



magnetic resources<sup>NL</sup>

**INVESTOR PRESENTATION – APRIL 2014**

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The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by George Sakalidis and Cyril Geech, who are Members of the Australian Institute of Geoscientists included in a list promulgated by the ASX from time to time. George Sakalidis is a full-time employee of the company, Cyril Geech is a contractor to the company and have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Sakalidis and Mr Geech consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

\* All reference to an exploration target are conceptual in nature. The potential quantity and grade is conceptual in nature and there has been insufficient exploration to define a Mineral Resource and that it is uncertain if further exploration will result in the determination of a Mineral Resource.

# Company Overview

Magnetic is listed on the Australian Stock Exchange (ASX Code: MAU).

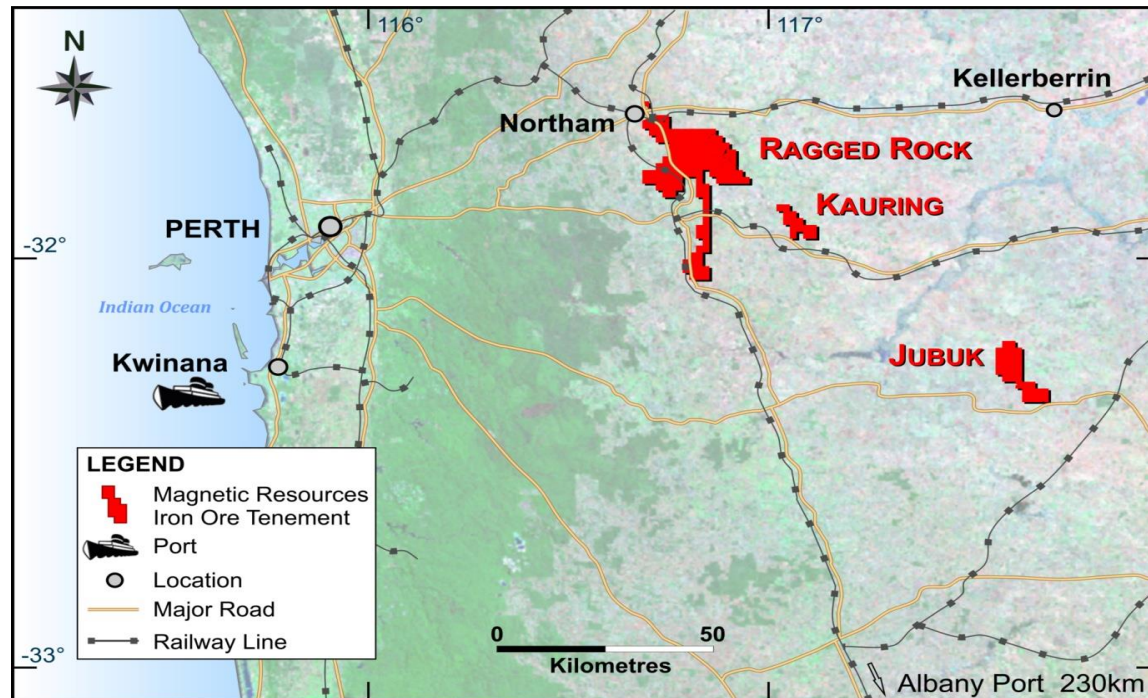
Capital Structure	ASX:MAU
Shares on issue	90,612,758
Options on issue (various terms)	44,016,005
Fully diluted shares on issue	134,628,763
Current share price	\$0.18
Market capitalisation	\$16.3m

Experienced Board	Position Held
George Sakalidis	Managing Director
Gavin Fletcher	Executive Director
Eric Lim	Non-Executive Director
Ben Donovan	Company Secretary

- ❑ Magnetic Resources offer a very unique investment opportunity.
- ❑ 3 key projects with coarse grained premium quality magnetite located in the South West of Western Australia.
- ❑ All situated close to the vital, rail and road infrastructure.
- ❑ Global focus for high iron and low contaminants similar to our 3 projects.



## LOCATION - Known iron ore area



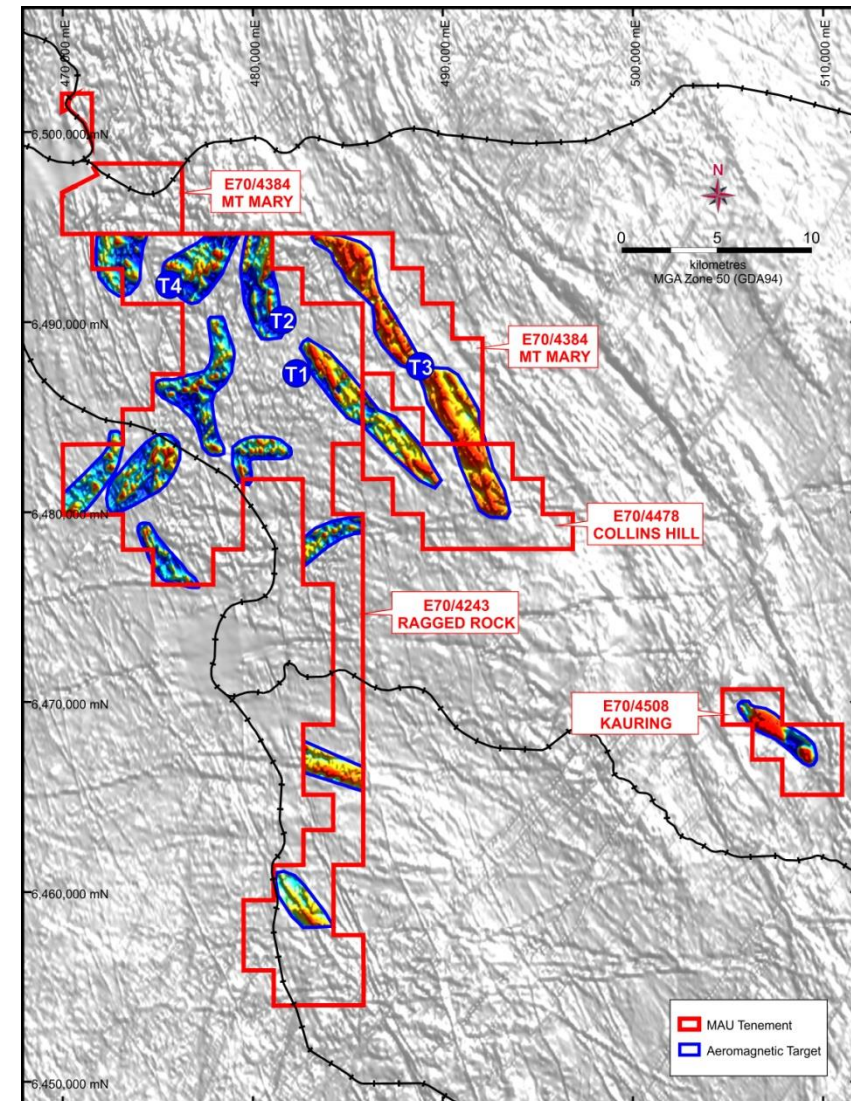
- ❑ Magnetic Resources had “first mover” advantage in the area, this created a pegging rush including major companies.
- ❑ Magnetic hold several key projects representing >50km of coarse grained premium quality magnetite targets.
- ❑ Current focus are the Ragged Rock and Kauring projects
- ❑ All within 15km of the Trans Australian railway line and the Albany railway line. Both are Government owned, open access railways.



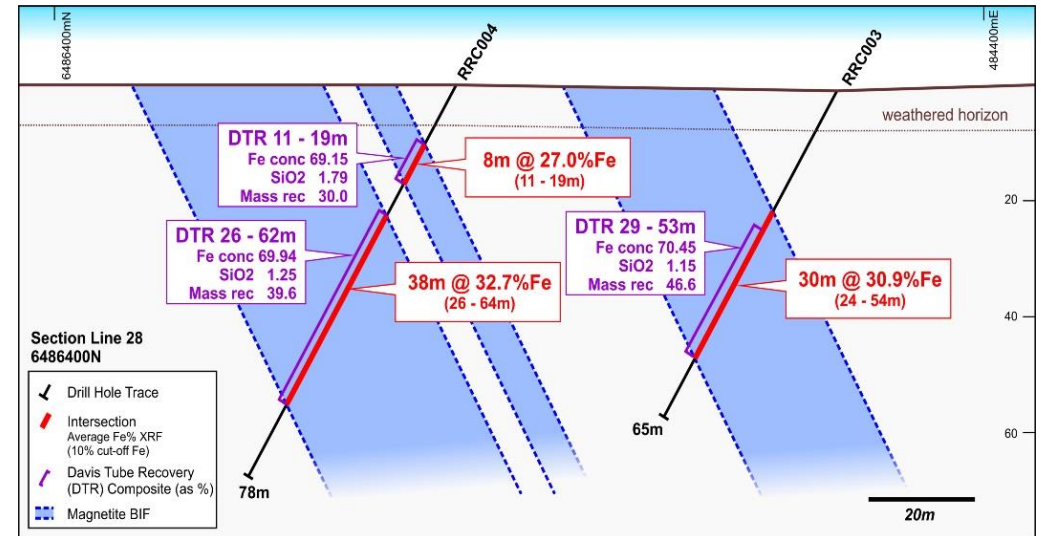
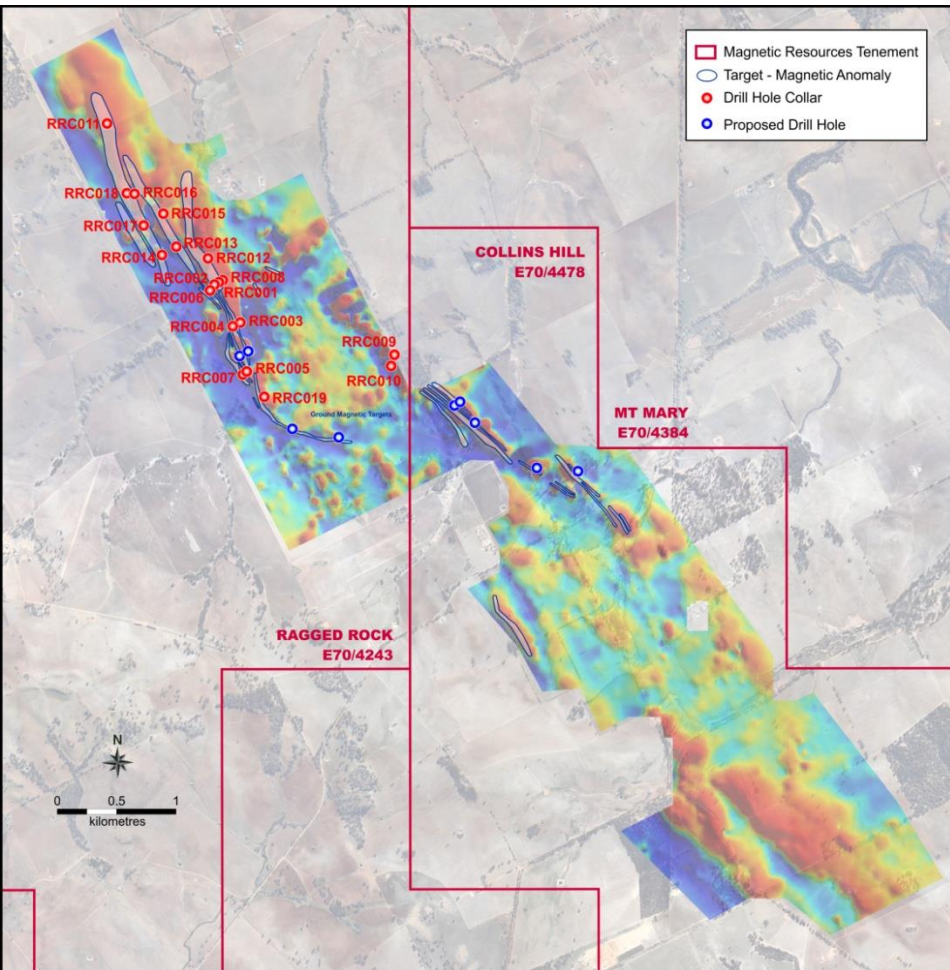
## LOCATION - Flagship Project : Ragged Rock

### Course grained, high quality magnetite = low cost production

- ❑ >50km of highly prospective strike length
- ❑ Very high quality concentrate (68-70%Fe) achieved at coarse grind.
- ❑ Flexibility to produce either high quality sinter feed at much coarser grind, or DR grade concentrate at moderate grind size
- ❑ Low Capex due to coarse liberation of high Fe, low impurity magnetite
- ❑ Low Opex due to low power requirements
- ❑ To date, approximately 1,500m of drilling has been done on the Ragged Rock project resulting in a **JORC exploration target of 100MT – 270Mt at 20% Fe – 40% Fe.** \*



## LOCATION - Flagship Project : Ragged Rock

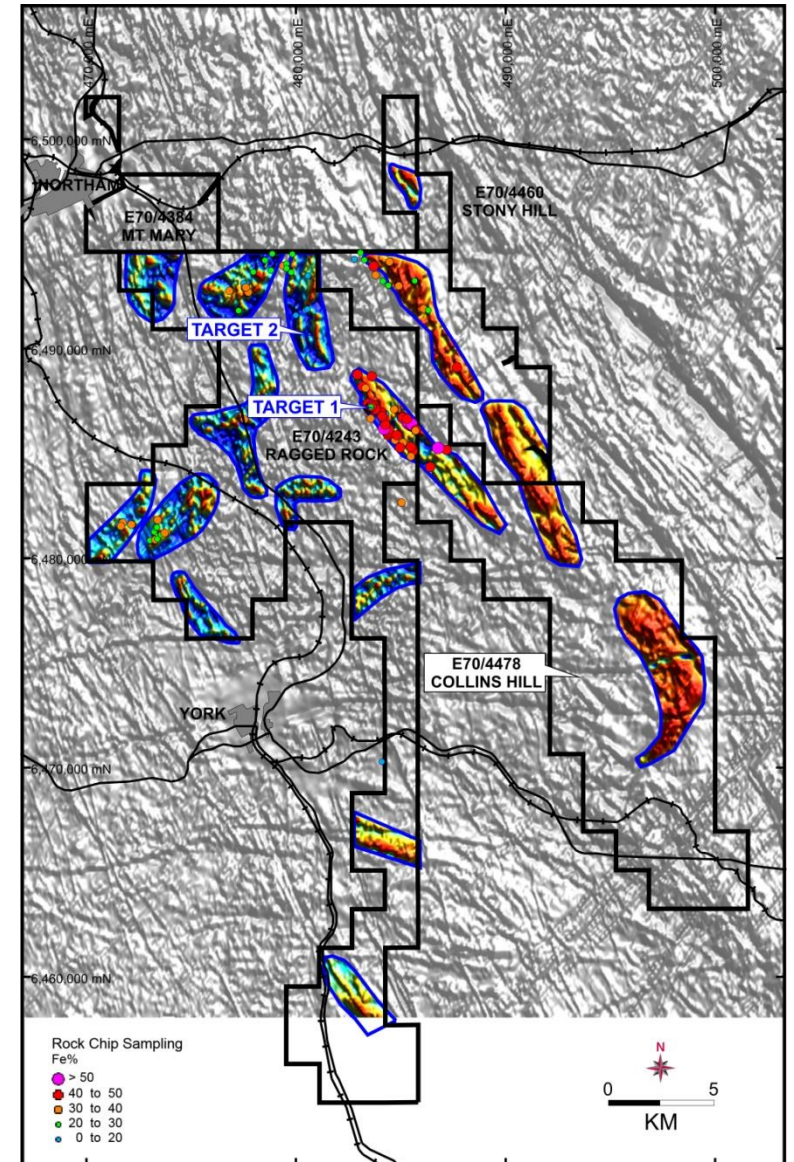


ARE A	NAME	TARGET TONNAGE	TARGET TYPE	TARGET GRADES %Fe
1	RAGGED ROCK	100-270Mt	BIF	20-40
2	JUBUK	50Mt	BIF	20-25
3	KAURING	50-100Mt	BIF	20-30

Target tonnage based on drilling results, aeromagnetic and ground magnetic models, historical data, density of 3.5 and target depth of 100m for BIF styles and density of 2.8 and target depth of 250m for gneiss styles. The potential quality and grade is conceptual in nature as there has not yet been sufficient exploration to define a mineral resource and it is uncertain if further exploration will result in the determination of a mineral resource.



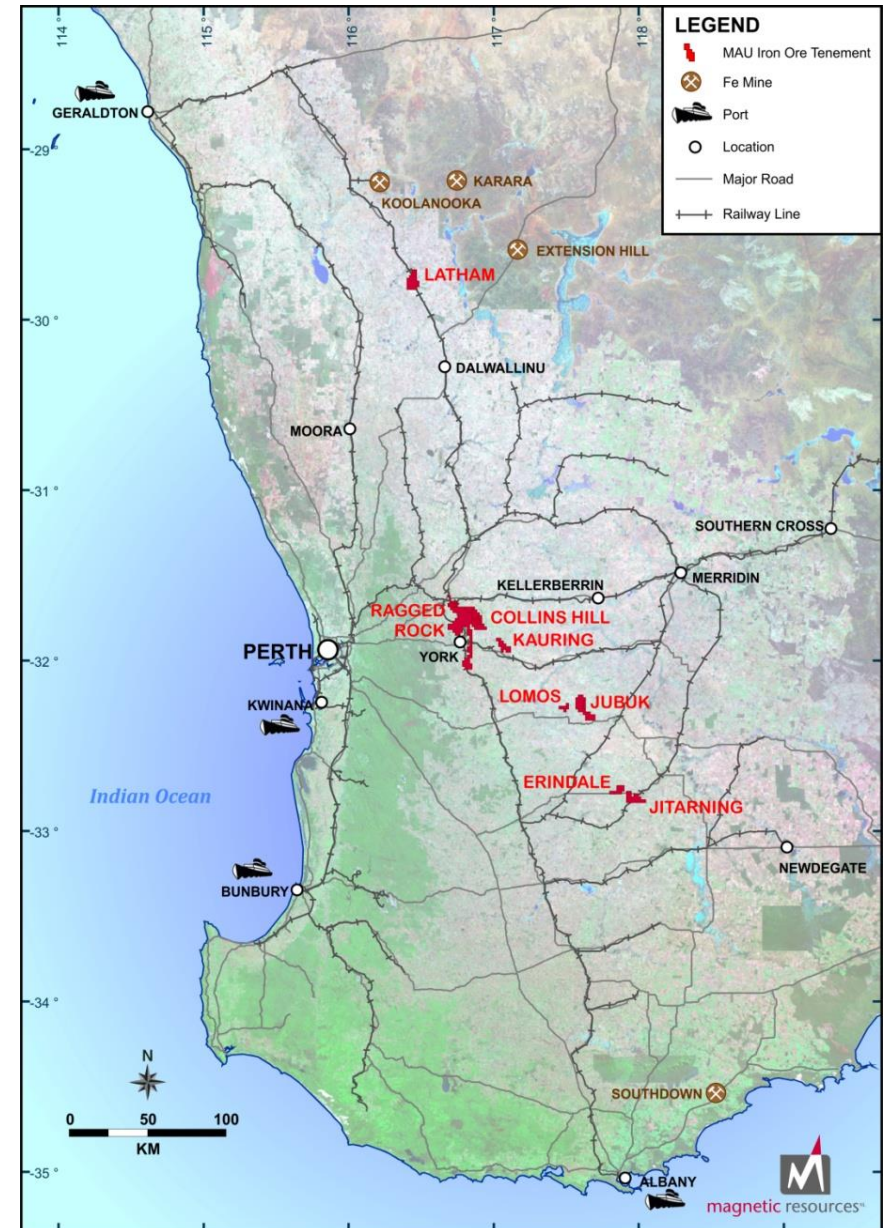
- ❑ High quality, coarse grained nature
- ❑ Very low Silica levels
- ❑ Davis Tube (DTR) concentrate as high as 70.45% Fe, 1.15% Silica and 0.64% Alumina achieved at a coarse grind size of 75 micron.
- ❑ DTR mass recovery of up to 46.6% achieved at higher than normal grind sizes



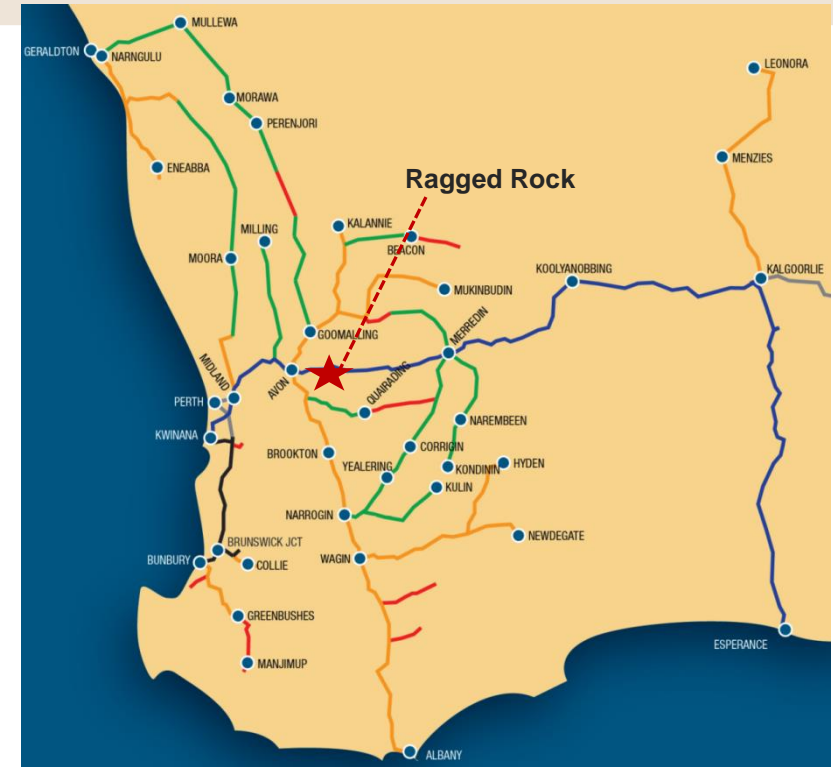


## LOGISTICS AND OPERATIONS - Infrastructure in place

- ❑ Projects within 10-15km of existing rail
- ❑ Rail capacity for up to 3Mt pa of Magnetic's final product
- ❑ Access to port of Albany
- ❑ Port keen to finalise agreement
- ❑ Grid Power available leading to significant capex reductions
- ❑ Clean groundwater expected to be available for processing
- ❑ Established town of York 15 km away, so no mine camps of FIFO



- ❑ No construction of railway required.  
(Most projects require 100km+ of Rail at ~\$4M/km)
- ❑ Located on cleared farm land
- ❑ Minimal environmental issues
- ❑ Freehold land so no state royalties
- ❑ Freehold land = no native title claims
- ❑ No mines department approvals
- ❑ Quicker approval process
- ❑ Bitumen road from Project site

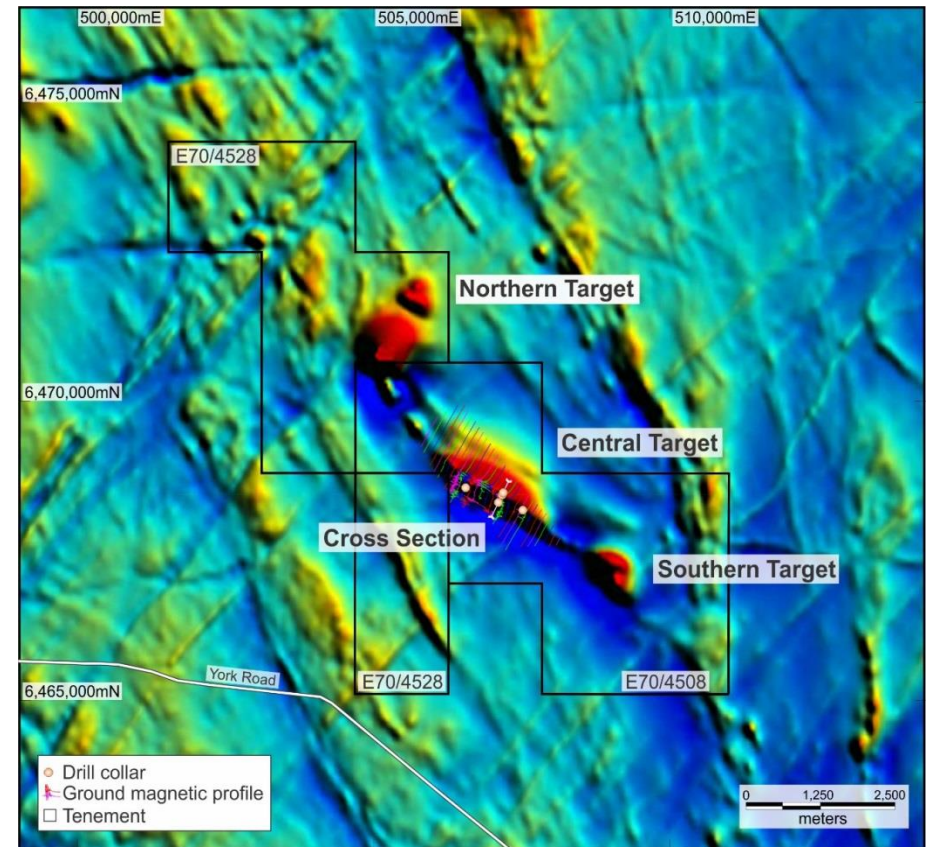


Source: Brookfield Rail



## LOCATION - Kauring : additional potential

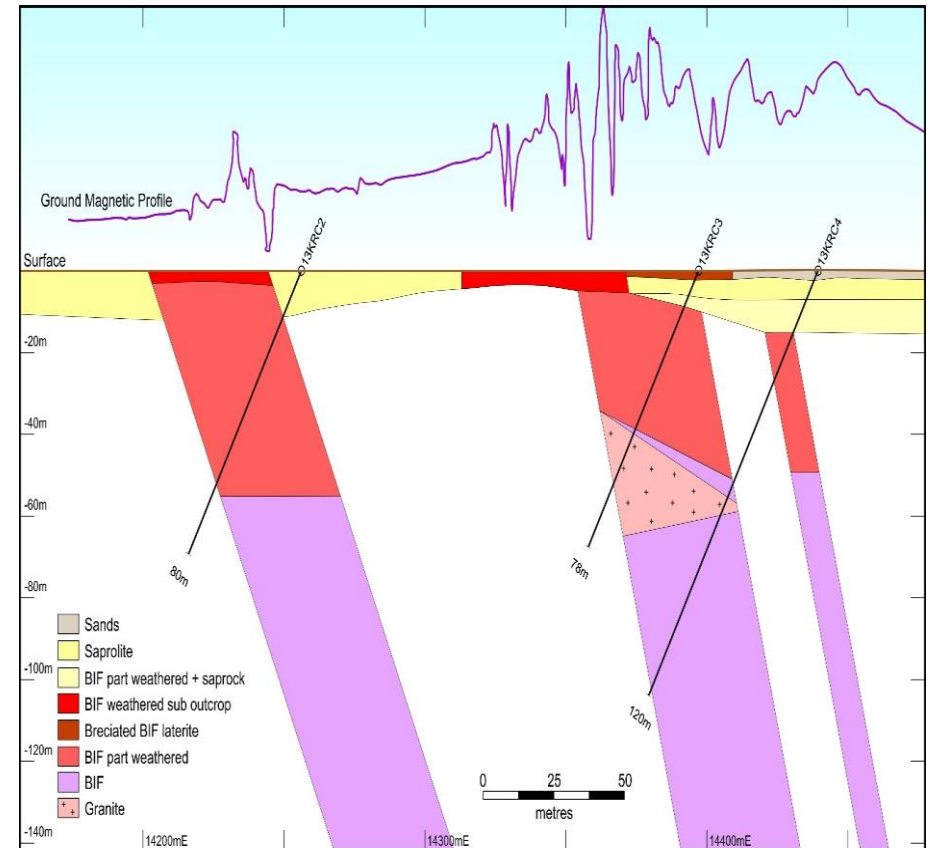
- ❑ Second project with significant BIF potential
- ❑ Located 20-30km south east of Ragged Rock
- ❑ Exploration Target for the South, Central and North Targets of **128-137Mt at 32-34%Fe for 150m of fresh BIF to 200m depth. \***
- ❑ Excellent initial Metallurgical results including high mass yield of 45% over 50m intersection.
- ❑ Close enough to process ore through Ragged Rock plant (increased Mineral inventory)



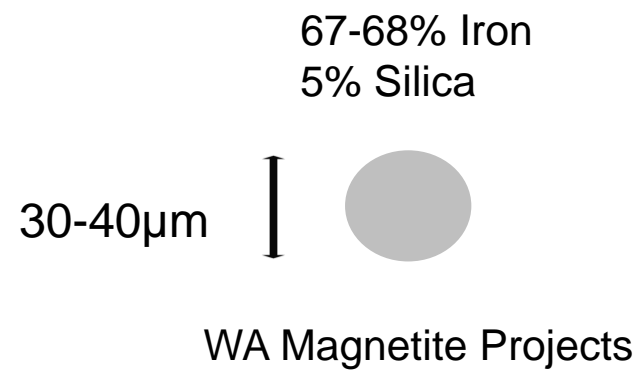
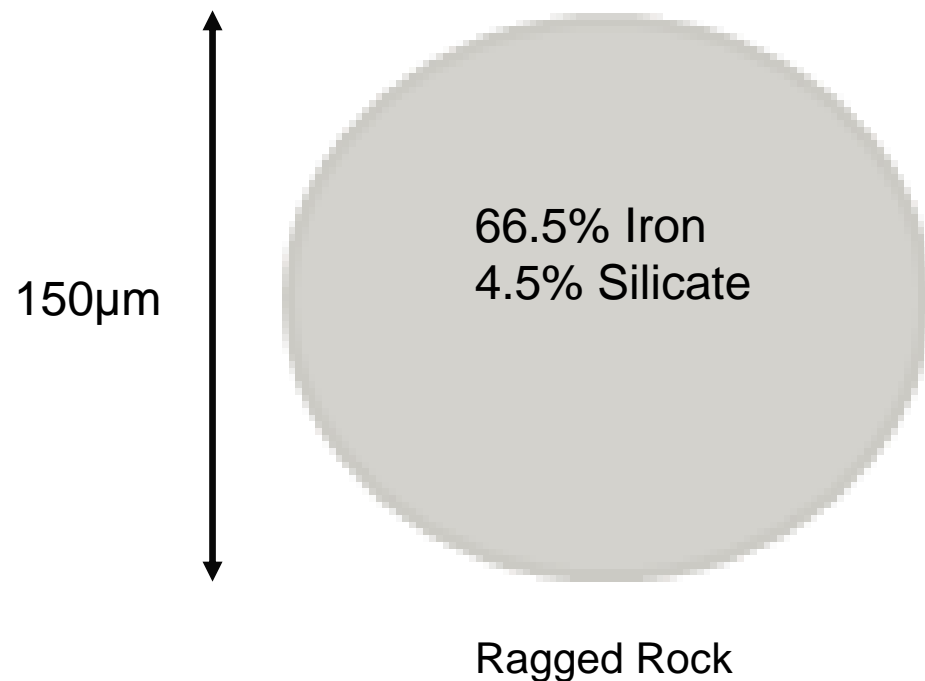


## LOCATION - Kauring : additional potential

- ❑ Wide zones of coarse grained magnetite
- ❑ encountered on both the eastern BIF(50m) and the Western BIF (40m)
- ❑ Assay results from the eastern BIF are very encouraging
- ❑ Excellent Davis Tube Recovery (45% mass recovery) and high Fe contents averaging 32% Fe head assay over 55m of magnetite BIF
- ❑ Potential for DSO style product from weathered cap (50m depth)



## GEOLOGY - Ragged Rock compared to other projects

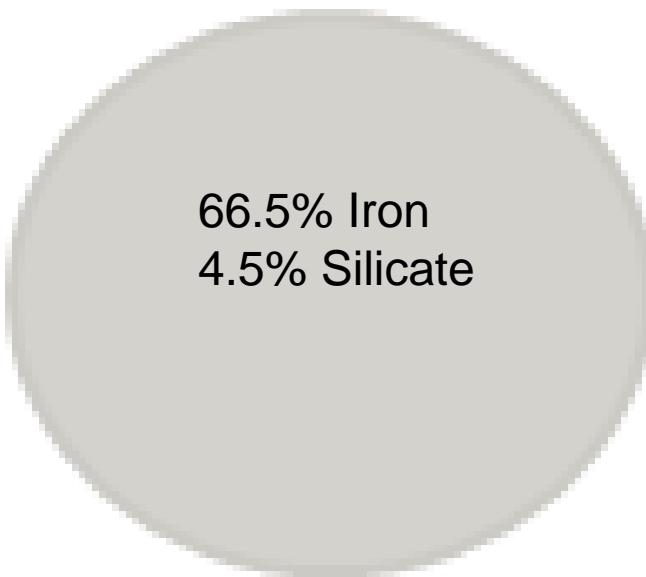




### WA Magnetite Projects

- Substantial energy demand
- Vastly more complex processing required
- Large Capex, High Opex
- Too fine for widespread useage in low cost Sinter process
- Main market is pellet feed. Less than 20% of seaborne market
- ~125 times the surface area of Ragged Rock product
  - Difficulties in grinding circuit
  - At least 3 stages of grinding required
  - Difficulties in flotation (iron losses)
  - Difficulties in fine magnetic separation (iron losses)
  - Major challenges in filtration
  - Challenges in transportation (TML)





66.5% Iron  
4.5% Silicate

**Ragged Rock**

- Vast reduction in energy demand
- Significantly simplified processing plant
- Low Capex, Low Opex
- Coarse enough to be readily used in low cost (Sinter) process
- Very competitive against DSO (Sinter) products of sub 60% Iron
- Coarse product = simple and reliable processing
  - Simple to grind
  - Fewer stages of grinding
  - No flotation required
  - Simple to filter = low moisture = easy transport

### Ragged Rock iron ore product quality compares favorably with typical iron ore projects

- ❑ Excellent results from product recoveries testing (DTR) to date:
  - ❑ Premium concentrate with low silica and impurities with corresponding global focus for this high quality concentrate.
  - ❑ Premium direct reduction iron ore pellet feed
- ❑ High weight recovery, leading to increased saleable product per tonne of feed
- ❑ Low impurities consistent with industry benchmarks
- ❑ Low bond work index reduces energy required to liberate iron

Reduced energy requirements

Very low Capex

Lower Opex

Higher profit margin

### Product Recoveries - Test work

	Ragged Rock	Other WA Projects
Grind size required	150µm	26µm→35µm
Concentrate grade	66%	64%-66%
Wet recovery	35%	20-30%
Energy (total)	~25	≈ 50-60

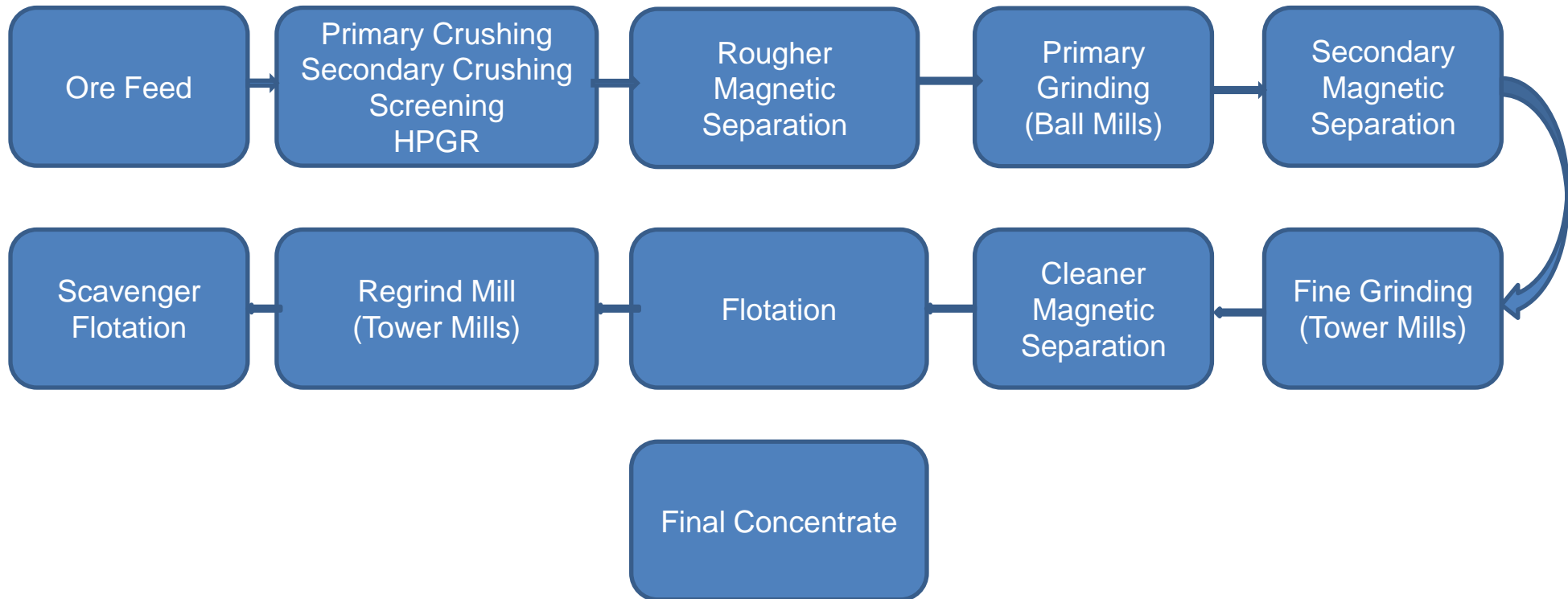


### Magnetic's projects appeal to a ready market

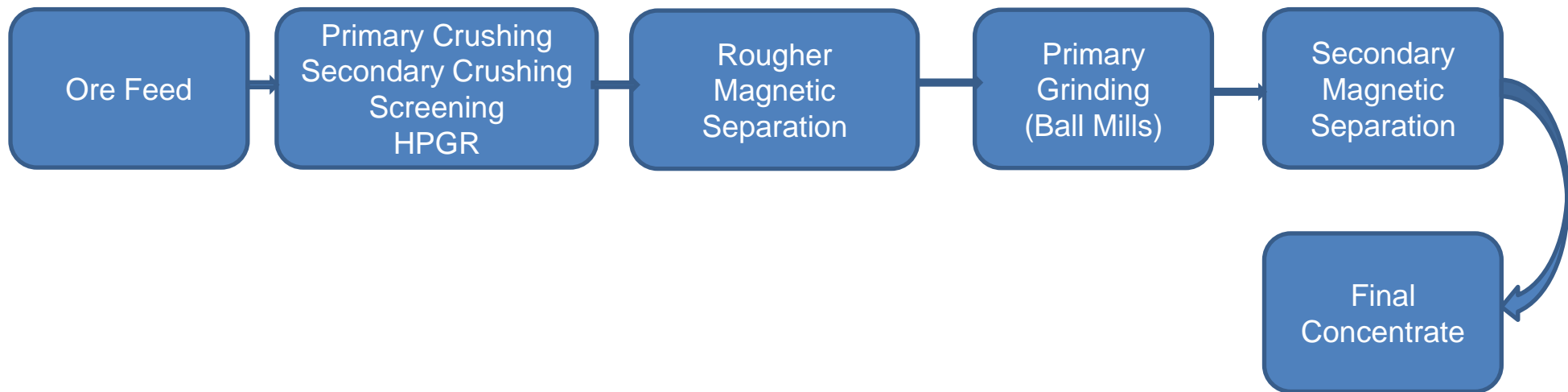
- ❑ Outstanding Metallurgical properties confirmed with low impurities with
- ❑ Economic Assessment completed – confirms low Capex and Opex
- ❑ Sinter testwork commenced in China
- ❑ Nearly all Iron Ore offtake agreements linked to 62% Fe benchmark
- ❑ Credits for high Fe content – approx. \$2-4/t per 1% Fe above 62%
- ❑ Eg.. 66% Fe product premium = \$8-\$16/t above benchmark
- ❑ In the event of price pressure, high purity products will always have a buyer !!



## LOGISTICS AND OPERATIONS - Typical magnetite project flow sheet



## LOGISTICS AND OPERATIONS - proposed Ragged Rock project flow sheet



*Coarse grained = Simple flowsheet = Low Capex = Low Opex = high likelihood of success!!*

## LOGISTICS AND OPERATIONS - Capital Intensity

CAPITAL INTENSITY - WA MAGNETITE PROJECTS		
Project	Planned Throughput (per annum)	Capex \$/annual tonne of concentrate
Southdown	10Mt	\$290
Extension Hill (Asia Iron)	10Mt	\$300
Karara (Gindalbie)	8Mt	\$320
Sino Iron	27.6Mt	>\$330
Magnetic Resources (expected)*	0.5-2Mt	\$90-\$120

- ❑ Significant CAPEX savings possible

## LOGISTICS AND OPERATIONS - Industry comparables

### Trading comparables

Company	Market Capitalisation (\$ million)	Share price (\$)	P/E Ratio (x)
Atlas Iron	888	0.975	8.45
Mount Gibson Iron	954	0.88	6.05
Fortescue Metals	16,628	5.34	6.03
BC Iron	592	4.77	5.44
Grange Resources	289	0.25	9.19
Iron Clad Mining	11	0.10	10.31
<b>Median</b>			<b><u>7.6</u></b>
<b>Sector Average</b>			<b>11.28</b>

Source: Netwealth

### Transaction Comparables (projects acquired)

Target	Acquirer	Date	EV (A\$m)	Contained Resource (Mt)	EV / Contained Resource (A\$/t Fe)
Southdown Project (9.9%)	Kobe Steel	Mar 12	285.0	41.2	6.91
Yerecoin Project	Cliffs	Dec 11	18.0	57.8	0.31
Balla Balla Project	Forge Resources	Dec 11	40.0	205.2	0.19
<b>Median</b>					<b>0.31</b>

Source: Bloomberg as at October 2012, Company Announcements.

## **Mr Gavin Fletcher – Executive Director**

- ❑ Mr Fletcher is a Metallurgist with 16 years' experience
- ❑ Experience in Metallurgy, Project Development, Operations and Technical Marketing
- ❑ Initial assessment of a deposit, through to testwork, flowsheet development and project management
- ❑ Previously Commissioning Manager, Process Manager and Project Manager for the Process Optimisation of the Sydvaranger Magnetite project in Norway.
- ❑ Held position of General Manager of Processing and Metallurgy for UK listed African Minerals, Commissioning and Project Manager for Northern Iron and Principal Process Engineer for Fortescue Metals Group Ltd.



## **George Sakalidis – Managing Director**

- ❑ Exploration geophysicist with over 30 years' industry experience
- ❑ Instrumental in the pegging of the tenements and the design of magnetic surveys and exploration drilling programs
- ❑ Director of Image Resources NL, Meteoric Resources NL and Potash West NL.

## **Eric JH Lim – Non Executive Director**

- ❑ Mr Lim is currently a senior executive officer with United Overseas Bank (Singapore) and is a Managing Director Group Finance in charge of Entity Reporting and Control.
- ❑ Prior to joining United Overseas Bank, he has held positions with Standard Chartered Bank, OCBC Bank, General Electric.
- ❑ Has extensive audit experience with GE Corporate Audit leading a variety of engagements ranging from process to financial audits.

## TRACK RECORD - Timetable

	Activity	Completion Date	Activities
1	Initial capital raising	March 2014	Capital Raising to fund JORC drillout (item 2) and commencement of Feasibility Study (item 3)
2	JORC Resource	May 2014	24 RC drill holes aimed at proving a JORC resource of approx. 70Mt for Ragged Rock Project. Sufficient for a 20 year initial mine life to commence cashflow.
3	Feasibility Study	Dec 2014	<p>Feasibility study to commence approx. April 2014. This work will cover all aspects of Project Development including:</p> <ul style="list-style-type: none"> <li>• Complete Environmental assessment</li> <li>• Complete Hydrogeological assessment (Water supply)</li> <li>• Complete Process Plant Design and Costing (+/-25%)</li> <li>• Complete Mining Design and Costing</li> </ul> <p>Complete Project Financial Modelling</p>
4	Capital Raising for Bankable Feasibility Study and/or Project Construction	Jan 2015	<p>Raise necessary funds for Bankable Feasibility Study. **PLEASE NOTE THIS WILL NOT BE REQUIRED IF A STRATEGIC PARTNER IS FOUND AT THIS POINT IN TIME WHO IS WILLING TO FUND THE DEVELOPMENT FROM CASHFLOW. This work will focus on the following:</p> <ul style="list-style-type: none"> <li>• Additional drilling to increase the Resource category, including Indicated Resources (Bankable tonnages for the first several years of mining).</li> <li>• Formalised and committed pricing on Process Plant and Mining Costs</li> </ul>
5	Project Construction	Dec 2015	<ul style="list-style-type: none"> <li>• Includes all approvals processes</li> <li>• Includes construction of Process Plant, Initial Mining and Port infrastructure (if required)</li> <li>• 1,000,000t p.a Iron Ore producer</li> </ul>

- ❑ High grade, course grained magnetite, low impurities which is sought globally.
- ❑ Significantly lower capex and opex project and within 10-15km of rail infrastructure points to stronger economic return
- ❑ Port access available
- ❑ Proven management with track record of developing projects
- ❑ 2 key projects – Ragged Rock and Kauring
- ❑ Global focus for high quality low impurity concentrate similar to Ragged Rock and Kauring.

Magnetic Resources provides a unique opportunity to invest in an emerging premium quality coarse grained magnetite producer with very low Capex requirements and a high likelihood of project success

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