



22 January 2020

## QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDED 31 DECEMBER 2019

### Highlights

- Feasibility Study completed in October 2019 showing that Iron Ridge will generate outstanding cashflow and financial returns:
  - Initial capital cost of just \$11.9 million, with 56% payable on a pre-production basis and the remainder expected to be payable after the first shipment
  - Average annual EBITDA of \$16.4 million
  - Estimated pre-tax Internal Rate of Return of 58.9% and Net Present Value of \$54.3 million (based on a real pre-tax discount rate of 10% on an ungeared basis)
  - The Feasibility Study assumed a 62% Fe index price of \$111.43 per dry metric tonne (US\$78/t and AUD:USD of US\$0.70) compared with current price of \$139.32 per dry metric tonne (US\$95.85/t and AUD:USD of US\$0.688) (Prices as at 21 January 2020)
- Ore Reserves of 7.76Mt @ 63.9% Fe underpin 96.5% of the LOM production with the rest in Inferred Resources
- Highly Experienced Mining Executive Mr Garret Dixon appointed Non-Executive Chairman effective 1 January 2020

Western Australian developer and explorer Fenix Resources Limited (ASX: FEX, “Fenix” or the “Company”) is pleased to report on its activities for the December 2019 quarter.

### Feasibility Study confirms the technical and financial viability of Iron Ridge

During the quarter Fenix advised the findings of the Feasibility Study (“FS”) relating to the Iron Ridge Project (“Project”). The FS revealed a high-grade and high-quality Project that provides strong returns over its life of mine (“LOM”).

The FS estimated that Iron Ridge will have modest initial capital cost of just \$11.9 million, 44% of which will not have to be paid until after the expected first shipment is dispatched.

The FS included a maiden Ore Reserve of 7.76Mt at 63.9% Fe. This underpins forecast annual production of 1.25 million tonnes.

The forecast annual EBITDA is \$16.4 million is based on C1 cash operating costs of \$76.86 a tonne and an assumed 62% Fe index price of \$111.43 per dry metric tonne (dmt) (US\$78/t at a AUD:USD exchange rate of US\$0.70 per A\$). This compares with the benchmark price as at 21 January of \$139.32/t.

Iron Ridge, which is located 490km from the Port of Geraldton, is planned to be a Direct Shipping Ore (“DSO”) operation. Ore will be crushed and screened on site and separated into lump and fines product before being trucked to port.

**The FS confirmed the following key attributes of Iron Ridge:**

- High-grade nature of the deposit;
- Existing infrastructure that is currently under-utilised (bitumen roads, surplus port storage capacity, surplus ship loading capacity);
- Granted Mining Lease which contains all the Mineral Resource;
- Rapid Delivery Time with the ability to mine ore from month one of operations; and
- Meaningful production at a simple single-excavator scale able to maintain a steady state production profile of 1.25Mtpa.

Operating Metrics	Unit	Feasibility Study Outcome
Processing Capacity	Mtpa	1.25
Average Strip Ratio	Waste:ore (tonnes)	2.86:1
Total Mineral Inventory	Mt	8.0
Initial Mine Life	Months	77
Average C1 Cash costs	A\$/dmt	76.86

Financial Metrics*	Unit	Feasibility Study Outcome
Project Life of Mine Revenue	A\$m	802.9
Project net cash flow	A\$m	110.4
Estimated C1 cash operating cost	A\$/dmt	76.86
Pre-Production Capex	A\$m	11.4
Pre-Production Capex Contingency	A\$m	0.5
NPV <sub>10</sub>	A\$m	54.3
IRR*	%	58.9
Annual Average EBITDA	A\$m	16.4

The above financial metrics were based on a flat forecast 62% Fe index price of US\$78/dmt for the LOM and a flat forecast exchange rate A\$/US\$ of 0.70 for the LOM.

## Project Management

The FS was executed by Fenix management with the support of experienced consultants including Mining Plus, CSA Global and HFC Mining, as follows:

Table 1: Project Management Consultants

Component	Consultant
Marketing & Shipping	M2A Partners / Thurlestone Shipping
Resource Estimation	CSA Global
Mine Design and Schedules	Mining Plus
Geotechnical Assessment	Peter O'Bryan & Associates
Hydrological Assessment & Modelling	Rockwater
Metallurgical Testwork	ALS / Nagrom / CSIRO
Marketing & Shipping	M2A Partners / Thurlestone Shipping
Metallurgical Assessment	METS Engineering
Engineering	HFC Mining
Road Transport Logistics	Fenix Newhaul Pty Ltd
Mining Operations	MACA Limited

The vast majority of inputs into the FS were derived from commercial proposals/quotations from experienced and highly capable service providers meaning that there is strong confidence in both the operating and capital cost estimates.

## Mineral Resources and Ore Reserves

The FS was based on the independently modelled Mineral Resource by CSA Global using a 58% Fe cut-off grade. The resulting Indicated and Inferred Resource is 10.5Mt at 64.2% Fe (Refer ASX release dated 21 August 2019 "Significant Increase in Iron Ridge Mineral Resource") outlined below:

Table 2: Iron Ridge Project – Mineral Resource estimate <sup>(1)</sup>

Classification	Tonnes Mt	Fe %	Al <sub>2</sub> O <sub>3</sub> %	LOI %	P %	SiO <sub>2</sub> %	TiO <sub>2</sub> %
Indicated	10.0	64.3	2.56	1.90	0.046	3.21	0.09
Inferred	0.5	62.5	2.80	3.13	0.046	4.41	0.12
<b>Total</b>	<b>10.5</b>	<b>64.2</b>	<b>2.57</b>	<b>1.96</b>	<b>0.046</b>	<b>3.26</b>	<b>0.09</b>

<sup>1</sup> Refer to the Company's Announcement dated 21 August 2019 for Listing Rule 5.8 information

Based on the current Mineral Resource, Mining Plus conducted a series of pit optimisations and mine designs with input from our geotechnical, hydrological and mining consultants. Detailed mine design and mine scheduling was then conducted before Fenix conducted a detailed Request for Proposals (RFP) from several mining services proponents.

Ore Reserves were then declared by Mining Plus based on a combined fines and lump production rate of 1.25Mtpa with a life of mine waste to ore stripping ratio of 2.86:1.

*Table 3: Iron Ridge Project – Ore Reserve*

<b>Classification</b>	<b>Tonnes</b> Mt	<b>Fe</b> %	<b>Al<sub>2</sub>O<sub>3</sub></b> %	<b>LOI</b> %	<b>P</b> %	<b>SiO<sub>2</sub></b> %	<b>TiO<sub>2</sub></b> %
Probable	7.76	63.9	2.79	2.00	0.05	3.46	0.09
<b>Total Ore Reserves</b>	<b>7.76</b>	<b>63.9</b>	<b>2.79</b>	<b>2.00</b>	<b>0.05</b>	<b>3.46</b>	<b>0.09</b>

Ore Reserves are derived from Indicated Resources and the Mineral Resources outlined above in Table 2 are inclusive of the Ore Reserves.

## FEASIBILITY STUDY KEY DETAILS

### Capital Costs

Capital cost estimates were prepared based on site establishment and mobilisation estimates from the RFP process, quotations from Cue Shire on road upgrade requirements, tenders for the mining camp and other associated project infrastructure, estimates of pre-production owner's costs from HFC Mining and initial contribution requirements to the road transport JV derived from the road transport model.

Initial capital costs to establish the operation are estimated at \$11.9 million, which includes \$520,000 in contingencies and \$1.25 million of total contributions to the Fenix Newhaul road transport joint venture. More than 80% of the capital cost estimate was derived from recent commercial proposals from reputable service providers. Approximately 44% of the estimated capital costs are not payable until commercial production has been achieved, meaning there is a high likelihood that these costs will be funded from the proceeds of the first shipment.

Table 4: Initial Capital Cost estimates

Item	Pre Start-up Capital Cost (A\$m)	At Commercial Production Cost (A\$m)	TOTAL CAPEX (A\$m)
Roads	2.76	0.00	2.76
Infrastructure Pads	0.33	0.00	0.33
Contractor Mobilisations	0.00	0.99	0.99
Mine Site Infrastructure	1.20	3.88	5.08
Owners Site Costs	0.79	0.21	1.00
Contingency	0.39	0.13	0.52
<b>Total Project Development Capex</b>	<b>5.46</b>	<b>5.20</b>	<b>10.67</b>
Haulage JV Contribution	1.25	0.00	1.25
<b>Total Capex</b>	<b>6.71</b>	<b>5.20</b>	<b>11.92</b>

There is a further \$3 million of capital to be spent in year one of the project, with more than 90% of that amount likely to occur in quarter four.

Table 5: Capex to be Incurred in Year 1

Item	Year 1 Capital Cost (A\$m)
Roads	1.89
Infrastructure Pads	0.00
Contractor Mobilisations	0.50
Mine Site Infrastructure	0.00
Owners Site Costs	0.43
Contingency	0.18
<b>Total Project Development Capex</b>	<b>3.00</b>
Haulage JV Contribution	0.00
<b>Total Capex</b>	<b>3.00</b>

## Operating Costs

Mining schedules were prepared by Mining Plus in consultation with Fenix management. Operating cost estimates were compiled from the results of the Request For Proposal process for the mining and processing component, the detailed road transport model prepared by Newhaul, published tariffs and a leasing cost estimate of port infrastructure from Mid West Ports Authority, and owner's costs estimated by HFC Mining.

C1 Cash Operating Costs are forecast at \$76.86 per dry metric tonne FOB over the life of the mine, with 56.3% attributable to road transport costs, 27.1% to mine and processing, 12.1% to port costs and 4.5% to corporate and administration. Including royalties, cash costs are estimated at \$86.10/dmt FOB (US\$60.27/dmt).

Table 6: Operating Cost estimates

Item	Life of Mine Cost (A\$/dmt)	Life of Mine Cost (US\$/dmt)
Mining & Processing	20.87	14.61
Road Haulage	43.27	30.29
Port storage, handling & ship loading	9.27	6.49
Corporate & administration	3.45	2.41
<b>C1 Operating Cash Costs (FOB)</b>	<b>76.86</b>	<b>53.80</b>
Royalties	9.24	6.47
<b>Cash Costs (FOB)</b>	<b>86.10</b>	<b>60.27</b>

## Production Profile

The FS is based on single open pit operation using conventional mining techniques providing 1.25Mtpa of high-grade iron ore to the crushing and screening plant for a mine-life of 6.5 years. The production schedule targeted the Indicated Resources, which were used for the Ore Reserve determination, with Inferred Resources added as additional tonnes where it was mined as part of the extraction process for the Indicated Resources. Over the modelled 6.5 years, the Iron Ridge Project utilises 7.76Mt of Indicated Resources (96.5%) and 0.28Mt of Inferred Resources (3.5%).

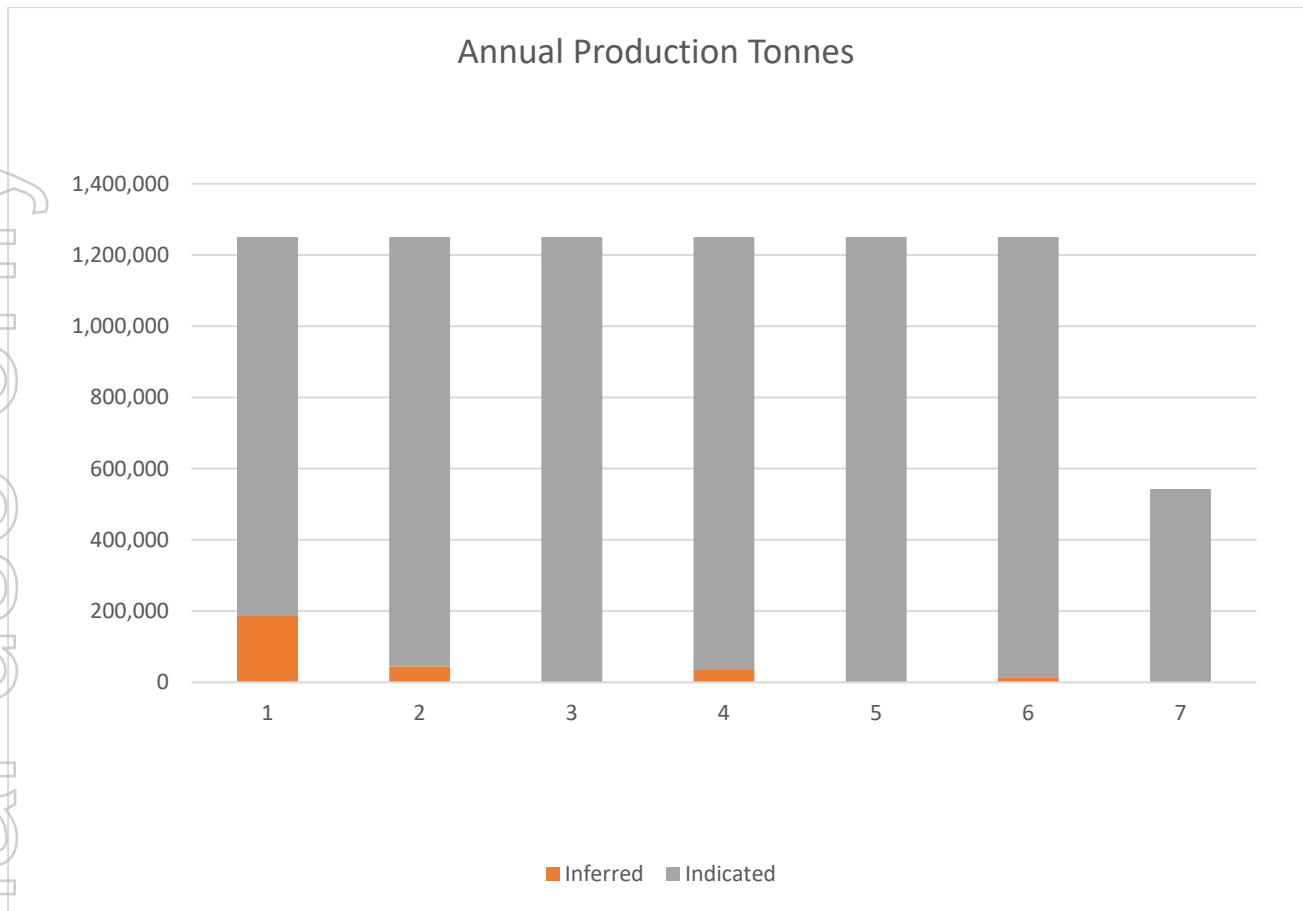


Figure 1: Annual Production Tonnes by Resource Category

**Mining**

The FS determined that approximately 8 million tonnes of high-grade hematite grading approximately 64% Fe over a mine life of 6.5 years could be extracted and sold based on declared Ore Reserves at the Project of 7.76Mt grading 63.9% Fe with a low level of impurities.

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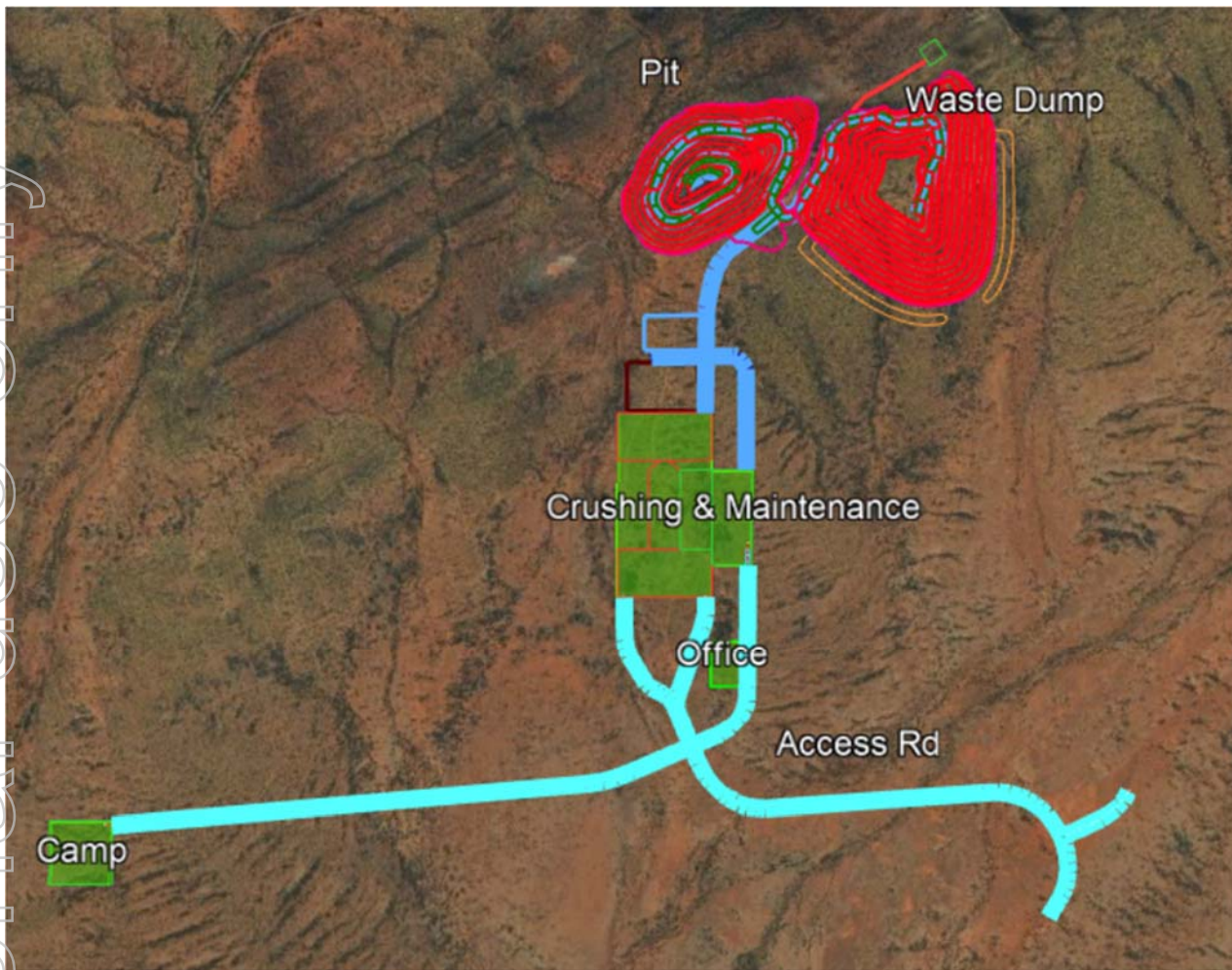


Figure 2: Iron Ridge Project Site Layout

### Processing

The processing of ore is a simple task given its high Fe and low impurity in-situ values. No beneficiation is required and there is no waste stream generated during the process.

The designed processing plant is mobile and modular and consists of a two-stage crushing circuit (primary and secondary crushing) and a multi-deck screen to separate the lump and fines product into distinct stockpiles for road transport to the port of Geraldton. The Process Flow Diagram (PFD) below depicts the simple process from the mine to the port:



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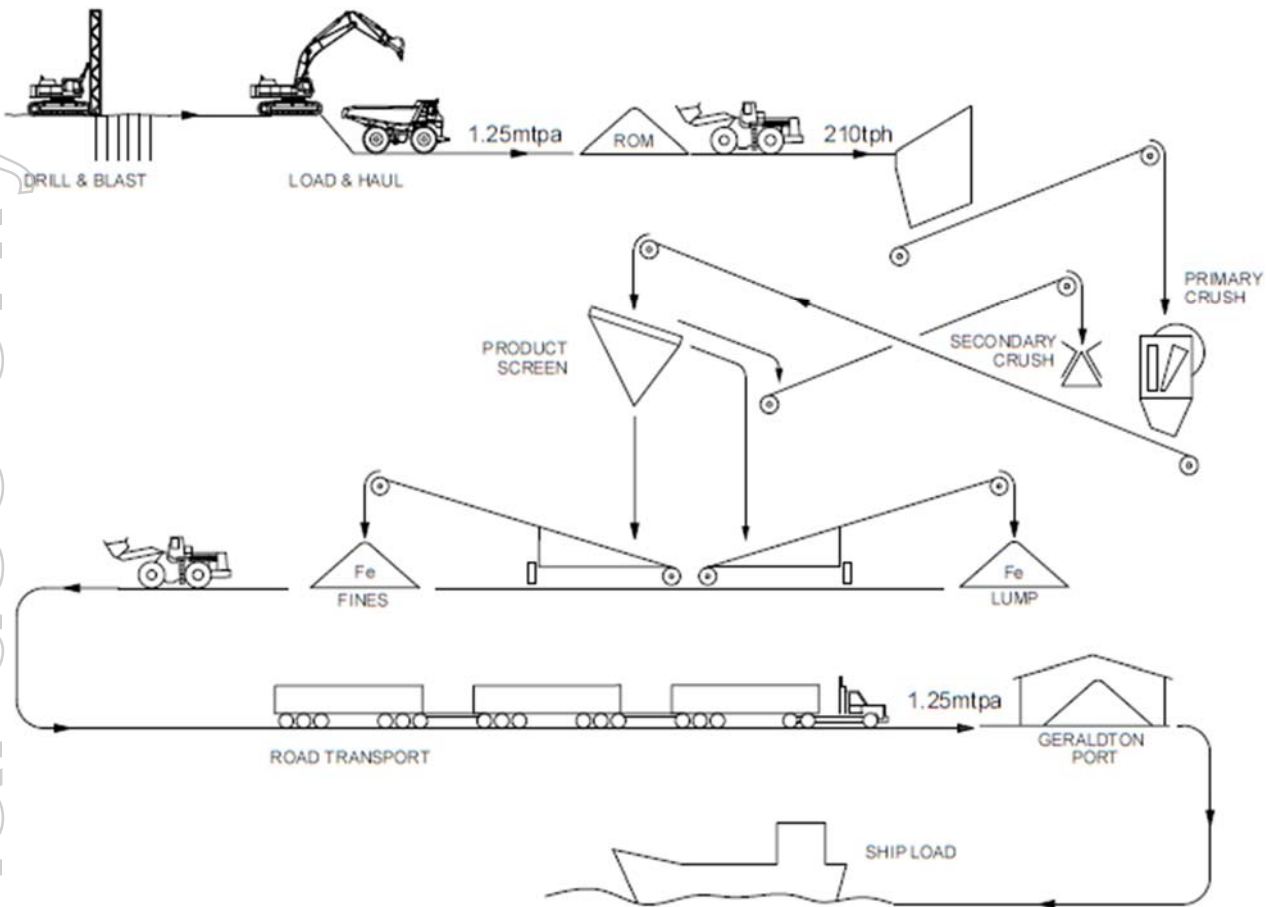


Figure 3: Iron Ridge Project – Process Flow Diagram

### Logistics

In May 2019, Fenix entered into a road transport joint venture agreement with Newhaul Pty Ltd, a private company owned by Mr Craig Mitchell, an experienced transport and logistics operator. Since then, the JV has developed a detailed road transport model that provides a competitive cost of transporting iron ore product from Iron Ridge to a storage shed at Geraldton port. Terms have essentially been agreed and the contract awaits signing once the Final Investment Decision is made.

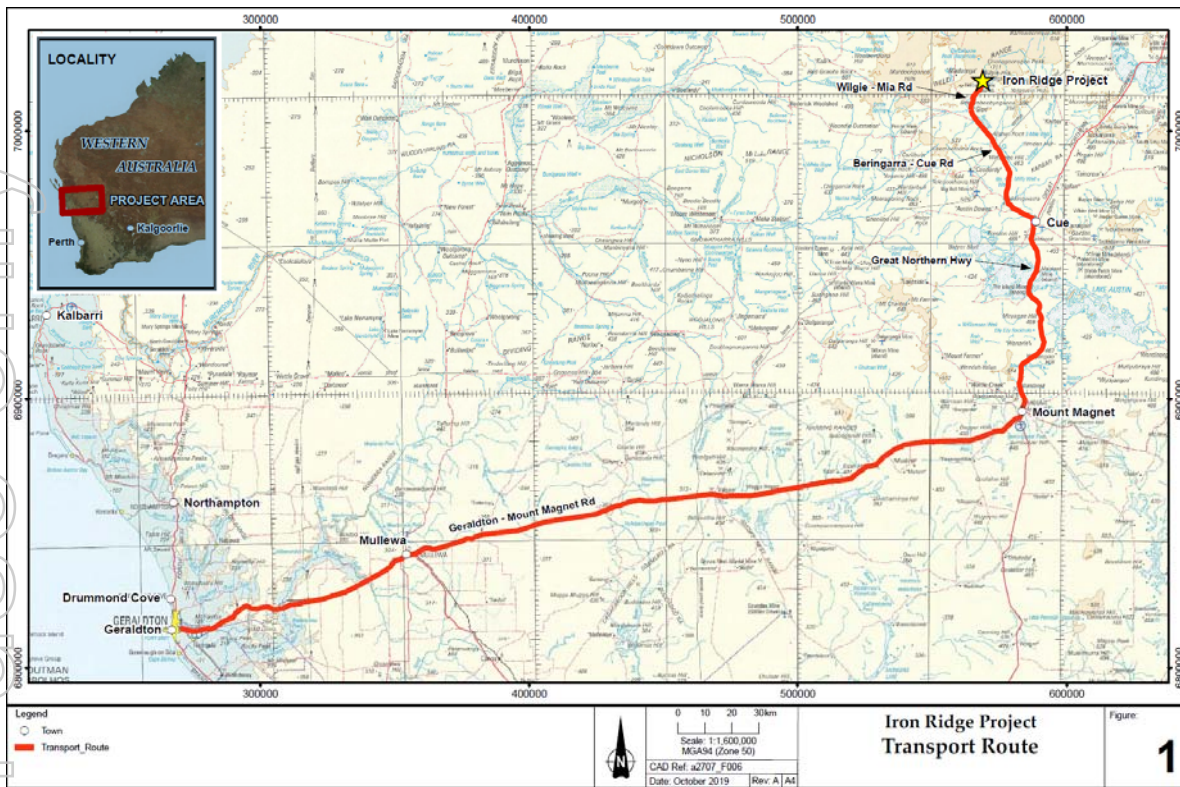


Figure 4: Iron Ridge Project – Road Transport Route

### Financial Metrics

Using a constant LOM Platts 62% Fe index price of US\$78/dmt CFR and an AUD:USD exchange rate of 0.70, Fenix estimates that the Iron Ridge project has a Net Present Value of \$54.3 million and will generate a pre-tax Internal Rate of Return of 58.9%.

Average annual EBITDA is estimated at \$16.4 million.

The financial metrics of the Iron Ridge Project, based on the capital and operating costs outlined above, are depicted in Table 7 below, assuming an AUD:USD exchange rate of 0.70 and a Platts 62% Fe iron ore price of US\$78/dmt CFR:

Table 7: Feasibility Study Financial Metrics

Item	Unit	FS Outcome
Project NPV <sub>10</sub> (real, pre-tax, ungeared)	A\$m	54.3
IRR (pre-tax, ungeared)	%	58.9
Total Development Capital	A\$m	14.9
Initial Development Capital	A\$m	11.9
EBITDA per annum (average)	A\$m	16.4
Life of Mine Revenue after marketing fee	A\$m	802.9
Life of Mine WA State Royalty payments	A\$m	60.2
Life of Mine	Months	77.0

Given the premium quality of the Iron Ridge product with an average grade of approximately 64% Fe over the life of mine, a significant premium to the Platts 62% Fe index price is expected, particularly in the last five years of operations. Fenix also estimates that 25% of the delivered product will be lump, which attracts a further premium.

Accounting for the expected premium for Iron Ridge product, the Project is expected to be cash flow neutral at a Platts 62% Fe price of US\$68/dmt CFR, assuming an average sea freight cost of US\$13.5/wmt and an average final product moisture content of 5%.

#### Sensitivity Analysis

The NPV of the Project is highly sensitive to iron ore price and the foreign exchange rate.

Modelling indicates that every US\$1/dmt move in the Platts 62% Fe index price impacts the NPV by approximately \$8 million and the average annual EBITDA by approximately \$1.6 million.

Similarly, every US\$0.01 movement in the AUD:USD exchange rate impacts NPV by approximately \$7 million and average annual EBITDA by approximately \$1.5 million.

Analysis of 5% movements to index price, currency, operating costs, capital costs and grade are illustrated in the Figure 5 below:

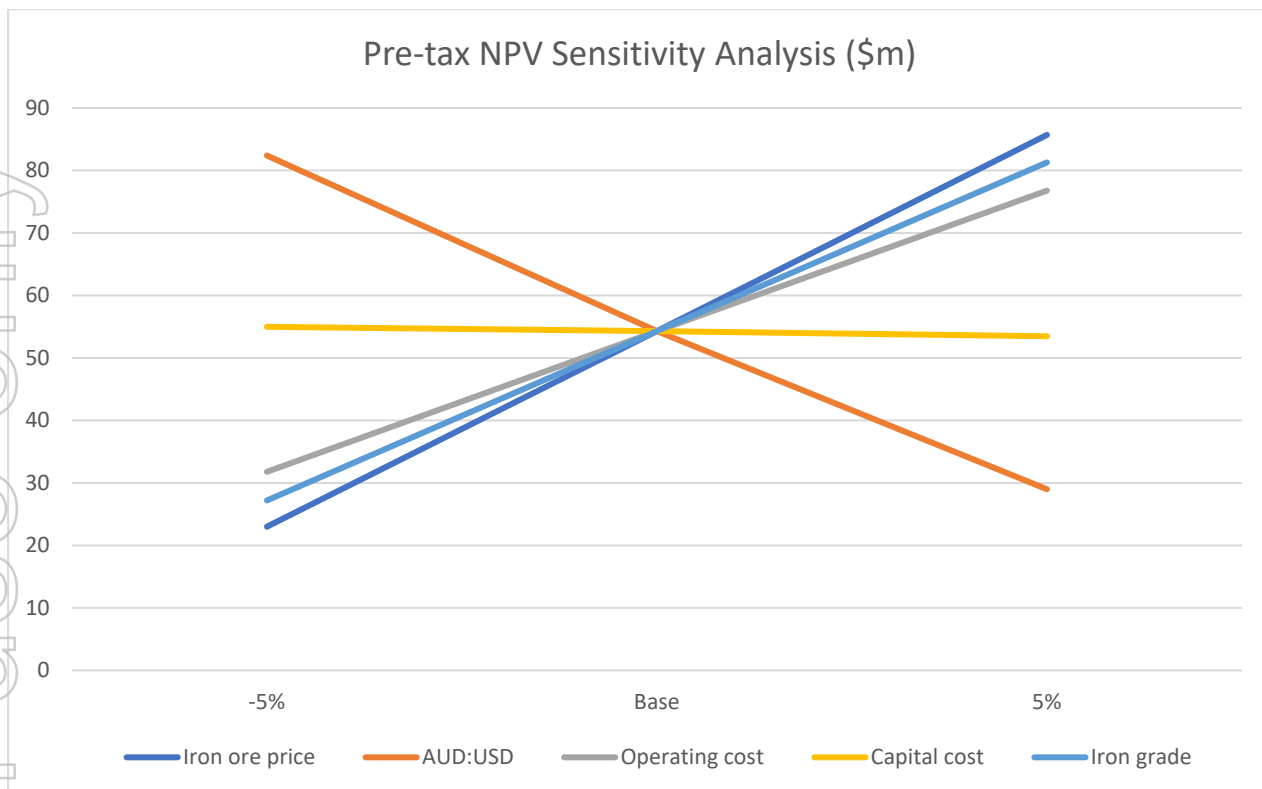


Figure 5: Iron Ridge Project Pre-tax NPV Sensitivity Analysis

### Approvals & Permitting

The Company has applied for the necessary miscellaneous licences and general lease required for project start-up. As is common during the lease application stage, there have been some objections to the granting of these leases. Fenix is engaged in productive discussions with the objecting parties and are hopeful of reaching access agreements during 2020. This will allow the submission of a Mining Proposal to the Department of Mines, Industry Regulation and Safety for statutory approval. Confirmation of this approval will allow the project to proceed to Final Investment Decision (FID) soon thereafter.

### Value Enhancement Opportunities

The Company is studying further opportunities to enhance the value of the project including entering into project partnering arrangements, seeking grants and concessions to reduce capital expenditure and ways to reduce operating costs. Fenix is also studying additional project opportunities in the vicinity of Iron Ridge and along the road haulage route.

## Next Steps

Fenix is focussed on obtaining all the necessary approvals to allow the project to proceed to development and rapidly thereafter into commercial production. Fenix remains engaged with several parties regarding iron ore product offtake and project and working capital financing. Additionally, the Company is looking to finalise port access arrangements with the Mid West Ports Authority, as well as enter into formal contracts with mining, road transport and port services contractors. Final agreements will be subject to receiving the necessary permits and approvals to achieve FID.

## CORPORATE

### Highly Experienced Mining Executive Appointed Chairman

During the quarter the Company advised Mr Garret Dixon had been appointed Non-Executive Chairman of Fenix Resources effective 1 January 2020.

Garret is an experienced and accomplished senior executive with extensive experience in the resources, transport and contracting sectors in Australia and overseas. His work in both private and ASX listed companies spans more than three decades, having worked in senior executive roles for major mine owners, mine operators and contractors in the iron ore, gold, coal, nickel and bauxite commodities markets. He has worked for many years in the iron ore industry and previously developed mines from start up to production.

Garret's career since graduation in 1981 includes time with a Federal Government construction department, Executive General Manager for civil construction and contract mining group Henry Walker Eltin Ltd, Managing Director of logistics company Mitchell Corporation, Managing Director & CEO of ASX listed Gindalbie Metals Ltd and Vice President of Iron Ore Business Development for rail freight operator Aurizon. Until recently, Mr Dixon held the position of Executive Vice President Alcoa & President Bauxite where he was responsible for the global bauxite mining business for the NYSE listed Alcoa Corporation.

Garret has a Bachelor of Engineering (Hons) and a Master of Business Administration and is a member of the Australian Institute of Company Directors.

The Company also advised the resignation of Mr Bevan Tarratt from his role as Non-Executive Director and Chairman. Bevan was a key contributor to the acquisition of the Iron Ridge Project and the subsequent recapitalisation of Fenix.

As at 31 December 2019 the Company had cash on hand of approximately \$2.2 million. The Company is forecasting cash outflows for the March 2020 quarter of \$0.4m.

This release is authorised on behalf of Fenix Resources Limited by:



Rob Brierley  
Managing Director  
Fenix Resources Limited

## About Fenix Resources

Fenix Resources is an ASX-listed, WA-based minerals explorer transitioning to miner.

The Company's 100% owned, flagship Iron Ridge Iron Ore Project is a premium DSO deposit which hosts a JORC 2012 compliant resource located around 490 km by road from Geraldton port.

High grade iron ore attracts a premium price on the seaborne market as Chinese steel works increasingly demand more pure inputs with lower emissions due to increasingly strict government regulations.

Only requiring crushing and screening, 1.25 million tonnes of ore per annum is proposed to be trucked to the port by a JV signed off in May 2019, with trucking specialist Newhaul Pty Ltd headed by respected logistics expert Craig Mitchell who was the founder and owner of Mitchell Corp before selling to Toll Group. In relation to the production target, the Company confirms that all material assumptions underpinning the target continue to apply and have not materially changed since the announcement of the feasibility study on 4 November 2019.

Negotiations are well advanced with Mid-West Ports Authority at Geraldton where export capacity is available.

Mining and environmental approvals are currently being undertaken and contract documentation with key service providers is advanced.

A total of three hundred and fifty (350) Full Time Equivalent (FTE) direct and indirect jobs throughout the supply chain will be created including seventy (70) FTEs on site at the Iron Ridge mine if project approvals are granted.

Geraldton is set to be a winner with one hundred (100) FTEs created including seventy (70) roadtrain drivers and a fleet maintenance depot established with an additional thirty (30) jobs. More jobs will be created at the Port and at local businesses and contractors that service the project.

The Project's Mineral Resource, announced on 21 August 2019, is categorised into Indicated and Inferred Mineral Resources as shown in Table 8.

Classification	Tonnes Mt	Fe %	Al <sub>2</sub> O <sub>3</sub> %	LOI %	P %	SiO <sub>2</sub> %	TiO <sub>2</sub> %
Indicated	10.0	64.3	2.56	1.90	0.046	3.21	0.09
Inferred	0.5	62.5	2.80	3.13	0.046	4.41	0.12
<b>Total</b>	<b>10.5</b>	<b>64.2</b>	<b>2.57</b>	<b>1.96</b>	<b>0.046</b>	<b>3.26</b>	<b>0.09</b>

Table 8: Iron Ridge Mineral Resource Estimate reported above a 58% Fe cut-off grade.

The Project's Ore Reserves are categorised in Table 9 below and as announced on 4 November 2019 titled "Feasibility Study Generates Outstanding Cashflow".

Classification	Tonnes Mt	Fe %	Al <sub>2</sub> O <sub>3</sub> %	LOI %	P %	SiO <sub>2</sub> %	TiO <sub>2</sub> %
Probable	7.76	63.9	2.79	2.00	0.05	3.46	0.09
<b>Total Ore Reserves</b>	<b>7.76</b>	<b>63.9</b>	<b>2.79</b>	<b>2.00</b>	<b>0.05</b>	<b>3.46</b>	<b>0.09</b>

Table 9: Iron Ridge Ore Reserves

## Competent Person Statements

The information in this report that relates to Mineral Resources is based on information compiled by Mr Alex Whishaw, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy and is employee by CSA Global Pty Ltd. Mr Whishaw has sufficient experience 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 the Reporting of Exploration Results, Mineral Resources, and Ore Reserves (JORC Code). Mr Whishaw consents to the disclosure of information in this report in the form and context in which it appears.

The information in this report that relates to the Processing and Metallurgy for the Iron Ridge Project is based on and fairly represents, information and supporting documentation compiled by Mr Damian Connelly who is a Fellow of The Australasian Institute of Mining and Metallurgy and a full time employee of METS Engineering Group. Mr Connelly has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is 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 Connelly consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Ore Reserves is based on information compiled by Mr John Battista, a Competent Person who is a Member and Chartered Professional (Mining) of the Australasian Institute of Mining and Metallurgy and is currently employed by Mining Plus (UK) Ltd. Mr Battista has sufficient experience 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 the Reporting of Exploration Results, Mineral Resources, and Ore Reserves (JORC Code). Mr Battista consents to the disclosure of information in this report in the form and context in which it appears. In relation to the production target referred to in the report, the Company confirms that all material assumptions underpinning the target continue to apply and have not materially changed since the announcement of the feasibility study on 4 November 2019.



## TENEMENT SCHEDULE

The Company's interests in tenements is as follows:

Location	Project	Tenement No.	Interest
Western Australia	Iron Ridge	M20/118-l	100%
Western Australia	Iron Ridge	E20/936	100%

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