AUSTRALIAN
RESEARCH
INDEPENDENT INVESTMENT RESEARCH

Hawsons Iron Limited

(ASX: HIO)

March 2022

INDEPENDENT
INVESTMENT RESEARCH

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INDEPENDENT INVESTMENT RESEARCH

Hawsons Iron Limited (ASX: HIO)

Initiation - March 2022

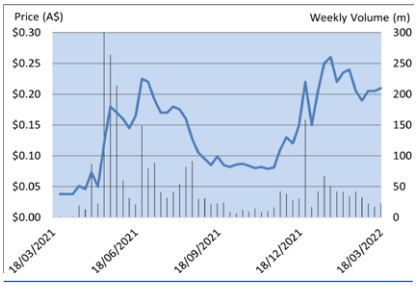
Note: This report is based on information provided by the Company as of March 24, 2022.

Investment Profile	
Share Price March 23, 2022	A$0.21
12 Month L/H	A$0.032/ A$0.26
Issued Capital:	
Ordinary Shares	715.1 m
Unlisted Options	104.0 m
Fully Diluted	819.1 m
Market Capitalisation UD	A$150.2 m
Cash - December 31, 2022	A$31.89 m

Board and Senior Management
Mr Bryan Granzien: Executive Chairman
Mr Paul Cholakos: Non-Executive Director
Mr Jon Parker: Non-Executive Director
Mr Greg Khan: CFO, Company Secretary
Mr Glenn Vassallo: Capital Finance Lead
Ms Kerry Bailey: Corporate Communications Lead
Mr Justin Haines: General Manager - Operations
Mr Wes Nichols - Geology Manager
Mr Ray Koenig: Process Plant Specialist
Mr Dean Roberts: Broken Hill Manager
Mr Rohan Koenig: Study Manager
Mr Peter Brennand: Procurement Manager

Major Shareholders	
Regal Funds Management	2.92%
Silvergate Capital	2.81%
Directors	0.89%
Top 20	20.14%

Share Price Performance



The investment opinion in this report is current as at the date of publication. Investors and advisers should be aware that over time the circumstances of the issuer and/or product may change which may affect our investment opinion.

WORLD'S BEST FEED FOR GREEN STEEL

With steelmaking responsible for an estimated 6.7% of global CO_2 emissions, steelmakers and investors are looking at ways to reduce these emissions, in the drive for "green steel" and to meet increasing Environmental, Social and Governence ("ESG") obligations.

One way of reducing emissions is to increase the efficiency of the steelmaking process - this can be achieved by using higher grade iron ore feed, and also by the use of direct reduction ("DR") furnaces. The latter however require feed with an Fe content of >67%, which cannot be met by the hematite ore which provides the bulk of the seaborne trade, and which generally has grades of between 55% and 64% Fe. Magnetite is the main feed for DR furnaces, with it also being used as higher grade feed for standard blast furnaces. The industry is experiencing decreases in the grade of hematite, as well as restricted supplies of high grade magnetite DR feed, with the latter expected to go into deficit in coming years, with this increasing prices.

Hawsons Iron Limited ("Hawsons Iron" or "the Company") is in an ideal position to take advantage of the changing market dynamics, with the 100% owned Hawsons Iron Project ("Hawsons" or "the Project") located near Broken Hill in Western New South Wales.

Extensive metallurgical test work has demonstrated that the mineralisation, hosted in a soft siltstone unit, can produce a high grade, low deleterious element magnetite concentrate suitable as feed for all processing options. The concentrate grade of ~70% Fe places the *Hawsons Supergrade®* product as the highest grade concentrate globally, which should attract premium pricing and be in demand. At the time of the 2017 10 Mtpa Pre-Feasibility Study ("PFS"), the Company had letters of intent ("LOI") for 12 Mtpa in place with seven potential customers.

Following project consolidation (after a less than ideal JV situation) the market has re-rated Hawsons Iron, with the consolidation removing a road block to effective progress. After raising A$35.6 million in a late 2021 underwritten placement and rights issue, it is now full steam ahead on a Bankable Feasibility Study ("BFS"), which is looking at options for a 10 Mtpa to 20 Mtpa concentrate operation.

A potential 20 year/20 Mtpa option is supported by the large resource, with 400 Mt of high grade DTR concentrate identified in 3.06 Bt of mineralisation. In addition there is an exploration target with the potential to add an additional 150 Mt to 250 Mt of high grade concentrate to the inventory as well as a significant strike length of untested prospective stratigraphy.

Current activities include a 160 hole drilling programme, which, amongst other things, will aim to further upgrade and increase resources, as well as provide samples for ongoing optimisation of the already excellent metallurgy.

Given the active work programme, we would expect ongoing positive news flow through to the release of the BFS, expected by the end of 2022.

VALUATION SUMMARY

We have completed an indicative base case valuation for Hawsons Iron, with this based on the 2017 PFS production scenario, however with costs and prices adjusted to those applicable in 2022. Note that this is indicative only - the ongoing BFS well may result in an expanded production scenario and different operating and capital costs. Also funding structures are likely to be different from the 30% equity/70% debt scenario that we have used.

We have run scenarios on an expanded 20 Mtpa operation, with capital costs escalated, however using the same operating costs - these, as expected, result in significantly higher valuations, and as such we see the valuation presented here as a base case. There is also significant upside in increasing iron ore prices. We have used a base 65% CFR price of US$130/tonne - increasing this to the two year average of US$165/tonne (which equates to a FOB concentrate price of A$238/tonne) increases the Project valuation to close to A$9 billion.

Hawsons Iron indicative base case valuation

Item	Total AUD	Ownership	Per Share	Equity Share Risk Factor	Risked AUD	Risked/Share
Hawsons - DCF	A$6,186 m	100%	A$2.775	30%	A$1,856 m	A$0.833
Cash - 31/12/21	A$32 m	100%	A$0.014	100%	A$32 m	A$0.014
Starlight Payments	-A$10 m	100%	-A$0.004	100%	-A$10 m	-A$0.004
Option Cash	A$61 m	100%	A$0.027	100%	A$60 m	A$0.027
Total	**A$6,269 m**		**A$2.812**		**A$1,938 m**	**A$0.869**
Project Modelling Parameters	Shares - post financing	2,229 m	Post Tax	Funded	Equity Price	A$0.50
	Discount Rate	7.50%	AUD/USD	0.72	65% Fe Fines	US$130/tonne

SWOT ANALYSIS

Strengths

- **100% ownership:** Having 100% ownership and control of Hawsons will significantly streamline the decision making process during development and production, and also provide flexibility in regards to financing and offtake.
- **Quality resource:** The Hawsons Iron deposit is a large coherent deposit amenable to low strip ratio mining by open cut methods.
- **Metallurgy:** The mineralisation has excellent metallurgical properties, being soft and consistent, and test work has demonstrated that a world best magnetite concentrate (that should attract a premium price) can be produced using simple, industry standard methods.
- **Location and infrastructure:** The Project is located close to infrastructure and skilled personnel and services - this includes access to grid power, and water from aquifers that will be sufficient to support an expanded 20 Mtpa operation. It is located within 60 km of the regional centre of Broken Hill which will allow for a resident work force.
- **Potentially low cost operation:** The above factors should result in a relatively low cost operation when compared to peers.
- **ESG credentials:** The planned operation is expected to have strong ESG credentials:
  - Scope 1 and Scope 2 emissions are expected to be low compared to most peers, given the expected relatively low power consumption and hence direct carbon footprint,
  - The production of magnetite (which is required for "green steel") will allow Hawsons to meet Scope 3 emissions, given the relatively low GHG emissions from steelmaking using magnetite; and,
  - The Company will be able to build an operation meeting ESG guidelines from the beginning, and thus will not be in the position to have to upgrade at a later date.
- **Experienced people:** Company personnel, consultants and technical services providers have significant experience in their relevant fields in the resources sector.
- **Strong community relations and support:** The Company has stated that it has strong community and government relations, and has an intensive ongoing community engagement programme - this is a critical factor in any such project.

Weaknesses

- **High capital cost:** Magnetite concentrate operations have a high up front capital cost, when compared to direct shipping operations which can make funding more difficult and complicated. However, given a number of factors, including location and existing infrastructure, Hawson's is expected to be relatively low when compared to other such operations.
- **Market capitalisation:** We would need to see the Company's market capitalisation increase significantly to allow it to raise the equity to fund the proposed development without excessive dilution of current shareholders. We would expect future positive news flow (including with regards to other financing and offtake agreements amongst others) to increase value.

Opportunities

- **Resource expansions:** One of the key aims of the current drilling programme is to expand the current MRE - any expansions could result in a longer mine life than the planned 20 years. The expansion potential is supported by the additional Exploration Target and significant strike length of untested prospective stratigraphy.
- **Partners:** The Company may consider bringing in a partner at the project level in order to help fund and develop the proposed operation.

Threats/Risks

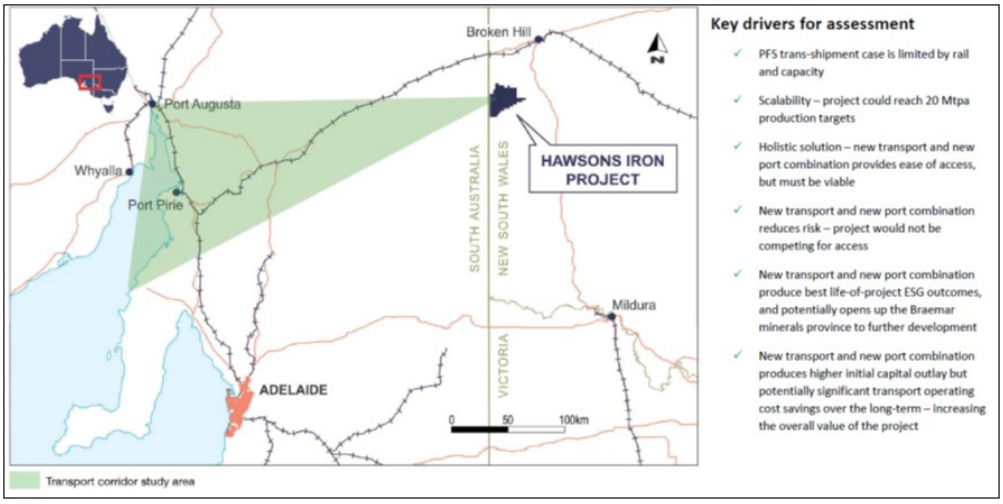
- **Markets and funding:** These are major threats for resource companies and can turn on a dime – adverse markets and sentiment can make it hard to raise cash, and, with depressed share prices make raisings more dilutionary.
- **Takeover and change of control:** Given the current market valuation, and the quality of the resource (and growing demand for magnetite) the Company may make an attractive target for a hostile takeover that would not realise fair value to shareholders.
- **Permitting:** The key risk here may not be whether the project would be permitted, but any blow outs in the time frames for permitting - such a project will need permitting, including environmental studies on several fronts, including the mine site, infrastructure corridors, bore fields and port facilities.
- **COVID:** Although it would seem that the worst of COVID may be over, the mineral exploration and development industry is being hit by a double whammy of one of the greatest booms in recent memory, leading to high demand for labour and services, coupled with reduced supply due to COVID.

OVERVIEW

BACKGROUND AND BFS

- Hawsons Iron is an ASX listed junior iron ore developer, with the focus on the Hawsons Iron Project near Broken Hill in Western New South Wales (Figure 1).

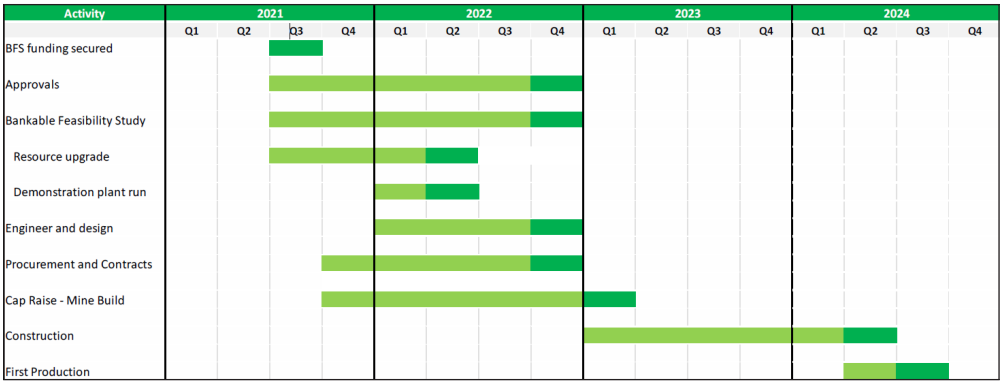
Figure 1: Hawsons project location map and transport envelope



Source: Hawsons Iron

- The Company is currently undertaking a BFS on the Project, which is investigating various options for the production of between 10 Mtpa and 20 Mtpa of high grade magnetite concentrate for the seaborne iron ore trade.
- It is planned to complete the studies by the end of 2022, and then move into development, with first production targeted for Q3, 2024 (Figure 2).
- The Company has engaged an experienced team with the skills relevant to the BFS, as well as using globally recognised and reputable consultants and technical service providers.

Figure 2: Hawsons BFS scope and timeline



Source: Hawsons Iron

- This follows on from a PFS that was completed in July 2017 and which presented a 10 Mtpa case, with concentrate transport through a slurry pipeline to the Trans-Australia railway line near Broken Hill, rail transport to Port Pirie, and then transhipment to bulk carriers in the Spencer Gulf.
- The decision to look at an expanded case (as announced on February 21, 2022) follows on from the October 2021 resource upgrade, which now contains 400 mt of 69.8% Fe magnetite, with low deleterious elements - if the Project goes into production, this will be the highest grade concentrate produced globally.
- An expanded case should significantly improve project economics, including in lowering per unit operating costs, which is expected to more than offset any additional capital required; in addition the power and water supplies as considered in the PFS will have the capacity to support any expanded operation.
- A key aspect of the Project is metallurgy, with studies continuing - one of the aims is to optimise costs, which in magnetite operations are a major part, particularly with regards to power requirements.

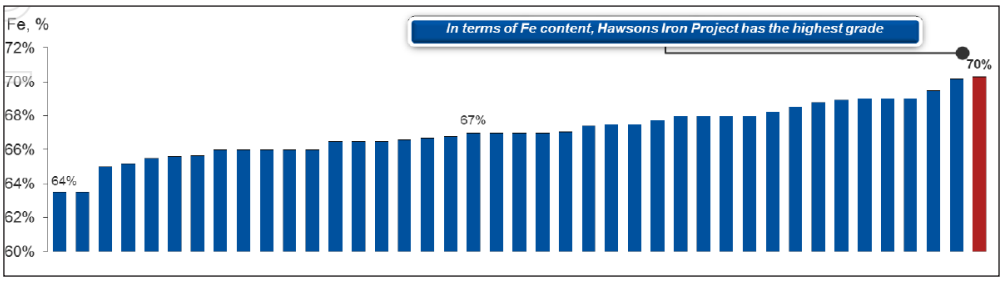
- As such, metallurgical test work samples will be collected from the current ~160 hole drilling programme (for which there are currently seven rigs operating), which has been designed to provide material and information for:
  - A major resource upgrade and expansion,
  - Metallurgical test work samples,
  - Geotechnical studies; and,
  - Groundwater/hydrogeological studies.
- A crucial aspect of the revised BFS is to investigate alternative FOB transport alternatives to those presented in the 2017 PFS (Figure 1).
- One of the potential transport limitations is rail capacity - although there is spare capacity to handle 10 Mtpa, 20 Mtpa cannot be managed as it stands, however this could potentially be overcome by the addition of passing loops amongst others.
- Different options (including hybrid and staged) are being considered, with an underground slurry pipeline from the concentrator site to the selected port being one of these
- Potential port options include:
  - Port Pirie,
  - Port Playford (Port Augusta); and,
  - A new port at Myponie Point, north of the current facility at Wallaroo - this has the benefit that a jetty with a length of ~2 km would be able to directly service cape size vessels, without the need for transhipment.
- The first two options will require transhipping, and the development of the necessary concentrate handling and loading facilities at the current facilities.
- It is estimated that the additional studies required to expand the scope, including port/transport, process engineering, EIS and approvals will cost an extra A$12.4 million.
- Another critical path is in financing, with Hawsons Iron now actively progressing project financing, with potential sources including, amongst others:
  - Traditional debt/equity (which we have used in our modelling),
  - Export Credit Agency ("ECA") financing,
  - Bringing in a project partner; and,
  - Offtaker financing.
- The ESG credentials should provide access to additional sources of financing (including Green Financing), as well as Government support, both financial and in permitting in addition to making the Project more attractive to traditional sources of finance.
- The Company sees no difficulties in securing offtake agreements given the quality of, and expected demand for the magnetite concentrate - this was borne out by the Company having LOIs signed with seven parties for a total of 12 Mtpa of concentrate at the time the PFS was delivered.
- This is further reinforced by increasing ESG requirements driving demand for green steel, which can only be met by the use of magnetite in the steel production process.

WHY MAGNETITE, AND WHY HAWSONS?

- When most people think of iron ore, it is direct shipping haematite ore that comes to mind, and which forms the bulk of Australia's ~900 Mtpa export trade, providing ~58% of the total seaborne trade of ~1,550 Mtpa, and 35% of the global mine production of 2,600 Mtpa.
- A key aspect of haematite is that it is generally has grades of between 57% and 65% (pure haematite contains 69.94% Fe) and can be readily mined and shipped with only limited, or no processing, and which can be used as is or sintered/pelletised in a blast furnace to produce pig iron.
- However, given the grade, haematite is not suitable for the production of direct reduction iron ("DRI") or hot briquetted iron ("HBI") through DR processes - these optimally require feed grades of >67%, generally supplied by iron ore pellets produced from magnetite, with magnetite providing the feed for ~30% of the world's steel production, including in blast furnaces - world steel production is currently around 1,950 Mtpa, and expected to grow steadily at ~2-3% pa.
- Significant producers of magnetite include the US, Canada and China.

- Given that magnetite deposits (and the itabirite deposits of Brazil) are generally of grades that preclude direct shipping (there are some exceptions, including Savage River in Tasmania) they require further processing, and hence additional capital and operating costs, however these costs are largely offset by premium prices.
- Aspects of the DR production route include:
  - Facilities are more energy efficient than blast furnaces,
  - Given the higher grade iron feed, it requires less feed per tonne of steel (this continues up the supply chain, with lower feedstock transport requirements per tonne of steel),
  - Less consumables, including lime and coal, are required than for a blast furnace,
  - The reduction of magnetite is an exothermic one, therefore the process produces a lot of its own heat; and,
  - It produces ~10% less CO_2 per tonne of steel than a blast furnace - it is estimated that a DRI facility produces ~170 kg/tonne less CO_2 than a blast furnace, however this is partially offset to the tune of the estimated ~64 kg of CO_2 produced in the concentration process.
- One aspect of the DR process however is that slag is not produced - the impurities remain in the final product, and are removed in the steelmaking stage.
- It is for this reason that high quality feed is required - excess deleterious elements, including the acidic components SiO_2 and Al_2O_3 can severely affect the performance of the facility; this is also the reason that the lower grade haematite is not suitable.
- Some of the same factors apply to the traditional blast furnace route - higher grade feedstock is more energy efficient than lower grade material.
- Given the current trend to decarbonisation, producing carbon neutral steel would seem to be the ideal (it is estimated that steel making contributes some 6.7% of the global emissions of CO2).
- We cannot see this happening (nor can we see substitutes for steel, that comprises ~95% of the total global metal production), however further development of DR steelmaking, and the replacement of current blast furnaces is required to turn steel "green", and meet the ESG obligations that are increasingly being placed on companies.
- However, this will require the production of more higher grade feed, both to increase the efficiency of blast furnaces (in which both magnetite and haematite is used), and to feed the DR operations.
- The world though is running out of higher grade (>64%) haematite, and due to costs, the supply of DR grade magnetite is also constrained; it has been forecast that there will be a significant shortfall in coming years - the world needs more high grade feed.
- Is it little wonder that groups such as FMG and Hancock are progressing magnetite projects, in addition to the Sino iron ore mine in Western Australia ramping up to 24 Mtpa?
- Enter Hawsons Iron...
- Work, including pilot scale processing, has demonstrated that Hawsons can produce a premium magnetite concentrate (with a registered trademark of *Hawsons Supergrade®*), which has a world high grade of 69.8% Fe, and low deleterious elements (Figure 3, Table 1) - the already low deleterious elements can also be further reduced through additional processing.

Figure 3: Iron content of concentrate products



Source: Hawsons Iron, CRU

- The iron content of pure magnetite is 72.36%, so with a grade of 69.8% Fe, the concentrate contains 96.5% magnetite.
- Also, the deposit is close to infrastructure (bulk commodities are commonly treated as infrastructure plays), and in a stable jurisdiction in a world class mining country.

- The sedimentary mineralisation, which is hosted in the Proterozoic Braemar Ironstone Formation, has key advantages over the generally mined BIF mineralisation that is a source for magnetite concentrate, particularly with respect to power requirements and overall costs:
  - It is soft and near surface, allowing for relatively low cost mining and processing; and,
  - Magnetite occurs largely as discrete grains, neither containing inclusions nor occurring as inclusions in other minerals - upon crushing and grinding the mineralisation breaks along grain boundaries, resulting in high recoveries to clean concentrates.
- One of the main costs in processing of BIF mineralisation is electricity, which can comprise up to 70% of the direct processing costs - having softer mineralisation should result in lower unit operating costs, as well as cheaper mining costs.
- Given the above, the Project is expected to consistently produce an in-demand premium product, with this being demonstrated by the LOIs as mentioned earlier.

HAWSONS OWNERSHIP CONSOLIDATION

- In 2020 the Company announced a strategy to consolidate ownership of Hawsons, with the Company initially acquiring 24.149% from then JV partner Pure Metals for 90.8 million shares through a share purchase agreement ("SPA"), and for Pure Metals to transfer 6.037% to Starlight Investment Company Pty Ltd ("Starlight"), a shareholder of Pure Metals.
- The SPA was approved at the Company's 2020 AGM, however before it could be closed, ASI went into liquidation, with the transactions ultimately being closed in mid-2021 - the announcement of the completion of the sale agreement on May 19, 2021 saw a sharp rise in the share price of Hawsons Iron.
- The consolidation of the ownership then allowed the Company to meet the requirements to raise the $35.6 million to progress the BFS.
- More recently the Company has acquired Starlight's 6.037% interest, with the total consideration of A$10 million in cash including:
  - A$5 million on execution; and,
  - Deferred payments of A$3 million within three months of completion and A$2 million within six months.

FINANCIAL POSITION

- As of December 31 the Company had A$31.89 million in the bank and no debt - in the September 2021 quarter the Company raised A$35.6 million through two underwritten placements (54.3 million shares, A$8.15 million) and a 1 for 2.6 rights issue (183 million shares, A$27.45 million).
- The pricing for the raises was A$0.15/share, with the funds to progress the BFS.
- Over the twelve months to December 31, 2021 the Company spent A$9.507 million on exploration and evaluation, and A$4.119 million on administration.
- The conversion of options has the potential to bring in ~A$60.9 million - these include the options issued to LDA (see below).
- The Company will, should additional funds be required during the BFS process (and we would expect that additional funds, if required, will not be significant), have flexibility in sourcing such funds, including through existing and new shareholders, as well as accessing the LDA facility.

CAPITAL STRUCTURE

- Hawsons Iron currently has 705.1 million shares and 104.0 million unlisted options on issue.
- On January 4, 2022, 71.5 million options were issued to LDA Capital Limited ("LDA") under a A$200 million equity funding package as discussed below.
- The strike price for the LDA options will be the 125% of the 90-day VWAP prior to the 2nd Anniversary of the issue of the Options, but if the HIO share price achieves a price of A$0.55 at any stage prior to the 2nd Anniversary of the issue of the Options, the strike price for the 71.5 million options automatically resets to A$0.70.
- The largest shareholder is Regal Funds Management with in 20.70 million shares, or 2.92% of the Company, with Silvergate Capital holding 19.95 million shares, or 2.81%.
- Total Directors interests are 0.89%, with the top 20 holding 20.14%.

LDA CAPITAL AGREEMENT

- On December 22, 2021, the Company announced that it had entered into a A$200 million equity financing Put Option Agreement ("Agreement") with LDA, a United States investment group.
- This facility can be regarded as a standby source of funds, and there is no obligation for the Company to access it - it however provides flexibility in financing, particularly to cover unexpected costs and overruns.
- Key terms include:
  - Up to A$200 million can be accessed by issuing put options over the four year agreement,
  - Access to the facility is at the Company's discretion,
  - The drawing down of funds includes the Company issuing ordinary shares to LDA (collateral), and then with the Company making a call on the capital at a later date by issuing a put option to LDA,
  - The issue price of the capital call shares will be the higher of 90% of the 30-day VWAP prior to issuing of the put option notice, or a minimum acceptance price ("MAP") as notified to LDA upon exercise of the put option; and,
- Other terms include:
  - Payment of legal fees capped at A$25,000,
  - The issuance of 71.5 million unlisted options as detailed earlier; and,
  - An A$4 million Option Management Fee, comprising A$2 million in cash, and A$2 million shares priced at the 90 day VWAP prior to the first anniversary of the execution of the agreement - the first anniversary is also the date that the Option Management Fee is due.

PROJECT DESCRIPTION

HAWSONS IRON ORE PROJECT

Location and Tenure

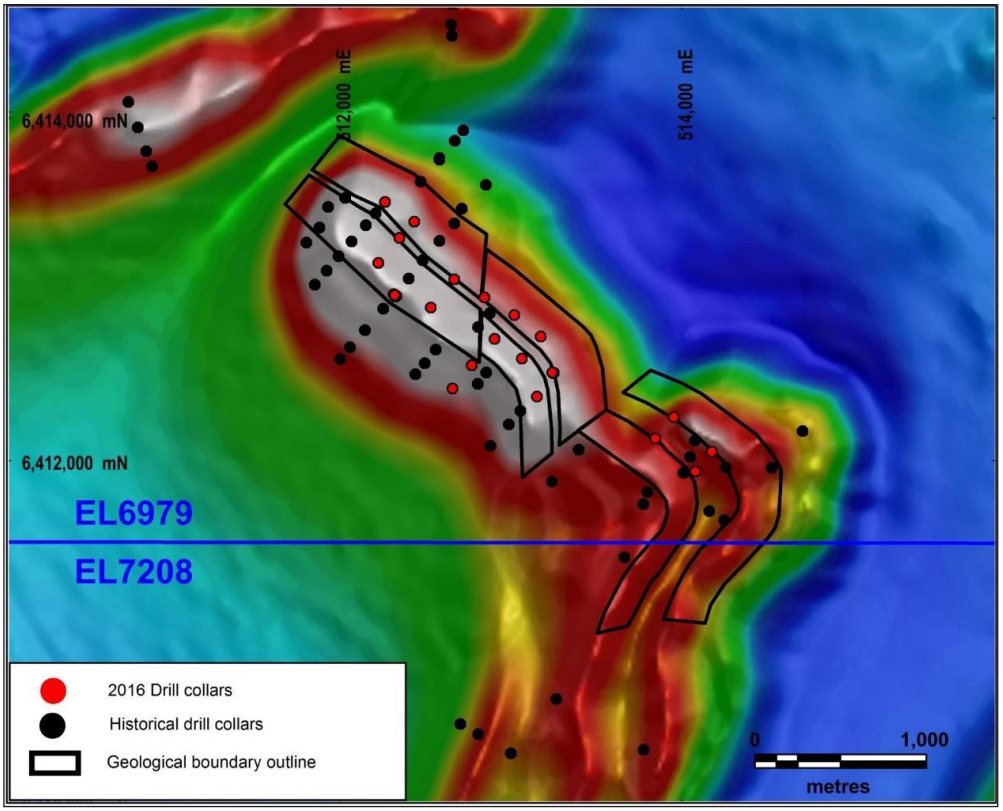
- Hawson's comprises three 100% owned granted Exploration Licences ("EL") for 511 km^2, and one Mining Lease Application ("MLA") for 187 km^2 - the granted tenements are in good standing (Figure 1).
- EL6979, for which the bulk of the Resource is located, is subject to a 1.5% NSR payable to Perilya Broken Hill Limited.
- The Project is close to infrastructure (Figures 1 and 8), including power, rail, and the regional mining centre of Broken Hill; as such there is ready access to skilled labour and services.
- Broken Hill itself is 500 km by highway from Adelaide, the capital of South Australia and 400 km from Port Pirie - the Project is a lot less remote than would appear at first glance, and is well situated when compared to many other significant mining projects.

Geology and Mineralisation

- Mineralisation at Hawsons is hosted within the Braemar Ironstone, a sedimentary formation within the Umberatana Group of the Neoproterozoic Adelaide Fold Belt.
- The magnetite bearing siltstones, which have been folded and metamorphosed to upper greenschist facies are identified by a series of parallel, high amplitude magnetic anomalies.
- Within the project area the unit forms a moderately WSW plunging syncline, with SW dips in the order of 45° to 65° in the northern NE-trending limb (Figures 4 to 6) - there is significant thickening around the nose of the syncline, resulting in the broad zones of mineralisation.
- The individual mineralised ironstones are up to 250 m thick, with the magnetite occurring as discrete disseminate grains with an average size of ~40 microns (0.04 mm) (Figure 7); these are inclusion free and do not occur as inclusions in other minerals, nor is there evidence for structural control on the mineralisation.
- Gangue minerals are largely comprised of quartz, mica and dolomite, and as mentioned previously, magnetite is readily liberated.

- Ironstones have been intersected down to a depth of ~400 mbs (and still open at depth), with it also being weathered to a depth of ~80 m; there is also a thin veneer of transported surficial cover.

Figure 4: Resource boundary and drill holes on magnetics image



Source: Hawsons Iron

MINERAL RESOURCES

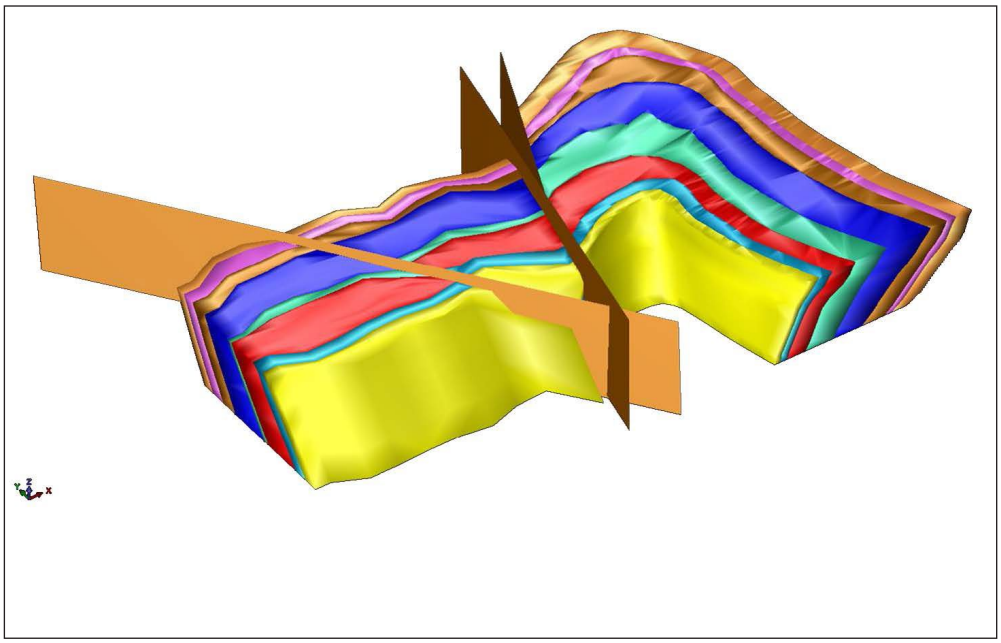
- The latest Mineral Resource Estimate ("MRE") upgrade was reported to the market on October 19, 2021; this was a result of a review of the June 2017 MRE as used in the PFS.
- No extra drilling was undertaken - the review and re-estimation was based on a detailed pit optimisation that resulted in the economic cut-off grade being reduced from 9.5% DTR (recovered magnetite) to 6.0% DTR.
- The optimisation used costs as used in the 2017 PFS, and revenue factors including forecast long term 62% Fe prices, applicable premiums for the premium magnetite product, and applicable royalties.
- The optimisation concluded that the outer boundary of the resource had not been totally identified - this, along with potential in other areas, has resulted in the calculation of an Exploration Target of 1,200 Mt to 1,800 Mt @ 12.5% to 13.5% DTR for 150 Mt to 250 Mt DTR concentrate; this is in addition to the updated MRE as presented in Table 1 below.
- The Company's tenements also host significant strike length of prospective Braemar Ironstone that are yet to be drill tested, thus providing additional upside.
- Lowering the cutoff grade has also negated a large part of the pre-strip that was included in the capital costs in the 2017 PFS.
- As discussed previously, of note is the high Fe grade, and the low grade of deleterious elements, making this a premium product, and thus that should demand premium prices.
- A key result is that the MRE contains 400 Mt of magnetite concentrate, which has led to the decision to investigate a 20 Mtpa/20 year operation.

Table 1: Hawsons October 2021 MRE - 6% DTR Lower Cutoff

Hawsons October 2021 MRE - 6% DTR Lower Cutoff									
Category	**Mt**	**DTR %**	**Con Tonnes**	**Fe %**	**SiO2 %**	**Al2O3 %**	**S %**	**P %**	**LOI %**
Indicated	960	13.7	132	69.9	2.6	0.19	0.002	0.003	-3
Inferred	2,100	12.9	268	69.7	2.8	0.2	0.003	0.004	-3.1
Total	3,060	13.1	400	69.8	2.8	0.2	0.003	0.004	-3

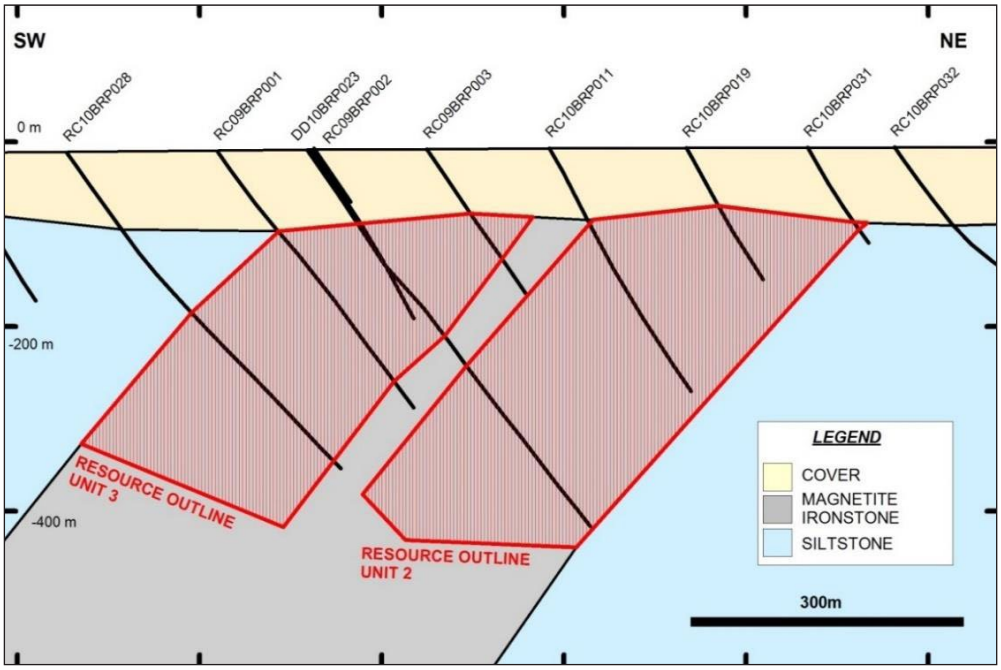
Source: Hawsons Iron

Figure 5: Isometric view showing resource zones and faulting - looking west



Source: Hawsons Iron

Figure 6: Cross section through the core zone of the resource - looking NW



Source: Hawsons Iron

- However, even with a high resource/reserve conversion ratio (the PFS had a 90% conversion from Indicated Resources to Probable Reserves), this will not provide the reserves sufficient to supply a 20 Mtpa operation for the purposes of a BFS.
- The Company, as part of the BFS, is now undertaking drilling (~160 holes) to upgrade the current Inferred and Indicated Resources, as well to expand the current resource, given the exploration target that is additional to the MRE as shown in Table 1.
- The MRE used data from 73 drillholes for 21,429.5 m; largely RC but with some diamond core drilling - all but four holes were drilled by Hawsons Iron.
- Drilling was generally on lines 200 m apart (with some wider 400 m spacing), with holes largely at 100 m and 200 m along lines.

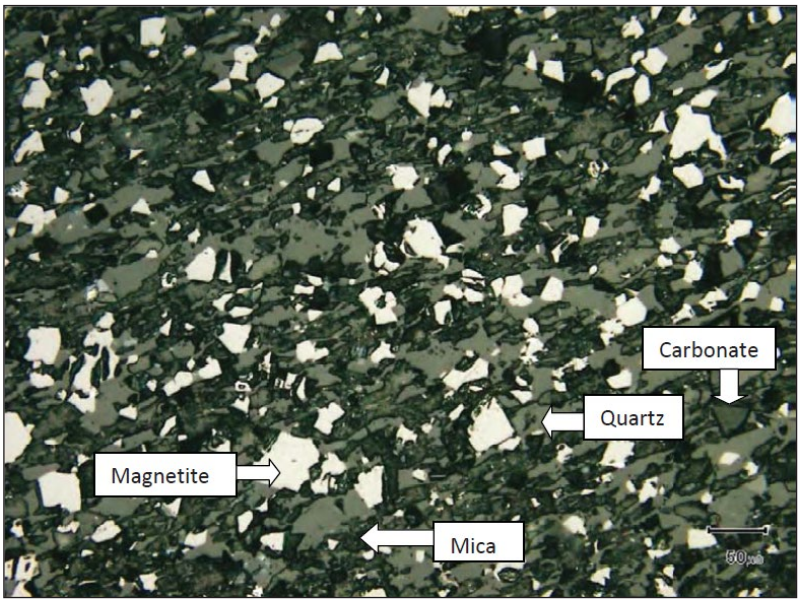
METALLURGY

- Simple metallurgy is a key strength of Hawsons, with factors (some discussed earlier) including:

- Disseminated magnetite grains without inclusions (Figure 7), resulting in easy liberation and the ability to produce a high grade, clean concentrate, potentially to the highest quality globally, and with close to 100% of the magnetite being recovered to a concentrate,
- Soft, with a bond work index of ~6.5, and estimated comminution power consumption of 12 kWh/tonne used in the plant design estimates, which is between 1/2 and 1/3 of that required for beneficiating equivalent grade/grind size BIF/taconite mineralisation - this lowers mining and processing costs through less power requirements,
- Actual power requirements in the pilot plant (discussed below) were significantly lower, being 6.9 kWh/tonne, with ongoing testing to confirm the power consumption,
- Low abrasiveness - decreases wear on mining and processing equipment, thus again reducing maintenance and replacement costs, and also makes the concentrate suitable for transport via slurry pipeline; and,
- Consistent DTR recoveries and concentrate quality throughout the deposit, obviating scheduling and processing issues that can arise from highly variable mineralisation.

- On the other hand, the mineralisation is fine grained, leading to the requirement to fine grind, which will offset some (but not all) of the power advantages of being soft, as well as being relatively low grade when compared to some other operations, requiring a larger plant/higher throughput for a given unit of concentrate production.

Figure 7: Polished section of the ironstone - scale bar is 50 microns



Source: Hawsons Iron

- As part of the current drilling programme samples will be collected for further metallurgical test work and optimisation, to follow up on the extensive work undertaken as part of the PFS - this included a pilot plant that treated eight tonnes of RC and diamond core samples.
- Ongoing metallurgical testwork is a critical part of the BFS with this also including a review of past work - it is probable that the process flowsheet as used in the PFS (and shown below) will change due to the result of the current activities - we have included the below for information purposes only.
- The pilot plant, with a P_{80} grind size of 26 microns resulted in an actual energy usage of 6.9 kWh/t (significantly less than the 12 kWh/tonne assumed in the BFS), with other bench scale tests on drill core achieving 9.7 - 10.7 kWh/t.
- The flowsheet used in the PFS was developed from the pilot scale work, and included:
  - Primary crushing - impact crushers,
  - Crushed ore stockpiling and reclaiming,
  - Secondary crushing - impact crushers
  - Primary concentration - rougher magnetic separators,
  - Grinding - ball mills,
  - Cleaner magnetic separators; and,
  - Hydro-separators, which are used to deslime the mineralisation, remove silica and thus upgrade the concentrate to the premium grades.

- Other work has included flotation undertaken on 60 kg of RC chips in South Africa - this resulted in a 91% iron recovery to a 69.1% Fe and 1.19% SiO_2 premium concentrate.
- The work has demonstrated the potential to produce both blast furnace and DR pellets using Hawsons concentrate.

PRE-FEASIBILITY STUDY

- As mentioned earlier, in 2017 the Company completed a PFS for Hawsons, producing 10 Mwtpa of concentrate (8% moisture), and based on the then MRE of 2,500 Mt @ 13.9% DTR for 348 Mt of magnetite concentrate - as part of the study initial Reserves of 755 Mt @ 14.7% DTR, for 111 Mt of contained concentrate were declared (Table 2).
- **This is presented for information purposes only given the ongoing BFS, which will result in updated figures.**
- One key point was that this assumed a 62% Fe iron ore benchmark price of US$63/tonne - prices have subsequently risen considerably, thus significantly increasing the NPV - should a 62% Fe price of US$100/tonne be used the NPV more than doubles.

Table 2: Hawsons PFS MRE and Reserves - 9.5% DTR Lower Cutoff

Hawsons PFS MRE and Reserves - 9.5% DTR Lower Cutoff									
Category	**Mt**	**DTR %**	**Con Tonnes**	**Fe %**	**SiO_2 %**	**Al_2O_3 %**	**S %**	**P %**	**LOI %**
Probable Reserves	755	14.7	111	69.9	2.6	0.19	0.002	0.003	-3.03
Indicated (inc. Reserves)	840	14.5	121	69.9	2.61	0.19	0.002	0.004	-3.04
Inferred	2,100	13.6	227	69.7	2.91	0.20	0.003	0.004	-3.04
Total	3,060	13.9	348	69.7	2.81	0.20	0.002	0.004	-3.04

Source: Hawsons Iron

- Tables 3 to 5 present the outcomes, costs and assumption of the PFS - costs were estimated to an accuracy of +-30%

Table 3: Hawsons PFS key economic results

Hawsons PFS key economic results		
Parameter	**Base Case**	**At July 26, 2017 prices 65% Fe fines, US$85.40/t**
Equity IRR (post tax, geared)	29.90%	37.90%
Equity NPV (10%) (post tax, geared)	US$1,091 m	US$1,626 m
Project IRR (post tax, ungeared)	17.80%	22.60%
Project NPV (10%) (post tax, ungeared)	US$867 m	US$1,432 m
Life of mine ave. annual revenue	US$881 m	US$983 m
Life of mine ave. all in costs	US$480 m	US$486 m
Life of mine annual margin (EBITDA)	US$401 m	US$497 m

Source: Hawsons Iron

Table 4: Hawsons PFS costs

Hawsons PFS costs			
Pre-production costs	**Cost**	**Operating and sustaining costs (after prestrip, ~Yr 3-22)**	**USD/dmt product**
Preproduction mining costs including prestrip	US$194 m	Mining	$12.14
Mining	US$242 m	Processing	$8.23
Processing	US$398 m	Infrastructure and admin.	$1.48
Infrastructure and administration	US$359 m	Rail and port	$11.23
Rail and port	US$208 m	**Total C1 FOB**	**$33.08**
Total [1,2,3]	US$1,401 m	Sustaining capital [4,5]	$3.48
[1] incl EPCM 12.5%/contract management of 3% of US$127m		Royalties	$3.18
[2] incl. contingency and design growth (av. 16.5%)		**Total all in FOB**	**$39.74**
[3] excludes finance costs		Sea freight	$8.29
[4] excludes new in-pit conveyor in yr 5 - US$120 m		**Total CFR China**	**$48.03**
[5] net of salvage		Less Supergrade premium	$25.00
		62% Fe equivalent total CFR	**$23.03**

Source: Hawsons Iron

Table 5: Hawsons PFS key assumptions

Hawsons PFS key assumptions					
Production Parameters	**Value**	**Price Parameters**	**Value**	**Financial Parameters**	**Value**
Total ore mined	1423 Mt	62% Fe fines benchmark	US$63/t	AUD:USD	0.75
Total waste mined	717 Mt	65% Fe fines benchmark	US75/t	Debt:equity	65:35
Total Product	201 Mt	Plus 5 x Fe 1% @ US$1.10	US$5.50/t	Corporate tax	30%
Product Specification	70% Fe	Plus magnetite premium	US$7.50/t	Loan term	10.5 years
Annual production	10 Mt	Product revenue (dmt)	US88.00/t	Delivered rebated diesel proce	A$0.89/l
Moisture	8%	Ave 2020 - 2030 forecast (real 2016)		Delivered power price	A$95/MWh

Source: Hawsons Iron

Mining

- Planned mining is by conventional drill and blast, utilising shovels and trucks for moving ore and waste - the average LOM material movement was estimated at 107 Mtpa for a 10 Mtpa concentrate operation of 20 years, and with a strip ratio of ~0.4:1 following the pre-strip - including the pre-strip the strip ratio is 0.5:1.
- Use of an in-pit conveyor was also planned from Year 5 onwards.

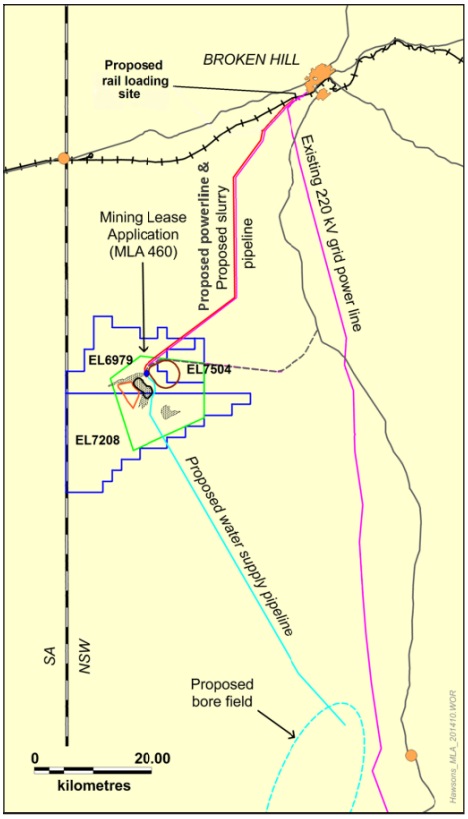
Processing and Concentrate Transport

- The planned processing flowsheet is as discussed in the section on metallurgy above, with concentrate then slurried, and transported via a ~70 km slurry pipeline (including a return water pipeline) to a rail siding near Broken Hill where it would be dried, and loaded into rail wagons for the 400 km trip to Port Pirie.
- A port study completed in 2015 allowed for a 21 Mtpa barge loading facility, a 300 kt storage shed and unloading utilising "straight loops" in the existing rail corridor.
- Concentrate would be moved from the shed to wharf via enclosed conveyors, where it would be loaded onto 12,000 t to 17,000 t self-propelled geared barges for transhipment to bulk ore carriers moored offshore in the Spencer Gulf.
- It was estimated that a 170,000 DWT ship could be loaded in under two days.

Infrastructure

- A map of the infrastructure as used in the PFS is presented in Figure 8.

Figure 8: Hawsons PFS infrastructure



Source: Hawsons Iron

- The estimated average power usage for the Project is 87.4 MW over three load centres (mine and concentrator, rail head, borefield), with total installed power of 138 MW.
- The existing 220 kV line running from Buronga (near Mildura) to Broken Hill has sufficient spare capacity to meet the project requirements, and thus it is planned to connect into this as mentioned earlier this will also be able to supply an expanded operation).
- A bore field with a sufficient supply of water from a deep saline aquifer has been identified 90 km south of the proposed mine site - the water is available for allocation under regulations as of 2017.
- Water would be pumped to the mine site, to be desalinated through a reverse osmosis plant; in addition water would be recovered from the drying of the concentrate slurry and pumped back to site via a return water line.
- As an aside, in the case of the current BFS, should a slurry pipeline to the coast be considered, the return pipeline could also be used to pump back sea water, however which has a higher salinity than the bore water, and thus would require more power to desalinate.

PEERS

- Table 6 presents several iron ore juniors, ranging from pre-resource to operating. The companies most directly comparable to Hawsons Iron are Magnetite Mines, whose Razorback project, like Hawsons, is based on mining and treating the Braemar ironstone, and Iron Road, which has the planned Central Eyre Iron Project ("CEIP") on the Eyre Peninsula, and for which it is looking to develop a multi-user port (Port Hardy) on the eastern side of the Eyre Peninsula. Mineralisation at the CEIP is hosted in a magnetite-bearing gneiss.

Table 6: Hawsons Iron peers

Hawsons Iron peers						
Company	**Code**	**EV**	**Equity Fe**	**EV/t Fe**	**Location, type**	**Status**
Macarthur Minerals Limited	MIO	$174.0 m	398 Mt	$0.44	Mt and DSO, Lake Giles, WA	Permitting, financing
Iron Road Ltd	IRD	$147.9 m	744 Mt	$0.20	Magnetite, South Australia	Sourcing partners, financing
Hawsons Iron Ltd	HIO	$118.3 m	381 Mt	$0.31	Hawsons Magnetite, NSW	PFS - July 2017. Now DFS, financing
Red Hill Iron Limited	RHI	$117.1 m	33 Mt	$3.51	Pannawonica CID, Pilbara, WA	Sold share of RHIJV to MinRes (with a royalty to come), own Pannawonica Project
Magnetite Mines Limited	MGT	$95.0 m	480 Mt	$0.20	Razorback magnetite, South Australia	PFS completed July 2021, now DFS
Fenix Resources Ltd	FEX	$73.2 m	6 Mt	$11.59	BIF, Yilgarn WA	Producing ~1.2 mtpa from Iron Ridge north of Cue
GWR Group Limited	GWR	$34.8 m	72 Mt	$0.48	BIF, Wiluna West, Yilgarn	Currently halted mining, however shipping - ~1 mtpa operation
Akora Resources Limited	AKO	$21.2 m	0 Mt	N/A	Mt and DSO, Madagascar	Drilling Kekisopa in Madagascar
CZR Resources Ltd	CZR	$20.8 m	41 Mt	$0.51	Robe Mesa CID, Pilbara, WA	Undertaking FS on 85% owned Robe Mesa CID project. Has other WA projects
Kogi Iron Limited	KFE	$8.7 m	248 Mt	$0.04	Agbaja CID, Nigeria, various, WA	FS - Agbaja, Exploration, WA
Pearl Gull Iron Limited	PLG	$4.5 m	0 Mt	N/A	Cockatoo Island haematite, WA	Drilling - previously mined area

Source: IRESS, Company Reports, IIR analysis

- Table 7 presents a comparison of parameters of magnetite projects that are the subject of development studies, else now in development
- All are broadly similar, with the exception of Magnetite Mines, which has a significantly smaller planned production profile than the others - this will explain the relatively high operating costs and capital intensity.

- However, MGT's costs are similar when scaled (using a 0.6 exponent) to an operation of a similar size to those presented by Iron Road and Hawsons Iron.
- We have also scaled FMG's costs to that for a 10 Mtpa operation (not presented in the table), with the scaled capex being US$2,125 million and the operating costs US$60/tonne - the scaling factor used is (22/10)^0.6, or 1.6.
- We do not have details of the different cost centres for FMG, however we would expect that some of the costs are due to the location in the Pilbara (and having to generate their own power).
- Also the mineralisation is BIF hosted, considerably harder than that for Hawsons and Razorback - even allowing for the higher DTR recovery at Iron Bridge, we may expect that the overall comminution power requirements per tonne of concentrate for the Braemar deposits are significantly lower than those for the BIF hosted deposits.
- We also present Hawsons PFS figures escalated by 12.5% to reflect estimated mining industry price inflation over the close to five years since the study was completed

Table 7: Magnetite project details

Magnetite project details						
		HIO		MGT	IRD	FMG
Parameter	Units	Hawsons 10 Mtpa - 2017 PFS	Hawsons 10 Mtpa - 2017 PFS costs escalated	Razorback - 2021 PFS Optimised Case	CEIP - 2019 BFS Update	Iron Bridge - Development
Magnetite Production	Mtpa - wet	10	10	2.2	13	22
Concentrate Grade	Fe % - Dry	69.8%	69.8%	68.0%	66.7%	67.0%
DTR Recovery	%	14.70%	14.70%	14.50%	15.00%	29.4%
Rom Mined	Mtpa	68.0	68.0	18.0	86.7	75
RoM Milled	Mtpa	68.0	68.0	15.5	86.7	75
Strip Ratio	Waste : Ore	0.40 :1	0.40 :1	0.10 :1	0.97 :1	?
Waste Mined	Mtpa	27.2	27.2	1.8	84.1	?
Tonnes Mined/Tonnes Con	Mtpa	9.5	9.5	9.0	13.1	?
Initial Capex	US$ m	$1,401	$1,576	$665	$1,740	$3,400
Cap int/tonne con	US$/tonne	$140	$158	$302	$134	$155
Cap int/tonne milled	US$/tonne	$21	$23	$43	$20	$45
C1 Cost Estimate	US$/tonne Con	$33	$37	$88	$44.5	$33 - $38
Sustaining Capital	US$/tonne Con	$3.48	$3.92	$4.53	$3.80	$5 - $7
C1 + SC	US$/tonne Con	$36.48	$41.04	$92.53	$48.30	$38 - $45
C1 Cost Estimate	US$/tonne Milled	$4.85	$5.46	$12.49	$6.68	$10.44
Sustaining Capital	US$/tonne Milled	$0.71	$0.80	$1.77	$1.00	$1.76
C1 + SC	US$/tonne Milled	$5.56	$6.26	$14.26	$7.68	$12.20
Power		Grid	Grid	Grid	Grid	Owner Provided
Transport		Slurry, Rail	Slurry, Rail	Road, Rail	Road	Slurry
Port		Port Pirie	Port Pirie	Whyalla	Planned Port Hardy, Eyre Peninsula	Port Hedland
Notes		PFS case has a ~150 Mtpa pre-strip			DTR rec est by IIR	

Source: IRESS, Company Reports, IIR analysis

VALUATION

- We have undertaken a valuation for Hawsons Iron based on the 2017 PFS, with our per share valuation using a conceptual 70% debt/30% equity scenario presented in Table 8 - in this case the Project valuation is on an after tax and funded scenario.
- **Given that this is based on a conceptual funding structure and a previous production scenario, and with the Project now subject to a BFS which may well provide a different scenario and figures, this valuation should be treated as indicative only - to deal with changes we have also included a sensitivity analysis as presented in Tables 11 to 13.**

Table 8: Hawsons Iron indicative base case valuation

Hawsons Iron indicative base case valuation						
Item			Equity Share			
	Total AUD	Ownership	Per Share	Risk Factor	Risked AUD	Risked/Share
Hawsons - DCF	A$6,186 m	100%	A$2.775	30%	A$1,856 m	A$0.833
Cash - 31/12/21	A$32 m	100%	A$0.014	100%	A$32 m	A$0.014
Starlight Payments	-A$10 m	100%	-A$0.004	100%	-A$10 m	-A$0.004
Option Cash	A$61 m	100%	A$0.027	100%	A$60 m	A$0.027
Total	**A$6,269 m**		**A$2.812**		**A$1,938 m**	**A$0.869**
Project Modelling Parameters	Shares - post financing	2,229 m	Post Tax	Funded	Equity Price	A$0.50
	Discount Rate	7.50%	AUD/USD	0.72	65% Fe Fines	US$130/tonne

Source: IIR analysis

- Per share valuations are diluted for current options and the conceptual project finance equity (30% @ A$0.50/share) - we have also included the cash on option conversion as a separate line - this has not been run through the Project model.
- We note that this equity price is significantly higher than the current price, however we would expect appreciation with ongoing activities and the release of the BFS at the end of 2022 - the sensitivity of the valuation to changes in the equity price is presented in Table 13.
- Even if the equity price is set at A$0.20/share the risked project per share valuation is A$0.43/share, still well above the current price and the raise price.
- The Project valuation has been risked to reflect the project stage to arrive at an indicative per share market valuation - a rule of thumb is that straightforward mining projects that are financed and construction ready trade at a value of ~40% of the project's NPV.
- Given the stage of the Project, we have used a more conservative risk multiplier of 30%.
- We would expect upside with ongoing progress on the current work programme, and should the Project be developed, for the market valuation to approach the technical valuation on demonstrating successful operations.
- Table 9 presents key model parameters, with Table 10 presenting key operational and financial outcomes, as well as the financing parameters.
- Table 10 also includes pre-tax/ungeared and post-tax/ungeared valuations.
- The valuation is based on the 2017 PFS with the following key changes:
  - USD costs were converted to AUD using an exchange rate of 0.75, which was that used in the study,
  - The AUD costs were then inflated by 12.5% to reflect the time since the study was completed - this is higher than the ~10% CPI increase since that time, however costs have generally increased at a greater rate in the mining industry,
  - We have used a 65% Fe CFR price of US$130/tonne (close to the average for the past 15 years), and a magnetite/grade premium of US$18.30/tonne; and
  - We have adjusted the CFR price to FOB Port Pirie using an estimated shipping cost of US$12/tonne - the shipping cost in the PFS study was US$8.29/tonne, however the Baltic Dry Index has increased by ~50% since that time.
- We have added additional funding requirements of A$250 million to cover financing costs and working capital.

Tables 9 & 10: Hawsons Iron Project - key inputs, and financial and operating outcomes

Hawsons Iron Project - key inputs		
Item	**Units**	**Phase 1**
Con Peak Production Rate - wet	Mtpa	10,000,000
Total Con Production - wet	t	200,000,000
Construction Start	Year	2023
Construction End	Year	2024
Production Start	Year	2025
Mine Life	Years	20
Cash Operating Costs - FOB	A$/Tonne Con	$60
Up Front Capex	A$ Million	$2,100
Capital Intensity	A$/tonne capacity	$210
Up Front Capex	A$/Tonne Con LOM	$10.5
Sustaining Capex Rate	% of Upfront pa	2.0%
LOM Sustaining Capex	A$ Million	$840
Sustaining Capex	A$/Tonne Con LOM	$4.20
Revenue	A$/Tonne Con	$238
Operating Margin	A$/Tonne Con	$178

Hawsons Iron Project - financial and operating outcomes		
Item	**Units**	**Value**
Financial and Operating Outcomes - 100% Basis		
Mine Life	Years	20
Total Con Sold - dmt	Tonnes	184,000,000
Sales Price - FOB South Australia	A$/tonne	$238
Pre-Tax NPV, mid-year	A$m	$11,928 m
Pre-Tax IIR	%	42%
Post-Tax NPV, Mid-Year	A$m	$9,154 m
Post-Tax IIR	%	36%
Funded, Post -Tax NPV	A$m	$8,973 m
LoM Revenue	A$m	$43,777 m
LoM Opex	A$m	-$12,252 m
LoM EBITDA	A$m	$31,525 m
LoM Capex	A$m	-$2,940 m
LoM Tax	A$m	-$8,342 m
LoM Interest	A$m	-$780 m
LoM Net Financing	A$m	$509 m
LoM FCF	A$m	$19,973 m
Peak Annual FCF	A$m	$1,286 m
Peak Annual EBITDA	A$m	$1,577 m
Discount Rate	%	7.50%
Corporate Tax Rate	%	30.00%
Project Financing		
Initial Capex	A$m	$2,100 m
Working Capital, Debt Service etc	A$m	$250 m
Total Financing Amount	A$m	$2,350 m
Project Finance Debt	%	70%
Debt Amount	A$m	$1,645 m
Financing Term	Years	10
Interest Rate	%	7.5%
Project Finance Equity	A$m	$705
Equity Price	A$/share	$0.50
Diluted Shares on Issue	Million on Issue	2,229
Exchange Rate	AUD:USD	0.72

Source: IIR Analysis

- We have also undertaken a sensitivity analysis as presented in Tables 11 and 12 - Table 11 is included to present the sensitivity of the Project's technical valuation to changes in key factors, whereas Table 12 presents the sensitivity of the risked share price to the CFR 65% fines price and operating costs.
- What this presents is an overall robust project, that can absorb adverse changes of 20% in the key inputs.

Table 11: Hawsons unrisked pre-tax sensitivity analysis

Hawsons Iron Project unrisked pre-tax sensitivity analysis				
Change	**Con Price**	**Opex**	**Capex**	**DTR**
-20%	A$ 5,289.34	A$ 8,422.06	A$ 8,416.00	A$ 7,371.39
-10%	A$ 6,533.84	A$ 8,100.19	A$ 8,118.36	A$ 7,574.86
0%	A$ 7,778.33	A$ 7,778.33	A$ 7,778.33	A$ 7,778.33
10%	A$ 9,022.82	A$ 7,456.46	A$ 7,395.92	A$ 7,981.80
20%	A$ 10,267.31	A$ 7,134.60	A$ 6,971.13	A$ 8,185.27

Source: IIR analysis

Table 12: Hawson risked per share sensitivity analysis

Hawsons Iron Project risked per share sensitivity analysis						
		Change in Operating Costs				
		-20%	-10%	0%	10%	20%
65% Fines CFR Price	US$100	A$ 0.60	A$ 0.55	A$ 0.51	A$ 0.47	A$ 0.42
	US$125	A$ 0.87	A$ 0.82	A$ 0.78	A$ 0.74	A$ 0.69
	US$150	A$ 1.13	A$ 1.09	A$ 1.05	A$ 1.00	A$ 0.96
	US$175	A$ 1.40	A$ 1.36	A$ 1.31	A$ 1.27	A$ 1.23
	US$200	A$ 1.67	A$ 1.63	A$ 1.58	A$ 1.54	A$ 1.50
	US$225	A$ 1.94	A$ 1.89	A$ 1.85	A$ 1.81	A$ 1.76

Source: IIR analysis

- Table 13 presents the effect of different equity pricing on the unrisked and risked Project per share valuations - we expect that, with material progress, that the risked valuation will increase.

Table 13: Project per share sensitivity to equity price

Project per share sensitivity to equity price			
Equity raise price A$	**Value/Share**		**Shares on Issue Post Financing**
	Unrisked	**Risked**	
$0.20	A$1.42	A$0.43	4,344 m
$0.30	A$1.95	A$0.59	3,169 m
$0.40	A$2.40	A$0.72	2,582 m
$0.50	A$2.78	A$0.83	2,229 m
$0.60	A$3.10	A$0.93	1,994 m
$0.70	A$3.39	A$1.02	1,826 m
$0.80	A$3.64	A$1.09	1,700 m
$0.90	A$3.86	A$1.16	1,602 m
$1.00	A$4.06	A$1.22	1,524 m

Source: IIR analysis

BOARD AND MANAGEMENT

- Note that the following has been extracted directly from the Company's website.
- **Mr Bryan Granzien - Executive Chairman**
  - B. Business
  - GAICD – Graduate of the Australian Institute of Company Directors
  - Fellow – CEO Institute
  - 30+ years experience in resources sector
  - ASX experience across mining, agribusiness, information technology and steel manufacturing
  - Ex Senior Executive MIM Holdings and Grainco Australia
  - Ex GM Neumann Steel and NatSteel Australia
  - Ex Director/CEO Tata Steel Resources and Kalimati Coal
- **Mr Paul Cholakos - Non-Executive Director**
  - Master Business Administration (MBA)
  - B. Engineering (Mining)
  - 30+ years experience in resources sector
  - Ex Executive: Oil Search Limited (ASX:OSH) and Exeter Resources
  - Broad international experience in North America, South America and Asia-Pacific
  - 20+ years in senior technical and commercial project roles
  - Central to Oil Search's transition to an LNG producer, leading key elements of PNG LNG through construction, start up and to steady state operations
- **Mr Jon Parker - Non-Executive Director**
  - B. Science (Physical Chemistry Hons)
  - Grad. Dip Business Admin.
  - 40+ years experience in the resources sector
  - Ex General Manager of Commercial Iron Ore for Rio Tinto (26 years with Rio)
  - Ex Managing Director Felix Resources and Norton Goldfields
  - Distinguished record in executive management and value creation across the resources sector for a range of ASX-listed companies, where he has overseen substantial growth in market capitalisation
- **Mr Greg Khan - Chief Financial Officer / Company Secretary**
  - B. Business (Accounting), (MIPA), (FGIA), (AFA), (MIMC), JP (Qual)
  - ASX CFO with more than 25+ years in financial, management and cost costing
  - Experienced in corporate governance, financial control, management accounting, financial modelling, operational excellence and supply chain optimisation, across multiple industry sectors
  - Member – Institute of Public Accountants
  - Fellow – Governance Institute of Australia
  - Associate – Institute of Financial Accountants
  - Member – Institute of Management Consultants
  - Member – Queensland Justices Association
- **Mr Glenn Vassallo - Capital Finance Lead**
  - B. Laws
  - B. Commerce
  - Member – Law Council of Australia Company Law Committee
  - Member – Law Council of Queensland
  - 20+ years' experience in equity and debt capital markets
  - 10+ years' experience in project finance
  - Co-Founder of GRT Lawyers and the GRT Foundation
  - Significant ASX experience at Executive and Non-Executive level
  - Guest speaker on global topics such as equity and debt raising and impact investing

- **Ms Kerry Bailey - Corporate Communications Lead**
  - B. Business (Communication)
  - 20+ years' experience managing company reputations, issues, change and stakeholder relations
  - Sector experience across renewable energy, mining, agriculture, property, retail, and manufacturing.
  - Previous leadership roles combining expertise in communications and human resources for Grainco Australia and consultancy Three Plus
- **Mr Justin Haines - General Manager, Operations**
  - B. App. Science (Geology)
  - G. Dip. Science (Honours)
  - M. Mining Engineering
  - Member – Australasian Institute of Mining and Metallurgy
  - Member – Australia Institute of Geoscientists
  - 25+ years experience in resources industry
  - Over 10 years in technical executive roles in listed resource development companies
  - Over 10 years in mining and resource consultancies
  - Broad commodity experience including 3+ years in iron ore
- **Mr Wes Nichols - Geology Manager**
  - B. A. (Science)
  - M.App.Sc (Geophysics)
  - Member – Australasian Institute of Mining and Metallurgy
  - Member – Geological Society of Australia
  - Fellow – Institute of Quarrying Australia
  - Over 30 years in mining and exploration geology
  - Over 20 years in senior geology and exploration management roles with listed mining companies
  - Over 7 years in mining and resource consulting
- **Mr Ray Koenig - Process Plant Specialist**
  - B. Science
  - Dip Met ASMB, FAusIMM CP
  - Technical Director of the Hawsons Iron Project since 2010
  - Developed initial scoping study for the Hawsons project which progressed to the pilot testing and PFS
  - Ex Executive of Pickands Mather (now Cleveland Cliffs)
  - Experienced in base metal and magnetite operations
  - Experienced in engineering and design
- **Mr Dean Roberts - Broken Hill Manager**
  - Grad Cert Organisational Safety and Human Factors(Current)
  - Advanced Diploma in WHS (Current)
  - Investigation Management (CSU)
  - Experienced WHS Inspector of Mining for SafeWork SA
  - 20+ years' experience in underground, opencut, exploration and surface operations
  - Senior roles with Uranium One, Nexgen Energy, Heathgate Resources and Thompson Drilling
  - Experienced project developer and manager, site manager and operations manager
  - Experienced work health and safety, environment, quality and engagement professional

- **Mr Rohan Koenig - Study Manager**
  - Masters of Engineering Management (Current)
  - Grad. Dip Engineering Management
  - Grad. Cert Project Management
  - Grad. Dip Applied Science (Aquaculture)
  - B. Science (Biology)
  - Long term role with GHD with project experience for Grange Resources, Bluestone Mining, Hawsons Iron, Harmony Gold, Lottah Mining, Rum Jungle Resources and MMG
  - Skills include 3D tunnel mapping, geotech monitoring, photogrammetry and ground penetrating radar
- **Mr Peter Brennand - Procurement Manager**
  - B. Business
  - Masters of Business Administration
  - MCIPS – Chartered Institute of Procurement and Supply
  - Leadership roles in oil & gas, mining, engineering and construction
  - Senior roles with Lockheed Martin, Beach energy, UTAS, Clough Engineering, Maersk Oil Qatar, BP Exploration (Iraq), Ausenco & Thiess
  - Skills include contract formulation, procurement strategies, transformation, stakeholder engagement and process improvement

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