ASX Release

25 October 2019

UPDATED MINERAL RESOURCES AND ORE RESERVES

- **Total iron ore Mineral Resources of 473Mt and Ore Reserves of 223Mt**
- **Iron Valley: Mineral Resources revised to 189.9Mt due to mining depletion as at 30 June 2019 and Ore Reserves revised to 89.0Mt due to mining depletion as at 30 June 2019 and updated price and cost assumptions. No other changes to the estimates**
- **Buckland (Bungaroo South and satellite deposits): Mineral Resources and Ore Reserves unchanged at 283.3Mt and 134.3Mt respectively**
- **Mardie Salt & SOP Project: Mineral Resources and Ore Reserves not applicable given seawater is an inexhaustible resource**

BCI Minerals Limited (ASX: BCI) ("BCI" or the "Company") reports its Mineral Resources and Ore Reserves as at 30 June 2019. As shown in tables 1 and 2 below, BCI has total hematite Mineral Resources of 473Mt and hematite Ore Reserves of approximately 223Mt.

Table 1: BCI Mineral Resources

Type / Project	Cut-off (% Fe)	Tonnes (Mt)	Fe (%)	CaFe (%)	SiO_2 (%)	Al_2O_3 (%)	P (%)	LOI (%)
Iron Valley	50	189.9	58.0	62.5	5.5	3.3	0.17	7.2
Buckland	50	283.3	56.5	61.4	7.8	2.7	0.14	8.1
Total		**473.2**						

Table 2: BCI Ore Reserves

Project	Cut-off (% Fe)	Tonnes (Mt)	Fe (%)	CaFe (%)	SiO_2 (%)	Al_2O_3 (%)	P (%)	LOI (%)
Iron Valley	54	89.0	58.3	63.0	5.0	3.1	0.18	7.5
Buckland	54	134.3	57.6	62.6	6.5	2.4	0.15	8.0
Total		**223.3**						

Iron Valley

Iron Valley is 100% owned by BCI and is being operated by Mineral Resources Limited (“MRL”) under a royalty-type agreement. MRL operates the mine at its cost and purchases Iron Valley product from BCI at a price linked to MRL’s realised sale price.

Mineral Resources and Ore Reserves for Iron Valley as at 30 June 2019 are presented below. The estimates and Competent Person Statements were prepared by MRL in accordance with JORC (2012) guidelines. Suitably qualified BCI personnel have reviewed the documentation and are comfortable with the methodologies used for the estimates.

The Mineral Resources and Ore Reserves have not materially changed since last reported as at 30 June 2018, with changes due to mining depletion as at 30 June 2019 and updated price and cost assumptions.

T +61 8 6311 3400
E info@bciminerals.com.au
W www.bciminerals.com.au
Level 1, 15 Rheola St
West Perth WA 6005
GPO Box 2811
West Perth WA 6872

Table 3: Mineral Resource Estimate

Classification	Cut-off (% Fe)	Tonnes (Mt)	Fe (%)	CaFe (%)	SiO_2 (%)	Al_2O_3 (%)	P (%)	LOI (%)
Measured – In-situ	50	81.8	57.8	62.7	5.2	3.2	0.19	7.9
Measured – Stockpiles	50	4.6	56.4	59.9	8.1	3.7	0.14	5.9
Indicated – In-situ	50	77.4	58.5	63.0	5.1	3.2	0.17	7.2
Inferred – In-situ	50	26.1	57.8	61.3	6.6	3.9	0.14	5.6
Total	**50**	**189.9**	**58.0**	**62.5**	**5.5**	**3.3**	**0.17**	**7.2**

Notes:

- *Tonnages are dry metric tonnes and have been rounded. Any small differences in totals are due to rounding.*
- *CaFe% is calcined Fe% calculated using the following formula; Fe% / (100% - LOI%) * 100.*

Table 4: Ore Reserve Estimate

Classification	Cut-off (% Fe)	Tonnes (Mt)	Fe (%)	CaFe (%)	SiO_2 (%)	Al_2O_3 (%)	P (%)	LOI (%)
Proved – In-situ	54	52.3	58.3	63.2	4.7	3.1	0.19	7.8
Proved – Stockpiles	54	4.6	56.4	59.9	8.1	3.7	0.14	5.9
Probable – In-situ	54	32.2	58.6	63.2	5.0	3.1	0.16	7.2
Total	**54**	**89.0**	**58.3**	**63.0**	**5.0**	**3.1**	**0.18**	**7.5**

Notes:

- *Tonnages are dry metric tonnes and have been rounded. Any small differences in totals are due to rounding.*
- *CaFe% is calcined Fe% calculated using the following formula; Fe% / (100% - LOI%) * 100.*
- *Stockpiles have been converted to dry tonnes based on a 7% moisture content.*
- *Stockpiles include 1.1Mt of post-process lump and fines products and 3.5Mt of pre-process ore.*

According to the MRL Competent Person, "*all required approvals are in place for the current operation to the end of December 2019. Additional approvals will be required to continue road train haulage beyond 2019 between Iron Valley and Port Hedland, and MRL is in the process of securing these*. *The current timeline for that process is not anticipated to delay or impede achievement of the mine plan"*. BCI notes that if the required additional approvals process result in higher transport cost or delays in ore haulage to port, it may have a negative impact on the assumptions applied for estimating the Ore Reserves, and on the economic viability of the mine.

Competent Persons Statements are shown in Appendix 1. Summaries of material information for Mineral Resources and Ore Reserves are shown in Appendix 2 and the JORC Table 1 report is shown in Appendix 3.

Buckland

The Buckland Project is a mine-to-port iron ore development project located in West Pilbara region. A feasibility study was completed in 2014 and key approvals and tenure in place. There have been no changes to the Mineral Resources or Ore Reserves since last reported. Competent Person disclosures are shown in Appendix 1.

-END-

For further information:

P: +61 8 6311 3400
E: info@bciminerals.com.au

Alwyn Vorster
Managing Director

Simon Hodge
Chief Financial Officer

Brad Milne
Investor Relations Manager

ABOUT BCI MINERALS

BCI Minerals Limited (ASX:BCI) ("BCI") is an Australian-based company that is developing a salt and potash business supported by iron ore royalty earnings.

BCI is focused on rapidly advancing its 100% owned Mardie Salt & Potash Project, a potential Tier 1 project located on the West Pilbara coast in the centre of Australia's key salt production region.

Mardie will produce high-purity salt (typically >99.5% NaCl) and sulphate of potash ("SOP") (typically >51% K_2O) via solar evaporation of seawater. Using an inexhaustible resource and a production process driven mainly by natural solar and wind energy, Mardie is a sustainable opportunity to supply the salt and potash growth markets in Asia over many decades.

The long-term demand outlook for both salt and SOP is positive. Salt is an essential mineral used extensively in modern life. High purity salt produced at Mardie will be used in chemical and industrial processes that create thousands of everyday products. Demand in this market segment, particularly in Asia, is expected to grow strongly over the next decade and result in a supply deficit.

Increasing population and urbanisation requires more and better-quality food to be produced from less arable land. SOP is a premium fertiliser providing two key nutrients – potassium and sulphur – which improves plant growth and makes it drought resistant. SOP is mostly used on high value crops where yield increases deliver larger financial benefits.

Following a positive Pre-Feasibility Study in 2018, a Definitive Feasibility Study on a 4Mtpa salt and 100ktpa SOP operation is underway and due to be completed in Q1 2020. Key approvals are expected to be in place by Q2 2020 and a Final Investment Decision is targeted by Q2 2020.

BCI receives quarterly royalty earnings from Iron Valley, an iron ore mine located in the Central Pilbara region of Western Australia which is operated by Mineral Resources Limited (ASX:MIN) (89Mt JORC Ore Reserve[1]). BCI's EBITDA from Iron Valley has ranged from A$5.6-18.3M per annum, with FY19 delivering A$12.3M.

KEY STATISTICS

Shares on issue:	398.9 million	
Cash and cash equivalents:	$32.3 million	as at 30 September 2019
Board:	Brian O'Donnell	Non-Executive Chairman
	Alwyn Vorster	Managing Director
	Michael Blakiston	Non-Executive Director
	Jenny Bloom	Non-Executive Director
Major shareholders (>5%):	Wroxby Pty Ltd	29.3%
Website:	www.bciminerals.com.au	

1: Refer to BCI's announcement "Updated Mineral Resources and Ore Reserves" dated 25 October 2019 for further details. BCI is not aware of any new information or data that materially affects the information included in that announcement.

APPENDIX 1: COMPETENT PERSONS STATEMENTS

The information in this report that relates to the Mineral Resource estimate at Iron Valley is based on, and fairly represents, information which has been compiled by Mr Matthew Watson, who is a Member of the Australasian Institute of Mining and Metallurgy and a full time employee of Mineral Resources Limited. Mr Watson has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken 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 Watson consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.

The information in this report that relates to the Ore Reserve estimate at Iron Valley is based on, and fairly represents, information which has been compiled by Mr Ross Jaine, who is a full time employee of Mineral Resources Limited and a Member of the Australasian Institute of Mining and Metallurgy. Mr Jaine has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken 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 Jaine consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.

The information in this announcement that relates to Mineral Resources and Ore Reserves at the Buckland Project is extracted from the Iron Ore Holdings Limited ASX Announcement titled "Buckland Project – Updated Ore Reserve" (dated 4 June 2014). This announcement is available to view at http://www.bciron.com.au/investors/asx-announcements/ioh-archive.html. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

APPENDIX 2: SUMMARY OF MATERIAL INFORMATION

Summary of Material Information – Mineral Resources

The Mineral Resource estimate, which has been prepared by MRL, factors in drilling and sampling completed by both MRL and a wholly-owned subsidiary of BCI. The Mineral Resource was estimated as at 30 June 2018 and has been depleted according to mining completed as at 30 June 2019.

Mineralisation within the Iron Valley deposit occurs as outcropping and buried Banded Iron Deposit ("BID") and Detrital mineralisation ("DID"). BID mineralisation is hosted predominantly in the Joffre Member of the Brockman Iron Formation. Incised into this bedrock geology are deposits of DID mineralisation.

Drilling comprises reverse circulation ("RC") and diamond core holes. RC holes of approximately 140mm in diameter were completed using a standard face sampling hammer. HQ sized diamond holes were drilled as diamond tails after RC holes and PQ sized diamond holes were drilled as twins to RC holes. Drill holes were both vertical and inclined to be sub-perpendicular to the local strike and dip of the mineralisation.

BCI RC cuttings were taken at 1m and 2m intervals, with the 2m intervals being the predominant interval size. Samples were generated by sending dry drill cuttings through a cone splitter. Where the drill cuttings were wet and interpreted to be mineralised, these cuttings were left to dry in poly weave bags prior to being passed through a riffle 3 tier splitting process to generate dry samples. Wet un-mineralised samples were generated by either taking a grab sample from the drill cuttings or following the wet mineralised cuttings procedure. MRL RC samples were taken at 2m intervals, with all samples generated using a cone splitter. BCI and MRL samples were sent to laboratories in Perth Australia where they were dried and prepared for XRF and TGA analysis.

Diamond core samples were taken at 1m, 2m, and 4m intervals, with 2m intervals being the predominant size for both. Complete core was sent to the laboratory for further preparation and XRF and TGA analysis or physical geo-metallurgical test work.

Geological interpretation was completed based on surface mapping, downhole geological logging, geophysics and geochemistry of RC and diamond core samples. Fe grade and key deleterious elements were estimated using ordinary kriging interpolation, while minor deleterious elements were estimated using inverse distance squared interpolation. A cut-off grade of 50% Fe was utilised.

Drilling was conducted on a 100m by 100m spacing (Indicated and Inferred classifications), with certain areas infilled to 50m by 50m (Measured and Indicated classifications), with a range of other criteria guiding the classifications within these drill spacing areas.

Summary of Material Information – Ore Reserves

The Ore Reserve estimate has been completed by MRL based on the 30 June 2018 Mineral Resource estimate and has been depleted according to mining completed as at 30 June 2019. Material assumptions for the Ore Reserve estimate are based on production data and operating costs to date. MRL has advised BCI that key cost assumptions are commercially sensitive.

Current and planned mining is by conventional open pit methods. A conventional dry crushing and screening process produces direct shipping ore lump and fines products, which are transported by road train to Port Hedland and exported. Financial modelling of the operation is based on a CFR 62% Fe iron ore price of US$75/dmt, an AUD/USD exchange rate of 0.70 and road train transportation.

The deposit was optimised using Whittle optimisation software utilising Measured, Indicated and Inferred Resources, with a cut-off grade of 54% Fe used to define ore within the optimisation. Life of Mine schedules were then completed using pit designs based on the results of the Whittle optimisations. Measured and Indicated Mineral Resources greater than or equal to 54% Fe were then classified as Ore Reserves.

Mining assumptions were adopted as follows: dilution was modelled by regularisation of the geological model using a selective mining unit of 12.5m by 12.5m by 5.0m, with the cut-off applied after regularisation. A 95% mining recovery factor was utilised and no minimum mining widths were applied.

Processing assumptions are based on the current metallurgical process in operation, being a conventional dry crushing and screening process producing DSO lump and fines.

All required approvals are in place for the current operation to the end of December 2019. Additional approvals will be required to continue road train haulage beyond 2019 between Iron Valley and Port Hedland and MRL is in the process of securing these. The current timeline for that process is not anticipated to delay or impede achievement of the mine plan.

The reported Ore Reserves are a subset of the reported Mineral Resources. An additional 5.6Mt @ 58.3% Fe of Inferred Mineral Resources has been scheduled in the mine plan and is not included in the Ore Reserve as Inferred Mineral Resources are not eligible for conversion to Ore Reserves.

APPENDIX 3: JORC CODE, 2012 EDITION – TABLE 1 REPORT

Section 1 – Sampling Techniques and Data

(Criteria In this section apply to all following sections.)

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 down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' 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.*	• All of the data used for resource estimation is based on the logging and sampling of reverse circulation ("RC") and diamond core drilling. • RC samples were taken at 1m and 2m intervals, with the 2m intervals being the predominant size. • Diamond core samples were taken at 1m, 2m and 4m intervals, with the 2m intervals being the predominant size. • Sampling has been undertaken by both Mineral Resources Limited (“MRL”) and a wholly owned subsidiary of BCI Minerals Limited ("BCI"). All BCI and MRL sampling has been carried out in accordance with the respective company's Sampling Procedure.
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.).*	• RC drill holes of approximately 140mm diameter were completed using a standard face sampling hammer. Drill holes were both vertical and angled. • HQ sized diamond holes were drilled as diamond tails after reverse circulation drill holes. Drill holes were both vertical and angled. • PQ sized diamond drill holes were drilled as twins to reverse circulation holes. Drill holes were both vertical and angled.

Criteria	JORC Code Explanation	Commentary
Drill Sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	• RC sample recovery was recorded by the company geologist as a relative percentage based on visual observation of the volume contained within each calico sample bag as well as the volume of the ground retention sample. Calico sample bags on average exceeded 80% of the sample bag total volume. • The Diamond core recovery was measured by the driller at the end of each drill run. Total core recovery for the MRL drilling averaged 85% of the total drilled interval. • No major issues with the sample collection system were identified during drilling. Minimal loss of fines was achieved through the use of an automated sample collection and splitting system. • No relationship was observed between sample recovery and grade.
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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	• All drill holes have been geologically logged using BCI and MRL coded logging systems for rock type, colour, shape, alteration, hardness, moisture and sample recovery. • Mineralised zones were identified from observations of mineralogy, lithological characteristics, downhole gamma survey data and geochemistry. The standard of logging is suitable to support an estimate of Mineral Resources. • All diamond core was photographed. • The total length of drill holes used for this resource is 85,273m with approximately 99.8% of the drill holes logged.

Criteria	JORC Code Explanation	Commentary
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• All RC samples are collected in labelled bags which are stored onsite or sent for analysis. • BCI RC cuttings were taken at 1m and 2m intervals, with the 2m intervals being the predominant interval size. Samples were generated by sending dry drill cuttings through a cone splitter. Where the drill cuttings were wet and interpreted to be mineralised, these cuttings were left to dry in poly weave bags prior to being passed through a riffle 3 tier splitting process to generate dry samples. Wet un-mineralised samples were generated by either taking a grab sample from the drill cuttings or following the wet mineralised cuttings procedure. Percussion samples weighing approximately 3kg were sent to the Ultratrace lab in Perth Australia where they were oven-dried and prepared for XRF and TGA analysis. • MRL RC samples were taken at 2m intervals. All samples were generated using a cone splitter. RC samples weighing approximately 3kg were sent to the Intertek Genalysis lab in Perth Australia where they were dried and prepared for XRF and TGA analysis. Post 2016 MRL samples were prepared and processed in the onsite lab. • BCI diamond tail HQ complete core was sampled at 1 m and 2m intervals and sent to Ultratrace labs to be crushed, dried and prepared for XRF and TGA analysis. • BCI diamond PQ complete core was sampled in 4m intervals and sent to the AMMTEC lab in Perth Australia for physical geo-metallurgical test-work. Each hole was analysed separately. • MRL diamond PQ complete core was sent to the ALS lab in Perth Australia for physical geo-metallurgical test-work.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.* • *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.*	• QA/QC procedures for the BCI drilling included the insertion of 4 different certified reference standards, field duplicates and lab repeats to monitor the accuracy and precision of the laboratory data. Inter-laboratory pulp checks were carried out at Genalysis Lab in Perth Western Australia. • QA/QC procedures for the MRL drilling included the insertion of a single type of certified reference standard, field duplicates and lab repeats to monitor the accuracy and precision of the laboratory data. • The sampling procedures and analysis of the QA/QC results indicate acceptable levels of assay accuracy and precision.

Criteria	JORC Code Explanation	Commentary
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Verification of the drill hole database provided by BCI was carried out by MRL. An issue was identified concerning the preferred reporting of calculated Fe instead of measured XRF Fe. No material difference was found to exist between the two data types. Another issue was identified concerning the replacement of original Ultratrace data with pulp check results from umpire lab Genalysis. Again no material difference was found to exist between the two sets of data. • No external verification was completed on the MRL data. • 8 BCI and 5 MRL twin diamond/RC holes have been completed in the area. Results of the twin analysis have shown acceptable correlation between the RC holes and the diamond twin holes. • Sample data is stored using a customized Access database, which includes a series of automated electronic validation checks. BCI and MRL data entry procedures are documented and readily available. Only trained personnel perform further manual validation in order to confirm results reflect field collected information and geology. • Some conversions of MnO% to Mn% have been made to the assay data used in the grade estimation. Samples returning below detection limits were given the result of half the detection limit. Samples with missing data were excluded from statistical analysis and estimation.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Survey control of drill hole collar locations has been established using a Real Time Kinetic ("RTK") Global Positioning System ("GPS"). The Grid system is MGA Zone 50 (GDA94 based) for horizontal data and AHD (based on AusGeoid09) for vertical data. Collar survey data has been validated against the LIDAR topographic surface. • Detailed downhole deviation surveys of accessible holes have been carried out by contractors Surtron and Pilbara Wireline Services. • The topography was created from 1m contours produced from 1m LIDAR data collected in 2013 and 2015.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• The BCI data is approximately spaced 100m along strike and 100m across strike. The MRL drilling has in-filled several areas of the earlier BCI drilling effectively closing the spacing to 50m along strike and 50m across strike. • The data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource estimation and classifications applied. • RC samples were composited over 2m intervals.

Criteria	JORC Code Explanation	Commentary
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.* • *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.*	• Vertical and inclined holes have been drilled sub-perpendicular to the local strike and dip of the mineralisation. The drilling has satisfactorily tested the geological structure and grade continuity of the mineralisation. • No biases are expected from the drilling direction.
Sample security	• *The measures taken to ensure sample security.*	• To ensure sample security the following measures were undertaken: A chain of custody is demonstrated by both the company (BCI and MRL) and the receiving lab in the delivery and receipt of sample materials via the use of consignment notes. Upon receipt of the samples the lab alerts the company designated contact that each batch has arrived noting any discrepancies from the consignment notes such as additional or missing samples within the batch. Damage to or loss of samples within each batch must also be reported to the company in the form of a list of samples affected and detailing the nature of the problem.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• All sampling has been carried out using BCI and MRL standard procedures. • No external audits were carried out during the drill programs. • Internal review by MRL of all QAQC and Twin data found the repeatability to be satisfactory. • MRL has not identified any major risk factors relating to the sampling and assaying of the data. Similar rigs and splitter systems were utilised across this deposit.

Section 2 – Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code Explanation	Commentary
General 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 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 Iron Valley deposit is located within Mining Licence M47/1439. M47/1439 is held by a wholly-owned subsidiary of BCI. • An iron ore sale agreement exists between BCI and MRL under which MRL operates the mine at its cost and purchases Iron Valley product from BCI at a price linked to MRL's realised sale price.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Both BHP (under the Broken Hill Propriety Company Ltd) and CSR Ltd have performed regional exploration for iron within the project boundaries during the 1970's. No historical data has been used by MRL.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Mineralisation within the Iron Valley deposit occurs as outcropping and buried Banded Iron Deposit ("BID") and Detrital mineralisation ("DID"). Outcropping geology in the project is the Joffre Member of the Brockman Iron Formation which hosts the BID mineralisation (predominantly in the upper Joffre member). Incised into this bedrock geology are deposits of DID mineralisation. The Weeli Wolli Formation also outcrops in the area, as well as Wongarra volcanics, Quaternary colluvium and a dolerite dyke.

Drill hole Information	• *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*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole 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 presented in this report.

Criteria	JORC Code Explanation	Commentary
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Exploration results and aggregates are not presented in this report.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• Exploration results are not presented in this report.
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.*	• Exploration results are not presented in this 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 presented in this report.
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.*	• Resources are primarily defined by drilling and assaying. Geophysics and surface mapping was used in exploration.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• No further drilling is currently planned.

Section 3 – Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

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.* • *Data validation procedures used.*	• Sample data is stored using a customised Access database (Datashed), which includes a series of automated electronic validation checks. Datashed is a secure industry standard database. • Only trained personnel perform further manual validation on the data in order to confirm results reflect field collected information and geology. In order to ensure integrity of the database, any changes to the database only occur after a review of the suggested changes are authorised, and these changes can only be performed by an authorised person. Prior to modelling, further validation was performed on the dataset being used using Micromine validation tools.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The Competent Person made a site visit to Iron Valley on 15 October 2014. BCI and MRL drill lines and locations were seen, as was drill and blast setup and excavation of ore and waste in the above water table pit. The visit provided an overview and context for the location and nature of the Iron Valley deposit.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• Logging and geological interpretation was completed by geologists experienced in iron mineralisation. There is some risk of misinterpretation in areas of wider spaced drilling with limited assay data, however this is not considered to be material. • Geological interpretation is based on surface mapping, down hole geological logging, geophysics and geochemistry of RC and Diamond drill samples. • BID and DID stratigraphy at Iron Valley is well known, and it is envisaged that any alternative geological interpretation, with or without further drilling, would not have a material impact on the Mineral Resource estimate. Further closer spaced drilling may improve the confidence in the stratigraphic interpretation of the BID mineralisation. • All samples are flagged with their host geological zone, only samples with the same geological zone as the block to be estimated can be used in grade estimation. • It is not expected that further drilling will materially change the grade and geological continuity.
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 Valley deposit extends approximately 6 km along a strike of 030°. Width varies from 50m to over 600m. Thickness varies from <15m to >120m.

Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme 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.*
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*
	• *The assumptions made regarding recovery of by-products.*
	• *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).*
	• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*
	• *Any assumptions behind modelling of selective mining units.*
	• *Any assumptions about correlation between variables.*
	• *Description of how the geological interpretation was used to control the resource estimates.*
	• *Discussion of basis for using or not using grade cutting or capping.*
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*
		• Ordinary Kriging (“OK”) interpolation was selected as the estimation method as it allows the measured spatial continuity to be incorporated into the estimate and is appropriate for the nature of the mineralisation.
		• Two separate geological/mineralisation domains were used to control estimation (sub-horizontal and sub-vertical).
		• Analysis of sample lengths indicated that compositing to 2m was necessary.
		• Variography was carried out on mineralised BID composites to determine kriging interpolation parameters. The sub-horizontal and sub-vertical domains were combined using an unfolding technique.
		• Search ellipse sizes for the estimation were based on a combination of drill spacing and variogram ranges.
		• The primary search ellipse in the sub-horizontal domain was 75m along strike, 60m across strike and 10m vertically using “unfolded” coordinates. A minimum of 8 samples and a maximum of 16 samples were required in the search pass; a minimum of two drill holes was required. A maximum of 4 samples per drill hole was used. Where blocks were not informed in the first pass, a second search was used with search distance increased by a factor of 2.5.
		• The primary search ellipse in the sub-vertical domain was 75m along strike, 6m across strike and 100m vertically using “unfolded” coordinates. A minimum of 4 samples and a maximum of 16 samples were required in the search pass; a minimum of two drill holes was required. A maximum of 4 samples per drill hole was used. Where blocks were not informed in the first pass, a second search was used with search distance increased by a factor of 2.
		• Fe, SiO_2, Al_2O_3, P, LOI, were estimated by OK; all other variables were estimated using Inverse Distance Squared interpolation.
		• Complete Inverse Distance Squared and Inverse Distance Cubed estimates were generated as a check. Check estimates produced confirmation of primary OK results.
		• Block size was 12.5m (E-W) by 12.5m (N-S) by 5m (Vertical) with sub-cells to 1.25m x 1.25m x 1m.
		• Previous Mineral Resource estimates were published by Iron Ore Holdings Limited in June 2011 and BCI in August 2015, August 2016, October 2017 and October 2018.
		• Validation of the final resource has been carried out in a number of ways, including:
		  ○ Drill Hole Section Comparison;
		  ○ Comparison by Mineralisation Zone;
		  ○ Swathe Plot Validation;
		  ○ Model versus Composites by Domain.
		• All modes of validation have produced acceptable results.

Criteria	JORC Code Explanation	Commentary
		• Global Reconciliations of actual production against the Mining model have been carried out on production of 30.1Mt (dry) to end of June 2018. The actual production reconciliations ≥ 50% Fe against the model are: 103% of tonnes; 101% of Fe%; 103% of SiO2%; 95% of Al2O3; and 98% of P%.
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.*	• An industry standard 50% Fe supported by the geology and the grade distribution of the sample population provided the basis for the cut-off grade selected.
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 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.*	• Current and planned mining is by conventional open-pit methods.
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.*	• MRL currently produces both lump and fines products.

Criteria	JORC Code Explanation	Commentary
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 explanation of the environmental assumptions made.*	• Mining waste is considered to be non-acid forming ("NAF") and formed waste dumps will conform to WA standards. Waste will be formed as dumps. Additional waste characterisation will be undertaken during mine life to confirm that waste is NAF. In the case of acid and fibre mitigation, MRL will use industry standard procedures. Ore is currently dry processed with future plans to implement wet screening and beneficiation. The beneficiation process will produce tailings that are planned to be disposed of within a tailings storage facility that will form part of an integrated waste landform.
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.* • *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.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Density has been calculated from bulk density measurements on diamond core. Average densities by geological unit and mineralisation have been applied globally to the model. Physical density measurements are taken in the field on core that has had excess moisture driven off. Core is then marked out according to geological unit and sent to the lab in Perth to be oven dried and weighed using various methods to estimate oven dried density, hydro-wrap density and hydro-spray density. • The following densities have been applied to the MRL codes by geological domain to the model: ○ BID 2.84 ○ DET 2.97 ○ COL 2.63 ○ BIF 2.62 ○ SHL 1.80 • The BCI codes have been changed to match the equivalent MRL codes and the following densities applied in the model: ○ BID 2.84 ○ BIF 2.62 ○ DET 2.97 ○ SHL 1.80 ○ WST 2.60

Criteria	JORC Code Explanation	Commentary

Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.*
	• *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).*
	• *Whether the result appropriately reflects the Competent Person's view of the deposit.*
		• The Iron Valley Mineral Resource has been classified in the Measured, Indicated and Inferred categories, in accordance with the 2012 Australasian Code for Reporting of Mineral Resources and Ore Reserves (JORC Code).
		• The area covered by detailed infill drilling is classified in the Measured and Indicated categories. The parts of the deposit lying outside this area are classified in the Indicated and Inferred categories.
		• A range of criteria has been considered in determining this classification including:
		  ○ Geological continuity;
		  ○ Data quality;
		  ○ Drill hole spacing;
		  ○ Modelling technique;
		  ○ Estimation properties including search strategy, kriging variance, number of informing data and average distance of data from blocks.
		• The Competent Person endorses the final results and classification.

Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• An Independent Technical Review was completed in March 2015 on the Mineral Resources by Coffey Mining Pty Ltd. The key findings were:
		  ○ The geological modelling is appropriate for the purpose of estimating the Mineral Resources;
		  ○ The geostatistical analysis is thorough and robust;
		  ○ The block model is appropriately constructed for the deposit on the basis of MRL's domains; and
		  ○ Visual and statistical validation of the model indicates that the model contains no fatal flaws.

Criteria	JORC Code Explanation	Commentary
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 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.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• Relative accuracy and confidence has been assessed by review of block kriging variance and variability statistics of individual block estimates. • The resource estimate is considered to reflect local estimation of grade. • Reconciliation of Actual production data vs the Mining model (based on Resource model) for the first 30.1Mt (dry) up to the end of June 2018 using a Fe cut-off ≥ 50% showed that the mining model slightly under-predicted Tonnes, Fe and SiO2, and over-predicted Al2O3 and P. The ratios of the Actual production data vs the Mining model are as follows: ○ 103% of Tonnes; ○ 101% of Fe%; ○ 103% of SiO2%; ○ 95% of Al2O3; and ○ 98% of P.

Section 4 – Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code Explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• The Iron Valley deposits are located in the Central Pilbara region of Western Australia. • The resource estimate was based on: data collected initially by a wholly-owned subsidiary of BCI and subsequently by MRL from an in-fill drilling campaign used for the commencement of mining; and geological interpretation by MRL. • The Mineral Resource estimate is based on a cut-off grade of 50% Fe. • The Mineral Resource estimate is not additional to the Ore Reserve estimate. The Ore Reserve estimate is a sub-set of the Mineral Resource estimate.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The Competent Person is Mr Ross Jaine, MAusIMM a full-time employee of MRL. • A number of site visits were undertaken prior to and during the development and subsequent operation of the site. These site visits informed access requirements, pit designs and site layout details. • The site has been operational since commencement of mining in July 2014.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	• The Iron Valley Project was studied at a pre-feasibility study level in 2012 by Snowden. • The Ore Reserve estimate is an update based on production to date and operating costs to date.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• A cut-off of 54% Fe has been used to define ore within the optimisation. All Mineral Resources ≥54% Fe within the optimisation shells have been scheduled. The cut-off grade has been selected on the basis of product specifications for marketing. Currently, all material mined ≥50% Fe is stockpiled into high and medium grade categories for blending to achieve product meeting specifications.

Criteria	JORC Code Explanation	Commentary
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	**Mining Method** • Current and planned mining of the resource is by use of conventional open pit methods. The current primary mine production fleet comprises 1x Hitachi EX2600 excavator, Komatsu HD785-7 (90t capacity) and HD1500 (150t capacity) dump trucks and Caterpillar 992 Front End Loaders or similar equivalents. • Mine designs comprise detailed pit designs for the Life-of-Mine. Operational waste dump and stockpile designs are in place with conceptual designs for the later phases of waste dump expansion. • Mining of the deposit below the water table is now underway with the approval for below table mining granted in December 2016. **Optimisation** • The deposit was optimised using Whittle Optimisation software. • Measured, Indicated and Inferred Mineral Resource categories were used in the Whittle Optimisation process. Excluding Inferred Mineral Resources from the Whittle Optimisation reduces in-situ Ore Reserves by 0.7Mt. • The overall slopes vary from 36° to 39° based on geotechnical studies. • Dilution has been modelled by regularisation of the geological model using a selective mining unit of 12.5m (length) by 12.5m (width) by 5.0m (depth). • Regularisation resulted in a reduction of 31Mt of Mineral Resources ≥ 50% Fe. • The cut-off grade has been applied after regularisation. • An ore mining recovery factor of 95% was applied in the Whittle Optimisation software. • No minimum mining widths (“MMW”) were applied with ≤ 4% of the Ore Reserves having a MMW < 100m. **Mine Plan** • Inferred Mineral Resources were included in the optimisation and 5.6Mt at 58.3% Fe of Inferred Mineral Resources have been included in the mine plans. No Inferred Mineral Resources are included in the Ore Reserves. **Infrastructure requirements of the selected mining method** • The Iron Valley Project is currently operational with TMM at 16Mtpa (wet) with all infrastructure requirements for the selected mining method in place.

Criteria	JORC Code Explanation	Commentary
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	• The metallurgical process in operation at Iron Valley is a conventional dry crushing and screening process producing lump and fines as Direct Ship Ore ("DSO"). • Lump and fines products are currently transported by road train to the port and shipped to market. • A comprehensive metallurgical evaluation of the Iron Valley deposit has been undertaken. The samples tested being representative of scheduled ore production from the deposit within the first three (3) years Above Water Table ("AWT") and the Below Water Table ("BWT") ore immediately beneath the AWT ore. The mineralisation tested as part of this programme included a combination of the surface detritals and Joffre hosted mineralisation. Eight (8) PQ diamond holes were drilled for the purposes of this test work programme with mineralised core intervals selected from seven (7) holes and domained into bedded, detrital and blended ore types. A total of 235.0m of core was used for testing with a total mass of 3.4 tonnes. • The grades of the deleterious elements in the Ore Reserves have been estimated using the Mineral Resources. The grades of the elements of the products are based on regression and mass balancing. • Global blended metallurgical parameters have been applied for Ore Reserve estimation.
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• All required environmental approvals are in place for the current operation underway. These include an Approved Mining Proposal under the Mining Act; and Above and Below Water Table approvals under Parts IV and V of the EP Act. • Waste rock characterisation studies have been completed and indicate low potential for acid rock drainage. • Additional approvals will be required to continue road train haulage from Iron Valley to Port Hedland beyond December 2019 and MRL is in the process of securing these. • Additional approvals are being sought for increased dewatering rates to facilitate mining of the northern deposits.
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• Existing infrastructure in place supports current operational requirements at 16Mtpa (wet) TMM.

Criteria	JORC Code Explanation	Commentary
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	• The cost estimates are in AUD with an exchange rate of 0.70 AUD/USD provided by MRL corporate. • An average price discount for lump and fines of 19.2% has been applied for excess deleterious elements in the products reflecting actual receipts for the previous three financial years. • All Government and private royalties are payable by the tenement owner, BCI. • The cost of acquiring Iron Valley ore from BCI is provided for in the cost assumptions.
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• The undiscounted price and exchange rate used for the calculation of Ore Reserves is US$75/dmt CFR 62% Fe and 0.70 AUD/USD respectively (equivalent to A$107.08/dmt CFR 62% Fe) as provided by MRL corporate. • The price used for the Ore Reserves has an 19.2% discount (average for lump and fines) applied to provide an allowance for penalties resulting from excess deleterious elements in the product with the discount reflecting actual receipts for the previous three financial years.

Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.*
	• *A customer and competitor analysis along with the identification of likely market windows for the product.*
	• *Price and volume forecasts and the basis for these forecasts.*
	• *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*
		• The Iron Valley Lump and Fines products are currently exported by MRL and their current relative values are well understood.
		• MRL markets the iron ore products utilising in house iron ore marketing expertise.
		• There have been no (external):
		  ○ Market assessment investigations;
		  ○ Customer or competitor analyses; or
		  ○ Price and Volume forecasts.

Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• Financial modelling of the operation based on the revenue and cost assumptions outlined above supports the Ore Reserve estimate.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• All required native title and heritage agreements are in place for the current operation underway. These include Native Title and Heritage agreements with the Nyiyaparli people.

Criteria	JORC Code Explanation	Commentary
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	• Identified risks include the following: ○ Waste disposal: Additional space for waste disposal is currently indicated with resolution studies currently underway including investigations into the backfilling of mined out pits and potential impacts on mine plan sequencing. ○ Elevated phosphorus levels of the Ore Reserve; and ○ Required approvals and agreements for continued road train haulage from Iron Valley to Port Hedland.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• All Indicated Mineral Resources within detailed pit designs have been converted to Probable Ore Reserves. • All Measured Mineral Resources within detailed pit designs have been converted to Proved Ore Reserves. • This classification is considered appropriate in the view of the competent person.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• There have been no (external) audits or reviews of the Ore Reserve estimates.

Criteria	JORC Code Explanation	Commentary
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve 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 reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *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.* • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• Factors that may affect the global tonnages and grade estimates may include: geological interpretation; mining ore recovery; mining dilution; and processing performance. • Global Reconciliations of actual production against the Mining model have been carried out on production of 30.1Mt (dry) to end of June 2018. The actual production reconciliations ≥ 50% Fe against the model are: 103% of tonnes; 101% of Fe%; 103% of SiO2%; 95% of Al2O3; and 98% of P%. • No assessment of the relative accuracy or confidence limits of the Ore Reserve have been undertaken.