

INVESTOR PRESENTATION 14 FEBRUARY 2022

# Perenjori Premium Grade Iron Project

Low carbon, premium iron in the right place



ASX : SRN  
SRNOG



**SUREFIRE  
RESOURCES NL**

MFlis Feb2022

**Cautionary Statement**

*The Exploration Target referred to in this announcement, being conceptual in nature, takes no account of geological complexity, possible mining method or metallurgical recovery factors. The Exploration Target was estimated in order to provide an assessment of the potential scale of the exploration on the Perenjori Iron Project and to inform the Company prior to a decision to proceed with additional resource definition work and more advanced and definitive studies. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or Reserves.*

**No New Information or Data**

*SRN confirms that it is not aware of any new information or data that materially affects the information included previous market announcements and, in the case of Mineral Resources, which all material assumptions and technical parameters underpinning the estimates in the relevant announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not materially changed from the original market announcement.*

**Forward Looking Statements:**

*This announcement contains 'forward-looking information' that is based on the Company's expectations, estimates and projections as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to the Company's business strategy, plans, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations, mineral reserves and resources, results of exploration and related expenses. Generally, this forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'potential', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this announcement are cautioned that such statements are only predictions, and that the Company's actual future results or performance may be materially different. Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking information.*

**Competent Person Statement**

*The information in this report that relates to Mineral Resource is based on information compiled by Mr Marcus Flis who is a Fellow of the Australian Institute of Geoscientists. Mr Flis is an independent Principal Consultant at Rountree Pty Ltd. Mr Flis has sufficient experience that is relevant to the style of mineralisation, type of deposit under consideration and to the activity that 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' and consents to the inclusion in this report of the matters based on their information in the form and context in which they appear.*

# High grade, fossil free iron concentrate



Long mine life resource



Premium product & price



Sustainable mining



In a stable jurisdiction



Adjacent to existing rail



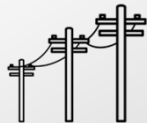
Positive Scoping Study



Close to bulks port



Emissions free



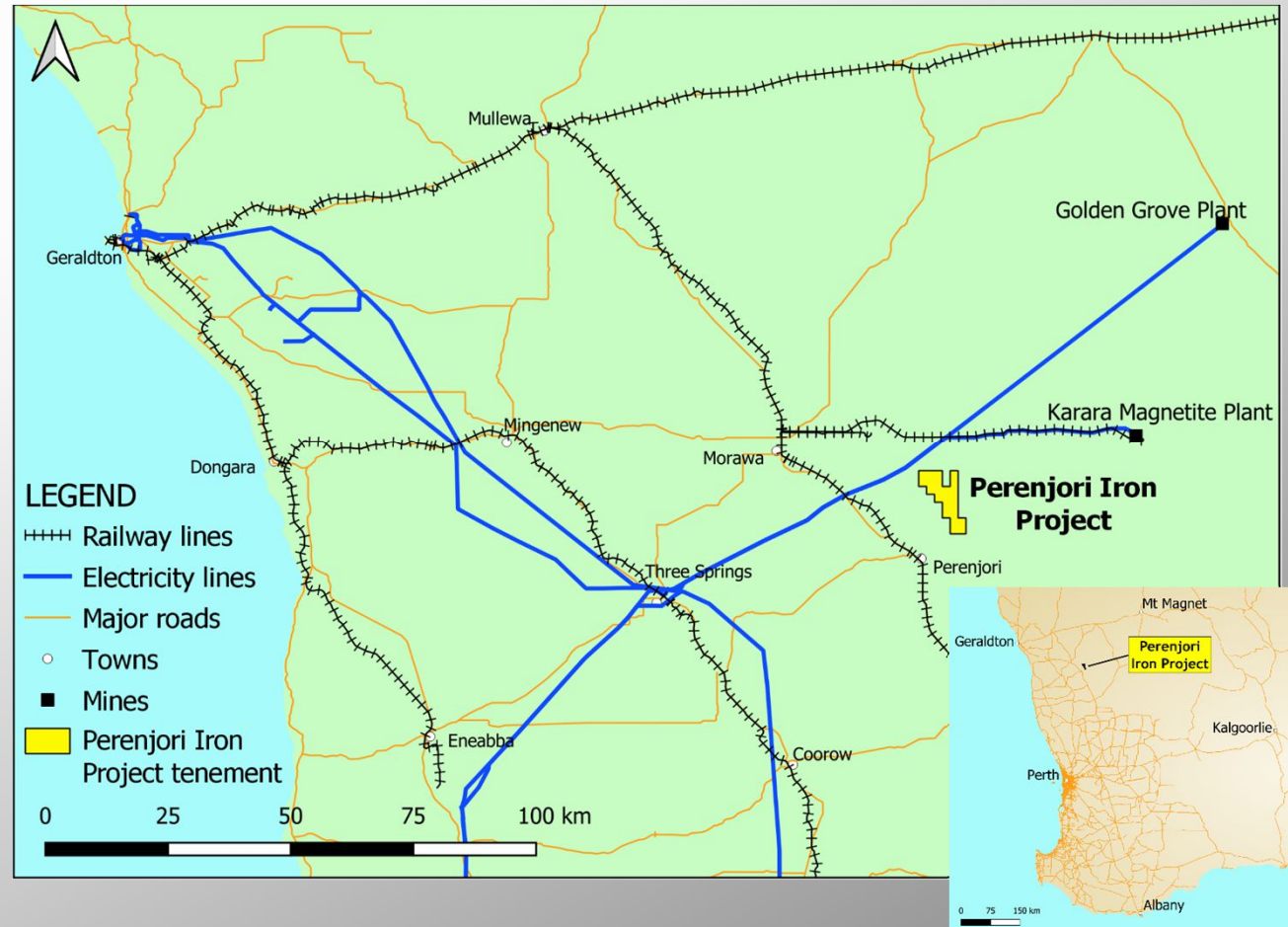
Access to HV power lines



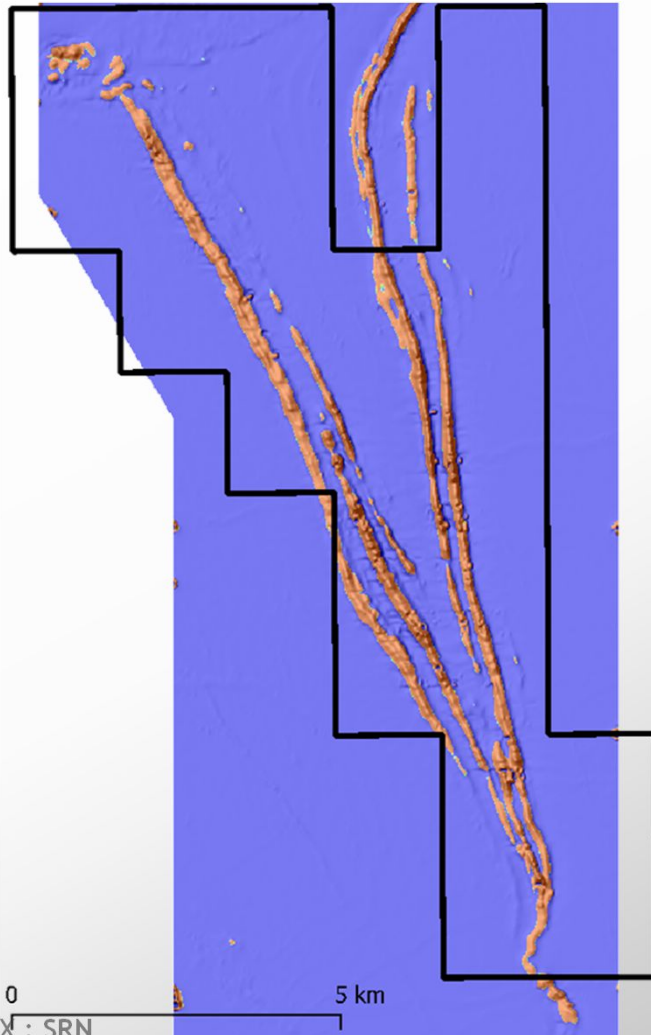
Secure title

# In the heart of the Mid West

- ✘ One of the closest large magnetite resources to the coast in Western Australia
- ✘ Rail lines to the north and to the southwest
- ✘ Rail distance directly to Geraldton bulk commodities port
- ✘ ~135km directly west to coast
- ✘ High voltage transmission line 5km to the north west
- ✘ In an established mining district of Western Australia
- ✘ Planning for seamless logistics solution with two transport solutions



# Over 1Bt targeted to add to 200Mt resource



- ✘ Hosted in a high-iron banded iron formation in a syncline of sedimentary schist host
- ✘ Over 47 strike kilometres of bif in 100% owned tenement
- ✘ BIF outcrops and forms ridges - low stripping ratio expected
- ✘ Less than 25% of this strike length drilled for an Inferred Resource of:

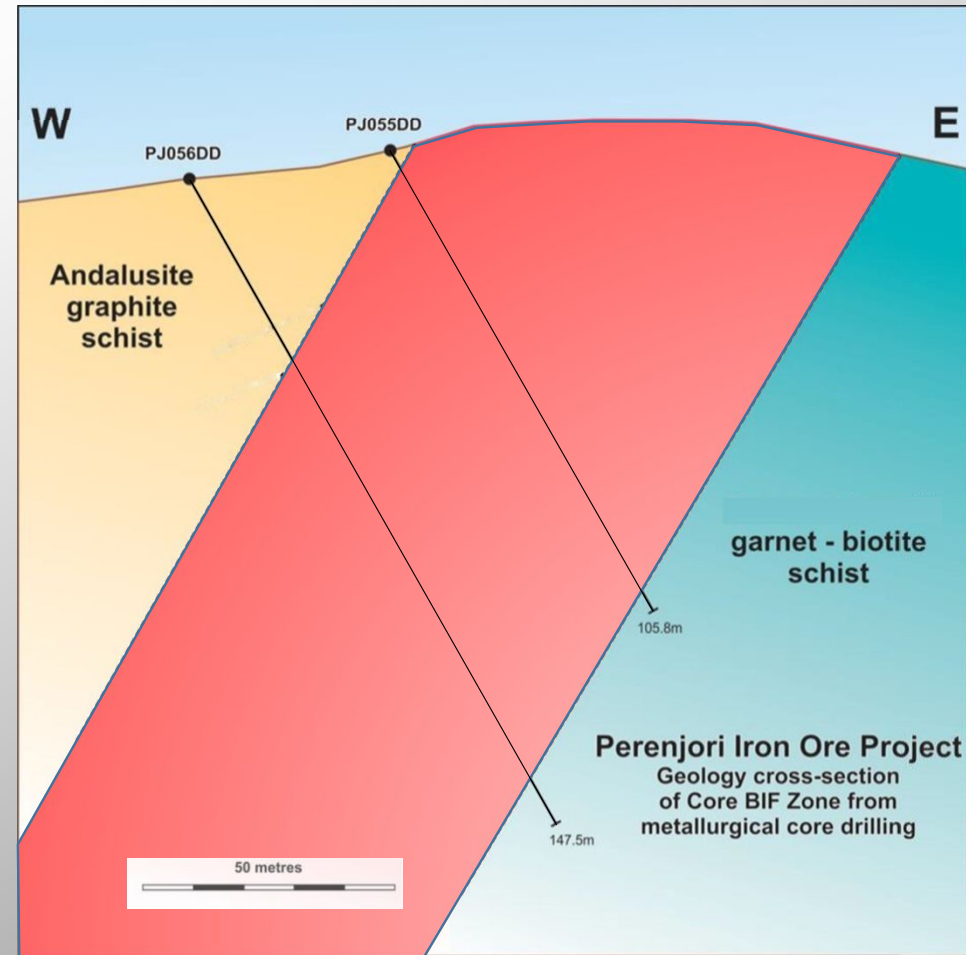
**191.7Mt @ 36.6% Fe<sup>1</sup>**

- ✘ 164 RC holes for 8,107.3m drilled
- ✘ Additional exploration target estimated at: **870 to 1,240Mt**
- ✘ Drill out plan in place to realise full potential and define initial pit area
- ✘ DSO haematite opportunity exists and is being pursued

<sup>1</sup> Complies with JORC(2004), ASX release 22 June, 2021

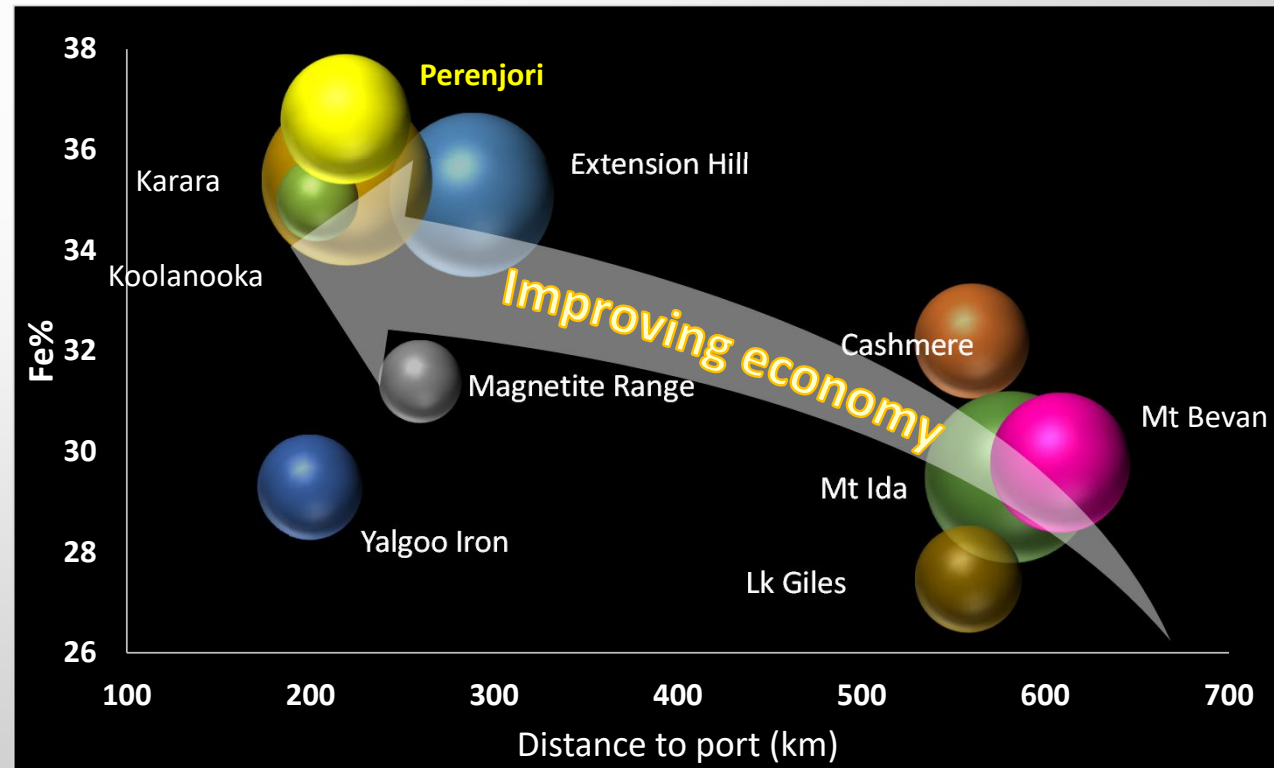
# Thick zones of high grade banded iron fm

- ✘ BIF beds are up to 80m thick
- ✘ Average resource grade is higher than standard WA bifs: 36.6% Fe in the resource with zones of up to 56% Fe
- ✘ Typically forms ridges, a low the strip ratio of less than 2:1 (waste:ore) has been estimated
- ✘ Competent host rock minimises the strip ratio
- ✘ Multiple horizons
- ✘ Steeply to moderately dipping
- ✘ Potential for oxide zone haematite resource to exist



# Grade & transport distance are critical

- ✘ Transport distance is key to economic production of a bulk commodity
- ✘ Head grade relates directly to tonnes mined to produce a tonne of product
- ✘ Unlike some others, both these parameters are difficult to “engineer out”
- ✘ Perenjori has a natural advantage with grade and distance to port
- ✘ Geraldton and the proposed Oakajee port are being considered



# Compelling Metallurgy<sup>1</sup>

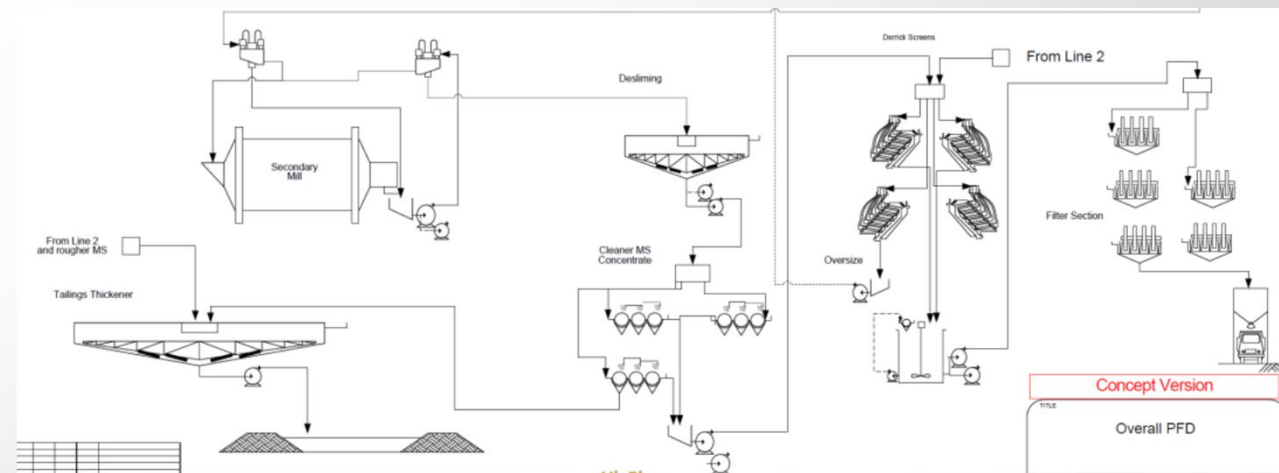
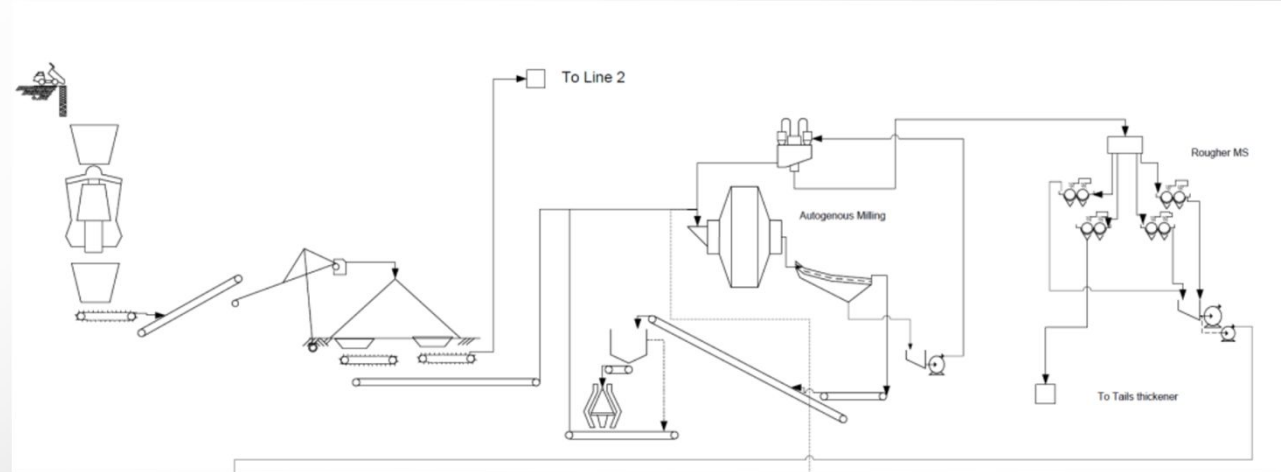
Faction	Fe %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	P %	S %	Mass Recovery %
Head	37.32	40.93	1.01	BD	0.22	100
106µm	64.57	9.10	0.06	BD		38.9
75µm	67.95	4.96	0.03	BD		36.0
45µm	<b>69.62</b>	<b>2.38</b>	<b>0.02</b>	<b>0.004</b>	<b>0.34</b>	<b>34.6</b>

- ✘ Grind size of 45µm produces a ultra high grade iron concentrate
- ✘ A 75µm grind produces a premium grade iron concentrate
- ✘ Low alumina, phosphorous, and sulphur makes this an attractive product
- ✘ Scoping Study finds a yield of 43.9% or 2.27t of ore for 1t of product - a high recovery that feeds in to a low cost per tonne of product
- ✘ The premium grade feed may be used for blast furnace pellet production or as a Direct reduction Iron feed, the latter potentially
- ✘ Ultra high grade attracts a premium iron price, a differential with haematite that is likely to increase into the future



# Standard concentration methods = low risk

- ✘ Primary and secondary circuits are industry standard
- ✘ Evaluating HPGR to decrease costs and increase production rate
- ✘ Potential for dry cobbing to reduce OPEX subject to testing
- ✘ Simple 2 stage LIMS magnetite recovery



- ✘ Standard equipment
- ✘ Low implementation risk
- ✘ Easily scaled
- ✘ Power and water requirements defined

# Conceptual Study highlights project economics

- ✦ Conceptual study has returned very encouraging results
- ✦ Strong market conditions and outlook for premium grade magnetite support planning for a Scoping Study in preparation for a Prefeasibility Study
- ✦ Strategy is to embark on a **+10Mtpa** magnetite concentrate production capacity
- ✦ A staged approach, to bring forward cash flows, will be considered



# 2.5Mtpa base case underpins 10Mtpa target

- ✦ Two cases considered by Scoping and Conceptual Studies
- ✦ Economic feasibility of 2.5Mtpa case supports the 10Mtpa case with economies of scale

Parameter	10Mtpa Option	2.5Mtpa Option <sup>1</sup>
Head grade	36.6%	36.6%
Magnetite recovery to concentrate	85%	85%
Ore:concentrate ratio	2.3	2.3
Mining rate	23Mtpa	5.75Mtpa
Life of Mine	46 years <sup>2</sup>	40 years
Stripping ratio (waste:ore)	Less than 2:1	Less than 2:1
CAPEX (+/- 35%)		A\$589M
OPEX (fob)		A\$80/t

<sup>1</sup> ASX announcement 22/6/21

<sup>2</sup> assumes minimum exploration target is achieved in addition to the current resource

# Choice of two transport solutions

1.

## Existing rail to Geraldton Port

- ✘ Rail/Geraldton Port solution for 2.5Mtpa start up option
- ✘ 11km SE to Perenjori siding
- ✘ 16km north to disused Koolanooka mine loop
- ✘ Rail distance to Geraldton Port is about 219 km
- ✘ Under-utilised rail line
- ✘ Port capacity sufficient for the 2.5Mtpa initial start-up option

2.

## Slurry pipeline to floating or new port option

- ✘ Slurry pipeline solution for 10Mtpa production option
- ✘ 135km west to the coast that could be used for either a Single Point Mooring floating stockpile or trans-shipment options
- ✘ 188km direct slurry pipeline route to the new port of Oakajee, 18km north of Geraldton
- ✘ Oakajee Port development supported by WA Government Oakajee Narngulu Infrastructure Corridor



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# Leading the industry into green iron

- ✘ A “next age” mine based on renewable power, automated and robotic processes, and fully integrated control systems
- ✘ Powered by renewables: well within scope of installations being built at mine sites now
- ✘ Delinking energy from CO<sub>2</sub> emissions means this project will be built for the future
- ✘ Automated systems have matured to allow basis for initial design, not the piecemeal upgrading that established mines pursue
- ✘ Control systems to harmonise and maximise production while managing planned and unplanned production disruptions
- ✘ High-grade magnetite concentrate facilitates the application of hydrogen-based, rather than carbon-based, reduction processes



*"Decarbonising magnetite concentrate production greatly increases its exothermic credentials in steel making, making it very attractive to steel producers."*

# Innovative and sustainable: key drivers

- ❖ Responsible mining practices with minimal impact on the environment through:
  - ❖ Adoption of next age mining technologies
  - ❖ Development of whole of life materials flow to minimise legacy landforms (waste and tailings dumps, open cuts)
  - ❖ Contemporaneous rehabilitation with open cut advance
- ❖ Optimised innovative design to deliver a fossil fuel free, zero emissions operation
- ❖ Life of Mine considerations to enhance economic operation and closure responsibilities
- ❖ Development of world standard and future focussed ESG principles that will enrich the community and environment in which the mine operates

# Development schedule & budget



✘ Drill out to Measured Resource:	\$2M	Year 1
✘ Environmental and land access:	\$1M	Year 1
✘ Permitting to Mine Lease level:	\$0.1M	Year 1
✘ PFS start:	\$1M	Year 1-2
✘ PFS completed:	\$1M	Year 2-3
✘ Environmental, water studies:	\$1M	Year 1-2
✘ DFS:	\$6M	Year 2-3
✘ Approvals:	\$0.2M	Year 2



# Perenjori Iron: a new style mine for a new age

- ✘ **LARGE SCALE** Over 1Bt resource target at superior grade to peers
- ✘ **IDEAL LOCATION** Within 12km of rail and power - closer to port than peers
- ✘ **HIGH GRADE** Resource of 36.6% Fe is exceptional for BIFs and higher than its peers
- ✘ **PREMIUM PRODUCT** 67 - 70% Fe concentrate attracting a premium price
- ✘ **LOW RISK** Straight forward expansion, industry standard processing
- ✘ **LOW SOVEREIGN RISK** 100% held by Surefire Resources, in a mine friendly jurisdiction with mature mining code

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