ASX ANNOUNCEMENT
20 November 2019

YILGARN – ORE RESERVE STATEMENT

HIGHLIGHTS

- Maiden combined Ore Reserve statement for MRL's Yilgarn deposits: Koolyanobbing, Windarling, Deception and Parker Range (Mt Caudan).
- Total combined Yilgarn Ore Reserve of 40.8Mt (dry) at 58.2% Fe, 4.9% SiO_2, 1.95% Al_2O_3, 0.097% P and 8.2% LOI.

Mineral Resources Limited (**ASX:MIN; MRL**) is pleased to announce an inaugural combined Ore Reserve for its Yilgarn Operations that includes its deposits at Koolyanobbing, Windarling, Deception and Parker Range.

Following a review of MRL's Yilgarn Deposits at Koolyanobbing, Windarling, Deception and Parker Range and the updating of the Mineral Resources (by Mr. Matthew Watson of Mineral Resources Limited, Mr Clint Ward formally of Cliffs APIO & Mr David Allmark of RPM Global), Mr Ross Jaine of Mineral Resources Limited has reviewed and compiled the Ore Reserves as at 30 June 2019.

The Yilgarn Total Ore Reserves, using a 54% Fe cut-off, now stands at:

- Proven 13.8Mt at 57.1% Fe, 5.2% SiO_2, 2.3% Al_2O_3, 0.02% P and 9.0% LOI and;
- Probable 27.0Mt at 58.8% Fe, 4.8% SiO_2, 1.8% Al_2O_3, 0.14% P and 7.8% LOI.

YILGARN ORE RESERVE COMMENTARY

The Ore Reserve of 40.8Mt at 58.2% Fe, 4.9% SiO_2, 2.0% Al_2O_3, 0.097% P and 8.2% LOI is based on:

- The combined Yilgarn Mineral Resources announced on 20 November 2019 of 108.6 million tonnes at 56.8% Fe, 6.3% SiO2, 2.2% Al2O3, 0.11% P and 8.2% LOI using a nominal cut-off grade of 50% Fe.
- Results from production to date with the Koolyanobbing, Windarling and Deception sites operational since re-commencement of mining and crushing in November 2018 and shipping in December 2018; and
- Feasibility level studies undertaken internally by MRL using its in-house design, engineering and metallurgy teams drawing upon their operational experiences at Koolyanobbing as well as other Iron Ore projects operated by MRL in Western Australia – these studies are not for release to the market due to them containing commercially and technically sensitive information.

Due to the deposit integration inherent in the Ore Reserve, the following supporting data is comprehensive and addresses the Reserve generation process collectively for all deposits.

- All tonnes are reported on a dry basis.

- Mining models with ore loss and dilution have been generated by regularisation of the sub-celled geological Mineral Resource models using a selective mining unit block size of 12.0m (length) by 6.0m (width) by 6.0m (depth) for all deposits with the exception of Parker Range (Mt Caudan) regularised at 15.0m (length) by 6.25m (width) by 5.0m (depth). The larger volume chosen for Parker Range addresses uncertainty given mining has not yet commenced there.

- This was followed by:
    - Pit optimisation using Whittle 4X software using Measured and Indicated Resource category material only;
    - Detailed open pit stage designs with a minimum mining width of 30 metres; and
    - Mine scheduling and costing.

- Operational waste dump and stockpile designs were in place when MRL commenced production in 2018. These have since been refined to suit MRL's operating model.

- The Ore Reserves have been classified based on their Mineral Resource category, are within the final pit designs and have been scheduled to achieve marketing product specifications. No other modifying factors have been used in the classification of Ore Reserves.

- The cut-off grade (54% Fe) was chosen following strategic mine planning analysis which sought to optimise ore extraction against the current marketing plan for MRL, considering the Fe content as well as the levels of contaminants.

- Inferred Mineral Resources are included in the mine plans. While no Inferred Mineral Resources are reported in the Ore Reserves these have the potential to increase the mining inventory with further drilling and metallurgical testing. The Ore Reserve is a subset of the Mineral Resources.

- All required environmental approvals are in place for the currently operating Koolyanobbing, Windarling and Deception pits with final approvals being sought for Parker Range (Mt Caudan).

- All required native title and heritage agreements are in place for the current operations with additional agreements similarly being sought for Parker Range (Mt Caudan).

- Current and planned mining is by use of conventional open pit drill and blast, load and haul methods. The current primary mine production fleet comprises Hitachi EX1900, EX2600, EX3600 excavators and matching haul trucks with required infrastructure for all mining operations in place with the exception of the undeveloped Parker Range.

- The following additional infrastructure will be required for the development of the Parker Range (Mt Caudan) deposit and is included in the capital estimates. Additional Infrastructure for Development of Parker Range (Mt Caudan) includes:
    - Road construction for road train haulage to the Koolyanobbing Ore processing facility including highway crossing upgrades
    - Site access road upgrade
    - ROM pad construction

- HV & LV workshops
- Warehouse
- Fuel storage and dispensing
- Magazines
- Wash down pad
- Power plant
- Potable water
- Office facilities including crib hut and ablutions

- Waste rock characterisation studies have been completed and indicate minimal quantities of Potentially Acid Forming material.

The key parameters used for conversion of the Mineral Resources to Ore Reserves include (but are not limited to) the following:

Pricing

- US$80/dmt CFR 62% Fe
- 0.74 AUD/USD exchange rate
- A 15% average price discount for both lump and fines for deleterious elements in the product

Price Sensitivity

- Mine Scheduling scenarios at lower pricing supports the Ore Reserves with no impact and no change to the reported Ore Reserves with a 15% reduction in revenue.

Costs

- Ore haulage and rail costs are based on budget forecasts based on current actual costs and include fixed and variable cost components.
- Railing and shipping costs are based on budget forecasts based on current actual costs and current third party contracts.
- Government and third party royalties have been included in the costs.
- Treatment and processing costs have been estimated based on existing MRL crushing and screening operations.

Geotechnical / Hydrogeology

- Overall pit slopes of 36° to 41° as estimated from Geotechnical studies provided by external consultants and past and present mining practices.
- Groundwater management is based on advice provided by external consultants. Dewatering, where required, is conducted using ex-pit bores and sumps.

Ore Recovery

- An ore recovery of 95% supported by reconciliation of actual production against the mining model for Koolyanobbing, Windarling and Deception.

- An ore recovery of 100% for Parker Range with a larger selective mining unit block size providing a higher degree of dilution than the Koolyanobbing, Windarling and Deception models. The SMU and recovery will be monitored once mining has commenced.

Reconciliation

- Reconciliation has been conducted on MRL production to the end of October 2019 on production of 7.5Mt blended feed from all Yilgarn operations. The actual combined production reconciliations ≥ 54% Fe across the deposits combined are: 102% of tonnes; 100% of Fe%; 95% of SiO2%; 94% of Al2O3; 101% of P% and 96% of LOI.

Processing

- Processing is via the existing crushing and screening plant.
- The plant uses dry processing methods to size and separate Iron Ore lump and fines products for direct shipping. No beneficiation is required and there is no yield loss.
- An 11M wet tonne per annum ore processing rate is assumed in generation of the Ore Reserves. The existing plant was reported by Cliffs to have produced 11.8Mt in 2016.

Yilgarn Iron Ore Reserves (as at 30 June 2019)

Iron Mineralisation			Proved Reserves					
Deposit	**Type**	**Cut-off (Fe %)**	**Tonnes (Mt)**	**Fe (%)**	**SiO2 (%)**	**Al2O3 (%)**	**P (%)**	**LOI (%)**
Parker Range	Open Pit	54	13.8	57.1	5.18	2.25	0.020	9.02
	Sub-Total	**54**	**13.8**	**57.1**	**5.18**	**2.25**	**0.020**	**9.02**

Iron Mineralisation			Probable Reserves					
Deposit	**Type**	**Cut-off (Fe %)**	**Tonnes (Mt)**	**Fe (%)**	**SiO2 (%)**	**Al2O3 (%)**	**P (%)**	**LOI (%)**
Deception	Open Pit	54	9.3	59.9	4.84	1.96	0.118	6.13
F Pits	Open Pit	54	4.9	57.4	6.23	1.44	0.058	9.23
Windarling	Open Pit	54	9.9	58.7	4.09	1.59	0.224	8.32
Parker Range	Open Pit	54	2.8	57.9	4.27	2.59	0.024	9.18
	Sub-Total	**54**	**27.0**	**58.8**	**4.76**	**1.80**	**0.136**	**7.83**

Iron Mineralisation			Total Reserves					
Deposit	**Type**	**Cut-off (Fe %)**	**Tonnes (Mt)**	**Fe (%)**	**SiO2 (%)**	**Al2O3 (%)**	**P (%)**	**LOI (%)**
	Grand Total	**54**	**40.8**	**58.2**	**4.90**	**1.95**	**0.097**	**8.23**

All tonnages reported on a dry basis. Note that small discrepancies may occur due to rounding.

Competent Person's Statement

The information in this report that relates to the Ore Reserve estimates at Koolyanobbing, Windarling, Deception and Parker Range (Mt Caudan) is based on, and fairly represents, information that 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.

Forward Looking Statement

This ASX announcement may contain forward looking statements that are subject to risk factors associated with iron ore exploration, mining and production businesses. It is believed that the expectations reflected in these statements are reasonable but they may be affected by a variety of variables and changes in underlying assumptions which could cause actual results or trends to differ materially, including but not limited to price fluctuations, actual demand, currency fluctuations, drilling and production results, Reserve estimations, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory changes, economic and financial market conditions in various countries and regions, political risks, project delay or advancement, approvals and cost estimates.

Forward-looking statements, including projections, forecasts and estimates, are provided as a general guide only and should not be relied on as an indication or guarantee of future performance and involve known and unknown risks, uncertainties and other factors, many of which are outside the control of Mineral Resource Ltd. Past performance is not necessarily a guide to future performance and no representation or warranty is made as to the likelihood of achievement or reasonableness of any forward looking statements or other forecast.

ENDS

APPENDIX 1: JORC COMPLIANT IRON ORE RESERVES

The following information is provided in accordance with Table 1 of Appendix 5A of the JORC Code 2012 – Section 4 (Estimation and Reporting of Ore Reserves)

Section 1 (Sampling Techniques and Data), Section 2 (Reporting of Exploration Results) and Section 3 (Estimation and Reporting) is not being reported in this document.

TABLE 1 - SECTION 4 - ESTIMATION AND REPORTING OF ORE RESERVES – KOOLYANOBBING

(Criteria listed in section 1, and where relevant in section 2 and 3 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 Koolyanobbing Ore Reserves are based on the corresponding Koolyanobbing Mineral Resource as announced in the Mineral Resource Statement – Koolyanobbing, Mt Dimer & Parker Range dated 20 November 2019. • 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. • Mr Jaine has visited the site and confirmed operating assumptions used for estimation of the Ore Reserves.
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 Koolyanobbing mining operations are located in the Yilgarn region of Western Australia approximately 10km east by road from the Koolyanobbing ore processing facility. • The Koolyanobbing Ore Reserves are comprised of three pit stages across three deposits F1, F2 and F3 • Mineral Resources Limited (MRL) acquired the Koolyanobbing Project from Cliffs Asia Pacific Iron Ore Limited (Cliffs) in July 2018 with Cliffs final iron ore shipment sailing in February 2018. • MRL recommenced mining and crushing in November 2018 and shipping in December 2018. • The conversion of Mineral Resources to Ore Reserves is based on current and forecast on-going production and operating costs.
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. • The cut-off grade has been selected on the basis of achieving product specifications suitable for marketing. • All Mineral Resources ≥54% Fe within the pit designs have been scheduled.
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral*	**General Method for Conversion of Mineral Resources to Reserves** • Regularisation of the Mineral Resource model to a

Criteria	JORC Code Explanation	Commentary
	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.*	diluted mining model; • Optimisation of the mining model using Whittle 4X Optimisation software including Measured and Indicated categories only and using input net price, cost, cut-off grade, ore-recovery and overall pit wall angle assumptions; • Detailed pit and stage designs completed based on the selected Whittle 4X Optimisation pit shell results; • Life-of-Mine scenario analysis and scheduling of pit design inventory to achieve marketing product specifications; and • Reporting of pit inventory above Fe% cut-off by Mineral Resource category and classification to corresponding Ore Reserve category. **Mining Method** • Current and planned mining of the resource is by use of conventional drill and blast, haul truck and excavator open pit methods. • The current primary mine production fleet comprises 1x Hitachi EX2600 excavator and 4x 150t capacity dump trucks. • Mine designs consist of detailed Life-of-Mine pit, waste dump and stockpile designs. • Overall wall angles of 41° have been used in the 4X Whittle Optimisation per the geotechnical design. • Dilution has been applied by regularisation of the Resource model using a selective mining unit of 6.0m (width) by 12.0m (length) by 6.0m (depth). • An ore mining recovery factor of 95% was applied in the 4X Whittle Optimisation. • Minimum mining widths have been incorporated into pit designs consistent with current mining equipment operating parameters. • Minimum mining widths have not been included in the optimisation. • Final pit designs are based on Measured and Indicated Resource classifications only and exclude any Inferred Mineral Resources. • All Inferred material contained within the detailed pit design has been included in the scheduling process. • No Inferred Mineral Resources are included in the Ore Reserve Statement. • All infrastructure requirements for the selected mining method are in place with mining operations at Koolyanobbing currently underway.
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*	• Ore processing at Koolyanobbing consists of conventional dry crushing and screening to produce Direct Ship Ore ("DSO") lump and fines products. The Koolyanobbing ore processing plant has been in its current configuration since 2012. • Cliffs produced 11.8Mt from the Koolyanobbing ore processing plant in 2016. • The deleterious element grades in the Ore Reserves have been estimated using the Mineral

Criteria	JORC Code Explanation	Commentary
	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?*	Resources. • The element grades of the products are based on regression and mass balancing from both production data and geo-metallurgical test work results.
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 current ore and waste mining operations at Koolyanobbing. • Waste rock characterisation studies indicate low potential for acid rock drainage with less than 1% of all waste material with a sulphur content ≥ 0.3%. • Any PAF material identified will be managed in accordance with operational PAF management procedures. • Mine designs consist of detailed Life-of-Mine pit, waste dump, stockpile designs, haul-roads and associated infrastructure.
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.*	• All Infrastructure requirements are in place for current ore and waste mining operations at Koolyanobbing. • The Ore processing facility and supporting infrastructure in place has historically supported production rates of 11M wet tonnes per annum. • Since closure by Cliffs in February 2018 MRL has hauled to and crushed at the Koolyanobbing ore processing plant over 1.3M wet tonnes of ore from Koolyanobbing.

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.*	• With all Infrastructure requirements in place for current ore and waste mining operations at Koolyanobbing, no additional major capital items are required for the Project • Sustaining capital is provided for in the unit rates used in the Whittle 4X Optimisation. • Operating costs are based on budget forecasts of current actual costs and include fixed and variable for crushing, maintenance, mining, ore haulage, labour, administration, accommodation, railing and shipping. • An average 15% price discount has been applied as provision for deleterious elements in the lump and fines products and is based on projected estimates from current actuals. • Ore haulage costs are based on budget forecasts of current actual costs and include fixed and variable. • Railing and shipping costs are based on budget forecasts of current actual costs and current third party contracts. • An allowance of 7.5% for the WA State Government royalty is included in the Whittle 4X Optimisation.
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$80/dmt CFR 62% Fe and 0.74 AUD/USD respectively equivalent to A$108.11/dmt CFR 62% Fe. • A 15% average price discount for both lump and fines has been applied to provide for deleterious elements in the product.

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 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 current and planned operation based on the revenue and cost assumptions outlined above supports the Ore Reserve estimate. • Mine Scheduling scenarios at lower pricing supports the Ore Reserves with no impact and no change to the reported Ore Reserves with a 15% reduction in revenue

Criteria	JORC Code Explanation	Commentary
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.
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.*	• Granted Mining Lease tenure held by MRL. • Project currently operating with Mining Proposal approval received from DMIRS.
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 and scheduled to achieve marketing specifications have been converted to Probable Ore Reserves. • All Measured Mineral Resources within detailed pit designs and scheduled to achieve marketing specifications 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 MRL production to end of October 2019 have been carried out on production of 7.5Mt blended feed from all Yilgarn operations. The actual combined production reconciliations ≥ 54% Fe across the deposits combined are: 102% of tonnes; 100% of Fe%;95% of SiO2%; 94% of Al2O3; 101% of P% and 96% of LOI. • No assessment of the relative accuracy or confidence limits of the Ore Reserve have been undertaken.

TABLE 1 - SECTION 4 - ESTIMATION AND REPORTING OF ORE RESERVES - WINDARLING

(Criteria listed in section 1, and where relevant in section 2 and 3, 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 Windarling Ore Reserves are based on the corresponding Windarling Mineral Resource as announced in the Mineral Resource Statement – Koolyanobbing, Mt Dimer & Parker Range dated 20 November 2019. • 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. • Mr Jaine has visited the site and confirmed operating assumptions used for estimation of the Ore Reserves.
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 Windarling mining operations are located in the Yilgarn region of Western Australia approximately 100km north by road from the Koolyanobbing ore processing facility. • The Windarling Ore Reserves are comprised of four pit stages across four deposits W1, W3, W7 and W10 • Mineral Resources Limited (MRL) acquired the Koolyanobbing Project from Cliffs Asia Pacific Iron Ore Limited (Cliffs) in July 2018 with Cliffs final iron ore shipment sailing in February 2018. • MRL recommenced mining and crushing in November 2018 and shipping in December 2018. • The conversion of Mineral Resources to Ore Reserves is based on current and forecast on-going production and operating costs.
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. • The cut-off grade has been selected on the basis of achieving product specifications suitable for marketing. • All Mineral Resources ≥54% Fe within the pit designs have been scheduled.
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*	**General Method for Conversion of Mineral Resources to Reserves** • Regularisation of the Mineral Resource model to a diluted mining model; • Optimisation of the mining model using Whittle 4X Optimisation software including Measured and Indicated categories only and using input net price, cost, cut-off grade, ore-recovery and overall pit wall angle assumptions; • Detailed pit and stage designs completed based on the selected Whittle 4X Optimisation pit shell results; • Life-of-Mine scenario analysis and scheduling of pit design inventory to achieve marketing product specifications; and • Reporting of pit inventory above Fe% cut-off by

Criteria	JORC Code Explanation	Commentary
	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.*	Mineral Resource category and classification to corresponding Ore Reserve category. **Mining Method** • Current and planned mining of the resource is by use of conventional drill and blast, haul truck and excavator open pit methods. • The current primary mine production fleet comprises 1x Hitachi EX1900 excavator and 3x 150t capacity dump trucks. • Mine designs consist of detailed Life-of-Mine pit, waste dump and stockpile designs. • Overall wall angles of 41° have been used in the 4X Whittle Optimisation. • Dilution has been applied by regularisation of the Resource model using a selective mining unit of 6.0m (width) by 12.0m (length) by 6.0m (depth). • In addition to regularisation, an ore mining recovery factor of 95% was applied in the 4X Whittle Optimisation. • Minimum mining widths have been incorporated into pit designs consistent with current mining equipment operating parameters. • Minimum mining widths have not been included in the optimisation. • Final pit designs are based on Measured and Indicated Resource classifications only and exclude any Inferred Mineral Resources. • All Inferred material contained within the detailed pit design has been included in the scheduling process. • No Inferred Mineral Resources are included in the Ore Reserve Statement. • All infrastructure requirements for the selected mining method are in place with Mining Operations at Windarling currently underway.
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*	• Ore processing at Koolyanobbing consists of conventional dry crushing and screening to produce Direct Ship Ore (“DSO”) lump and fines products. The Koolyanobbing ore processing plant has been in its current configuration since 2012. • Cliffs produced 11.8Mt from the Koolyanobbing ore processing plant in 2016. • The deleterious element grades in the Ore Reserves have been estimated using the Mineral Resources. • The element grades of the products are based on regression and mass balancing from both production data and geo-metallurgical test work results

Criteria	JORC Code Explanation	Commentary
	appropriate mineralogy to meet the specifications?	
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 current ore and waste Mining operations at Windarling. • Waste rock characterisation studies indicate low potential for acid rock drainage with less than 4% of all waste material with a sulphur content ≥ 0.3%. • Any PAF material identified will be managed in accordance with operational PAF management procedures. • Mine designs consist of detailed Life-of-Mine pit, waste dump, stockpile designs, haul-roads and associated infrastructure.
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.*	• All Infrastructure requirements are in place for current ore and waste Mining operations at Windarling. • The Ore processing facility and supporting infrastructure in place has historically supported production rates of 11M wet tonnes per annum. • Since closure by Cliffs in February 2018 MRL has hauled, to and crushed at the Koolyanobbing ore processing plant, over 2.4M wet tonnes of ore from Windarling.
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.*	• With all Infrastructure requirements in place for current ore and waste Mining operations at Windarling, no additional major capital items are required for the Project. • Sustaining capital is provided for in the unit rates used in the Whittle 4X Optimisation. • Operating costs are based on budget forecasts of current actual costs and include fixed and variable for crushing, maintenance, mining, ore haulage, labour, administration, accommodation, railing and shipping. • An average 15% price discount has been applied as provision for deleterious elements in the lump and fines products and is based on projected estimates from current actuals. • The cost estimates are in AUD with an exchange rate of 0.74 AUD/USD as provided by MRL corporate. • Ore haulage costs are based on budget forecasts of current actual costs and include fixed and variable. • Railing and shipping costs are based on budget forecasts of current actual costs and current third party contracts. • An allowance of 7.5% for the WA State Government royalty is included in the Whittle 4X Optimisation.
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$80/dmt CFR 62% Fe and 0.74 AUD/USD respectively equivalent to A$108.11/dmt CFR 62% Fe. • A 15% average price discount for both lump and fines has been applied to provide for deleterious elements in the product.

Criteria	JORC Code Explanation	Commentary

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 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 current and planned operation based on the revenue and cost assumptions outlined above supports the Ore Reserve estimate. • Mine Scheduling scenarios at lower pricing supports the Ore Reserves with no impact and no change to the reported Ore Reserves with a 15% reduction in revenue
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 operation currently underway.
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.*	• Granted Mining Lease tenure held by MRL. • Project currently operating with Mining Proposal approval received from DMIRS.
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 and scheduled to achieve marketing specifications have been converted to Probable Ore Reserves. • All Measured Mineral Resources within detailed pit designs and scheduled to achieve marketing specifications have been converted to Proved Ore Reserves. • This classification is considered appropriate in the

Criteria	JORC Code Explanation	Commentary
		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.
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 MRL production to end of October 2019 have been carried out on production of 7.5Mt blended feed from all Yilgarn operations. The actual combined production reconciliations ≥ 54% Fe across the deposits combined are: 102% of tonnes; 100% of Fe%;95% of SiO2%; 94% of Al2O3; 101% of P% and 96% of LOI. • No assessment of the relative accuracy or confidence limits of the Ore Reserve have been undertaken.

TABLE 1 - SECTION 4 - ESTIMATION AND REPORTING OF ORE RESERVES - DECEPTION

(Criteria listed in section 1, and where relevant in section 2 and 3, 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 Deception Ore Reserves are based on the corresponding Deception Mineral Resource as announced in the Mineral Resource Statement – Koolyanobbing, Mt Dimer & Parker Range dated 20 November 2019. • 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. • Mr Jaine has visited the site and confirmed operating assumptions used for estimation of the Ore Reserves.
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 Deception mining operations are located in the Yilgarn region of Western Australia approximately 122km north by road from the Koolyanobbing ore processing facility. • The Deception Ore Reserves are comprised of two pit stages across one deposit. • Mineral Resources Limited (MRL) acquired the Koolyanobbing Project from Cliffs Asia Pacific Iron Ore Limited (Cliffs) in July 2018 with Cliffs final iron ore shipment sailing in February 2018. • MRL recommenced mining and crushing in November 2018 and shipping in December 2018. • The conversion of Mineral Resources to Ore Reserves is based on current and forecast on-going production and operating costs.
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. • The cut-off grade has been selected on the basis of achieving product specifications suitable for marketing. • All Mineral Resources ≥54% Fe within the pit designs have been scheduled.
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*	**General Method for Conversion of Mineral Resources to Reserves** • Regularisation of the Mineral Resource model to a diluted mining model; • Optimisation of the mining model using Whittle 4X Optimisation software including Measured and Indicated categories only and using input net price, cost, cut-off grade, ore-recovery and overall pit wall angle assumptions; • Detailed pit and stage designs completed based on the selected Whittle 4X Optimisation pit shell results; • Life-of-Mine scenario analysis and scheduling of pit design inventory to achieve marketing product specifications; and • Reporting of pit inventory above Fe% cut-off by

Criteria	JORC Code Explanation	Commentary
	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.*	Mineral Resource category and classification to corresponding Ore Reserve category. **Mining Method** • Current and planned mining of the resource is by use of conventional drill and blast, haul truck and excavator open pit methods. • The current primary mine production fleet comprises 1x Hitachi EX3600 excavator and 4x 180t capacity dump trucks. • Mine designs consist of detailed Life-of-Mine pit, waste dump and stockpile designs. • Overall wall angles ranging from 36° to 39° have been used in the 4X Whittle Optimisation. • Dilution has been applied by regularisation of the Resource model using a selective mining unit of 6.0m (width) by 12.0m (length) by 6.0m (depth). • In addition to regularisation, an ore mining recovery factor of 95% has been applied in the 4X Whittle Optimisation. • Minimum mining widths have been incorporated into pit designs consistent with current mining equipment operating parameters. • Minimum mining widths have not been included in the optimisation. • Final pit designs are based on Measured and Indicated Resource classifications only and exclude any Inferred Mineral Resources. • All Inferred material contained within the detailed pit design has been included in the scheduling process. • No Inferred Mineral Resources are included in the Ore Reserve Statement. • All infrastructure requirements for the selected mining method are in place with Mining Operations at Deception currently underway.
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*	• Ore processing at Koolyanobbing consists of conventional dry crushing and screening to produce Direct Ship Ore (“DSO”) lump and fines products. The Koolyanobbing ore processing plant has been in its current configuration since 2012. • Cliffs produced 11.8Mt from the Koolyanobbing ore processing plant in 2016. • The deleterious element grades in the Ore Reserves have been estimated using the Mineral Resources. • The element grades of the products are based on regression and mass balancing from both production data and geo-metallurgical test work results.

Criteria	JORC Code Explanation	Commentary
	estimation been based on the appropriate mineralogy to meet the specifications?	
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 current ore and waste mining operations at Deception. • Waste rock characterisation studies indicate low potential for potentially acid forming (PAF) drainage with less than 4% of total waste material reporting a sulphur content ≥ 0.3%. • Any PAF material identified will be managed in accordance with operational PAF management procedures. • Mine designs consist of detailed Life-of-Mine pit, waste dump, stockpile designs, haul-roads and associated infrastructure.
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.*	• All Infrastructure requirements are in place for current ore and waste mining operations at Deception. • The Ore processing facility and supporting infrastructure in place has historically supported production rates of 11M wet tonnes per annum. • Since closure by Cliffs in February 2018 MRL has hauled to and crushed at the Koolyanobbing ore processing plant over 1.5M wet tonnes of ore from Deception.
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.*	• With all Infrastructure requirements in place for current ore and waste mining operations at Deception, no additional major capital items are required for the Project • Sustaining capital is provided for in the unit rates used in the Whittle 4X Optimisation. • Operating costs are based on budget forecasts of current actual costs and include fixed and variable for crushing, maintenance, mining, ore haulage, labour, administration, accommodation, railing and shipping. • An average 15% price discount has been applied as provision for deleterious elements in the lump and fines products and is based on projected estimates from current actuals. • The cost estimates are in AUD with an exchange rate of 0.74 AUD/USD as provided by MRL corporate. • Ore haulage costs are based on budget forecasts of current actual costs and include fixed and variable. • Railing and shipping costs are based on budget forecasts of current actual costs and current third party contracts. • An allowance of 7.5% for the WA State Government royalty is included in the Whittle 4X Optimisation.

Criteria	JORC Code Explanation	Commentary
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$80/dmt CFR 62% Fe and 0.74 AUD/USD respectively equivalent to A$108.11/dmt CFR 62% Fe. • A 15% average price discount for both lump and fines has been applied to provide for deleterious elements in the product.

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 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 current and planned operation based on the revenue and cost assumptions outlined above supports the Ore Reserve estimate. • Mine Scheduling scenarios at lower pricing supports the Ore Reserves with no impact and no change to the reported Ore Reserves with a 15% reduction in revenue
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.
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.*	• Granted Mining Lease tenure held by MRL. • Project currently operating with Mining Proposal approval received from DMIRS.

Criteria	JORC Code Explanation	Commentary
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 and scheduled to achieve marketing specifications have been converted to Probable Ore Reserves. • All Measured Mineral Resources within detailed pit designs and scheduled to achieve marketing specifications 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.
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 MRL production to end of October 2019 have been carried out on production of 7.5Mt blended feed from all Yilgarn operations. The actual combined production reconciliations ≥ 54% Fe across the deposits combined are: 102% of tonnes; 100% of Fe%;95% of SiO2%; 94% of Al2O3; 101% of P% and 96% of LOI. • No assessment of the relative accuracy or confidence limits of the Ore Reserve have been undertaken.

TABLE 1 - SECTION 4 - ESTIMATION AND REPORTING OF ORE RESERVES – PARKER RANGE (MT CAUDAN)

(Criteria listed in section 1, and where relevant in section 2 and 3, 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 Mt Parker Ore Reserves are based on the corresponding Mt Parker Mineral Resource as announced in the Mineral Resource Statement – Koolyanobbing, Mt Dimer & Parker Range dated 20 November 2019. • 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. • Mr Jaine has visited the Parker Range site informing access requirements and site layout details for the Parker Range pit and stage designs.
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.*	• A Definitive Feasibilty Study (DFS) was completed by RPM (formally Runge) in 2009. • An updated Resource model was completed by RPM in June 2019. • MRL have updated the previous study to integrate and blend the Parker Range (Mt Caudan) deposit into existing MRL Operations with processing through the Koolyanobbing Ore processing facility.
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. • The cut-off grade has been selected on the basis of achieving product specifications suitable for marketing. • All Mineral Resources ≥54% Fe within the pit designs have been scheduled.
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).*	**General Method for Conversion of Mineral Resources to Reserves** • Regularisation of the Mineral Resource model to a diluted mining model; • Optimisation of the mining model using Whittle 4X Optimisation software including Measured and Indicated categories only and using input net price, cost, cut-off grade, ore-recovery and overall pit wall angle assumptions; • Detailed pit and stage designs completed based on the selected Whittle 4X Optimisation pit shell results; • Life-of-Mine scenario analysis and scheduling of pit design inventory to achieve marketing product specifications; and • Reporting of pit inventory above Fe% cut-off by Mineral Resource category and classification to corresponding Ore Reserve category.

Criteria	JORC Code Explanation	Commentary
	• *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** • Planned mining of the resource is by use of conventional drill and blast, haul truck and excavator open pit methods. • Mine designs consist of detailed Life-of-Mine pit, waste dump and stockpile designs. • Overall wall angles ranging from 36° to 41° have been used in the 4X Whittle Optimisation. • Minimum mining widths have been incorporated into pit designs consistent with current mining equipment operating parameters. • Minimum mining widths have not been included in the optimisation. • Final pit designs are based on Measured and Indicated Resource classifications only and exclude any Inferred Mineral Resources. • All Inferred material contained within the detailed pit design has been included in the scheduling process. • No Inferred Mineral Resources are included in the Ore Reserve Statement. **Additional Infrastructure for Development of Parker Range (Mt Caudan) includes:** • Road construction for road train haulage to the Koolyanobbing Ore processing facility including highway crossing upgrades • Site access road upgrade • ROM pad construction • HV & LV workshops • Warehouse • Fuel storage and dispensing • Magazines • Wash down pad • Power • Potable water • Office facilities including crib hut and ablutions.
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*	• Ore processing at Koolyanobbing consists of conventional dry crushing and screening to produce Direct Ship Ore (“DSO”) lump and fines products. The Koolyanobbing ore processing plant has been in its current configuration since 2012. • Cliffs produced 11.8Mt from the Koolyanobbing ore processing plant in 2016. • The deleterious element grades in the Ore Reserves have been estimated using the Mineral Resources. • The element grades of the products are based on estimated regression and mass balancing from similar type Iron Ore deposits.

Criteria	JORC Code Explanation	Commentary
	whole. • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	
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.*	• Required environmental approvals were previously sought and approved but have now lapsed. MRL is currently renewing these approvals and is preparing a mining proposal for the planned operation at Parker Range (Mt Caudan). • Waste rock characterisation studies indicate low potential for acid rock drainage with less than 0.1% of all waste material with a sulphur content ≥ 0.3%. • Any PAF material identified will be managed in accordance with operational PAF management procedures. • Mine designs consist of detailed Life-of-Mine pit, waste dump, stockpile designs, haul-roads and associated infrastructure.
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.*	**Works to include** • Site access road • Haul roads • Offices / workshops / ablutions including septics • Water pipeline • Power plant • Topsoil stockpiling • ROM pad • Waste dump construction • Evaporation ponds.
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.*	• Capital costs for development have been estimated in-house through the MRL group's internal specialist engineering capability. • Operating costs are based on budget forecasts of current actual costs and include fixed and variable for crushing, maintenance, mining, ore haulage, labour, administration, accommodation, railing and shipping. • An average 15% price discount has been applied as provision for deleterious elements in the lump and fines products and is based on projected estimates from current actuals. • The cost estimates are in AUD with an exchange rate of 0.74 AUD/USD as provided by MRL corporate. • Ore haulage costs are based on budget forecasts of current actual costs and include fixed and variable. • Railing and shipping costs are based on budget forecasts of current actual costs and current third party contracts. • An allowance of 7.5% for the WA State Government royalty is included in the Whittle 4X Optimisation.

Criteria	JORC Code Explanation	Commentary
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$80/dmt CFR 62% Fe and 0.74 AUD/USD respectively equivalent to A$108.11/dmt CFR 62% Fe. • A 15% average price discount for both lump and fines has been applied to provide for deleterious elements in the product.

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.*
		• Lump and Fines yields and regression parameters have been estimated from similar style deposits.
		• 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 current and planned operation based on the revenue and cost assumptions outlined above supports the Ore Reserve estimate. • Mine Scheduling scenarios at lower pricing supports the Ore Reserves with no impact and no change to the reported Ore Reserves with a 15% reduction in revenue
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• Agreements with stakeholders are still in the process of being negotiated with stakeholders following the acquisition of the project by MRL from Cazaly. • Arrangements are in place for the undertaking of additional heritage surveys as required.

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.*	• Granted Mining Lease tenure held by MRL. • There are no unresolved matters which are dependent on third parties on which extraction of the reserve is contingent. • It is anticipated that all necessary Government approvals will be received within expected timeframes.
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 Measured Mineral Resources within detailed pit designs and scheduled to achieve marketing specifications 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. • No assessment of the relative accuracy or confidence limits of the Ore Reserve have been undertaken.