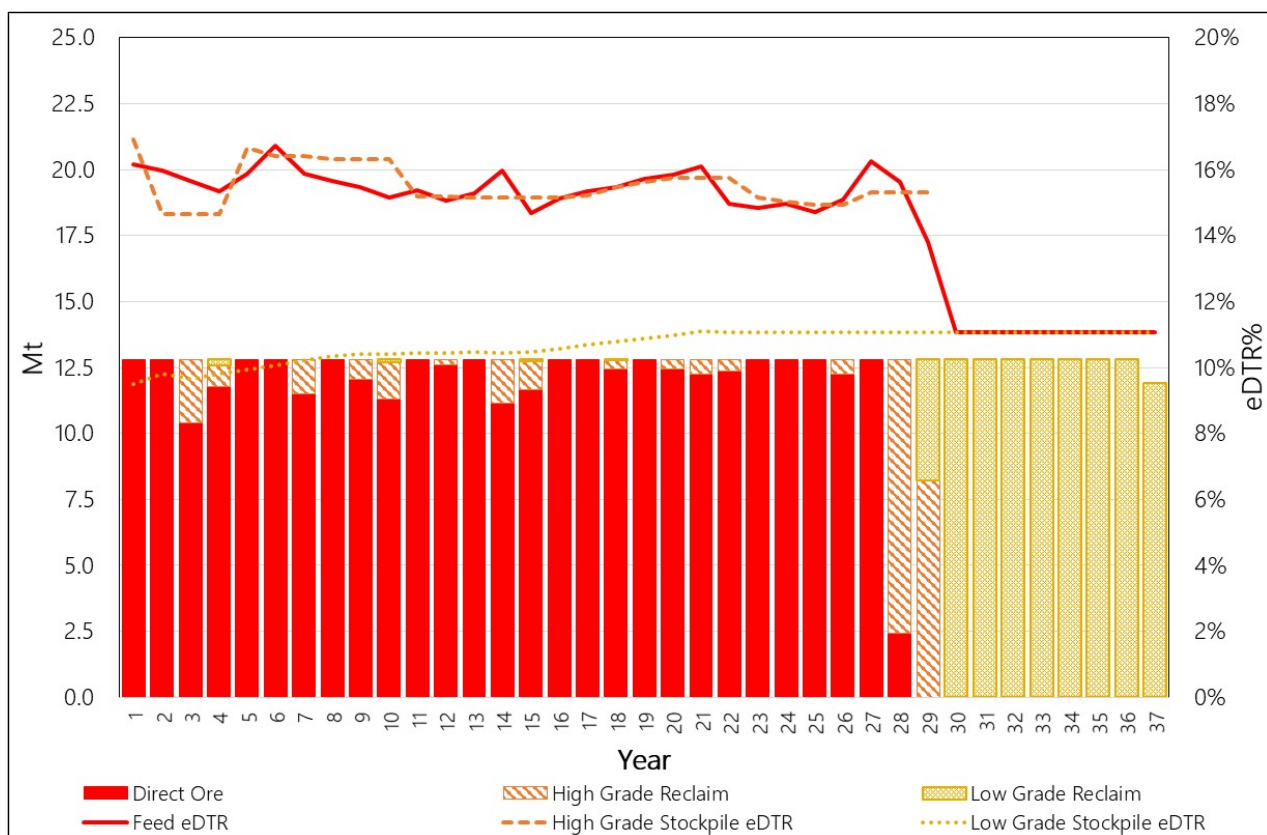


Figure 3. Razorback Iron Project Ore Reserve Mine Schedule – Process Plant Feed

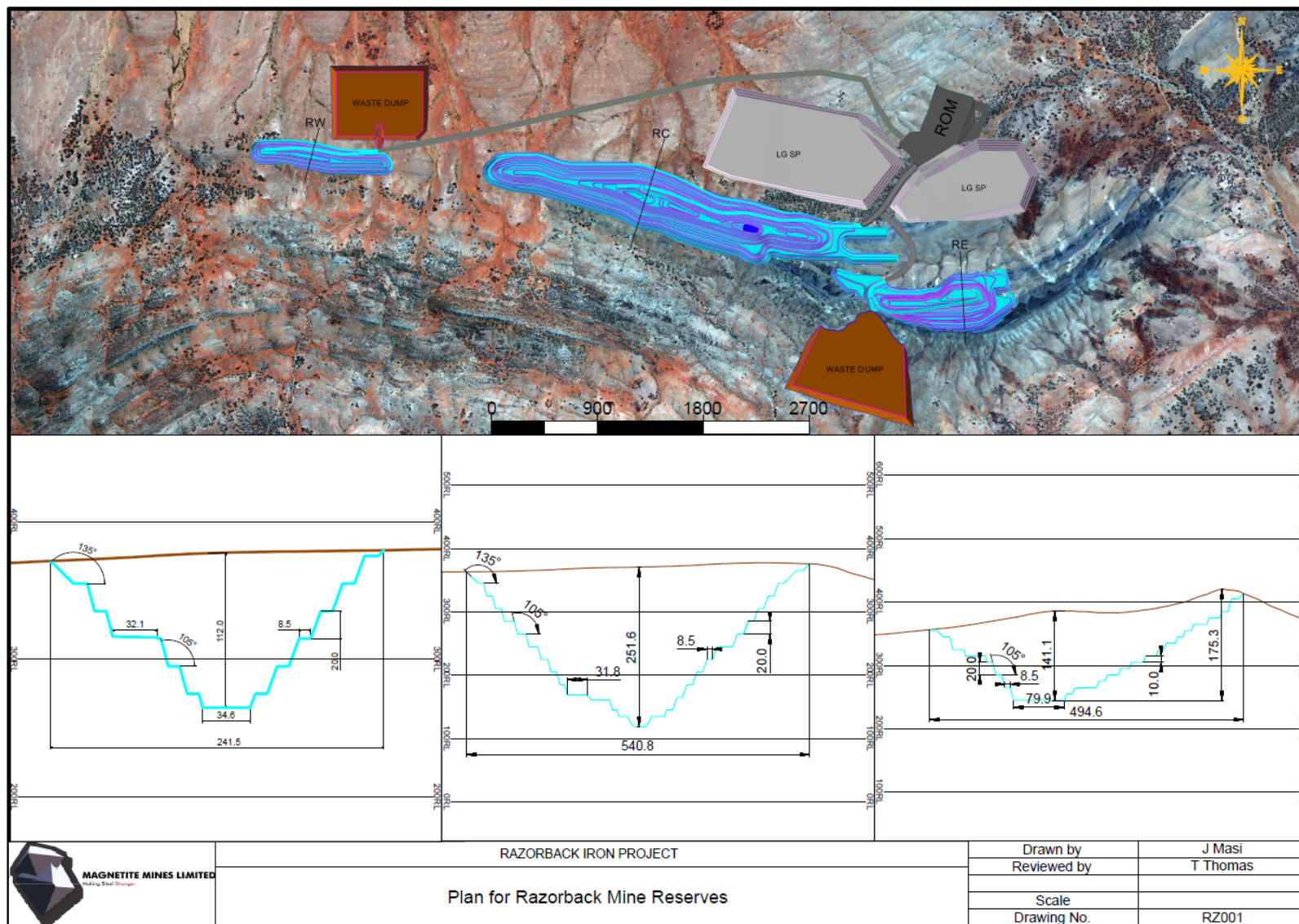


Figure 4. Razorback Iron Project Ore Reserve Site Plan



## PROJECT BACKGROUND

### Razorback Iron Project Location and Tenure

The Razorback Iron Project is located approximately 55 kilometres south of Yunta, on the margin of the Nackara Arc in regional South Australia (Figure 5).

In total, the Company holds 1,520km<sup>2</sup> of tenure as related to the Razorback Iron Project. The deposits associated with the Razorback Iron Project are located primarily on the EL6353 and EL6126 tenements. Outside of those tenements the adjacent EL6127, 5902 and 6037 tenements host several Braemar Iron Formation prospects including the Ironback Hill deposit and will accommodate a combination of processing and non-process infrastructure associated with the Project mining development. The tenements are held by Magnetite Mines Limited together with its 100% owned subsidiaries Razorback Iron Pty Ltd and Ironback Pty Ltd.

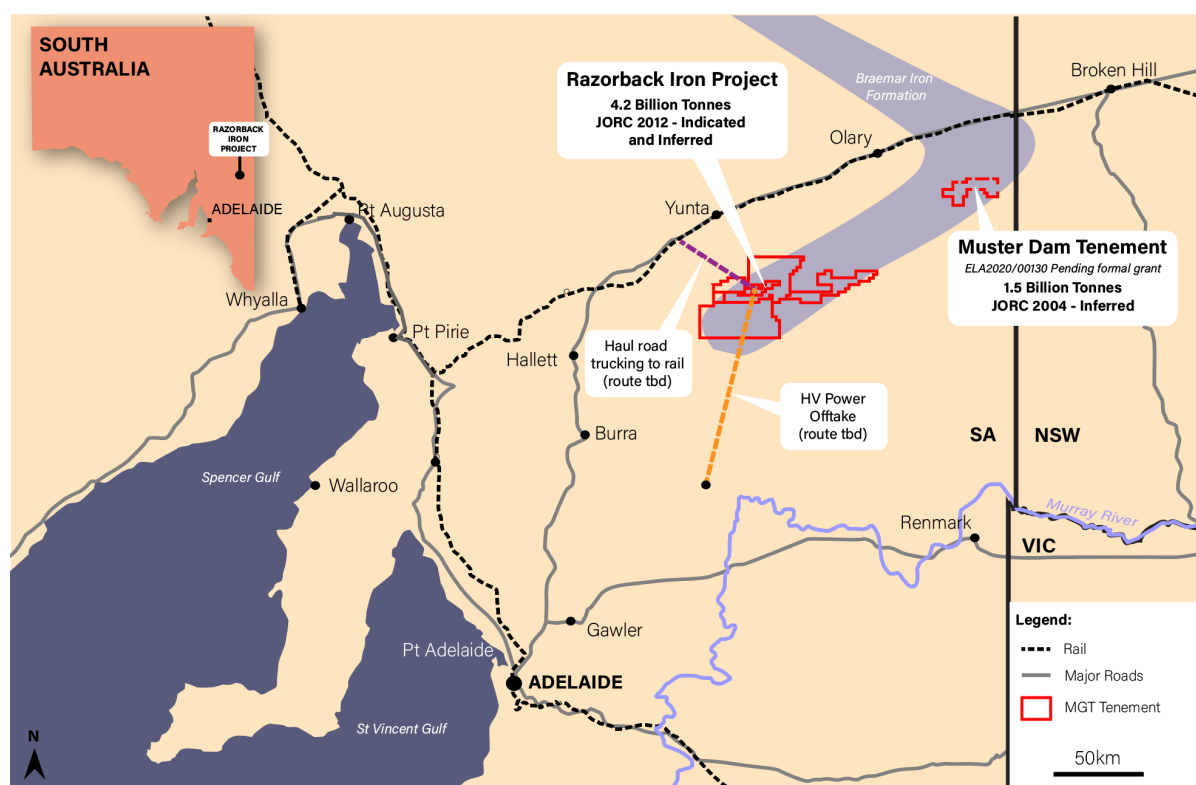


Figure 5. Razorback Iron Project location and regional infrastructure

The Ngadjuri People are the Native Title claimants and Traditional Owners of the Project area. The Company negotiated a Native Title Mining Agreement (NTMA) in 2011 for exploration purposes that is inclusive of the Razorback Iron Project tenement package. A suitable agreement with the Traditional Owners will be required for mining purposes. Based on the results of ongoing baseline studies there are no major social or environmental impediments known to exist with respect to the proposed mining operation.

### Regional Infrastructure

The Project site is within economic distances of existing infrastructure in the North East Pastoral district. Site access would be via the Barrier Highway and a new access road/haul approximately 44 kilometres in length. Bis Industries<sup>4</sup> completed a road access and trucking study which forms the basis of road transport for the mining scenario. The road design will be suitable for construction traffic access, road haulage and daily operational traffic.

Engineering consultants GHD in collaboration with Electranet<sup>4</sup> provided proposals for power supply to the mine site. Power supply for the Project is proposed from a connection to ElectraNet's regulated transmission network at the Robertstown substation, south-southwest of the Project site. The infrastructure consists of an expansion of the existing Robertstown 132kV substation, approximately 125 kilometres of new 132 kV transmission line, and new substation near the Razorback Mine Project site. The power line will interface to a new 132/11kV substation to service the mine site (including processing plant, MIA, and camp).

The Project is planned to operate as a Drive-In Drive-Out (DIDO) operation with dedicated on-site accommodation and non-process infrastructure facilities designed and budgeted by GHD. Services and consumable supplies will be delivered by existing roads and the private haul access road. The Company currently holds the mineral rights the Project areas and prospects therein. The tenements extend beyond the immediate proposed mining area.

### **Social, Environmental and Approvals**

Studies completed by Ecological Australia<sup>5</sup> towards baseline ecology studies indicate limited potential for listed flora or fauna species within the Project area. The Company is continuing the assessment of fauna and flora prior to finalising an impact assessment study that will establish management processes required during construction and/or operational stages of the Project to adequately protect any species of significance.

Waste rock and tailings characterisation work has been completed and all waste types and tailings are non-acid forming and have limited metal leachate potential.

The permitting process for the Project is transparent, clearly defined and well understood in South Australia.

PFS-level conceptual bore field designs have been completed using available bore, geophysical and recharge rate modelling to define the availability and sustainability of groundwater. The studies have identified a number of prospective targets to generate required processing water (5Gl/a) from local ground water aquifers. The studies, as completed by Eco Logical Australia, identified two potential bore fields within 5-10km of the proposed mine site that may supply up to 10Gl/a. The proposed aquifers are located within the tenement area. Additional studies by Water Technology that have identified step-out water targets for 5, 10 and 20Gl/a options at distances between 40 and 100km from the proposed mine have been included in ground water assumptions. Further testing of water sources via drilling is required and planned for Q3 of 2021 targeting two primary, near project, groundwater targets.

### **Geology and Mineral Resources**

The Razorback Iron Project covers sedimentary lithologies of the Adelaide Geosyncline, a linear north-south to north-east trending tectonic rift basin comprising sediments deposited during the late Proterozoic and early Cambrian Eras. The host rock to the magnetite at the Razorback Iron Project Neoproterozoic glaciogenic meta-sediment of the Braemar Iron Formation.

The mineralisation within the Braemar Iron Formation forms a simple dipping tabular body with only minor faulting, folding and intrusives. Grades, thickness, dip, and outcropping geometry remain very consistent over kilometres of strike. While the bedded magnetite has the highest in-situ iron content, typically 19-35% Fe, the tillitic unit, at typically 15-26% Fe is diluted by the inclusion of lithic fragments, such as iron-poor granite and metasedimentary dropstones.

Razorback Ridge iron deposit is positioned on the north dipping (approximately 40° to 60°) limb of the Pualco Anticline. Whitten (1970) divided the Braemar Iron Formation at Razorback into seven

sedimentary packages, comprising members A to G, with a total thickness ranging from 480m to 780m. Of these, members A, B, D and G are of economic interest and all outcrop or sub-crop at the surface, with member B forming the prominent ridge.

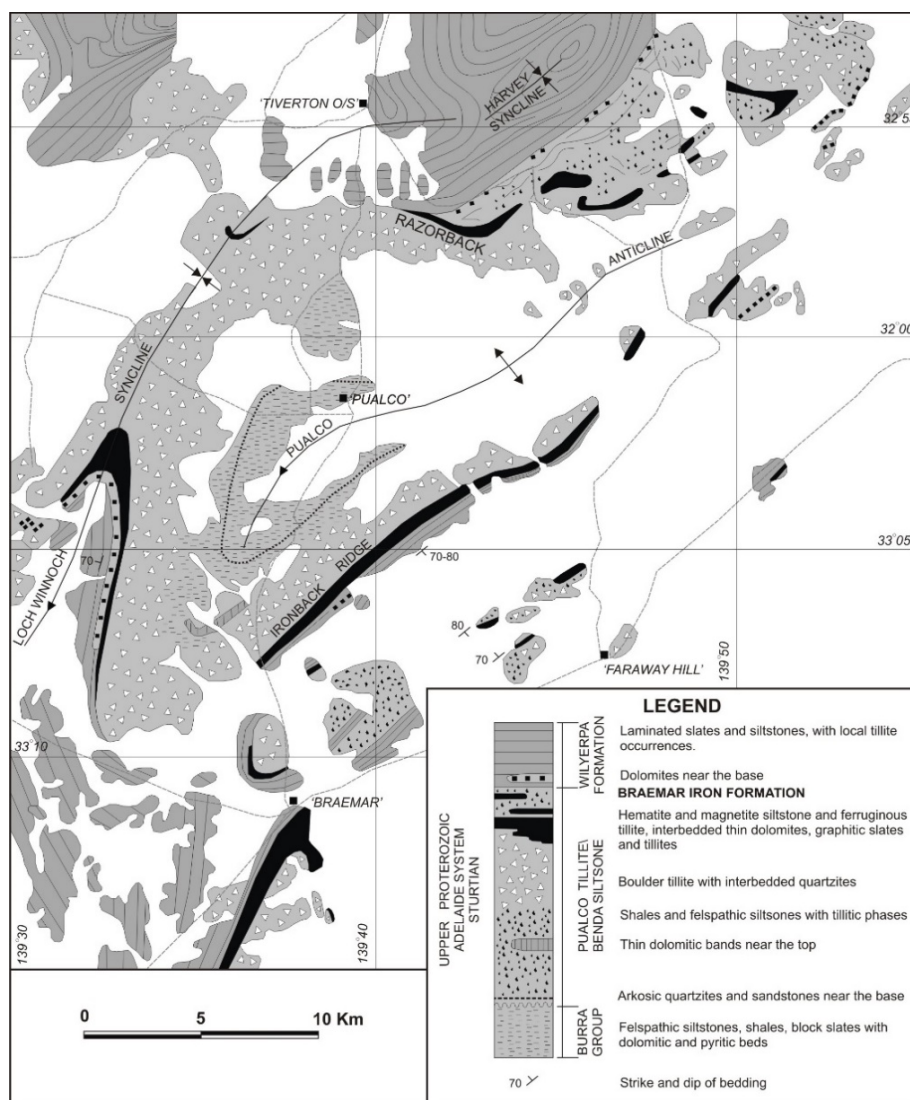


Figure 6. Regional geology of the Razorback Iron Project area (modified after Lottermoser and Ashley, 2000)

The Razorback Iron Project Mineral Resource Estimate of May 2021 was completed by Widenbar and Associates using an updated geological model interpretation which sought to improve mineralisation resolution using down hole geophysics and high-resolution mass recovery determinations (through Davis Tube Recovery testwork)<sup>1</sup>. Mineral Resource estimation for the Razorback and Iron Peak deposits is compliant with 2012 JORC Code and guidelines and was presented to the market on 24 May 2021<sup>1</sup>. The Mineral Resource estimate for the Razorback Iron Project as of May 2021 is outlined in Table 2 below:

Table 2. Razorback Iron Project May 2021 Mineral Resource Estimate at 11% eDTR cut-off grade, Widenbar and Associates<sup>1</sup>

Classification	Million Tonnes (Mt, dry)	Mass Rec (eDTR%)	Fe%	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	P%	LOI%	Magnetite%
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>

All figures quoted at an 11% eDTR cut-off. Magnetite Mines Limited is not aware of any new information or data that materially affects the information included in the resource announcement dated 24 May 2021<sup>1</sup> and all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

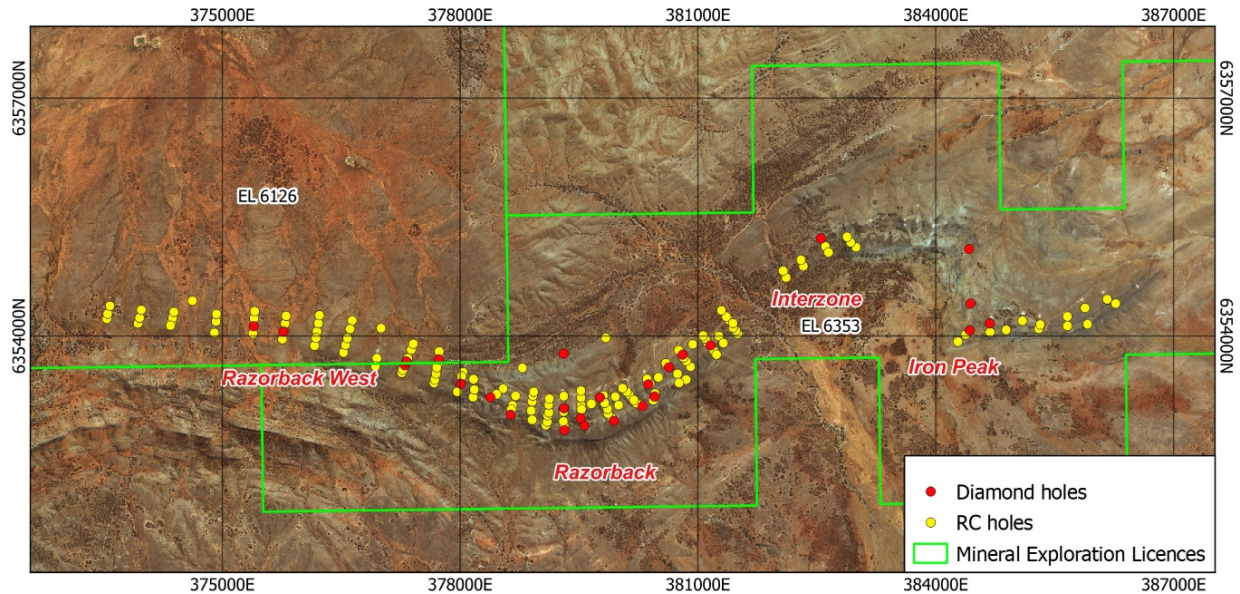


Figure 7. Razorback Iron project drilling, plan view

### Razorback Iron Project Pre-Feasibility Study Status

The Ore Reserve estimate has been completed on the basis of modifying factors determined in a soon to be finalised Pre-Feasibility Study (PFS). The study is being completed by a team consisting of Company personnel and independent external consultants. The components of the PFS that are yet to be completed are not considered to have a material impact on this Ore Reserve estimate with all moderating factors used for the estimation defined by studies within the tolerances expected for a PFS. The results of the PFS will be announced in July 2021.

The Ore Reserves and associated proposed mine plan are considered technically achievable. All proposals for the operational phase involve the application of conventional mining technology which is widely utilised in Australia and globally. Financial modelling completed as part of the PFS shows that the Project is economically viable under current assumptions. In the opinion of the Competent Person, cost assumptions and modifying factors applied in the process of estimating Ore Reserves are reasonable. The Ore Reserve is considered to provide the basis of a technically and economically viable project. Material assumptions (mining, processing, infrastructure, economic, commercial, environmental and social) have been considered as part of the PFS and during the Ore Reserve estimation process. Further detailed is provided in Appendix 1.



## APPENDIX 1 – JORC TABLE 1

### Section 4 - Estimation and Reporting of Ore Reserves – 2020 PFS Update

Criteria	JORC Code Explanation	Commentary
<b>Mineral Resource estimate for conversion to Ore Reserves</b>	<p>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</p> <p>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</p>	<p>Sections 1, 2 and 3 of the JORC Table 1 as related to the Mineral Resources can be found in the MGT <a href="#">ASX Release dated 24 May 2021</a>. The Mineral Resource Estimate used as the basis for the conversion to Ore Reserve was announced to the public via ASX on 24 May 2021 with consultant Mr. Lynn Widenbar of Widenbar Associates providing competent person sign off for Resource and Mr. Trevor Thomas providing competent person sign off for Exploration data.</p> <p>The May 2021 Mineral Resource Estimate was completed using geological interpretation and 3D modelling provided by MBGS and reviewed by Magnetite Mines Limited and resource estimation using Ordinary Kriging as completed by Widenbar Associates.</p> <p>The geological model has been used to constrain the interpolation of the block model, with hard boundaries being used for some 19 separate geological units at both Razorback and Iron Peak. Statistical analysis and metallurgical test work indicated that the weathering (oxide) zone behaves differently to the fresh zone, and consequently the weathering/fresh interface has been used as a hard boundary.</p> <p>Following geostatistical analysis, an Ordinary Kriging interpolation method has been used: a block size of 10 m (E) by 5 m (N) by 5 m (RL) has been used, to enable adequate representation of geological zones, as the strike varies from 100° to 045° and dip from 30° to 70°.</p> <p>The geological domains have been “unfolded” to simplify search orientation setup and interpolation was carried out in unfolded space. Blocks (and their sub-cells) are treated as sub-cells within a larger panel that is estimated as a parent cell (30 m x 5 m x 10 m). The unfolded plane for each domain is its footwall, so all the blocks and data line up east-west and vertically; this also removes the effect of the faults and makes all the data available for estimation rather than small subsets within the faulted areas.</p> <p>The unfolding projection is in a north-south sense onto the footwall of each domain, and fore-shortens the distance from 100 m sections in the main infill central area to 70 m - 90 m; a 30 m along strike panel size is appropriate on this case. The variography is also carried out in unfolded space, so spatial relationships are properly maintained in setting up the kriging weighting factors. Variables estimated were: DTR, Magnetite, Fe, SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, TiO<sub>2</sub>, MnO, CaO, P, S, MgO, K<sub>2</sub>O, Na<sub>2</sub>O, LOI, Cu and Zn.</p> <p>Drill hole section spacing is generally 200 m by 50 m, with infill lines at 100 m in the central parts of the Razorback deposit. The resource has been classified in the Indicated and Inferred categories in accordance with the 2012 JORC Code. Classification is based on a combination of drill hole spacing and kriging output parameters (including number of samples and holes used in estimation, average distance to samples, kriging variance etc).</p> <p>The Mineral Resources are inclusive of the Ore Reserve.</p>



Criteria	JORC Code Explanation	Commentary
Site visits	<p>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</p> <p>If no site visits have been undertaken indicate why this is the case.</p>	<p>No site visit was undertaken by the Competent Person for Ore Reserves at the time of this release due to Covid-19 restrictions. However, Mr Ross Cheyne of Oreology Mine Consulting has previously visited the site in late 2012, under the Company's previous name 'Royal Resources Limited'. There are no current facilities at the project site.</p>
Study status	<p>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</p> <p>The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</p>	<p>The Ore Reserve is supported by a Pre-Feasibility level study compiled by Magnetite Mines Limited. Including contributions from specialist consultants:</p> <ul style="list-style-type: none"> <li>• Widenbar Associates – Mineral Resource estimate</li> <li>• MBGS – Geological Interpretation and modelling</li> <li>• Hatch/Bureau Veritas - Geometallurgical and mineralogical testwork (basis for plant design)</li> <li>• Hatch – Mineral Processing and Tailings design – AACE Class 4 Estimate</li> <li>• Oreology – Mine design, pit optimisation and scheduling</li> <li>• Eco Logical Australia – Permitting and approvals, baseline environmental assessments, hydrogeological and borefield design studies</li> <li>• GHD – Non-Process Site Infrastructure, human resourcing</li> <li>• Electranet/GHD - Power and electrical studies</li> <li>• Bis Industries/ARTC – Transport and haul road studies</li> <li>• SIMEC – Port usage proposal</li> </ul> <p>The results of the Prefeasibility are expected to be released in July 2021</p>
Cut-off parameters	<p>The basis of the cut-off grade(s) or quality parameters applied.</p>	<p>The traditional economic break-even cut-off calculation is defined as:</p> $\text{Cut-off grade} = \frac{\text{Processing costs} \times (1 + \text{Dilution}(\%))}{(\text{Net Commodity Price} \times \text{Process Recovery}(\%))}$ <p>The final open pit optimisation modifying factors utilised to calculate the breakeven cut-off grade for the Ore Reserve estimate were:</p> <ul style="list-style-type: none"> <li>• Processing cost = \$6.89/t ore</li> <li>• Dilution = 5%</li> <li>• Price (FOB destination incl. premium) = \$173.11/t</li> <li>• Transport and shipping cost = \$40.94</li> <li>• Royalties (@ 6.25% of Mine Gate Price i.e. price – transport) = \$8.26</li> <li>• Net Commodity Price = \$123.91/t concentrate</li> <li>• Recovery = 100%</li> </ul> $\Rightarrow \text{Breakeven cut-off grade (eDTR\%)} = \frac{\$6.89 \times (1 + 5\%)}{\$123.91 \times 100\%}$ $= 5.8\% \text{ eDTR}$

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Mining factors or assumptions	The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).	The Mineral Resources have been optimised using Whittle software followed by detailed final pit design. The Ore Reserve is the Measured and Indicated Resources within the pit design, after allowing for ore loss and mining dilution. An optimisation shell was selected on the basis of providing 30+ years of mine life at a plant feed rate of 12.8Mtpa. Consequently, the pit shell used as the basis for pit designs was relatively conservative, with an associated revenue factor of just 0.62.
	The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.	The mining method selected is a conventional open pit approach utilising a 350 tonne class hydraulic backhoe excavator loading 150 tonne class rigid body dump trucks for selective mining of ore and waste on nominal 5 m benches. Surplus waste material will be mined using the spare capacity of the designated stockpile reclaim front-end loader. Dual lane pit ramps are designed at a 10% gradient and 31.5 m wide, except for lower pit levels where the ramp reduces to 16.5 m wide one-way access.
	The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.  The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).	Geotechnical parameters are based on studies completed as part of the 2013 Preliminary Feasibility Study. These studies were completed by Hard Rock Mining Consultants and Golder Associates. The studies utilised the data from 4 scissor DDH holes and two single DDH holes. These holes and the associated drilling program were planned and managed by Royal Resources (now Magnetite Mines).  The pit slope parameters used in mine optimisation cases were those recommended in the Golder study as these superseded the Hard Rock study.  During the initial production phase, every 10 <sup>th</sup> hole along the deposit strike will be tested on every 2 <sup>nd</sup> row. As the reliability of this concentration of testing is realised, the spacing of test holes may change.  Grade control during mining operations will utilise down-hole magnetic susceptibility testing of production holes as necessary. Allowances have been made in the cost estimate for a light vehicle mounted unit and a dedicated operator.
	The mining dilution factors used.	The Whittle optimisation tool utilises a fairly simple approach to dilution and ore loss on the basis of fixed global factors for both, with the diluent material assumed to be barren (i.e. carrying no grade). Mining dilution was set to 5% for the purposes of optimisation. This was considered relatively conservative given the vast majority of material within the pits is mineralised, with a relatively small proportion of the orebody bounded by truly barren waste. For scheduling purposes, the dilution for the high-grade material was reduced to 1% at zero grade. This was in order to maintain the same dilution approach (i.e. barren diluent material) but to account for the fact that the vast majority of high-grade diluent material would actually be mineralised low grade. The low-grade material preserved the 5% dilution assumption from the optimisation. These parameters are reflected in the Ore reserve estimate.

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	The mining recovery factors used.	As with the dilution approach, the mining ore loss was set to 5% for the purposes of optimisation. For scheduling purposes, the ore loss for the high-grade material was reduced to 1% while the low-grade material preserved the 5% ore loss factor.
	Any minimum mining widths used.	A minimum mining width of 30 m was utilised at the base of the pits
	The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.	Inferred Resources within the pit design have not been considered as part of the Ore Reserve estimate, in line with the JORC 2012 guidelines. The Pre-feasibility Study will present both a Life of Mine Plan based on the Ore Reserve, and an alternative optimised Life of Mine strategy inclusive of limited Inferred material.
	The infrastructure requirements of the selected mining methods.	<p>The key infrastructure for the truck and shovel method selected are:</p> <ul style="list-style-type: none"> <li>• ROM pad, high grade and low-grade stockpiles.</li> <li>• Magazine and bulk explosives storage facility.</li> <li>• Heavy and light vehicle maintenance workshop.</li> <li>• Mine administration area including offices, crib rooms and training rooms.</li> <li>• Fuel farm.</li> <li>• Camp accommodation for mine workers.</li> <li>• Water bore field for both concentrator requirements and the mine dust suppression requirements that cannot be supplied by pit water.</li> <li>• Power lines and on-site transformers and switches for the supply of power to the workshop, offices and camp.</li> <li>• Roads, including mine access roads, ore haul roads (from pit to concentrator) and product haul roads (from concentrator to rail loading area).</li> </ul>
<b>Metallurgical factors or assumptions</b>	<p>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</p> <p>Whether the metallurgical process is well-tested technology or novel in nature.</p> <p>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</p>	<p>The metallurgical process proposed in the PFS involves crushing and beneficiation. Magnetite Mines believes the processes proposed are well understood in nature, due to their application in existing magnetite beneficiation plants. The process flow sheet and its specification has been designed to deliver a product between 67.5% and 68.5% Fe. The processing plant design has been developed based on extensive metallurgical testwork and completed to an AACE class 4 estimate by engineering consultants Hatch.</p> <p>The metallurgical test work completed to date has involved size separation, gravity separation and magnetic separation. Both magnetite recovery and hematite recoveries have been investigated.</p>

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	<p>Any assumptions or allowances made for deleterious elements.</p> <p>The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</p> <p>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications.</p>	<p>The processes tested to date are as follows.</p> <ul style="list-style-type: none"> <li>• Davis Tube Recovery</li> <li>• Dry Cobbing</li> <li>• Three stage wet LIMS on a grind size of -45µm</li> <li>• Upgrade of non-magnetic material with MIMS</li> <li>• Wilfley table upgrading of LIMS concentrate on a grind size of +45µm</li> <li>• Wilfley table upgrading of MIMS concentrate on a grind size of -45µm</li> <li>• Floatation</li> <li>• Dewatering, thickening and filtration</li> </ul> <p>The comminution test work to date is as follows:</p> <ul style="list-style-type: none"> <li>• Rock strength characterisation (bulk and core samples)</li> <li>• Work index characterisation (core samples)</li> <li>• Starkey SAG Mill and Ball Mill testing (core samples)</li> <li>• SMC tests (bulk samples)</li> <li>• HPGR and Air Classification test work</li> </ul> <p>In addition to the beneficiation and comminution test work, geometallurgical investigations have been conducted at several stages using the following techniques.</p> <ul style="list-style-type: none"> <li>• QEMSCAN, XRF and QXRD.</li> <li>• SEM-EDS.</li> <li>• Satmagan</li> <li>• Davis Tube</li> </ul> <p>Following the test work listed above and the interpretation of these results, Hatch Australia developed a flow sheet for the Razorback Project for Magnetite Mines.</p> <p>The flow sheet crushing circuit consists of:</p> <ol style="list-style-type: none"> <li>1. Primary gyratory crusher</li> <li>2. Secondary cone crusher <ol style="list-style-type: none"> <li>a. Oversize material will report to a recirculation circuit via banana screens.</li> <li>b. Sized material will report to a coarse ore stockpile.</li> </ol> </li> </ol> <p>The flow sheet beneficiation circuit consists of:</p> <ol style="list-style-type: none"> <li>1. Primary grinding by High Pressure Grind Rolls (HPGR). <ol style="list-style-type: none"> <li>a. This circuit will be fed from the coarse ore stockpile by front end loader.</li> <li>b. Banana screens will report oversize to a recycle circuit.</li> <li>c. A secondary HPGR will consume oversize material in the recycle circuit.</li> </ol> </li> <li>2. Air classification by cyclones. <ol style="list-style-type: none"> <li>a. Oversize material (underflow) will report to the HPGR recycle circuit.</li> </ol> </li> </ol>

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		<ol style="list-style-type: none"> <li>3. Primary magnetic separation by LIMS. Overflow will report to concentrate.</li> <li>4. Secondary grinding of underflow by ball mill.</li> <li>5. Secondary magnetic separation</li> <li>6. Flotation <ol style="list-style-type: none"> <li>a. Overflow will report to a tertiary grinding stage via Isa Mill followed by WHIMS</li> <li>b. Underflow will report to concentrate.</li> </ol> </li> </ol> <p>Materials handling at the concentrator will utilize front end loaders.</p> <ul style="list-style-type: none"> <li>• The ROM bin feeding the primary crusher will be fed by a combination of direct tip and rehandle by front end loader.</li> <li>• The coarse ore stockpile will be rehandled by front end loader.</li> <li>• The concentrate will be rehandled by front end loaders to on-highway trucks with trailers in a road train configuration.</li> </ul> <p>Tailings will be pumped to a dedicated Tailings Storage Facility, currently located south of the Iron Peak deposit. This location was based on previous mining schedules and pits. The final PFS outcome indicates there will be no mining in the Iron peak area adjacent to the TSF and therefore the location will be optimised during the DFS phase of work. The TSF "starter" embankment will be constructed from suitable near surface rock material sourced from adjacent borrow pits. The coarse fraction of the tailings material will then be utilised to extend the embankment over the remainder of life of mine. The coarse tailings construction will require profiling and general management during tailings production and this has been allowed for in the cost model. Tailings design was completed by Hatch to ANCOLD standards.</p>
Environmental	The status of studies of potential environmental impacts of the mining and processing operation.	<p>The appraisal of potential environmental impacts resulting from mining and/or processing operations encompasses a two-stage approach – firstly, the quantification and qualification of existing environmental conditions (or baseline studies), and the completion of an environmental impact assessment.</p> <p>Baseline environmental studies have commenced for all principal study areas. Primary field ecology surveys (flora, fauna, ecosystems) are complete, with final targeted surveys planned. Detailed desktop reviews for groundwater, surface water, soils, air quality and noise investigations have all commenced and will be completed in the coming months.</p> <p>While formal impact assessment has not yet commenced, a risk and opportunities assessment of baseline study results to date indicate:</p> <ul style="list-style-type: none"> <li>• there is limited potential for listed species to be present in the Project area; final field surveys will confirm whether management strategies are required to adequately protect any species of significance</li> <li>• there are several potential aquifer systems (of varying quality) that may be accessible to the Company; regional groundwater use is limited to stock and domestic applications, with some ecosystem use likely from smaller, shallow groundwater systems</li> <li>• existing regional profiles for soil, noise and air quality conditions are available, and form the basis of baseline condition quantification.</li> </ul> <p>Following completion of the baseline studies, and once an optimised Project has been established, environmental impact assessment will be completed to establish any potential impacts and the management / mitigation strategies to be adopted during construction and / or operations.</p>



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	Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	An initial 2012 acid-rock drainage study examined the characteristics of selected samples of hanging wall and footwall rocks, magnetite ore and low-grade ore. Of the 13 samples tested, seven (including a duplicate sample) were classified as acid consuming material (ACM) and six samples were classified as non-acid forming (NAF) indicating that ARD is highly unlikely to occur. On the basis of these initial test results, it is considered that there is negligible potential for ARD conditions to be developed at the Razorback Project (based on initial mineralization and waste zone types and extent).
Infrastructure	The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	<p>No infrastructure currently exists at site. Land required for the project development is currently held in pastoral lease or Crown Perpetual Lease. Mine infrastructure (excluding haul road and power line) will situate within the mining lease or an associated licence area under the <i>SA Mining Act 1971</i>.</p> <p>A power line will be required from the appropriate ElectraNet substation to the concentrator. The planned route is approximately 130km and will require land access agreements and a licence under the <i>SA Mining Act 1971</i>.</p> <p>A water bore field will be required. All prospective drilling for the bore field is to the south and east of the and are partially within the mining lease extents. Where the bore field extends outside of the mining lease, land access agreements and a licence under the <i>SA Mining Act 1971</i> will be required. The bore field will initially be supplied with power from diesel generators.</p> <p>A haul road for concentrate will be required from the concentrator to the rail loading facility. The concentrate haul road will provide access to site from the Barrier Highway under all conditions except major flooding and will double as the mine access for workers and supplies. The planned route is approximately 50km and will require land acquisition or agreements, and a licence under the <i>SA Mining Act 1971</i>. The train loading facility will require land acquisition or agreements as part of the haul road arrangement and a licence under the <i>SA Mining Act 1971</i>.</p> <p>The mine accommodation will be accessed from the concentrate haul road, approximately 5km from the concentrator, on the mine lease. Communications with the village and site will be via a 4G booster tower.</p> <p>South Australia has an extensive mining history and a well-established, highly skilled workforce. The South Australian energy and mining sector employs more than 41,000 people, providing a large pool of skilled project development and operations staff. Significant capacity exists within South Australian training institutions to maintain a capable and accessible workforce, and Government-supported training programs (apprenticeships, traineeships, industry initiatives) are readily accessible.</p>
Costs	The derivation of, or assumptions made, regarding projected capital costs in the study.	<p>Komatsu Australia have provided capital and operating costs for the heavy mining equipment. Oreology Mine Consulting have included allowances for delivery, commissioning, first fill spares and tires if not included.</p> <p>Bridgestone Australia have provided capital costs for tires</p> <p>Hatch Australia have provided capital costs for the concentrator and associated tailings disposal</p>

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		<p>GHD have provided capital costs estimates for:</p> <ul style="list-style-type: none"> <li>• Camp accommodation (with support from Ausco Australia).</li> <li>• Mine administration area including offices (with support from Ausco Australia).</li> <li>• Heavy Vehicle and Light Vehicle maintenance facilities, wash down bays and tire change facilities.</li> <li>• Warehouse and stores facilities.</li> <li>• Mine supporting site civil infrastructure.</li> <li>• Potable water and waste water facilities.</li> <li>• Water bore field</li> </ul> <p>ElectraNet have provided capital cost estimates for the power line.</p> <p>Orelogy Mine Consulting provided the capital cost estimates for:</p> <ul style="list-style-type: none"> <li>• Drill rigs</li> </ul> <p>Labour costs used in the study have been guided by inputs from:</p> <ul style="list-style-type: none"> <li>• WorkPac South Australia</li> <li>• Hatch Australia</li> <li>• Orelogy Mine Consulting</li> </ul> <p>Concentrate haul road capital cost have been provided by Bis Industries</p> <p>The capital costs that have been absorbed into operating costs are:</p> <ul style="list-style-type: none"> <li>• Magazine and bulk explosives storage facilities.</li> <li>• Concentrate haul trucks.</li> <li>• Concentrate haul road maintenance equipment.</li> <li>• Locomotive and rail wagons.</li> <li>• Mining Support equipment and light vehicles</li> </ul>
	The methodology used to estimate operating costs.	<p>Mining operating costs have been developed from a first-principle basis utilising:</p> <ul style="list-style-type: none"> <li>• Up-to-date (Q3 2020 to Q1 2021) equipment costs (capital and operating) from OEMs</li> <li>• Current salary and labour rates based on a combination for 9:5 and 2:1 rosters</li> <li>• Orelogy Mine Consulting estimates for blasting product costs and ancillary support equipment</li> <li>• Diesel cost of \$0.70/l based on Bis Industries transportation quotation</li> </ul> <p>Mining costs were calculated for the following activities:</p> <ul style="list-style-type: none"> <li>• Clearing and grubbing</li> <li>• Topsoil removal and storage</li> <li>• Road building</li> <li>• Drilling and blasting</li> <li>• Loading and hauling (including support equipment)</li> </ul>

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		<ul style="list-style-type: none"> <li>Personnel including operational, maintenance, technical and management/supervision</li> <li>Rehabilitation and closure allowance</li> </ul> <p>The resulting LOM cost is approximately \$3.14/tonne mined inclusive of capital.</p> <p>Processing costs have been estimated to a Class 4 level by Hatch Australia based on the plant design and detailed costings. This includes, but is not limited to, estimates for:</p> <ul style="list-style-type: none"> <li>Labour</li> <li>Power reticulation</li> <li>Water reticulation</li> <li>Reagents</li> <li>Consumables</li> <li>Maintenance parts</li> <li>Site and corporate general and administrative costs</li> </ul> <p>Operating costs related to Non-Process Infrastructure (e.g. accommodation etc) was completed by GHD</p> <ul style="list-style-type: none"> <li>Accommodation</li> <li>Maintenance facilities</li> <li>Services – Waste water and power reticulation</li> </ul> <p>Off-site costs related to product transport have been estimate by Bis Industries, ARTC and SIMEC and include allowances for:</p> <ul style="list-style-type: none"> <li>Road – BIS Industries</li> <li>Rail – BIS and ARTC</li> <li>Port - SIMEC</li> <li>Shipping - SIMEC</li> </ul>
	Allowances made for the content of deleterious elements.	Not applicable
	The source of exchange rates used in the study.	The exchange rates were sourced from publicly available data and were based on a forward view developed internally by Magnetite Mines
	Derivation of transportation charges.	Shipping costs were derived from historical rates, FOB from Whyalla. The earliest of these rates sources were from February 2014.
	The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.	Processing and refining costs have been derived by Hatch Australia based on their design of the processing plant.

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	The allowances made for royalties payable, both Government and private.	<p>Allowances made for royalties payable include:</p> <ul style="list-style-type: none"> <li>Government: 5% of profit as determined by Department of Energy and Mines (DEM) schedule of royalties and rates</li> <li>Vendor: 1% royalty over mine profit payable to the vendor of the exploration licenses (Mintech Resources).</li> <li>Native Title/Traditional Owners: An allowance of 0.25% royalty has been assumed.</li> </ul> <p>All royalties are based on the value of the product produced at the 'mine gate'.</p>
Revenue factors	<p>The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</p> <p>The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</p>	<p>Head grade has been calculated in the Mining Reserve using:</p> <ul style="list-style-type: none"> <li>Dilution of 5% at zero grade and ore loss of 5% for low grade material</li> <li>Dilution of 1% at zero grade and 1% ore loss for high grade material</li> </ul> <p>Revenue for pit optimisation assumed a benchmark 62% Fe fines price of US\$100/tonne. An additional premium for the 67.5% Fe concentrate was then added on the basis of US\$3.85/%Fe above the benchmark, resulting in a final sale price of AUD\$173.11/tonne based on an exchange rate of 0.70 USD:AUD.</p> <p>For mining optimisation and design, the exchange rate used was AU\$:US\$ 0.70. The exchange rate used in financial modelling was AU\$:US\$ 0.75. The exchange rate used for Capex and Opex derivation was AU\$:US\$ 0.75, AU\$:EUR 0.64 and AU\$:JPY 84.</p>
Market assessment	<p>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</p> <p>A customer and competitor analysis along with the identification of likely market windows for the product.</p>	<p>Steel is the most widely used metal in modern society. It is the primary building material and indicator for industrialisation, urbanisation and economic wealth.</p> <p>Recent growth in steel use has been driven by industrialisation in China. Future growth is expected to be driven by developing countries, in particular India and south-east Asia. Global steel production is presently dominated by China, at over 1000Mt crude steel in 2020 (Commonwealth Department of Industry, Innovation and Science (IIS) "Resources and Energy Quarterly March 2021").</p> <p>The 10 year (2011-2020) average iron ore price (CFR Tianjin, 62% Fe Fines) is US\$107 (Dec 2020\$).</p> <p>Since 2013, indices for high grade 65% fines have been published and an average premium of \$13 in nominal terms or about 13%, has been realised. This translates to approximately US\$4.20 per Fe% above the 62% fines benchmark. However, the high-grade indices have become more mainstream in recent years and the premium for 65% over 62% has been US\$15/t (\$5 per % Fe) in the last three years and US\$19/t (\$6 per % Fe) in the last year, with a recent peak of about \$36 (\$12 per % Fe) in May 2021.</p>

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	<p>Price and volume forecasts and the basis for these forecasts.</p> <p>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</p>	<p>Razorback product is a high-grade concentrate that is expected to be attractive to blend at low levels into sinter feed, 'sweetening' sinter quality, or potentially for blast furnace pellet production. Product grade is expected to range between 67.5% and 68.5% Fe, with correspondingly low silica and alumina. As a 'headline' grade, this is in the same range as other concentrates such as Anglo's Minas Rio BF product (66-67% Fe) or Champion Iron's Bloom Lake product at 66.5%, both of which have achieved substantial sales at premium prices that are considerably higher than the major fines brands.</p> <p>The PFS financial model uses a base price assumption of US\$110/t, CFR China 62% Fe Fines, in 2021.</p> <p>A price premium of US\$25/t is used for the Razorback concentrate. This is the equivalent of a 29% premium, or a nominal \$5 per % Fe. This is lower than the average premium per Fe % of the 65% fines product since inception in 2013 as a simple comparison.</p> <p>Actual pricing of Razorback material will depend on a range of attributes as well as iron. The concentrate will be relatively fine, but not unusually so compared to other concentrate products. Phosphorus levels are very low, which is an increasing advantage as Pilbara phosphorus levels appear to be trending up.</p>
<b>Economic</b>	<p>The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</p> <p>NPV ranges and sensitivity to variations in the significant assumptions and inputs.</p>	<p>The economic analysis undertaken to determine the Ore Reserve used a discount rate of 8%. The discount rate is consistent with other ASX listed companies with similar project stages, domiciles and production targets. There is no account for inflation in revenue calculations or operating costs.</p> <p>No sensitivity analysis has been undertaken within the financial model. A conservative approach of 20% contingency on all capital expenditure has been taken so that the NPV quoted is at the low end of the range.</p> <p>The initial capital expenditure schedule, of a total of A\$572 million, began in Year -2 and ramped up progressively to Year 0 before operating income was registered in Year 1.</p> <p>The Company corporate financial model generates an after-tax project NPV of approx. A\$295 million inclusive of allowances for depreciation as completed for the Ore Reserve case. This does not represent the go-forward optimized case that the Company anticipates moving forward.</p>
<b>Social</b>	<p>The status of agreements with key stakeholders and matters leading to social licence to operate.</p>	<p>The Project sits within the Ngadjuri Nation #2 Native Title Claim (ref SC2011/002) area, which was accepted for registration in 2012. The resolution of this claim is anticipated prior to the end of 2021 where it is expected that Native Title will be granted. The determination of the Native Title provides the most-suitable opportunity to commence an agreement-making process with Ngadjuri representatives that satisfies the requirements of the <i>SA Mining Act 1971</i>.</p> <p>It is expected that either a mining agreement pursuant to the SA Mining Act 1971 or an Indigenous Land Use Agreement under the Commonwealth Native Title Act 1993 will be entered into. Frameworks for each process are well-formed, and extensive support is available from local Native Title lawyers and service providers to ensure fair, robust and meaningful negotiations and outcomes for both parties.</p> <p>The mine, plant and other infrastructure principally exist within Pastoral leases and Crown Perpetual leases. These are established by separate legislation and administered by the South Australian Government. Principal tenure for the project is established by licences granted under the SA Mining Act 1971 but requires an agreement with the leaseholder of a Pastoral or Perpetual lease to be exercised. Planning for these agreements has commenced, with initial discussions commenced with leaseholders in the mining area.</p>



Criteria	JORC Code Explanation	Commentary
Other	<p>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</p> <p>Any identified material naturally occurring risks.</p> <p>The status of material legal agreements and marketing arrangements.</p> <p>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</p>	<p>No material naturally occurring risks have been identified. Severe weather including the risk of flooding will not completely cease operations for an extended period of time. The mine and mine support operations exist in a low seismic activity zone.</p> <p>No material legal or marketing agreements have been entered into.</p> <p>In South Australia, mineral resources are the property of the Crown. The South Australian Government, through the <i>SA Mining Act 1971</i>, issues tenements to companies to provide rights to explore for and extract mineral resources. Magnetite Mines holds exploration rights to the Razorback Iron Project through Exploration Licences (ELs). The rights inferred under these licences can support a range of other activities required during the prefeasibility and definite feasibility study programs. The right to mine is awarded with the granting of a Mining Lease.</p> <p>Combined the Company holds 1,520km<sup>2</sup> of tenure as related to the Razorback Iron Project. The deposits associated with the Razorback Iron Project are located primarily on the EL6353 and EL6126 tenements, while infrastructure may also extend into EL6127 and EL5902.</p> <p>Magnetite Mines has registered its intention with the South Australian Government to undertake the Mining Lease application process for the Project. A Case Manager has been designated by the South Australian Government to provide support and facilitation through the established approvals and permitting processes. Early engagement with government mining and other technical specialists has commenced and demonstrate a clear support for the project. A project approvals schedule is being developed between the Company and the South Australian Government.</p> <p>Eco Logical Australia has been engaged to prepare application documentation. The South Australian Government provides clear requirements on the application process and scope of information to be provided to ensure a robust planning and assessment process. A review against these requirements demonstrates that the development and provision of such information to form the mining lease application is readily achievable.</p> <p>Baseline environmental studies are well-advanced and will be reviewed by Government stakeholders as part of an iterative process to ensure alignment to necessary standards and other expectations.</p>
Classification	The basis for the classification of the Ore Reserves into varying confidence categories.	As the Mineral Resource for the Razorback Iron Project consists of JORC (2012) Indicated and Inferred resources, only a portion of the Indicated Resources have been converted to Probable Reserves.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The estimated Ore Reserves are, in the opinion of the Competent Person, appropriate for these deposits.
	The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	Not applicable
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	No audits have been undertaken.