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13 September 2019 ASX Announcement

POSITIVE RESULTS FROM CSIRO METALLURGICAL TESTING

- **Positive results from CSIRO evaluation of the sintering characteristics of an Iron Ridge Ore Sample**
- **Iron Ridge composite fines matrix blends performed well when substituted at 10%, 20%, 30%, 40% and even 100% in a typical Japanese Steel Mill blend in sintering tests**
- **Composite fines classified as high grade with moderate alumina and low silica**

Fenix Resources Limited (ASX: FEX, "**Fenix"** or the "**Company"**) is pleased to provide an update on the metallurgical studies conducted on the Company's 100% owned Iron Ridge DSO hematite project ("**Project**") in Western Australia.

The Commonwealth Scientific and Industrial Research Organisation ("**CSIRO**") has developed a laboratory test methodology that allows the relative sintering properties of fine ores and concentrates to be determined. The tests have returned positive results on both the ore characterisation and sintering characteristics as summarised below.

Ore Characterisation

The Iron Ridge composite fines were classified as high-grade (>64% Fe), with moderate alumina (2.48%), and low silica (3.57%), total LOI (1.68%) and phosphorous (0.05%) contents. In terms of sizing, the majority of the sample fell within the -4+0.5 mm range, with little material in the -0.25+0.038 mm range and relatively few coarse +4 mm particles.

The ore was dominated by friable to moderately microporous, fine- to very fine-grained microplaty hematite textures, with minor goethite and kaolinitic shale content, increasing slightly with decreasing size fraction and with significant concentration of alumina in the -0.038 mm ultrafines.

Sintering Characteristics

Laboratory sintering tests were carried out to evaluate the performance of the -1 mm matrix-forming component of the ore then substituted in a simulated customer blend, as well as the reactivity of the coarse, ore nucleus-forming fraction.

The Iron Ridge composite fines proved to be highly compatible with the simulated Japanese Steel Mill ("**JSM**") customer blend, with all blends achieving high strength, well above the target value, over a relatively wide temperature range. The 20% Iron Ridge blend produced the best result, with improved characteristics relative to the JSM blend.

In terms of overall characteristics, the Iron Ridge composite fines were closest to a high-grade Brockman fine ore product, albeit with atypically fine-grained microplaty hematite textures. The Iron Ridge fines also showed some mineralogical/textural similarly to Vale's Carajas fines, although with lower silica and higher alumina content.

The high reactivity and excellent sinter matrix strength of the fines suggest good blending compatibility with other fine ores contributing stable, coarse ore nuclei, at immediate fuel rates.

CSIRO Testing Undertaken

Fenix sent the CSIRO a composite fines sample from equal mass proportions from drill holes IR003, IR004 and IR005. The headgrade of the composite sample was 64.15% Fe, 3.57% SiO_2, 2.48% Al_2O_3 and 0.053% P, which is considered representative of the Iron Ridge deposit given that the Indicated Mineral Resource averages 64.3% Fe, 3.21% SiO_2, 2.56% Al_2O_3 and 0.046% P.

Representative polished sections of the composite fines were prepared from sized fractions for microscopic characterisation of the ore mineralogy and texture.

Additionally, laboratory-scale sintering tests were carried out on the composite fines sample. The composite fines were substituted in a typical JSM blend at the following six levels: 0, 10, 20, 30, 40 and 100%. Blends were fluxed to a basicity of 1.8 and silica level of 5.0% (on a whole blend basis) and fired in a laboratory under controlled conditions of temperature, gas atmosphere and time that simulate the actual sintering process. The strength versus temperature behaviour of the ore was determined and its optimum melting point, reactivity and matrix strength established. The CSIRO sintering test methodology is universally well regarded.

Managing Director Comment

Fenix's Managing Director, Robert Brierley, commented:

"We are very pleased with these results from the highly reputable CSIRO Mineral Resources division. The results suggest that the Iron Ridge fines can improve the sinter blend characteristics due to the high proportion of low-temperature bonding phase formation and its generally high matrix strength. We now have independent evidence of the potential of Iron Ridge product to form a high-quality sinter matrix at a low cost which we will be pleased to share with the parties that we are currently engaged with in discussing potential product offtake."

On Behalf of Fenix Resources Limited:

Robert 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, Fenix aspires to be a 1.25 million tonne per annum producer with product to be trucked directly to Geraldton Port in partnership 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.

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

Pit planning, metallurgical work and mining and environmental approvals are currently being undertaken.

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.

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The Project's Mineral Resource, delineated on 20 August 2019, is categorised into Indicated and Inferred Mineral Resources as shown in Table 1.

Classification	Tonnes Mt	Fe %	Al_2O_3 %	LOI %	P %	SiO_2 %	TiO_2 %
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
Total	**10.5**	**64.2**	**2.57**	**1.96**	**0.046**	**3.26**	**0.09**

Table 1: Iron Ridge Mineral Resource Estimate reported above a 58% Fe cut-off grade.

Competent Persons Statement

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 Damian Connelly who is a Fellow of The Australasian Institute of Mining and Metallurgy and a full time employee of METS Engineering Group. Damian 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'. Damian Connelly consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Appendix 1: JORC Table 1

Section 1 – Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	*Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.*	Samples used in the estimation of grade in the Mineral Resource were collected by Commercial Minerals Ltd (Com Min) using reverse circulation percussion (RC) in 1997 (WRR series), Atlas Iron Ltd (Atlas) in 2008 using RC (WRRC series) and Fenix Resources Ltd (Fenix) in 2018 (IR series). Some samples were also collected from RC (1995), vacuum (1973) and diamond drilling (1962) techniques, although these were used in validating the mineralisation envelope only and not in the Mineral Resource Estimation. Com Min samples varied in length from 3 – 5 m in mineralisation, representing 329 m or 5.3% of the assay length. Atlas samples were taken on 1 and 2 m lengths for 1,131 m or 18.4% of the samples. RC and diamond drilling methods were used to assay 2,809 primary samples in the Fenix Resources Ltd 2018 and 2019 programs. All the Fenix 2018 and 2019 RC samples were two metre composites, except where the drill holes terminated on an odd meter interval. Fenix 2018 and 2019 Diamond (DDH) sampling was completed to geological contacts with the maximum length being 2m. Occasional short (<0.5m) lengths were taken. The sample intervals were measured and marked up in the field and transported in its entirety to Perth for cutting by ALS Minerals and Chemistry in Wangara, Perth, which was inspected by the Competent Person in Perth. The core was considered in a good physical state when it arrived in Perth with little degradation, except for two trays which were re-assembled with the assistance of photography. The Fenix 2019 RC water monitoring bore samples RC samples were done on regular 2m sampling intervals except at the end of hole where the sample length may be down to 0.5m. The samples were collected from the outside return between the rods and the hole which is likely to result in contamination. A 1-2kg sample was collected in a calico bag. The Competent Person (CP) considers the diamond sampling techniques acceptable for the purposes of reporting Exploration Results. The RC water bore samples are of a lower confidence when compared to the diamond drilling, and should be taken to be indicative of mineralisation tenor only.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	2008 Atlas samples were taken from shallow RC holes that remained dry and did not encounter any significant water. All samples were cone split and dry. In the event where the sample exceeded 3 kg, it was then split down to a smaller sample. 2018 RC samples were typically collected via a cone splitter or if the splitter clogged up a representative sample has been taken by hand (scoop). While scoop samples are not ideal it is not considered material for this style of mineralisation and analysis of sample recovery showed no correlation with grades. 55 RC field duplicates were taken on selected intervals within the interpreted mineralised horizons. RC samples were reported to weigh between 2 and 4kg which is appropriate. Where the primary sample exceeded 3kg it was then split down to a smaller sample. The Competent person considers the sampling process to be appropriate and representative of the mineralisation style present.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard'	All RC samples were cone split except in some occasions where the material blocked up the splitter and had to be manually collected. Crushed core and RC samples were dried, pulverised to 85% passing 75 micron and riffle split to a maximum of 3 kg. Samples up to 3 kg were pulverised in their entirety to nominal 85% passing 75 µm. Samples which exceed 3 kg first were riffle split 50:50 using a standard benchtop laboratory riffle splitter.

Criteria	JORC Code explanation	Commentary
	work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information	Once the sample was pulverised, a pulp subsample of approximately 300 g was taken from the pulveriser bowl. From that master pulp, the ~0.7 g aliquot was taken for XRF analysis. The laboratories procedures have been reviewed and are considered by the Competent Persons (James Potter) to be industry standard and acceptable for the style of mineralisation.
Drilling techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	The mineral resource modelling database contained 80 collar records for 9,187.7 m and 3,478 assay records, a total of 15 more collars for 2,040.3 m and 726 more assay records than the previous MRE. This new drilling included seven resource diamond holes, three unassayed geotechnical diamond holes and five assayed water monitoring RC holes. Of this new drilling, BIF 1 and BIF 2 were intercepted by nine and three holes for 655.75 m and 159.32 m respectively. All diamond holes except one were core from surface using triple tube techniques to improve core recovery. The core was orientated however many orientations failed due to the friable nature of the core. The Competent Person does not consider the inability to orientate the core a material risk to the MRE. The 2018 Fenix RC drill holes utilised 5 ¾ inch face sampling drill bit by Frontline Drilling. The water-bore RC holes were drilled with open hole hammer using a 4 ¼ inch drill bit. Downhole surveys included 11 holes by gyro and 18 holes by geophysics (gamma, density, resistivity). Geophysical logging of all 2018-2019 holes was conducted for varying depths to blockage or end of hole. The drilling technique is considered appropriated for the style of style mineralisation present and the Competent Person does not consider the inability to orientate the core a material risk to the Mineral Resource estimate. Downhole surveys included 17 holes by gyro and 25 holes by geophysics (gamma, density, resistivity). Geophysical logging of all 2018 holes was conducted for varying depths to blockage or end of hole.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	The 2018 RC sample recoveries were estimated subjectively as poor, fair, good or large. These were recorded for all samples typically with deeper, wet holes having poor to fair sample recovery. Recovery for dry samples was typically good. The 2008 drilling by Atlas was dry and while no record of recovery was available no issues were noted. The diamond recovery was generally good with the average being above 95%, however recovery in areas of soft clay or zones of high porosity did reduce to below 80%. Sample return for the RC water-bore drilling is considered very poor (<10%) Sample moisture content was variable. Typically, deeper holes returned moist or wet samples and shallow holes (<100m) largely returned dry samples.

Criteria	JORC Code explanation	Commentary
		The Competent Person (CP) considers the sub-sampling appropriate for the reporting of an Exploration Result
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Diamond drilling was completed to assist in validating the results from the RC samples and no identifiable bias was observed. Analysis of sample recovery showed no relationship with grades, including the water bore samples. Twin hole analysis showed good correlation between DDH and RC holes analysed.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	Analysis of sample recovery measurements on diamond core and RC sample weights showed no relationship to grades.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	All RC and diamond drill holes were geologically logged to an industry standard appropriate for the mineralisation present of the project. Diamond core was photographed, and a selection of RC chips were retained for future reference. The CP considers that the level of detail is sufficient for the reporting of Exploration Results and for future Mineral Resource estimation.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Lithological logging is qualitative in nature. Logged intervals were compared to the quantitative geochemical analyses and geophysical logging to validate the logging. Quantitative logging was provided by downhole geophysical surveys were completed on 36 holes for long and short sign gamma density, resistivity and calliper in January to February 2019 and July 2019 by independent contractor MPC Kinetic in open holes drilled by Fenix Resources Ltd in November and December 2018 and June and July 2019. The geophysical probe penetrated > 85% of the final hole depth for the majority of the holes. The Competent Person considers that the availability of qualitative and quantitative logging has appropriately informed the geological modelling, including weathering and oxidation, water table level and rock type.
	The total length and percentage of the relevant intersections logged.	The total length of all drilling was logged.
Subsampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	For the Fenix 2018 – 2019 DD samples, the diamond core samples were measured and marked for sampling in the field at site and transported in their entirety to Perth (~750 km by sealed roads) by ALS Minerals and Geochemistry, which was inspected and found to be in good physical state on arrival by the Competent Person. If the core was competent, the sample was cut by ALS using a purpose build automatic saw with diamond tipped blade, then half the core was sampled. For fragmented core sections, the best effort was made to separate half the sample for processing. Typically, the fragmented sections were within the clay rich areas and not in the mineralisation. ALS then crushed the sample to 6 mm.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	Atlas and Com Mins samples were dry and collected via cone splitter. All RC samples were cone split to approximately a 12.5% split except damp to saturated Fenix samples that caused the cone splitter to block. In this case, the sample had to be manually collected by scoop.

Criteria	JORC Code explanation	Commentary
		Most raw sample intervals within mineralisation and all Fenix samples are 2 m in length. RC water-bore hole samples were collected every 2 m in their entirety by the drilling offsiders into plastic bags due to their poor sample return. Samples were then transferred into a calico bag by the field assistant. Com Mins samples were submitted to Analabs in Perth for x-ray fluorescence (XRF) analysis for a basic iron oxide suite of elements (OX408). Commercial laboratories crushed and pulverised the sample for further subsampling for XRF analysis. The focus of Com Mins for the Iron Ridge area was the extraction of iron oxide material for use as a pigment. Samples were also analysed for colour testing at Com Mins' Technical Services Division in Footscray, Victoria. For the Fenix 2018 – 2019 drilling, crushed core and RC samples were dried, pulverised to 85% passing 75 micron and riffle split to a maximum of 3 kg. Samples up to 3 kg were pulverised in their entirety to nominal 85% passing 75 µm. Samples which exceed 3 kg first were riffle split 50:50 using a standard benchtop laboratory riffle splitter. Once the sample was pulverised, a pulp subsample of approximately 300 g was taken from the pulveriser bowl. From that master pulp, the ~0.7 g aliquot was taken for method.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	All RC samples were cone split to approximately a 12.5% split with the exception of some of the Fenix samples where water was encountered, and the cone splitter clogged up. Commercial Minerals samples were submitted to Analabs in Perth for XRF analysis for a basic iron oxide suite of elements (OX408). Commercial laboratories crushed and pulverised the sample for further subsampling for XRF analysis. The focus of Commercial Minerals for the Iron Ridge area was the extraction of iron oxide material for use as a pigment. Samples were also analysed for colour testing at Commercial Minerals Ltd's Technical Services Division in Footscray, Victoria. 2007 Atlas RC samples were submitted to Ultratrace Laboratories in Perth for silicon fusion disk XRF analysis (XRF202) for the standard iron ore suite of 10 elements. Sample preparation consisted of pulverizing using robotic preparation. For the Fenix 2018 drilling, crushed core and RC samples were dried, pulverized to 85% passing 75 micron and riffle split to a maximum of 3 kg. 0.7 g samples were then analysed using technique ME-XRF21u with lithium bornite fusion and XRF finish (fused disk), yielding the standard iron ore analysis of 24 unnormalised elements. Loss on ignition (LOI) was determined on a 1 g pulp sample by thermogravimetric analysis. The Competent Person considers these methods appropriate for this style of mineralisation.
	Quality control procedures adopted for all subsampling stages to maximise representivity of samples.	No quality control (QC) samples were available for the Com Mins drilling. For Atlas 2008 drilling, field duplicates were taken every 25th and 75th sample. Results were reported by Atlas to indicate good correlation between original and duplicate assays, indicating good accuracy with sample procedure. The Fenix 2018 – 2019 drilling included certified reference materials (CRMs) from a commercial supplier inserted at a rate of 3 in 100, blanks inserted 1 in 100, and field and pulp duplicates.
	Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.	The recent Fenix drilling included field duplicate sampling to support this Mineral Resource estimate. The Atlas drilling also included Field duplicates. No quarter core duplicate samples have been taken.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td>Whether sample sizes are appropriate to the grain size of the material being sampled.</td><td>Sample sizes are considered to be appropriate to the grain size of the material being sampled.</td></tr>
<tr><td rowspan="3">Quality of assay data and laboratory tests</td><td>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</td><td>The 2007 Atlas RC samples were submitted to Ultratrace Laboratories in Perth for silicon fusion disk XRF analysis (XRF202) for the standard iron ore suite of 10 elements. Sample preparation consisted of pulverising using robotic preparation.

For the 2018 - 2019 Fenix drilling, the assaying and laboratory procedures used were consistent with industry good practice. All RC and diamond core samples were sent to ALS Minerals and Geochemistry in Wangara Perth for XRF analysis. Whole core trays were delivered to ALS Perth.

Laboratory procedures adopted are sufficient for the reporting of Mineral Resources. ALS is a NATA accredited organisation. XRF is a total rock geochemical analysis method and a standard technique adopted by the iron ore industry.</td></tr>
<tr><td>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</td><td>Downhole gamma-density was logged in counts-per-second (cps) by MPC Kenetic at 10 cm spacing downhole. These were then converted to physical property values using calibrations determined specifically for each physical property parameter. The internal consistency of the downhole gamma-density data was demonstrated by repeat logging of against a calibration hole data from an iron ore deposit calibration holes in the Pilbara.

The final data were supplied in a Logging ASCII Standard (LAS) file format.

The type of instrument used was a 9239 Dual Density Instrument (serial number 2544). The instrument was calibrated on 27 July 2019, source serial number 2544, with results shown in the table below.
<table>
<tr><th></th><th>Long space response (cps)</th><th>Short space response (cps)</th></tr>
<tr><td>High-Point Standard (LS-2.645g/cc)(SS-2.653g/cc)</td><td>3739</td><td>30771</td></tr>
<tr><td>Low-Point Standard (LS-1.643g/cc)(SS-1.661g/cc)</td><td>15183</td><td>47507</td></tr>
</table>
An in-hole calliper was used to identify areas where blowouts and significant aberrations in the hole rugosity were encountered; any deviations from within 20% of the nominal hole diameter (960 mm for HQ and 1,460 mm for RC) were removed.
Calliper-corrected gamma density readings were calibrated against dry water immersion/Archimedes method core density samples from the diamond drill core (239 samples). A final check was completed against other known deposits in the Weld Range from publicly available MREs.</td></tr>
<tr><td>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</td><td>The Fenix drilling program quality control (QC) samples included blanks, CRMs, field duplicate and pulp duplicates. The CRMs used were two iron ore standards from GeoStats Pty Ltd and were inserted at a rate of three samples every 100. Blanks were inserted every 100 samples. The CRMs performed well within nominated tolerance limits.

Atlas utilised field duplicates and standards. Data was not available for review; however, Atlas did not report any identified issues.

ALS also completed their own internal QAQC with standards blanks and duplicates. The raw QAQC standard results were reviewed by the competent persons.

For the blanks, although the iron results could be interpreted as showing that poor hygiene has impacted some samples, given the uncertainty of the material quality, it is impossible to draw any conclusions.

The alumina duplicates do not display a high level of precision overall. These are principally below the water table and relate to the lower-grade alumina values. It</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
		is likely that both the clogging of the cone splitter by water and the biased sampling by scoop have impacted precision. The data collected by Atlas and most of the Com Mins data derives from above the water table and is unlikely to show the same level of smearing of grades, although QC data was not available for review by the Competent Persons. The Competent Persons consider that assaying poses an acceptable level of risk to the overall confidence level of the MRE and would not preclude the estimation of Mineral Resources.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	All mineralisation intersections, both significant and anomalous were verified by CSA Global during the drill hole validation process.
	The use of twinned holes.	Diamond holes were drilled to infill areas of RC holes, and although not proximal twins, DD sample results showed strong correlation to the nearest RC sample results.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	The data entry, storage and documentation of primary data was completed on Excel spread sheets and local hard drives, then imported into a central database managed by CSA Global. The competent person has reviewed the database and completed validation and considers the data management process acceptable for the use in Mineral Resource Estimation.
	Discuss any adjustment to assay data.	No adjustments were made to the analytical data, other than replacing a single TiO2% below detection results with a negative value in the database, which was then set as null (absent data). Phosphorous was heterotopically sampled, therefore, the data were treated as absent rather than below detection limit or zeros. Downhole density was calibrated and adjusted using moisture and hydrostatically obtained measurements.
Location of data points	*Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	All collar positions were recorded in GDA 94 MGA Zone 50 coordinate system and then uploaded into the database as the final collar positions. MHR Surveyors measured the 2018 and 2019 locations by DGPS and 14 historic collars. The water bore holes were measured using a Garmin handheld GPS and elevation values draped to measured DTM topography Downhole surveys were completed using a Gyro tool by the drilling contractor with readings taken approximately every 30 metres. Check north seeking gyro and collar surveys by registered surveyors MHR Surveyors were undertaken. Generally, the holes remained straight with less than 2 degrees (both dip and azimuth) variation over a 100 m length recorded. Downhole surveys on the Fenix drilling included 18 holes by gyro and 26 holes by Reflex EZ-Trac, Geophysical logging of all holes was conducted for varying depths to blockage or end of hole. Down-hole surveys were not conducted on historic drilling. The Competent Person is satisfied that the location of data points is sufficiently accurate for the purpose of Mineral Resource estimation.
	Specification of the grid system used.	Drill hole data were transformed from the original grid system, GDA94 MGA Zone 50, to a local grid by a two-point transformation shift using the following parameters: MGA Zone 50

Point	Direction	MGA Zone 50 (m)	Local Coordinate (m)
1	X	566911	0
	Y	7018548	0
2	X	569076.064	2500

Criteria	JORC Code explanation	Commentary
		Y 7019798 0
	Quality and adequacy of topographic control.	In 2007, MHR Surveyors defined an RTK GPS base station for Atlas on an existing MHR control point PCP02 at coordinates: X = 567525.519 mE; Y = 7018600.545 mE; Z = 492.662 mRL. The absolute accuracy of PCP02 was checked by logging ~4 hours of static data and submitted to the Geoscience AUSPOS. The result indicating that the current values for PCP02 have an absolute accuracy of sub 0.1 m. Using this topographic control, Atlas a produced a georeferenced aerial survey, extracting 0.5 m contours. Significant earthworks were required for the Fenix drilling; therefore, many recent collars are below the surface (up to ~3 m). Check traverses confirmed the accuracy of the topographic surface in relation to the Atlas and newer Fenix differential GPS collars. The contours and the collar coordinates were meshed by Datamine to form a coherent surface and imported into Surpac for coding the Mineral Resource block model. The topographic surface shows strong visual correlation to the differential GPS collar surveys at the resolution required for this MRE.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	The drill spacing is on a reasonably regular grid of approximately 40 m x 40 m along strike and down dip, with a few drill sections spaced out to 100 m x 100 m at the southwest and northeast extents of the deposit.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	The Competent Person believes the mineralised lenses have sufficient geological and grade continuity to support the classification applied to the Mineral Resources given the current drill pattern.
	Whether sample compositing has been applied.	Sample lengths of the Com Min drilling was carried out on 3 to 5 m lengths, so it is assumed these were composites. However, these represent a small portion of the total dataset, and only 75 of these samples of 918 were within mineralisation wireframes. No compositing was completed on the Atlas or Fenix drilling (typically 2m sample intervals).
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	The drill holes were angled appropriately to intersect the hematite mineralisation perpendicular to strike and at a high angle No major structures were reported in the drilling or noted during the field reconnaissance which could negatively impact the Exploration Results by introducing sampling bias.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	An effort has been made to drill holes as close as possible to orthogonal to the lodes. The Competent Person considers that the orientation of the sampling is unlikely to have caused biased sampling.

Criteria	JORC Code explanation	Commentary
Sample security	*The measures taken to ensure sample security.*	RC samples were bagged, and cable tied upon collection. Diamond core samples were strapped using metal straps with a secure lid on the top tray to prevent damage to the core and improve security. Sample security was maintained through short (<1 day) collection and delivery and the use of secured transport yards. The remote site within a low risk jurisdiction mitigated the risk of sample security being compromised
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	No external audit of sampling techniques and data has been undertaken.

JORC 2012 Table 1 Section 2 – Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	The Project is located in the Mid-West region of Western Australia and comprises one granted Mining Lease (M20/118) situated approximately 380 km north east of Geraldton and some 50km north north-west of the township of Cue, Western Australia. The Mining Lease is held 100% by Prometheus Mining Pty Ltd, a wholly owned subsidiary of Fenix Resources Ltd. Heritage surveys completed in 2018 identified a site immediately to the west of the current resource. Development of the mineral resource may encroach on this site potentially reducing the size of the project.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The tenement is securely held by Fenix and there are no impediments preventing the operation of the Mining Lease.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	The quality of the exploration by previous parties varies however, is of sufficient quality and quantity to support the Exploration Target and an Inferred Mineral Resource as previously reported. The previous results are also consistent with the 2018 results. The Competent Person considers the previous work to be useful for the ongoing assessment of the Mineral Resource. The relevant historical work covering M20/118 is summarised: **1959 – 1962: Geological Society of Western Australia** Government of Western Australia made a proposal to diamond drill six then known lenses of hematite in the Iron Ridge Mapping on 1” to 50 chains scale by Jones and Gemuts. Lenses W1 to W6 were mapped on contour plans at 100 feet to 1”. Lenses W3 and W4 lie within the current Mining Lease. Five diamond drill holes for 883m were completed by the Western Australian Government in the Wilgie Mia lease, what is now M20/118. Drill holes were inclined -40 / -50 degrees. **1973: Universal Milling Company Pty Ltd**

Criteria	JORC Code explanation	Commentary
		Five holes were drilled and intersected mineralisation grades similar to those in the Inferred Mineral Resource, close to surface. **1992 – 2000, Commercial Minerals Limited (CML)** 1992 – 1993: Completed reconnaissance mapping and historic data compilation. Reconnaissance mapping at 1:8000 scale using 1980 aerial photography. Mapping of the iron oxide quarry at 1:250 using a tape measure. 1995 – 1996: Mining of 8,000 t from a 4.5m cut in the existing quarry. 6000 t crushed on site over a 3-day period. 1000 t transported to Perth for storage. Mining described the increase of specular hematite with depth. Described as metallic grey with a characteristic red streak. Sample analysis by CML's Technical Service division in Footscray Victoria 1996 – 1997: Six RC drill holes (WRR01-06) totalling 329m drilled with an Edson 600 drill rig in and adjacent to the iron oxide quarry. Purpose was to test the strike extent of the ore zone. Results confirmed an ore zone with dimensions of 50m laterally / strike, 25m width and at least 50m depth. Further to the east and west the ore pinches out with a maximum strike length of 100m. 78 composited samples sent to Analabs in Perth for XRF analysis. **MinCorp Consultants Pty Ltd, 2007** Engaged by Atlas Iron to research and compile the historic exploration data on Wilgie Mia and design a drill program. **Atlas Iron Limited, 2007 to 2011** 2007: 14 rock chip samples (ARK00547 to ARK00560. Grading from 55% to 67% Fe, variable silica, alumina and phosphorous. Risks were identified: Poor grade continuity, internal waste with dolerite / shales, mineralisation pinching out at depth, moderate to high P levels 2008: 1:1,000 scale mapping of the Iron Ridge Project in conjunction with rock chip traverse sampling. A total of 14 RC drill holes for 1,131m were completed focused on testing the grade and mineralisation continuity along 300m of the identified 500m of prospective strike. It was this drilling campaign and only these drill holes support the 2009 Mineral Resource. Drill spacing was on a variable 50 – 100 m x 10 – 25 m grid. 2009: Atlas estimated an Inferred Mineral Resource in December 2009, its classification due to limited drilling with no diamond core to gauge properties. In CSA Global's opinion this is an important fact. Without diamond core or extremely high quality and detailed RC logging, there is no confidence in concluding that Iron Ridge can produce a premium lump product, particularly if the mineralisation comprises significant amounts of specularite. The M20/118 Inferred Mineral Resource estimation is tabulated below <table><tr><th>Tonnes (Mt)</th><th>Fe %</th><th>SiO_2%</th><th>Al_2O_3%</th><th>P %</th><th>S %</th><th>LOI%</th></tr><tr><td>5.0</td><td>64.1</td><td>3.3</td><td>2.7</td><td>0.05</td><td>0.06</td><td>1.58</td></tr></table>2011: Review of the Atlas Mid-West Tenements The enriched zone at Wilgie Mia is described as 550m x 40m wide and at Little Wilgie Mia 370m x 45m width. It dips 80 degrees to the south and has been interpreted in excess of 80m depth The area between the Wilgie Mia and Little Wilgie Mia mineralised lenses is approximately 260m length. Atlas reported it as concealed by a thin alluvial cover with mineralisation potentially continuing beneath. **Emergent Resources Limited (renamed to Fenix Resources Limited)**

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>2018: Independent technical assessment of the Iron Ridge Project by CSA Global Pty Ltd. Atlas 2009 Mineral Resource estimate reported in accordance with the JORC Code, 2012 Ed., by CSA Global Pty Ltd. Exploration Target reporting in accordance to JORC 2012 by CSA Global Pty Ltd. The results are tabulated below:

An infill and step out drilling programme comprised of 20 RC holes for 3,370 m, eight DD holes for 1,123.7 m and one RC hole with a diamond tail for 255.7 m.

<table>
<tr><th>BIF unit</th><th>Mineralisation</th><th>Tonnage (Mt)</th><th>Grade (% Fe)</th></tr>
<tr><td>Main BIF</td><td>Hematite</td><td>0.6–7.1</td><td>64.1–65.3</td></tr>
<tr><td>Little BIF 1/2</td><td>Goethite</td><td>0.1–5.5</td><td>58.0–59.5</td></tr>
<tr><td>Total</td><td></td><td>0.7–12.7*</td><td>58.0–65.3</td></tr>
</table>
*Totals may not sum correctly due to rounding.

Fenix 2019

Following the drilling completed in late 2018 a Mineral Resource estimate reported in accordance with the JORC Code by CSA Global, which are tabulated below above a cut-off of 58% Fe.

<table>
<tr><th>Class</th><th>Tonnes
Mt</th><th>Fe
%</th><th>Al2O3
%</th><th>LOI
%</th><th>P
%</th><th>SiO2
%</th><th>TiO2
%</th></tr>
<tr><td>Indicated</td><td>6.6</td><td>64.5</td><td>2.5</td><td>1.7</td><td>0.042</td><td>3.1</td><td>0.1</td></tr>
<tr><td>Inferred</td><td>2.6</td><td>63.2</td><td>3</td><td>2.1</td><td>0.1</td><td>3.9</td><td>0.1</td></tr>
<tr><td>TOTAL</td><td>9.2</td><td>64.1</td><td>2.7</td><td>1.8</td><td>0.045</td><td>3.4</td><td>0.1</td></tr>
</table></td></tr>
<tr><td>Geology</td><td>Deposit type, geological setting and style of mineralisation.</td><td>The Iron Ridge is a northwest trending Archaean aged granite greenstone terrain of the Yilgarn Craton. It is a marked physiographic feature, 3-5km wide, 40km long, within which there is good exposure of metabasalts showing mainly doleritic and minor basaltic and gabbroic textures. Such exposures occur between ridges defined by weathered, steeply dipping beds of banded iron-formation which form less than 10% of the thickness of the sequence.

The Iron Ridge Project contains one main BIF horizon which exhibits significant iron enrichment in two locations (Wilgie Mia and Little Wilgie Mia). The mineralisation comprises a mixture of banded hematite (specular and earthy, goethite and shaly limonite iron ore. It has been documented that the primary ore mineral is martite. The ore lenses have formed by remobilization of iron and replacement of jaspilites (BIF) during deep-seated thermal metamorphism. Subsequent supergene oxidation, leaching and hydration of the iron ore has resulted in the formation of goethite and the concentration of secondary hematite (occasionally in the form of red ochre).

Three parallel to sub-parallel ranges of BIF occur on the tenement. The Main BIF (mapped as hematite) is approximately 50m wide, with much thinner (several metres) BIF ridges to the south (designated Little BIF 1 and 2 respectively). Little BIF 1 and 2 are defined by discontinuous goethitic outcrops at a lower elevation than the Main BIF.</td></tr>
<tr><td>Drill hole Information</td><td>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:

Easting and northing of the drill hole collar</td><td>Exploration results are not being reported.</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	Elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar *Dip and azimuth of the hole* *Downhole length and interception depth* *Hole length.*	
	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	Exploration results are not being reported.
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	Exploration results are not being reported.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Exploration results are not being reported.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Exploration results are not being reported.
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.*	The BIF ridges dip steeply to the northwest and southeast. All drill holes were angled approximately 45-70 degrees with an azimuth (~330 degrees) perpendicular to the BIF strike to provide as near a 'true' intercept thickness as realistically possibly.
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	Exploration results are not being reported.

Criteria	JORC Code explanation	Commentary
	If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known').	Exploration results are not being reported.
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	Relevant maps and diagrams are included in the body of the report.
Balanced reporting	*Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	Exploration results are not being reported.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	Surface geological observations have been incorporated into the geological interpretation and context of the results received and exhibit a correlation considered reasonable for this style of mineralization. Downhole geophysical surveys were completed on36 holes for long and short sign gamma density, resistivity and caliper in January to February 2019 and July 2019 by independent contractor MPC Kinetic in open holes drilled by Fenix Resources Ltd in 2018 and 2019. The geophysical probe penetrated > 85% of the final hole depth for >50% of the 36 holes. Four holes penetrated between 40–60% of the final depth, one hole penetrated 33% and one 18% of the final depth.
Further work	*The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).*	Further work planned for the project is focused on the development of the Mineral Resource to achieve greater proportions of Indicated material, as well as hydrology, metallurgy, and geotechnical studies. Further drilling may be required to the west to test the near surface and down plunge extent.
	Diagrams clearly highlighting the areas of possible extensions, including the main	Exploration results are not being reported.

Criteria	JORC Code explanation	Commentary
	geological interpretations and future drilling areas, provided this information is not commercially sensitive.	

JORC 2012 Table 1 Section 3 – Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	*Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	Down-hole geophysical logging was undertaken on site on 29 open holes in less than two months of the drilling date. Core logging is completed in the Perth core yard using project-specific logging codes. Data is then loaded directly into the site database. Assay results are currently received from the laboratory in digital format. Once data is finalised it is transferred to a Microsoft Access database.
	Data validation procedures used.	The Competent Person checked the drill hole files for the following errors prior to Mineral Resource estimation: • Absent collar data • Multiple collar entries • Questionable downhole survey results • Absent survey data • Overlapping intervals • Negative sample lengths. Sample intervals which extended beyond the hole depth defined in the collar table.
Site visits	*Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	James Potter, Competent Person for sections 1 and 2 of the JORC Table 1, completed several site visits from October 2018 through July 2019 and undertook geological logging and instructed sampling. During the site and laboratory visits, the following was completed: • Geological management of all Fenix drilling • Inspection of the location of historical collars and their relationship to the intersection of mineralisation by the Fenix drilling • Inspection of sample processing facilities Geological procedures were followed on site data and collection systems were found to be consistent with industry good practice. Furthermore, geological controls to the mineralisation were sufficiently understood to enable a Mineral Resource to be reported in accordance with the JORC Code. Laboratory systems were being maintained at a high level and processes were being followed. Alex Whishaw, Competent Person for section 3 of JORC Table 1, MRE, has undertaken several site visits to the project in the last decade, prior to the project's incumbency by Fenix. During these site visits, the high-grade nature of the mineralisation and the geological controls were reviewed as having the potential to host a Mineral Resource as defined by the JORC Code
	If no site visits have been undertaken, indicate why this is the case.	N/A
Geological interpretation	*Confidence in (or conversely, the uncertainty of) the geological*	The lithological interpretation is robust, supported by clear visual boundaries in mapped outcrop and drill samples, with high-contrast in colour, texture, sample weight and drill penetration (drill plod comments/logs) on rock-type changes

Criteria	JORC Code explanation	Commentary
	interpretation of the mineral deposit.	from waste to mineralisation. The geological model is simple in the ore-waste definition. Statistical analysis determined that the logged mineralisation strongly correlates to a population above 47–50% Fe, which was used to assist the interpretation of the mineralisation. Alumina and titania grades and gamma logs also were used to confirm the boundaries of the mineralisation and the domains. The interpretation of the oxidation is less robust, supported by fewer records in the top 20 m of the deposit and at depth. Therefore, an iron-hard cap has not been interpreted. However, goethitic, limonitic and ochreous mineralisation has been noted in logging, but the lack of continuity meant that no substantial weathering and oxidation overprint could be modelled.
	Nature of the data used and of any assumptions made.	No material assumptions have been made which effects the MRE reported herein.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	Alternative interpretations are not likely to materially impact on the global MRE. It is likely that a greater understanding of the southwest-plunging extents of the mineralisation, currently open and limited by drilling information, will be developed over time. Additional drill hole information will further improve the understanding of the high alumina domain within the Main BIF. This may lead to separate domaining and alternative interpretation of this material in the future. Although very small and discontinuous, the most southern BIF unit, BIF 3, has potentially to be interpreted as a separate unit from the waste. However, it is unlikely to be of a suitable size and tenor of mineralisation to alter the MRE.
	The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology.	The main controls to the mineralisation are the lithological units of BIF, modelled explicitly as separate domains. The mineralisation has been estimated entirely within the BIF units. BIF 1 was further sub-domained by a high-grade alumina zone, which accounted for the upper 50 – 100 m, extending down-dip and along strike for the length of BIF 1. This formed a co-planar division of the unit into a hanging-wall high alumina sub-domain on the southern side, and a footwall, low-alumina sub-domain, which were treated as hard-boundaries for estimation. The grade and density estimates were constrained by BIF 1 high-alumina, BIF 1 low-alumina and BIF 2 domains, so that only the relevant composites were used to estimate the corresponding blocks for each domain. For density, the water table affected the moisture content. Therefore, the composites and blocks were further constrained to within the relevant domains and above or below the water table.
Dimensions	*The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	The Iron Ridge deposit constitutes two major, parallel BIF units, separated by a range of 14–36 m, which outcrop for ~75% of the drilled strike length of 600 m. The interpreted area lies in a minimum bounding rectangle of 7,019,245 mN, 567,498 mE to 7,019,663 mN, 7,019,605 mE in MGA Zone 50 coordinates. The sharp contacts to the dolerite are visible in the outcrop and in drilling, forming lateral widths of 31 m for BIF 1 and 6 m for BIF 2, which are consistent for the interpreted depth. The depth of the north-eastern extent of BIF 1 reaches an RL of 247 m for 280 m vertical depth, while the south-western extent reaches an RL of 247 m for 280 m vertical depth. The depth of the north-eastern extent of BIF 2 reaches an RL of 341 m for 176 m vertical depth, while the south-western extent reaches an RL of 510 m for 44 m vertical depth.
Estimation and modelling techniques	*The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme*	Quantitative kriging neighbourhood analysis (QKNA) was undertaken to assess the effect of changing key kriging neighbourhood parameters on block grade estimates on Fe% in BIF 1 and BIF 2. Kriging efficiency (KE) and slope of regression (SOR) were determined for a range of block sizes, minimum/maximum samples, search dimensions and discretisation grids.

Criteria	JORC Code explanation	Commentary
	grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen, include a description of computer software and parameters used	A three-pass search ellipse strategy was adopted whereby search ellipses were progressively increased if search criteria could not select sufficient data for the block estimate. The primary, secondary and tertiary search ellipse dimensions represented 67%, 100% and 200% of the variogram range respectively. For a very minor number of blocks, the Sichel mean was assigned for grades that were un-estimated. Ordinary kriging was adopted to interpolate grades into cells. Statistical analysis was completed using Supervisor and Isatis software. All geological modelling and grade estimation were completed using Surpac software.
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	In 2009, Atlas reported an Inferred Mineral Resource from BIF 1 only of 5 Mt @ 64.1% Fe%, 2.73% Al_2O_3%, 1.58% LOI, 3.29% SiO_2, 0.05% P. The MRE was interpreted on substantially less drill hole data with no QC sample analysis or density data available. In 2018, CSA Global converted the Atlas MRE to be reported in accordance with the JORC Code (2012 Edition). However, the geological model compares well where the interpretation of the previous was established. Given that significant drilling was completed in 2018, the 2019 MRE is considered to provide a more realistic inventory of the mineralisation.
	The assumptions made regarding recovery of by-products.	No assumptions have been made regarding recovery of by-products.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	Al_2O_3, LOI, SiO_2, P and TiO_2 were estimated. All other elements and variables were not estimated, as preliminary statistics showed that their means and maxima were considered below a significant threshold for this type of mineralisation.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	A 20 m(E) x 10 m(N) x 20 m(RL) parent cell size was used with sub-celling to 5 m(E) x 1.25 m(N) x 2.5 m(RL) to honour wireframe boundaries. The drill hole data spacing is highly variable but approximates 25–50 m along strike (north-south) x 25–50 m down dip. The block size represents approximately half of the drill spacing in the more densely drilled areas of the deposit.
	Any assumptions behind modelling of selective mining units.	No assumptions were made regarding selective mining units.
	Any assumptions about correlation between variables	The dataset is compositional; therefore, the proportion of iron in a sample is complementary or inversely correlated to the total of all other major grades, being SiO_2%, LOI% and Al_2O_3%. However, the estimate was optimised for iron, so that all variables used the same variogram model in each domain, which was checked against each variable to ensure there were no significant deviations no methods to estimate by considering the complex compositional nature, or decorrelate the data, were undertaken.
	Description of how the geological interpretation was used to control the resource estimates.	The main controls to the mineralisation are the lithological BIF units of BIF 1 and BIF 2 domains. BIF 1 was further sub-domained by a high-grade alumina zone, which accounted for the upper 50–100 m, extending down dip and along strike for the length of BIF 1. This formed a co-planar division of the unit into a hangingwall high-alumina sub-domain on the southern side, and a footwall, low-alumina sub-domain, which were treated as hard-boundaries for estimation.

Criteria	JORC Code explanation	Commentary
		The grade and density estimates were constrained by BIF 1 high-alumina, BIF 1 low-alumina and BIF 2 domains, so that only the relevant composites were used to estimate the corresponding blocks for each domain. For density, the water table affected the moisture content. Therefore, the composites and blocks were further constrained to within the relevant domains and above or below the water table.
	Discussion of basis for using or not using grade cutting or capping.	The requirement for bottom-cuts for iron and top-cuts for other variables was reviewed given the potential for extreme grades to bias block grade estimation. For each variable in each statistical domain, histograms and log-probability plots were reviewed to determine the point at which the number of samples supporting a high-grade distribution diminishes. Mean-variance plots were then reviewed to determine if potential outliers were significant contributors to the mean and variance, while themselves representing insignificant proportions of the total datasets. A review of outliers at the lower end of the iron distribution found that all sub-50% Fe composites related to samples at the boundary of the mineralisation, where 2 m composite lengths had incorporated mineralisation and some waste. Therefore, bottom-cuts were applied to iron around the 1st percentile. Top-cuts of the major components of the total assay were limited to < 1% of the population prevent unbalanced block total estimates.
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	Drill hole grades were initially visually compared with cell model grades. Domain drill hole and block model statistics were then compared. Swath plots were also created to compare drill hole grades with block model grades for easting, northing and elevation slices throughout the deposit. Estimated block grade totals were checked to ensure low variation from 100%. The block model reflected the tenor of the grades in the drill hole samples both globally and locally.
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	Tonnages are estimated on a dry basis.
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	The Mineral Resources have been reported above a cut-off grade of 58% Fe.
Mining factors or assumptions	*Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral*	In selecting the reporting cut-off grade, the mining method has been considered.

Criteria	JORC Code explanation	Commentary
	Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	
Metallurgical factors or assumptions	*The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	The very high iron grades are assumed to provide the possibility to produce a lump or fines product, thereby providing reasonable prospects for eventual economic extraction. In February 2019, Fenix submitted the following samples for comminution testwork on mineralisation: • 3 x 200–200 mm full core samples for uniaxial compression strength (UCS) testwork • 20 x -76 +51 mm pieces for bond work • Three bulk composites for drop tower test, dry scrub and dry screen from diamond holes IR002. The metallurgical results indicate that the mineralisation of the Iron Ridge deposit can produce lump and fines products with high iron and low impurity grades.
Environmental factors or assumptions	*Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered, this should be reported with an*	It is assumed that there will be no significant environmental impediments to developing the project. This is an early stage project and potential environmental impacts require review.

Criteria	JORC Code explanation	Commentary
	explanation of the environmental assumptions made.	
Bulk density	*Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.*	For mineralisation, long sign, downhole geophysical gamma density was used to estimate density by ordinary kriging using the relevant iron variogram and estimation parameters for each statistical domain. Only samples points that had a calliper measurement of not more than 20% of the nominal hole diameter for each hole type. The gamma density was correlated point-by-point to each overlapping water immersion determination of specific gravity on HQ core, which found a strong correlation. Sample points were composited to 2 m length prior to estimation. The moisture content of BIF 2 was measured as a length-weighted average of 11.15%. The data derived from one hole at the base of the interpreted domain, which was below the water table. Based on visual assessments, the moisture content of BIF 1 below the water table was estimated as 5%. Composites below the water table were corrected for the moisture content in the relevant domain. The mineralisation was considered entirely oxidised, therefore, the density was not split by an oxidation profile. A small volume of blocks on the fringes of each domain that did not receive an estimate were assigned the arithmetic mean of the composites. For waste where data were limited, a length-weighted average was calculated of 2.15 g/cm^3 and 2.0425 g/cm^3 above and below the water table respectively for oxide material, and 2.82 g/cm^3 above and 2.679 g/cm^3 below the water table respectively for fresh material.
	The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.	The gamma determines a quantitative, in situ measurement of density that accounts for void spaces. The measurements have been calibrated to regular calibration holes in iron ore deposits in the Pilbara. The water immersion method measurements were determined by measuring the weight of part or the entire sample in air and water and then applying the formula bulk density = weight_air/(weight_air-weight_water). Samples of drill core that contain "holes" or "vugs", are very porous, crumbly and incompetent or clay rich are sealed with a masonry sealant/wax and allowed to dry prior to bulk density determination.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	After considering the results of the above analysis, it was clear that the gamma density data were sufficient in number for all material types, quantitative and unbiased when large calliper deviations from the nominal hole diameter were removed. Calibration was undertaken calibration holes, to other holes and to density measured by water immersion. The approach adopted is considered robust.
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.*	The Mineral Resource has been classified following due consideration of all criteria contained in Section 1, Section 2 and Section 3 of JORC 2012 Table 1. After considering data quality and geological continuity, grade estimation quality was assessed. For BIF 1 and BIF 2 separately and then in combination, the block model was coloured for Fe% by the number of samples used to estimate the block, average distance to informing samples, estimation pass and SOR. Drill hole composites were then loaded to gain an understanding of how these measures related to drill hole spacing. Number of samples >8 and nearing the optimum of 18, average distance of <20 m, estimation pass 1 and SOR values of >0.5 were found to relate to a drill hole spacing of denser than approximately 40 m(E) x 40 m(RL). The Competent Person classified areas as Indicated where the drill hole spacing was denser than 40 m by 40 m. All other modelled areas were classified as Inferred. The drill hole spacing in these areas is 60 – 80 m. Only continuous areas were classified to avoid the "spotted dog effect".

Criteria	JORC Code explanation	Commentary
	Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	Appropriate account has been taken of all relevant criteria including data integrity, data quantity, geological continuity, and grade continuity.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	Appropriate account has been taken of all relevant criteria including data integrity, data quantity, geological continuity, and grade continuity.
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	The current model has not been audited by an independent third party but has been subject to CSA Global's internal peer review processes.
Discussion of relative accuracy/ confidence	*Where appropriate, a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.*	The Mineral Resource accuracy is communicated through the classification assigned to this Mineral Resource. The MRE has been classified in accordance with the JORC Code (2012 Edition) using a qualitative approach. All factors that have been considered have been adequately communicated in Section 1 and Section 3 of this table.
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	The Mineral Resource statement relates to a global tonnage and grade estimate. Grade estimates have been made for each block in the block model.
	These statements of relative accuracy and confidence of the	No production data is available.

Criteria	JORC Code explanation	Commentary
	estimate should be compared with production data, where available.	