MACARTHUR Minerals

News release

For Immediate Dissemination

21 March 2022

MAIDEN ORE RESERVE FOR LAKE GILES MAGNETITE PROJECT TOTALS 237 MILLION TONNES - SUPPORTING A 25 YEAR MINE LIFE

Macarthur Minerals Limited (ASX: MIO) (TSX-V: MMS) (OTCQB: MMSDF) (the **Company** or **Macarthur**) is pleased to announce a maiden Ore Reserve Statement for the Lake Giles Iron Project as at 21 March 2022.

The Ore Reserve defined for the Lake Giles Iron Project, incorporates the Moonshine and Moonshine North magnetite deposits. The Lake Giles Iron Project is 100% owned by Macarthur Iron Ore Pty Ltd, (a wholly owned subsidiary of Macarthur Minerals Limited). The Ore Reserve has been incorporated into a Feasibility Study which demonstrates a technically and economically viable project. This Ore Reserve Statement sets out the key Feasibility Study outputs which support the Ore Reserve, however a separate and more detailed summary of the key Feasibility Study outputs has also been released to the market today.[1]

Ore Reserves are reported in accordance with the JORC Code 2012 and the Canadian Institute of Mining, Metallurgy and Petroleum "CIM Definition Standards for Mineral Resources and Ore Reserves" (CIM, 2014)

HIGHLIGHTS

1. Maiden Ore Reserve totals 237 million tonnes of iron ore at Probable/Proven classification.
2. Ore Reserve contains 74 million dry tonnes of iron ore concentrate for a 25-year mine life, based on 87% of the Indicated and Measured Mineral Resources.
3. Ore Reserves support a positive Feasibility Study.

Project Location

The Lake Giles Iron Project is located 250 km northwest of Kalgoorlie in the Yilgarn region of Western Australia.

Regional Geology and Geological Interpretation

The Ore Reserve forms part Indicated and Measured Mineral Resources of the Lake Giles Iron Project encompassing the Moonshine and Moonshine North magnetite deposits. The Mineral Resource estimate was completed by CSA Global Pty Ltd (CSA Global) and previously reported to the market on 12 August 2020[2]. The Company confirms that all assumptions and technical parameters underpinning the Mineral Resource estimates continue to apply and have not materially changed. Detailed discussion of the project geology and Mineral Resource estimation methodology are detailed in release available here.

[1] ASX Press Release filed 21 March 2022, titled "Positive Feasibility Study Results for Lake Giles Iron Project".
[2] ASX Press Release filed 12 August 2020, titled "Moonshine Magnetite Resource Upgrade"

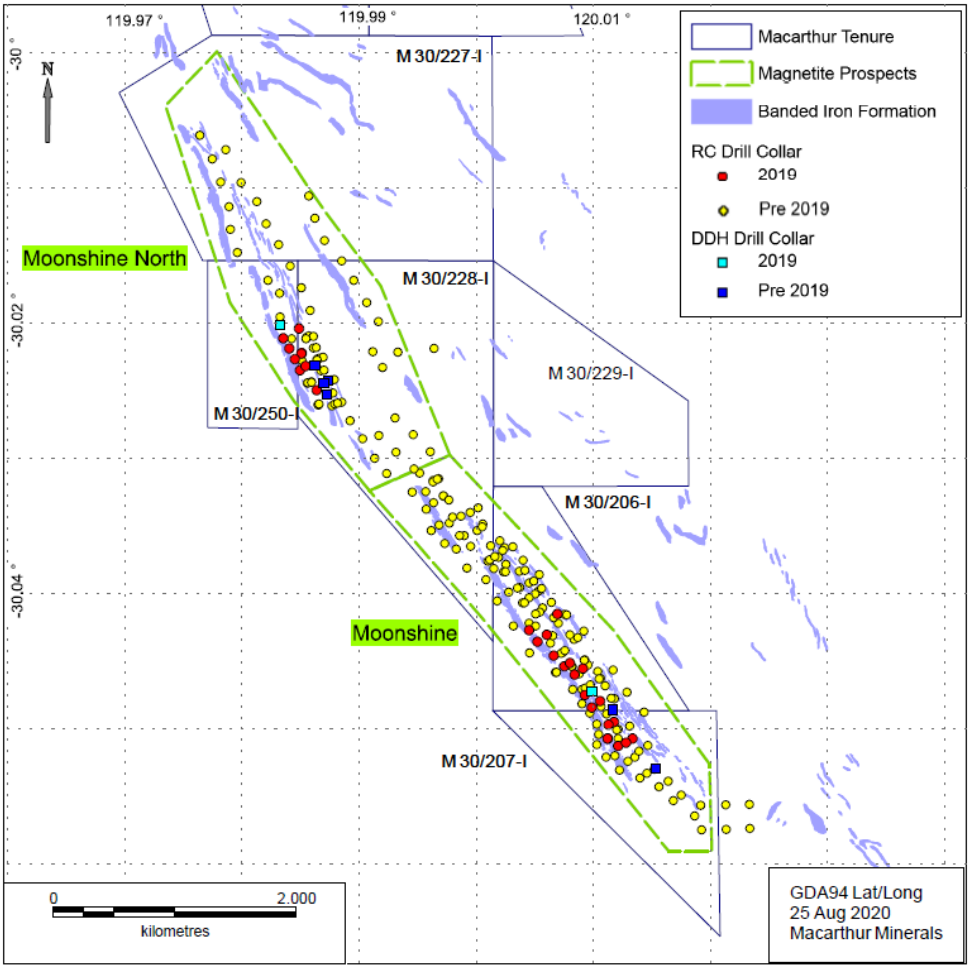

Figure 1. Plan view of Moonshine magnetite deposits of the Lake Giles Iron Project

Mineral Resource and Ore Reserve Statement

The Mineral Resource estimate was completed by CSA Global Pty Ltd (CSA Global) and previously reported to the market on 12 August 2020. Mineral Resources for the Moonshine and Moonshine North deposits are presented in Table 1.

Table 1. Mineral Resources – Lake Giles Iron Project, Moonshine and Moonshine North, DTR >15%

Category	Tonnes (Mt)	Head Grades (%)					Concentrate Grades (%)					
		Fe	**P**	**SiO_2**	**Al_2O_3**	**LOI**	**DTR**	**Fe**	**P**	**SiO_2**	**Al_2O_3**	**LOI**
Measured	53.9	30.8	0.05	45.4	1.6	2.7	32.2	66.0	0.031	6.2	0.2	-0.7
Indicated	218.7	27.5	0.046	51.1	1.4	1.6	31.0	66.1	0.017	6.7	0.1	-0.1
Subtotal	272.5	28.1	0.047	50.0	1.4	1.8	31.2	66.1	0.02	6.6	0.2	-0.2
Inferred	449.1	27.1	0.047	52.6	1.0	1.4	29.2	65.0	0.026	8.4	0.1	0

Notes

(a) Figures contained within the Tables have been rounded.
(b) Resource estimates are based on block models constructed using three dimensional geological wireframes.
(c) Mineral Resources are reported from the block models above a DTR cut-off grade of 15%.
(d) Mineral Resources are not Ore Reserves and do not have demonstrated economic viability.
(e) All Mineral Resources are reported on a dry-tonnage basis.
(f) Mineral Resources are reported inclusive of the Ore Reserve.
(g) The Mineral Resource estimates underpinning the production target of the Feasibility Study have been prepared by a competent person in accordance with the requirements in Appendix 5A (JORC Code).

The Ore Reserve estimate was prepared by Orelogy Consulting Pty Ltd (Orelogy) based on the diluted resource block model. The Ore Reserve for the Lake Giles Iron ore Project is estimated at 237 Mt at an average grade of 28.2% Fe and DTR of 31.3%, as presented in Table 2.

Table 2. Ore Reserves – Lake Giles Iron Project, Moonshine and Moonshine North, DTR >15%

Category	Tonnes (Mt)	Head Grades (%)					Concentrate Grades (%)					
		Fe	SiO_2	Al_2O_3	P	LOI	DTR	Fe	SiO_2	Al_2O_3	P	LOI
Moonshine												
Proven	34.2	28.1	51.6	1.2	0.04	1.7	30.5	65.9	6.8	0.2	0.02	-0.6
Probable	166.4	27.2	51.9	1.4	0.05	1.4	30.7	66.6	6.2	0.1	0.02	0.0
Sub-total	**200.6**	**27.4**	**51.9**	**1.4**	**0.04**	**1.4**	**30.6**	**66.5**	**6.3**	**0.1**	**0.02**	**-0.1**
Moonshine Nth												
Proven	17.8	35.4	35.4	2.2	0.06	4.2	34.3	66.5	5.0	0.3	0.03	-0.9
Probable	18.2	30.4	44.7	1.3	0.05	2.9	35.9	63.2	9.4	0.2	0.04	-0.3
Sub-total	**36.0**	**32.9**	**40.1**	**1.7**	**0.05**	**3.5**	**35.1**	**64.8**	**7.3**	**0.3**	**0.05**	**-0.6**
Combined												
Proven	51.9	30.6	46.0	1.5	0.05	2.6	31.8	66.1	6.1	0.2	0.03	-0.7
Probable	184.7	27.6	51.2	1.4	0.05	1.5	31.2	66.2	6.6	0.1	0.02	-0.1
TOTAL	**236.6**	**28.2**	**50.1**	**1.4**	**0.05**	**1.8**	**31.3**	**66.2**	**6.5**	**0.1**	**0.02**	**-0.2**

Notes

(a) The Ore Reserve is reported in accordance with JORC Code 2012 and Canadian Institute of Mining, Metallurgy and Petroleum "CIM Definition Standards for Mineral Resources and Ore Reserves" (CIM, 2014).

(b) The Ore Reserve was evaluated using a 62% Fe benchmark price of USD100/dmt with a 20% premium for 65% Fe and concomitant Fe concentrate grade bonus.

(c) Ore Reserves are based on a Feasibility Study utilising Mineral Resources from Moonshine and Moonshine North deposits.

(d) Ore Reserves account for mining dilution and mining ore loss.

(e) A Davis Tube Mass Recovery (DTR MR) cut-off grade of 15% was applied prior to scheduling for 2022 reserves estimate.

(f) Proven Ore Reserves are based on Measured Mineral Resources only and Probable Ore Reserves are based on Indicated Mineral Resources only.

(g) Ore Reserves are reported on a Dry Tonnage Basis.

(h) Ore Reserves are a part of Mineral Resources.

(i) The sum of individual amounts may not equal due to rounding.

(j) The Ore Reserve estimates underpinning the production target of the Feasibility Study have been prepared by a competent person in accordance with the requirements in Appendix 5A (JORC Code).

Ore Reserves Estimation Methodology

The mine design and Ore Reserve estimate have been completed to a level appropriate for a feasibility study and are consistent with the CIM definitions for public reporting. The Ore Reserve estimate is based on Measured and Indicated (MI) mineral resources only. Inferred material has been classified as waste.

The mining strategy is based on Contractor mining with Macarthur providing management and technical oversight. Conventional open pit mining using 400 t excavators and 180 t rigid dump trucks was selected as the most appropriate mining method for the contract mining operation. Drill and blast will be undertaken on 10 m bench and mined in 5 m flitches.

Waste will be hauled to external waste rock dumps. Ore will be hauled to the ROM pad and either tipped directly into the primary crusher feed bin or placed onto a ROM finger stockpile for later rehandling using a front-end loader.

The two pits will be mined in a total of seven stages – two for Moonshine North and five for Moonshine. Each stage will require pre-stripping of the oxidised material to a depth of approximately 55 m prior to commencing ore mining procedures. Each stage has been designed with separate ramp access using dual lane ramps except for the final two benches where single lanes were adopted. The cutback distance between stages targeted a mining width of 120 m to provide sufficient working room for the mining equipment.

Pit Optimisation

A mining model was developed for a proposed open pit mining method. Overall mining dilution was 2.5% at an average grade of 14% DTR and ore losses were 2.0% at an average grade of 30% DTR.

Open pit optimisation was conducted to determine the optimal economic geometry of the open pits. A cut-off grade of 15% DTR was used for ore definition. This was rounded up from the calculated breakeven cut-off grade of 14.2% DTR. The pit optimisation was undertaken in Whittle software using the parameters presented in Table 3.

Ore Reserves represent 87% of the Measured and Indicated mineral resources. The production target of the Feasibility Study is underpinned by 22% of Proven and 78% of Probable Ore Reserves. No inferred resources have been incorporated into the Ore Reserve or production target.

Table 3. Pit Optimisation parameters

Optimisation Parameter	Unit	Value
Financial Parameters		
Iron Ore Price for 66% Product	USD/t concentrate	125
Shipping and Insurance	USD/t concentrate	13.20
Price FOB	USD/t	111.80
Exchange rate	USD: AUD	0.73
Government Royalty	%	5.0
Net Price	**AUD/t**	**145.49**
Discount Rate	%	8.0
Selling Parameters		
Concentrate Production	Mt/a (wet)	3.3
Road transport	AUD/wt concentrate	9.09
Rail transport	AUD/wt concentrate	15.64

Port Charges		AUD/wt concentrate	7.58
Moisture content		%	9.0
Total selling cost		**AUD/dt concentrate**	**29.64**
Processing Parameters			
Design throughput capacity		Mt/a (dry)	9.68
Owner Mining Overhead		AUD/dt ore	1.26
Grade control		AUD/dt ore	0.13
Ore mining premium:	> 265 mRL: < 265 mRL:	AUD/dt ore AUD/dt ore	*OMP = (5.093 x LN (Bench RL) – 30.32)/SG* *OMP = (-0.039 x (Bench RL) + 8.11)/SG*
Ore Blasting premium		AUD/dt ore	0.33
Ore Feed Rehandle (55%)		AUD/dt ore	0.80
Reclaim from Stockpile (20% of ore mined)		AUD/dt ore	0.49
Dry reject rehandle (149 t/h)		AUD/dt ore	0.31
Crushing		AUD/dt ore	0.84
Processing		AUD/dt ore	10.21
Tailings & Filtration		AUD/dt ore	0.97
Site general and administration		AUD/dt ore	1.13
Sustaining Capital		AUD/dt ore	0.30
TOTAL Processing Cost (excl. OMP)		**AUD/dt ore**	**16.44**
Mining parameters			
Mining rate		Mt/a	45
Slopes (OSA):	Oxide Moonshine Nth HW Oxide others Fresh FW (Domains1, 3, 4) Fresh HW (Domain 6A) Fresh HW (Domains 2, 5, 6B)	Degrees Degrees Degrees Degrees Degrees	27 33 41 37 41
Drill and Blast:	Oxide waste Fresh Waste	AUD/dt AUD/dt	0.50 0.81
Load and Haul waste		AUD/dt	*MCAF = (0.0000736 x (Bench RL)^2 – 0.0723 x (Bench RL) + 22.58)/SG*

Scheduling Inventory

The shell with a revenue factor of 0.88 was selected as the basis for design. Stage design was guided by the nested pit shells and practical design considerations for the selected mining fleet. The mine inventories for each stage, as summarised in Table 4, were imported to Evolution scheduling software to generate the LOM schedule. Figure 2 shows the nested stage designs within the overall pit design.

Table 4. Scheduling Inventory reported by Stage

Stage	Ore	Grades							Waste	Total	Strip Ratio
	Mt	Fe %	SiO2 %	Al2O3 %	P %	S %	LOI %	DTR %	Mt	Mt	W:O
1	22.4	28.3	50.5	1.5	0.05	1.2	1.2	31.2	81.9	110.2	2.9
2	7.8	31.3	44.3	1.3	0.05	1.3	3.0	35.1	53.6	61.3	6.9
3	28.2	33.3	39.0	1.8	0.06	1.5	3.7	35.1	64.0	86.2	2.9
4	22.2	27.8	51.6	1.2	0.05	0.9	1.4	31.2	52.8	75.2	2.4
5	69.9	27.3	51.9	1.3	0.05	1.0	1.4	30.7	152.6	222.5	2.2
6	55.9	27.4	52.1	1.3	0.05	0.9	1.4	31.1	133.9	189.9	2.4
7	30.2	26.7	52.7	1.8	0.04	1.1	1.7	28.5	77.9	108.1	2.6
TOTAL	**236.6**	**28.2**	**50.1**	**1.4**	**0.05**	**1.1**	**1.8**	**31.3**	**616.8**	**853.4**	**2.6**

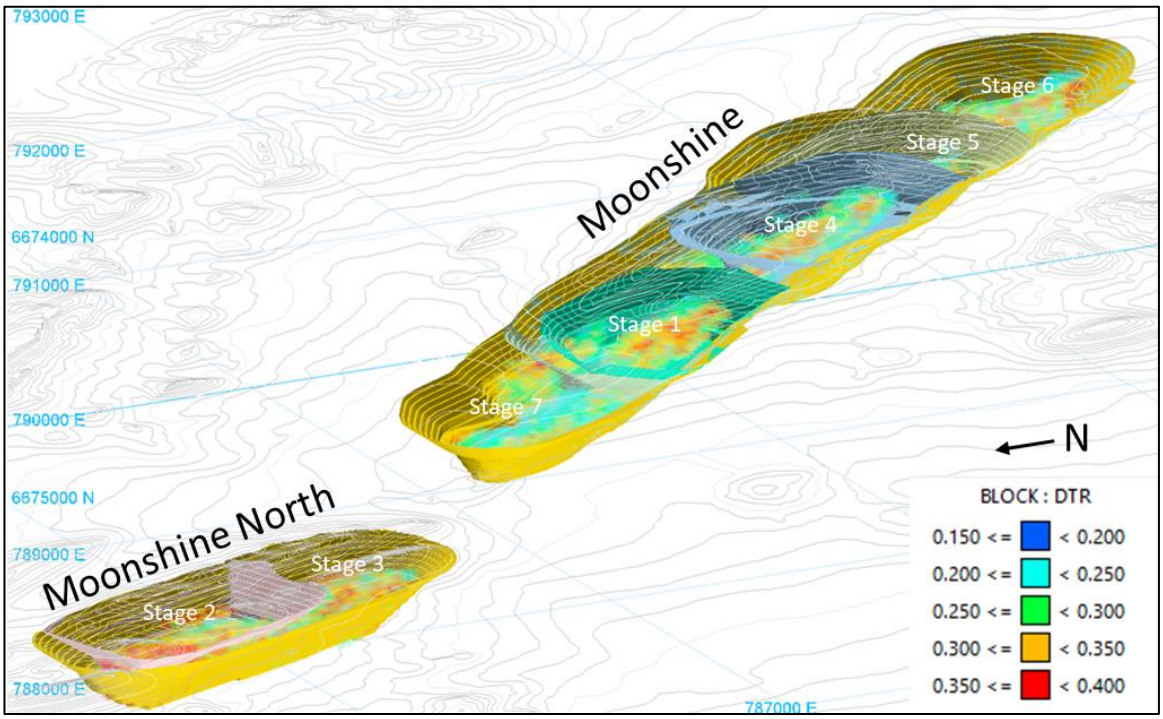

Figure 2. Moonshine and Moonshine North pits showing stages and mineralisation coloured by DTR

Mine Scheduling

The Moonshine North pit has ore with higher DTR head grade and higher Silica in concentrate values than Moonshine and consequently the two pits are scheduled to be mined at the same time as part of the blending strategy.

The mine schedule has a 9-month pre-strip period and requires a mining rate of approximately 43 Mt per year to balance waste stripping requirements with continuous ore supply and the blending strategy. The mining sequence is presented in Figure 3.

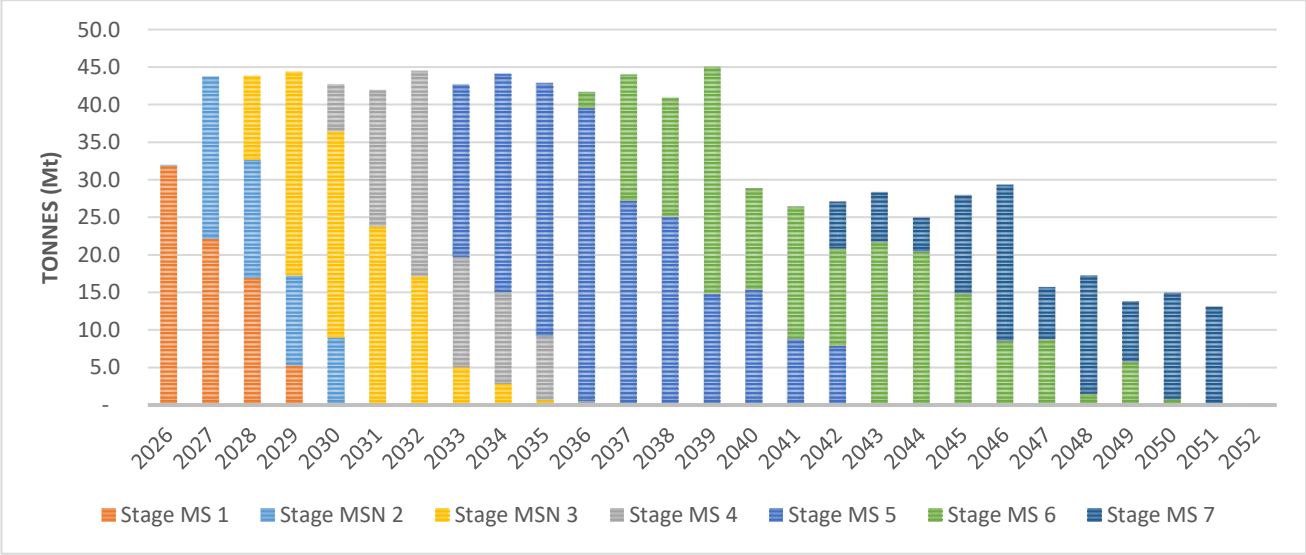

Figure 3. Overall mining rate by stage

Approximately, 65% of the ore from both pits is categorised as high DTR material and sent directly to the ROM pad for processing. The low DTR material is split into high silica and low silica stockpiles and used to control the silica content of the concentrate. Figure 4 shows the ore feed blend with constant silica grade and DTR grade gradually reducing over time.

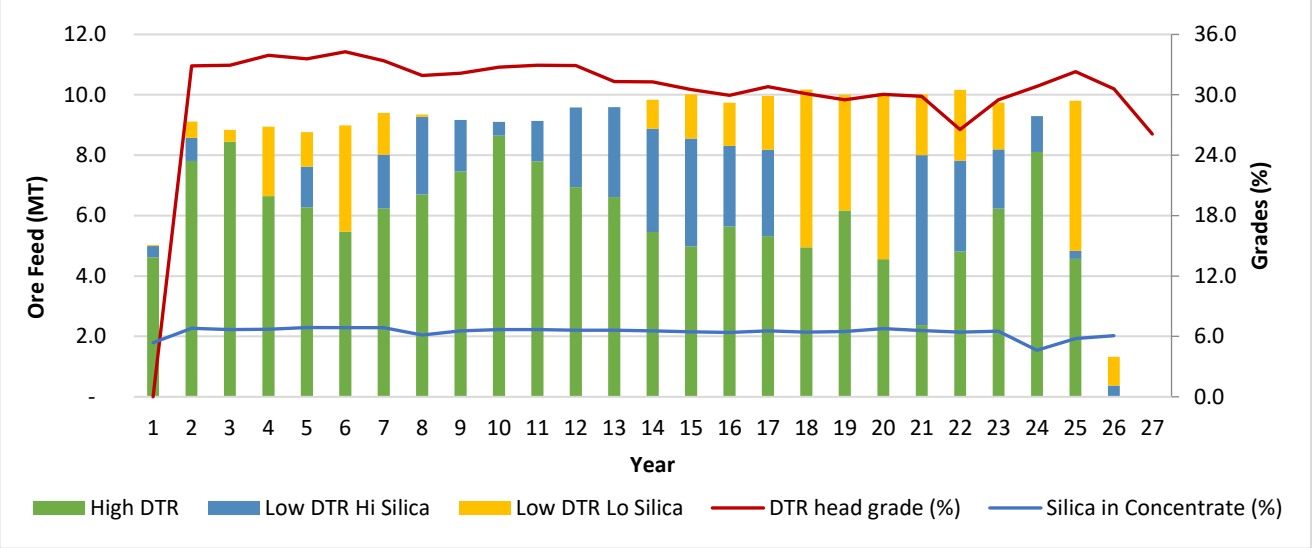

Figure 4. Ore feed blend showing DTR head grade and Silica in concentrate grade

Processing Methods and Assumptions

The proposed flow sheet is based on conventional gyratory crushing/ cone crushing followed by HPGR grinding. Product from the HPGR is screened with the +12 mm returning to the HPGR, the -12 +3 mm material undergoes dry magnetic separation with the magnetics returning to the HPGR and the non-magnetics being discarded. The -3 mm material is fed to two ball mills followed by magnetic separation with the magnetics undergoing further size reduction to P80 38 microns in two vertimills followed by magnetic separation. Reverse flotation of the magnetic concentrate is followed by a final stage of magnetic separation. The concentrate produced is dried using pressure filtration and then transferred to the product stockpile.

The above process will yield a saleable magnetite concentrate with a LOM grade of 66% Fe. The process is well tested, widely used in the mining industry and there are no novel steps in the flowsheet.

Tailings is directed to a wet tailings impoundment from which process water is recovered. The tailings storage facility (TSF) design was undertaken by engineering consultants Stantec. The TSF utilises available topography at the project with waste ore and borrow pits contemplated as construction materials with future raises utilising processing by- products. Mine closure and rehabilitation assume profiling and seeding of the TSF based on high settling and local evaporation rates.

Revenue Factors and Market Analysis

Pit shells were generated at a long-term iron ore price for the Lake Giles concentrate of USD 125/dmt on a CFR basis.

The forward iron ore price adopted for the Lake Giles Iron Project is based on the Company's assessment of published consensus pricing, forecasts derived directly from steel mills, various analyst reports and a comparison of historical analyst forecasts against actual pricing over time.

Operating Costs

Operating costs for mining have been developed from contractor rates and in-house estimates. Processing and crushing costs were provided by the Feasibility Study engineering consultant based on feasibility level engineering studies for the processing plant and supporting infrastructure. Product logistics encompassing road, rail and port operations were sourced from budget quotations from haulage operators and asset infrastructure owners. Site operating costs total AUD 101.05/dmt FOB (USD 71.74/dmt) and summarised in Table 5. Operating costs inclusive of WA State royalties total AUD109.56/dmt FOB (USD 77.79/dmt) calculated against the base case sales price of USD 131.40/dmt.

Table 5: Summary of operating cost ($/t concentrate)

Area	USD/dmt	AUD/dmt
Mining	26.08	36.73
Crushing & Processing	22.41	31.56
Logistics	21.25	29.93
General & Administration	2.00	2.82
Total operating costs	**71.74**	**101.05**

Capital Costs

Capital cost estimates were completed at a Feasibility Study level estimate with an expected accuracy range of between +/-10% to +/-15% (AUSIMM Class 3), based on engineering to 25% definition.

The Project capital cost is estimated at AUD801m with an additional AUD61.6m in pre-production mining costs. The capital breakdown is summarised in Table 6 below.

Table 6: Summary of direct & indirect capital costs

Area	USDm	AUDm
DIRECTS		
Facilities process plant	11.6	16.4
Process plant	227.6	320.5
Product transport logistics	36.5	51.4
Port storage & ship loading	24.2	34.0
Infrastructure & headworks	72.0	101.3
General and administration	1.3	1.8
Total direct costs	***373.1***	***525.5***
INDIRECTS		
Construction Indirects	83.6	117.8
EPCM	52.2	73.5
Spares & Commissioning	4.8	6.8
Freight	11.2	15.7
Contingency	43.9	61.9
Total indirect costs	***195.7***	***275.7***
Total Directs & Indirects	**568.8**	**801.1**
MINE DEVELOPMENT		
Capitalised pre-strip	43.8	61.6
TOTAL PROJECT CAPITAL	**612.5**	**862.7**

Project Economics

A full financial model has been developed for the Feasibility Study inclusive of capital and operating costs, taxes, and State royalties payable at 5% of FOB sales price. The model uses constant (real, non-inflated) 2021 Australian dollars for operating and capital costs with shipping and iron ore sales in US dollars and cash flows modelled in monthly periods. The Project valuation was based on a discounted cashflow analysis. The key assumptions and financial outcomes are summarised in Table 7.

At a 6% discount rate, the model reports a pre-tax NPV of AUD816 M with an IRR of 13%. After tax the NPV is AUD443 M with an IRR of 10.1%.

Table 7: Summary of Project Economics

Production		
Ore mined	236.6 Mt	
Waste mined	624.9 Mt	
Total mined	861.5 Mt	
Strip ratio	2.64	
Concentrate produced	74 Mt	
Concentrate iron grade	66.1	
Plant recovery	31%	
Financials	**AUDm**	**USDm**
Sales revenue	12,614	8,956
Operating Expenses	8,116	5,672
Initial Capital Expenditure		
Construction capex	801.1	568.8
Mining overburden pre-strip	61.6	43.8
Total initial capital	862.7	612.5
Future Capital Expenditure		
Sustaining capital	203.0	144.1
Deferred capital - Tailings	39.8	28.3
Capitalised non-operational waste mining	355.7	252.5
Total future capital	598.0	424.6
Closure Expenditure		
Closure and rehabilitation	58.2	41.3
Total Operating Cash Flows	3,625	2574
Taxes & Royalties		
Tax paid	873	620
Royalties	631	435
Valuation	**AUDm**	**USDm**
NPV (6%) Pre-tax	816	579
NPV (6%) Post-tax	443	314
IRR Pre-tax	13.0%	-
IRR Post-tax	10.1%	-

The Competent Person has reviewed the financial model and determined that the Ore Reserve estimate disclosed in this release is based on a Feasibility Study level of accuracy with inputs from open pit mining, processing, logistics, project capital and contingencies scheduled and costed to define the Ore Reserve. The Competent Person is satisfied that the Ore Reserve returns a positive NPV based on the Feasibility Study and associated modifying factors.

The Company confirms all material economic and non-economic assumptions that form the basis of the Ore Reserve have been disclosed in accordance with ASX Listing Rule 5.9.

Environment and Approvals

An environmental impact assessment is required to obtain environmental approval for development. The Company has commenced the scoping process to identify the key environmental risks and level of survey to be undertaken. The Company has mapped out an approval pathway and schedule for the primary and secondary approvals required and intends to commence desktop and baseline surveys at the conclusion of the feasibility study. The Company has previously gained EPA approval for its adjacent hematite project and is not aware of any major environmental obstacles that would prevent approval of the Project.

Native Title and Heritage

The Project sits within the Marlinyu Ghoorlie native title claim. The claim was registered on 28 March 2019 but is currently not determined. Native title rights in registration or grant give claimants the right to negotiate during the grant of mineral tenure. Macarthur's Mining Leases were all granted prior to registration of the Native Title claim and the current claim does not confer rights to negotiate or affect the tenure. There were no Native Title claims over the area at the time of grant and therefore no access agreements were required to be negotiated with Claimants.

Current applications for tenure as described below are subject to native title. Macarthur is currently progressing heritage agreements with the native title claimants to progress the tenure to grant.

Heritage surveys have been conducted in accordance with EPA Guidance Statement No. 41 (EPA 2004a) across some areas, including both archaeological and ethnographical surveys. To date, one archaeological site has been identified within the Project area. The location of the heritage site does not impact the Project and a suitable buffer distance has been employed to avoid any impact to the site. Additional surveys will be undertaken with the traditional owners across outstanding project areas in due course.

Tenure

The Lake Giles Iron Project includes 15 granted mining leases covering a total area of approximately 6,256 Ha. All tenements are 100% controlled by Macarthur Iron Ore Pty Ltd (MIO), a 100% owned subsidiary of Macarthur, as itemised in Table 8. MIO has also made applications for miscellaneous licences to support supporting infrastructure of the Project and to explore for groundwater resources.

MIO has entered into an agreement with Arrow Minerals to acquire adjacent tenure to locate the proposed processing plant, waste rock dumps, tailings storage facility and other supporting infrastructure. An application for a general purpose lease is in progress.

The tenements are not subject to any royalty agreements or encumbrances that would restrict the ability to exploit the Ore Reserve.

Table 8. MIO Tenure Details and Expenditure Commitments

Tenement ID	Holder	Area (ha)	Grant or (Application) Date	Expiry date	Annual expenditure Commitment (AUD)
M30/0206	MIO	189	02/07/2007	01/07/2028	$18,900
M30/0207	MIO	171	02/07/2007	01/07/2028	$17,100
M30/0213	MIO	258	13/06/2011	12/06/2032	$25,800
M30/0214	MIO	260	13/06/2011	12/06/2032	$26,000
M30/0215	MIO	521	13/06/2011	12/06/2032	$52,100
M30/0216	MIO	55	13/06/2011	12/06/2032	$10,000
M30/0217	MIO	114	13/06/2011	12/06/2032	$11,400
M30/0227	MIO	504	13/06/2011	12/06/2032	$50,400
M30/0228	MIO	362	02/07/2007	01/07/2028	$36,200
M30/0229	MIO	205	02/07/2007	01/07/2028	$20,500
M30/0248	MIO	585	22/02/2012	21/02/2033	$58,500
M30/0249	MIO	1206	22/02/2012	21/02/2033	$120,600
M30/0250	MIO	102	05/03/2013	04/03/2034	$10,200
M30/0251	MIO	1246	27/11/2012	26/11/2033	$124,600
M30/0252	MIO	478	27/05/2013	26/05/2034	$47,800
E15/7775	MIO	590	(24/06/20)		$15,000
L15/409	MIO	97	(25/06/20)		NA
L16/133	MIO	923	(25/06/20)		NA
L30/89	MIO	23663	(26/03/21)		NA
L30/92	MIO	31660	(26/03/21)		NA

Andrew Bruton, CEO of Macarthur Minerals commented:

"The release of the Maiden Ore Reserve Statement for the Lake Giles Iron Project will support a positive Feasibility Study for the project.

Macarthur has worked hard over the course of the last 12 months to deliver this result, and the Company looks forward to releasing the Feasibility Study shortly."

On behalf of the Board of Directors, Mr Cameron McCall, Chairman

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Competent / Qualified Person Statement

Mineral Resources:
The information in this report that relates to Mineral Resources is based on, and fairly reflects, information compiled by Mr. David Williams, a Competent Person, who is an employee of CSA Global Pty Ltd, a member of the ERM group of companies, and a Member of the Australian Institute of Geoscientists (#4176). Mr Williams has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a competent Person as defined in the 2012 Edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources, and Ore Reserves (JORC Code). Mr Williams consents to the disclosure of information in the form and context in which it appears.

Ore Reserves:
The information in this report relating to Ore Reserves is based on information compiled by Stephen Craig, a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Craig is a full-time employee of Orelogy Consulting Pty Ltd. Mr. Craig has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources, and Ore Reserves (JORC Code). Mr Craig consents to the disclosure of information in the form and context in which it appears.

Company profile

Macarthur is an iron ore development, gold and lithium exploration company that is focused on bringing to production its Western Australia iron ore projects. The Lake Giles Iron Project mineral resources include the Ularring hematite resource (approved for development) comprising Indicated resources of 54.5 million tonnes at 47.2% Fe and Inferred resources of 26 million tonnes at 45.4% Fe; and the Lake Giles magnetite resource of 53.9 million tonnes (Measured), 218.7 million tonnes (Indicated) and 997 million tonnes (Inferred). Macarthur also holds 24 square kilometre tenement area iron exploration interests in the Pilbara region of Western Australia. In addition, Macarthur has lithium brine Claims in the emerging Railroad Valley region in Nevada, USA.

This news release is not for distribution to United States services or for dissemination in the United States

Caution Regarding Forward Looking Statements
Certain of the statements made and information contained in this press release may constitute forward-looking information and forward-looking statements (collectively, "forward-looking statements") within the meaning of applicable securities laws. All statements herein, other than statements of historical fact, that address activities, events or developments that the Company believes, expects or anticipates will or may occur in the future, including but not limited to statements regarding expected completion of the Feasibility Study; conversion of Mineral Resources to Ore Reserves or the eventual mining of the Project, are forward-looking statements. The forward-looking statements in this press release reflect the current expectations, assumptions or beliefs of the Company based upon information currently available to the Company. Although the Company believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and no assurance can be given that these expectations will prove to be correct as actual results or developments may differ materially from those projected in the forward-looking statements. Factors that could cause actual results to differ materially from those in forward-looking statements include but are not limited to: unforeseen technology changes that results in a reduction in iron or magnetite demand or substitution by other metals or materials; the discovery of new large low cost deposits of iron magnetite; the general level of global economic activity; failure to complete the FS; inability to demonstrate economic viability of Mineral Resources; and failure to obtain mining approvals. Readers are cautioned not to place undue reliance on forward-looking statements due to the inherent uncertainty thereof. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. The forward-looking statements contained in this press release are made as of the date of this press release and except as may otherwise be required pursuant to applicable laws, the Company does not assume any obligation to update or revise these forward-looking statements, whether as a result of new information, future events or otherwise.

APPENDIX 1

JORC Code 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as 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.*	• The deposit was sampled using diamond core and reverse circulation (RC) drill holes between 2008 (commencement of the assessment of the Lake Giles Magnetite Project) and 2019. RC drilling was the dominant sampling technique used. Diamond core samples were largely reserved for metallurgical and geotechnical studies; however, some were used for Mineral Resource estimation. • Diamond core recoveries were recorded by measuring the length of drill core retrieved per metre of drill penetration. RC samples were weighed and a recovery (%) was estimated per metre of drill penetration. RC chip recovery information was recorded in digital logs. • RC drilling was used to obtain 1 m samples, via 3-tier riffle splitter or rotary cone, with a 3 kg sample split submitted to the assay laboratory and pulverised to produce a 30 g pulp charge for XRF analysis. • Some compositing of samples is used to reduce costs of DTR analysis, whereby composites of between 1 m and 7 m are used, depending on the continuity and metre-scale head grade decided by a geologist.
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 were drilled by either a Schramm T660 (Volvo 8x4 wheel rig), or a track mounted Schramm T450WS rig or a Hydco 350 mounted on a 2008 Tatra 8x8 truck. Choice of drill rig was dependent upon the terrain hosting the drill pads. Drilling diameter for RC holes was generally 140 mm. Diamond drilling for metallurgical purposes used mostly HQ diameter core with occasional PQ core depending on the mass of core required. Core orientation was performed using Reflex apparatus and was unsuccessful for the majority of weathered core.
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*	• Diamond core recoveries were recorded by measuring the length of drill core retrieved per metre of drill penetration. RC samples were weighed and a recovery (%) was estimated per metre of drill penetration. • If sample recoveries were observed becoming sub-optimal by the project geologist, the information was relayed to the driller who adjusted the drilling penetration rate, or other sample recovery drill rig characteristics such as air compression, in order to improve sample recovery. A geologist was present at the drill rigs at all times whilst drilling procedures were under

Criteria	JORC Code explanation	Commentary
	occurred due to preferential loss/gain of fine/coarse material.	way, and logged all drill samples. • No relationship was observed between sample recovery and Fe (%) grade. No loss of haematite or goethitic fines was observed during drilling. • In heavily fractured zones with strong groundwater flow, recovery can suffer unless appropriate measures are taken.
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.*	• Diamond drill core and RC chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Not all drill holes penetrated the BIF host units, but all were used to guide the geological interpretations supporting the Mineral Resource estimates. • Geological logging of drill samples was qualitative in nature for all RC drilling and diamond core samples. • All (100%) drill holes were geologically logged, with lithologies, oxidation, structure, alteration and mineralogy among the geological categories logged. • Moonshine and Moonshine North recorded nine diamond holes (1,807.5 m) and 236 RC holes (43,156 m) in the drill hole database • Clark Hill North recorded five diamond holes (8,551 m) and 60 RC holes (8,551 m). • Clark Hill South recorded nine RC holes (2,086 m). • Sandalwood recorded 38 RC holes (6,933 m). • Snark (magnetite units only) recorded 16 RC holes (3,007 m).
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.*	• Some diamond core was for metallurgical and geotechnical purposes and therefore not used to support the Mineral Resources estimate, apart from the geological logging. • Diamond core was cut using an Almonte electric core saw in competent ground and hand split in clay at either 1 m intervals or to geological contacts. RC samples were collected at the rig using riffle splitters. Samples were generally dry with some areas wet due to perched water tables. Industry standard diamond and RC drilling techniques were used and are considered appropriate for use in Mineral Resource estimation. For RC drilling, sample quality was maintained by monitoring sample volume and by cleaning the splitters on a regular basis. Field duplicates were taken every 20 metres for RC drilling. Quarter splits of core have been taken and recorded as duplicates in the database. • RC samples passed through a cyclone then passed through a three-tier riffle splitter or rotary cone (depending on drilling campaign and equipment used). Samples were predominantly dry. Occasional single wet samples were obtained at the start of drill rods when groundwater flow was particularly strong. A total of 75% of the sample passed through the splitter to be captured in a residue bucket whilst the remaining 25% of the sample was evenly distributed through the primary sample chute and the field duplicate chute. • RC samples were securely delivered to the analytical laboratory where they were crushed to 3 mm fraction, then pulverized to 105µm (p95). The laboratories are accredited to industry standards, and the sample preparation stages likewise to industry standard. The sample preparation is considered appropriate for the mineralisation investigated. • Samples were ground to p95 75µm and subjected to DTR

Criteria	JORC Code explanation	Commentary
		testing with XRF analysis performed on head and concentrate material. A mass recovery via DTR was also calculated. A magnetic field strength of 3,000 Gauss was used. A total of 498 samples delivered DTR results from the Moonshine and Moonshine North deposits, 579 from Clark Hill North, 157 from Clark Hill South, 523 from Sandalwood and 64 from Snark. • The laboratory collected splits of the sub samples at the crushing and pulverizing stages, with the splits stored. The pulp splits were sourced for laboratory duplicate XRF analyses. • Field duplicate samples were taken at the drill rig via the 3-tier riffle splitter or rotary cone. • Sample sizes are appropriate to the grain size of the material being sampled.
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.*	• All samples were dispatched to one of three assay laboratories; samples prior to mid-2007 were sent to Genalysis, and from mid-2007 to 2013 dispatched to an Amdel / UltraTrace, and samples from 2019 were analysed by SGS. Pulp samples were analysed for the standard suite of Fe ore elements by XRF, considered industry standard practice for iron ore. • DTR work was performed by Amdel / UltraTrace until 2010 and then SGS for the 2019 work. • Geophysical analyses etc., were used to assist with the geological interpretation. • Standards were used throughout the drilling programs to test analytical accuracy, at a rate of 1:50 and at least one standard inserted per drill hole. Field duplicates were captured at a rate of 1:25 prior to 2019 and 1:20 in 2019. Pulp duplicates were also analysed to test for analytical accuracy. The assay labs conducted their own QAQC analyses and results were provided to Macarthur. The QAQC procedures and results showed that acceptable levels of accuracy and precision were established.
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.*	• Significant intercepts were independently verified by alternate company personnel including senior geological management. • Selected RC holes were twinned by diamond core holes. The purpose of the twinning was to provide diamond drill core for geotechnical purposes, especially within the oxidised zones of the deposit. The diamond tails that penetrated the primary zone of mineralisation were no longer twinned to an RC hole. The geological logging from both the RC and diamond holes demonstrate consistency in logging of the primary lithologies and weathering profiles. • Drill hole data was logged by hand at the drill rig, then data was manually entered into spreadsheets. These were imported into an SQL database independently maintained by CSA Global. The database has various criteria, relationships, and triggers to ensure the data entered into the database is valid. Strict security and daily backups are managed by SQL server software. Data was verified by the CP (resources) by randomly cross-checking collar and survey data in the database with independently recorded geospatial data from the drill sites. • No data adjustments were made to assay data in the database.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	• All drill hole collars included in the Mineral Resource estimates were surveyed after drilling by high accuracy Real Time Kinematic GPS (RTKGPS). RTKGPS surveys, which were undertaken by licensed surveyors, are accurate to within 50 millimetres in three dimensions.

Criteria	JORC Code explanation	Commentary
	• *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Down-hole surveys were performed by external contractors (Surtron and ABIMS) before 2019 and by the drilling contractor in 2019, using a Reflex EZ-Giro tool. Measurements were generally taken at 10 m intervals. • All coordinates are in Geocentric Datum of Australia (GDA94, Zone 50). • A LIDAR topographic survey was flown in June 2011. The data was re-sampled from 1 m to 2 m and exported as a wireframe surface in dxf format. The choice of a coarser contour interval has not resulted in any noticeable difference to resource volumes at the 'outcropping' surface of the BIF strata. Drill collars were validated against the DTM elevation. The topographic survey is considered adequate to support the Mineral Resource estimates.
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.*	• Drill holes were sited on the many outcropping ridges of haematite / goethite mineralisation, although not all ridges had been drill tested prior to late 2012. Drill hole section lines along the ridges were typically spaced 100 m. Across strike drilling was occasionally used to define depth to base of complete oxidation and verify grades. • Drill hole spacing is deemed sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource classifications applied. • Samples were not composited at the drill rig.
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.*	• Holes were generally angled at 60° across the strike of mineralisation, with occasional vertical orientations, targeting strata typically dipping at 70° to 90° towards the angle of drilling. Some bias of sampling was anticipated based upon the angle of drill hole interception against the dip of haematite bearing strata, however this bias is not considered detrimental to the Mineral Resource estimate.
Sample security	• *The measures taken to ensure sample security.*	• On completion of each hole the calico sample bags were placed in polyweave bags, then transferred to the Ularring exploration compound where they were securely stored. The polyweave bags were placed in large bulka bags and transported to the assay laboratory depot in Kalgoorlie and then Perth using a contracted freight company. At all times the samples were under the security of either Macarthur or the transport company personnel, and then under the security of the assay laboratory. Security tags were used for all bulk sample dispatches (i.e. 'bulka' bags), as well as the majority of individual polyweave bags.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• The Competent Person (Mineral Resources) reviewed sampling procedures during site visits. Any problems observed were discussed with the geological staff on roster, and the problems were quickly corrected, with no detrimental impact upon the Mineral Resources noted. Senior geological staff from Macarthur regularly vetted sampling procedures.

Section 2 Reporting of Exploration Results

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Mineral tenement and land tenure status</td><td>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.</td><td>At present Macarthur manages 15 contiguous Mining Leases covering a total area of approximately 62.4 km². Macarthur also has two pending miscellaneous licences for a haul road and rail siding to facilitate transport of iron ore from the mining leases to the rail line approximately 90 km south of the project, and a further two pending licenses for water exploration.
Macarthur Minerals Ltd, through its wholly owned subsidiary Macarthur Iron Ore Pty Ltd, is the registered holder of or registered applicant for the Tenements.
The following table details the tenure at the Project, effective 3 August 2020.
<table>
<tr><th>Tenement</th><th>Status</th><th>Holder</th><th>Area (Ha)</th><th>Grant Date</th><th>Expiry Date</th></tr>
<tr><td>M30/0206</td><td>Live</td><td>Macarthur Iron Ore Pty Ltd</td><td>189</td><td>2/07/2007</td><td>1/07/2028</td></tr>
<tr><td>M30/0207</td><td>Live</td><td>Macarthur Iron Ore Pty Ltd</td><td>171</td><td>2/07/2007</td><td>1/07/2028</td></tr>
<tr><td>M30/0213</td><td>Live</td><td>Macarthur Iron Ore Pty Ltd</td><td>258</td><td>13/06/2011</td><td>12/06/2032</td></tr>
<tr><td>M30/0214</td><td>Live</td><td>Macarthur Iron Ore Pty Ltd</td><td>260</td><td>13/06/2011</td><td>12/06/2032</td></tr>
<tr><td>M30/0215</td><td>Live</td><td>Macarthur Iron Ore Pty Ltd</td><td>521</td><td>13/06/2011</td><td>12/06/2032</td></tr>
<tr><td>M30/0216</td><td>Live</td><td>Macarthur Iron Ore Pty Ltd</td><td>55</td><td>13/06/2011</td><td>12/06/2032</td></tr>
<tr><td>M30/0217</td><td>Live</td><td>Macarthur Iron Ore Pty Ltd</td><td>114</td><td>13/06/2011</td><td>12/06/2032</td></tr>
<tr><td>M30/0227</td><td>Live</td><td>Macarthur Iron Ore Pty Ltd</td><td>504</td><td>13/06/2011</td><td>12/06/2032</td></tr>
<tr><td>M30/0228</td><td>Live</td><td>Macarthur Iron Ore Pty Ltd</td><td>362</td><td>2/07/2007</td><td>1/07/2028</td></tr>
<tr><td>M30/0229</td><td>Live</td><td>Macarthur Iron Ore Pty Ltd</td><td>205</td><td>2/07/2007</td><td>1/07/2028</td></tr>
<tr><td>M30/0248</td><td>Live</td><td>Macarthur Iron Ore Pty Ltd</td><td>585</td><td>22/02/2012</td><td>21/02/2033</td></tr>
<tr><td>M30/0249</td><td>Live</td><td>Macarthur Iron Ore Pty Ltd</td><td>1206</td><td>22/02/2012</td><td>21/02/2033</td></tr>
<tr><td>M30/0250</td><td>Live</td><td>Macarthur Iron Ore Pty Ltd</td><td>102</td><td>5/03/2013</td><td>4/03/2034</td></tr>
<tr><td>M30/0251</td><td>Live</td><td>Macarthur Iron Ore Pty Ltd</td><td>1246</td><td>27/11/2012</td><td>26/11/2033</td></tr>
<tr><td>M30/0252</td><td>Live</td><td>Macarthur Iron Ore Pty Ltd</td><td>478</td><td>27/05/2013</td><td>26/05/2034</td></tr>
</table></td></tr>
<tr><td>Exploration done by other parties</td><td>Acknowledgment and appraisal of exploration by other parties.</td><td>The property was previously explored for nickel (1968 to 1972) and gold (Aztec, Battle Mountain, 1993 to 1998) with limited success. Internickel Australia undertook a detailed evaluation of previous exploration from 2001 to 2005. Macarthur Minerals took over the tenements in 2005 and has been actively exploring for iron mineralisation since. The Ularring Hematite Project has reported Mineral Resources, with the hematite deposits located adjacent to, and sometimes interspersed, with the Lake Giles Magnetite deposits.</td></tr>
<tr><td>Geology</td><td>Deposit type, geological setting and style of mineralisation.</td><td>The outcropping geology of the project area is comprised of a combination of un-altered silica rich banded iron formations (BIFs) and altered, enriched haematite / goethite BIFs. Weathering has resulted in the leaching of the majority of the</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
		silica from the BIFs, thus producing a rock rich in iron and low in silica, near surface. Below the depth of oxidation (generally between 45–90 m from surface) the BIF units are comprised almost entirely of ferrous/ferric Fe(II,III) iron, silica and small amounts of alumina with occasional incipient iron sulphides (predominantly pyrite). The Fe grades are consistently between 20 and 40% Fe. Macarthur believes the majority of the underlying BIF units have experienced minimal metamorphism beyond their original formation. A notable exception to this is a pocket of high grade magnetite mineralisation (up to 15 m true thickness, and continuous along strike for >200m) found in the Moonshine North prospect, which was targeted as part of a co-funded EIS drilling program in 2012 with two diamond drill holes. The pocket of high-grade magnetite mineralisation (in excess of 60% in-situ Fe) was interpreted to be the result of structural and geothermal alteration of the primary BIF fabric. • The main zones of mineralisation are interpreted as a series of thick tabular units, steeply dipping eastward at ~70° with moderate to minimal structural deformation. More intense deformation is modelled at the south edge of the Moonshine prospect with several synclinal structures and possible shearing related to recumbent folds, which increase the apparent thickness of the zones of mineralisation. • Depth and consistency of mineralisation has been confirmed in excess of 250 m below surface through several drill holes, confirming a consistent dip of the hanging wall for the majority of the Moonshine and Moonshine North prospects. • A region of lower grade, highly siliceous (> 60% SiO2) is occasionally observed in the footwall of the thicker Western units, especially in Moonshine, and is generally referred to as the siliceous footwall. The siliceous footwall is characterised by strongly siliceous BIF with much thinner iron rich bands. It appears to be a secondary feature of the primary source BIF unit, as it varies in thickness itself, but the general thickness of the main BIF units tends to remain fairly constant over the entire strike of the larger tabular BIF bodies.

Drillhole information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:*
	  ○ *easting and northing of the drillhole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *downhole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• The Lake Giles Magnetite Project consists of 374 diamond and RC drill holes (66,542.5 m). This includes 14 diamond holes for 2,809.5 m and 359 RC holes for 63,733 m. All of these holes were used to support the Mineral Resource estimate. The Mineral Resource estimate conveys the tenor of grade from the drill holes.

Criteria	JORC Code explanation	Commentary
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *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 are not being reported here.
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 (e.g. 'downhole length, true width not known').*	• True width of mineralisation is derived from detailed three-dimensional geological rock models. • Various ore bodies are intercepted at varying degrees of obliqueness, therefore a simple conversion to true thickness from down hole intercepts is not possible. • General geometry of mineralisation is sub-vertical tabular bodies generally dipping between 60° and 90°, with true thickness of mineralisation between several metres and 140 m.
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.*	• Maps showing drill hole collar locations and prospects are presented in the body of 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.*	• Drill hole information is incorporated into the Mineral Resource estimates.
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.*	• Additional exploration data such as ground/air magnetic surveys, gravity and geochemical soil sampling are mentioned in technical reports available from the company website. Metallurgical testing is reported in full detail in all technical reports and updated as required. Bulk density data is reported in full detail with explanations of final assumptions and modelling parameters included in technical reports. All relevant geotechnical and rock characteristic data is fully described in reports.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas*	• A Bankable Feasibility Study (BFS) is planned for the Moonshine and Moonshine North deposits. A metallurgical test work program will be undertaken using representative core samples to develop an optimal grind size and flowsheet to produce a saleable magnetite concentrate. • Further resource drilling may be conducted in the future to

Criteria	JORC Code explanation	Commentary
	of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	upgrade the Mineral Resource category for Mineral Resource currently classified as Inferred. This work will be undertaken as required after the release of the BFS. • No immediate resource drilling is planned for the Snark, Clark Hill South, Clark Hill North and Sandalwood deposits. These deposits are planned for future development after development of the Moonshine Project, comprising the Moonshine and Moonshine North deposits. • Diagrams and maps of potential areas for resource expansion, extension and upgrading (in category) are produced in-house for review and approval by management before drilling/exploration programs are finalized and executed.

Section 3 Estimation and Reporting of Mineral Resources – Moonshine and Moonshine North

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, e.g. transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Data used in the Mineral Resource estimate is sourced from relational database in MS Access format, maintained by Macarthur. • Relevant tables from the data base are exported to MS Excel format and converted to csv format for import into Datamine software for use in the Mineral Resource estimate. • Validation protocols for the data entered into the database are described in Section 1.
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 (Mineral Resources) inspected the property on several occasions between 2008 and 2012. During each site visit, drilling operations and sampling procedures were inspected, proposed drill hole locations reviewed, geological outcrops were inspected, and geological and project discussions held with Macarthur staff. • COVID 19 travel restrictions have prevented the Competent Person from visiting the project during 2020. When travel restrictions are lifted, the Competent Person will aim to conduct a site visit in conjunction with other technical staff during the preparation of the Moonshine BFS.
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.*	• There is a reasonable to high level of confidence in the geological interpretation of the Moonshine and Moonshine North deposits, as reflected in the classification levels of the Mineral Resource. The confidence level is higher for the geometry of the mineralisation, and the true width, than for the depth of mineralisation. • Geological interpretations were based upon geologically logged and chemically analyses drill hole samples and mapping of outcrop. A lower cut-off of 15% DTR or 30% head Fe was used to constrain the mineralisation domains. A highly siliceous zone in the footwall of the Moonshine deposit was domained out from the geological model, which also exhibited low levels of magnetite mineralisation. • Geological factors such as strike and dip of the individual BIF lenses controlled the geometry of the mineralisation domains. Surface mapping of the BIF outcrops guided the geological interpretations. • Mineralisation domains along strike and down dip were curtailed when the grade consistently fell below 30% Fe. The mineralised interpretation used for the estimates extends from the base of oxidation (at an average of approximately

Criteria	JORC Code explanation	Commentary
		65 m below surface) to the depth of the mineralised drill intersections ranging from approximately 200 m to 350 m below surface. • A base of complete oxidation was modelled to constrain the reported Mineral Resource within the fresh rock zones only. This was guided by geological logging and sample assays.
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 mineralisation extends along a strike extent of 7,000 m (Moonshine and Moonshine North). • Mineralisation true widths vary from 10 m to 140 m. Depth of mineralization commences below the base of oxidation. The classified Mineral Resource extends between 200 m and 250 m below the base of oxidation. • The mineralization is open at depth with the current drilling. For resource estimation the mineralisation has been constrained by geological knowledge, the available drilling and where appropriate, expected pit depths.
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 (e.g. 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 drillhole data, and use of reconciliation data if available.*	• Datamine Studio and Surpac software were used for geological modelling, block modelling, grade interpolation, Mineral Resource classification and reporting. GeoAccess Professional and Snowden Supervisor were used for geostatistical analyses of data. Mineralisation domains were based upon a lower cut-off of 30% head Fe or 15% DTR. Mineralisation domains were encapsulated by means of 3D wireframed envelopes. Domains were extrapolated along strike or down dip to half a section spacing or if a barren hole cut the down dip extension before this limit. Drill hole samples were composited to 5 m sample lengths, and statistical analyses for Fe(%), P(%), SiO2(%), Al2O3(%), LOI(%) and S(%) were carried out. Grade cutting was employed to ensure excessively high grades, for any of the grade variables, would not have an undue influence upon the grade interpolation by smearing high grades through the domains. • A block model was created incorporating all the geological domains, with block sizes 25 m x 25 m x 10 m. Sub-celling of 2.5 m x 2.5 m x 1 m was used to ensure the domain volumes were adequately filled with blocks. • Variograms were modelled for head grades for Fe, SiO2, Al2O3, MgO, P, S and LOI; and for concentrate grades for Fe, SiO2, Al2O3, MgO, P, S and LOI. A plunge to the mineralisation towards the southeast was modelled for all variograms. Low to moderate relative nugget effects were modelled for all grades, with short ranges of between 80 m and 110 m modelled, accommodating over half of the sample population variance. • Kriging neighbourhood analysis (KNA) was carried out to assist with determining appropriate sample search and selection criteria. • All RC and diamond drill hole data constrained within the mineralisation envelopes were utilised in the grade interpolation. Grade estimation was by OK with IDS estimation concurrently run as a check estimate. A minimum of 8 and maximum of 18 samples were used in any one block estimate. A maximum of 4 composited samples per drill hole were used in any one block estimate. Cell discretisation of 3 x 3 x 3 was used. Grade interpolation was run within the individual mineralisation domains, acting as hard boundaries. Search ellipsoid radii varied between the deposits, typically a primary search ellipse of 240 m along strike and down plunge, by 120 m down dip by 40 m across strike. Grades

Criteria	JORC Code explanation	Commentary
		were interpolated into the parent cells. • Datamine's Dynamic anisotropy functionality was used to control the orientation of the search ellipse, relative to the local orientation of the mineralisation domain. • Grade interpolation results were compared with previous Mineral Resource estimates and any anomalous differences were investigated. • Head grades were estimated for Fe, SiO2, Al2O3, P, MgO, LOI, S, CaO, K2O, MnO, Cr, TiO2 and V. Concentrate grades were estimated for the same elements and oxides. The Mass Recovery percentage was also estimated using DTR results. • Grades were also interpolated into the waste domains and the oxide zone of the mineralisation domains. • No SMU assumptions were made. • The grade models were validated by 1) creating slices of the model and comparing to drill holes on the same slice; 2) swath plots comparing average block grades with average sample grades on nominated easting, northing and RL slices; and 3) mean grades per domain for estimated blocks and flagged drill hole samples. No mining has taken place therefore no reconciliation data was available.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages are estimated on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The Mineral Resources are quoted from blocks above 15% DTR. This cut-off grade is also the domain cut-off. The DTR cut-off is required to ensure a higher volume of magnetite bearing mineralisation is selected, removing the rock volumes with low magnetite content.
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.*	• Mineralisation outcrops at surface and was modelled to a depth to which open pit mining would operate. No assumptions have been made to date regarding minimum mining widths or dilution controlling the Mineral Resource estimates.
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.*	• Metallurgical test work was considered sufficient to support a Preliminary Economic Assessment (2019) for the Moonshine deposit. • A metallurgical sample was prepared using drill samples from two RC holes, one located in Moonshine and the other in Moonshine North. The DTR and head Fe grades from the samples are higher than the average grades and recoveries of surrounding samples. • The Low Intensity Magnetic Separators (LIMS) test results yielder a poorer quality concentrate than was determined from the DTR preliminary analysis. The reason for this is unknown and will be investigated further during the proposed BFS.

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.*	• Environmental factors and assumptions have been examined as part of the PFS for the Ularring Hematite Project, overlapping or immediately adjacent to the Lake Giles Magnetite Project. The Ularring Hematite Project has received State and Commonwealth environmental approvals. Additional environmental surveys are required over areas of the magnetite deposits that are not included in the environmental approvals for the Ularring Hematite Project. The Company is not aware of any significant environmental reasons why approval is unlikely to be granted for the Lake Giles Magnetite Project.

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.*
		• A total of 624 drill samples were captured within the mineralisation domains and statistically assessed to determine the mean and data ranges, and to see if any excessively low or high SG values were present. Three mineralisation domains contain SG data. A further 400 samples were taken from the BIF oxide zones, or the footwall and hangingwall waste zones. Core samples were sealed prior to immersion in water. A conventional Archimedes wet/dry weighing was used to measure density.
		• Density was determined by way of algorithms comparing head Fe versus the measured SG values from diamond core billets, from the domained data.
		  ○ For main Moonshine zone, DENSITY = (0.0241*FE) + 2.624
		  ○ For eastern Moonshine, DENSITY = (0.0293*FE) + 2.492
		  ○ For Moonshine North, DENSITY = (0.0295*FE) + 2.468
		  ○ Where FE is the estimated block grade.
		• The Moonshine northeast zones used the Moonshine North algorithm
		• Algorithms were developed for the other non-mineralised domains.

Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (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.*	• Classification of the Mineral Resource estimates was carried out taking into account the geological understanding of the deposit, QAQC of the samples, density data and drill hole spacing. • The Measured Mineral Resources were based upon a confirmed understanding of the geological and grade continuity. Drill spacing is typically 25 m along the northerly strike, with often 2 to 3 holes per section. The Measured volumes also contain samples which were subject to DTR test work, with associated assays from the recovered concentrates. SG measurements were also available. The Indicated Mineral Resources were based upon an assumed understanding of the geological and grade continuity. Drill spacing is typically 25 – 50/100 m along the northerly strike, with at least one hole per section. The Indicated volumes also contain samples subject to DTR test work, with associated assays from the recovered

Criteria	JORC Code explanation	Commentary
		concentrates. SG measurements may also be available. • The Inferred Mineral Resources were based upon an implied understanding of the geological and grade continuity. Some mineralisation domains are only cut by one drill hole, and the geological models are strongly guided by surface mapping of the BIF outcrops. Drill spacing is typically ≥100 m along the northerly strike. DTR and SG results are generally absent from within the Inferred volumes. • All available data was assessed and the Competent Persons relative confidence in the data was used to assist in the classification of the Mineral Resource. • The current classification assignment appropriately reflects the Competent Person's view of the deposit.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• No independent audit of the Mineral Resources has been conducted. Alternate CSA Global resource geologists reviewed the Mineral Resource estimates prior to release of the results to Macarthur Minerals, as part of CSA Global's procedures.
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.*	• No other estimation method or geostatistical analysis has been performed. • The Mineral Resource is a local estimate, whereby the drill hole data was geologically domained above a nominated Fe(%) cut-off grade, resulting in fewer drill hole samples to interpolate the block model than the complete drill hole dataset, which would comprise a global estimate. • Relevant tonnages and grade above a nominated cut-off grade are provided in the body of this report. Tonnages were calculated by filtering all blocks above the cut-off grade and sub-setting the resultant data into bins by deposit and classification. The volumes of all the collated blocks were multiplied by the dry density value to derive the tonnages. The Fe (%) metal value (g) for each block was calculated by multiplying the Fe grade (%) by the block tonnage. The total sum of all metal (g) for the deposit for the filtered blocks was divided by the total tonnage to derive the reportable Fe grade (%). The other elemental species mentioned in this table were similarly reported, based upon the Fe (%) reporting cut-off grade. • The Mineral Resource is not a precise calculation of volumes and metal, rather it is an estimate based upon relatively wide spaced sampling locations. The Inferred Mineral Resource tonnages and grades reported here are an approximation and further geological testwork, by way of drilling, sampling and mapping, is required to increase confidence levels.

Section 4 – Estimation and Reporting of Ore Reserves

Orelogy Consulting Pty Ltd estimated the Ore Reserve in accordance with *The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2012 Edition)*. The following information is provided in accordance with Table 1 of Appendix 5A of the JORC Code 2012.

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.*	The Mineral Resource Estimate used as a basis for the conversion to the Ore Reserve was dated 29th September 2020 with Mr. David Williams, of CSA Global Pty Ltd, as the Competent Person. The total Mineral Resource for the Moonshine and Moonshine North deposits, reported above 15% Davis tube recovery (DTR), includes: • Measured at 53.9 Mt at 30.8% Fe & 32.2% DTR. • Indicated at 218.7 Mt at 27.5% Fe & 31.0% DTR. • Inferred at 449.1Mt at 27.1% Fe & 29.2% DTR. The estimation and reporting of Mineral Resources are outlined in Section 3 of this Table.
	Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	Mineral Resources are reported inclusive of Ore Reserves.
Site visits	*Comment on any site visits undertaken by the Competent Person and the outcome of those visits.*	Mr. Stephen Craig, the Competent Person for this Ore Reserve statement is a full-time employee of Orelogy Consulting Pty Ltd (Orelogy). A site visit to the Lake Giles Iron Ore Project (LGIP) was untaken on the 1-2 Nov 2021 accompanied by Dean Carter (Macarthur), Jake Fitzsimons (Orelogy) and Matt Clark (CSA Global) on behalf of David Williams as CP for the Mineral Resource Estimate. The site visit found that: • The terrain is rugged with medium density scrub underlying trees of up to 30 m in height. • The pits are located on elevated ridges with shallow cover. • Infrastructure will be in gently sloping areas with thick soil cover that will not be trafficable in wet weather. • Core examined for the Oxide material was moderately hard and often broken. Fresh rock was very hard with few joints. All rock will require blasting.
	If no site visits have been undertaken indicate why this is the case.	A site visit was undertaken as described above.
Study status	*The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.*	The Ore Reserve estimate is based on a Feasibility Study (FS) for the Moonshine and Moonshine North deposits. The objective of this FS was to develop an integrated Life of Mine plan for mining and processing the magnetite ore to produce 3.0 Mt (dry) of concentrate to be transported to market via the port at Esperance in Western Australia. The FS study was compiled by Engenium (now Stantec) with input from: • CSA Global (Geology & Mineral Resources) • Pells Sullivan and Meynink (Geotechnical) • Orelogy Consulting (Mine Planning) • Engenium (metallurgical test work, process design and non-process infrastructure) • Stantec (tailings storage and port reclaim) • Engenium (hydrology and hydrogeology) • Engenium and Macarthur (Environment) • Macarthur & LJF Consulting (marketing) • Macarthur and FTI (financial analysis) • Macarthur and Projectus (logistics)

Criteria	JORC Code Explanation	Commentary
Cut-off parameters	*The basis of the cut-off grade(s) or quality parameters applied.*	Revenues for Iron ore are based on tonnes of product within a grade specification. The magnetite concentrate specification for the LGIP was for a concentrate with: • 66.1% Fe • 4.9% SiO2 • 0.02% P • 0.1% Al2O3 • 0.6% S • -2.7% LOI A cut-off grade of 15% DTR was used for ore definition and reporting after applying dilution to the block model. The 15% DTR cut-off grade was rounded up from the breakeven cut-off grade of 14.2% DTR using the formula: *BECOG (DTR) = (Process cost)/(Price – Selling costs).*
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 Open Pit Ore Reserve Estimate is underpinned by mine plans that deliver ore for processing on site to produce a concentrate for export. The mine planning activities included to derive the Ore Reserve were: • Detailed dilution modelling for a bulk mining operation. • Blasting analysis for ore and waste with ore patterns optimised for the crusher feed specifications. • Open pit optimisation and selection of a viable economic shell as the basis for design. • Development of ultimate pit designs with practical internal stages suitable for the size of the mining equipment and batter-berm parameters based on recommendations from PSM. • Mine scheduling using blending of ore types to provide consistent ore feed to the plant for processing. Blending was based on balancing DTR grade, with Fe and SiO2 in concentrate grades to eliminate variability of feed grades and concentrate production. • Haulage simulations based on rim-pull curves and fuel burn factors were used to develop haulage cycle times and fuel consumption for each source and destination. • Contract mining costs were sourced via a request for pricing sent to seven Mining Contractors with four submissions received. The costs used in the estimate were based on the lowest complete submission.

Criteria	JORC Code Explanation	Commentary
	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.	Conventional open pit mining method using excavators and rigid dump trucks was selected as the most appropriate mining method. The bench heights were reviewed in parallel with the dilution modelling and 5 m flitch height selected with blasting on 10 m benches. This suited the selected equipment size of 300-400 t excavators in backhoe configuration matched to 180 t rear dump trucks. The pits and internal stages were each designed with separate access using dual lane ramps except for the final two benches where single lanes were adopted. All oxide material (generally to a depth of approximately 55 m) will be pre-stripped in each stage prior to commencement of ore mining procedures.
	The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling.	A geotechnical assessment of the slope design was undertaken by Pells Sullivan Meynink (PSM) with batter / berm configurations provided for design of the final walls based on weathering profiles and footwall / hanging wall conditions. Grade control drilling is proposed using a 12.5 m by 12.5 m pattern angled 60° perpendicular to the strike of the pits using RC drilling to minimise contamination. Drilling will be campaigned with ½ the pattern drilled at 20 m vertical intervals to a depth of 40 m in advance of mining.
	The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).	The Mineral Resource model created to estimate the Mineral Resources was used as the basis for pit optimisation and scheduling. To establish mineable quantities, open pit optimisation and sensitivities were completed on the diluted Mineral Resource model. Waste mining costs and an ore mining premium were applied at the block level in the diluted model. The base case optimisations considered Indicated materials only, and applied grade control, ore handling, processing, G&A, road transport, rail, and port costs to the tonnes processed or the concentrate produced. The net revenue used in the optimisation was derived using a base price of US$125/t for 66% Fe concentrate, supplied by Macarthur, with 5% royalties and 0.73 USD/AUD exchange rate. Only diluted blocks with a positive value were identified as Ore during pit optimisation. The shell selection was based on the business objectives of maximising the discounted cash flow whilst providing sufficient mine life for the Project. A conservative open pit optimisation shell, at a revenue factor of 0.88 times base net concentrate price, was selected as the basis for design.
	The mining dilution factors used.	Dilution was applied to the Mineral Resource model. The model was initially re-blocked to 6.25 m by 6.25 m by 5.0 m with ore and waste parcels. This averages the ore grades within the regular blocks. No dilution was applied to blocks with 100% ore. Blocks that straddle an ore-waste boundaries are indicative of an edge block and dilution was applied using a 2 m skin. As a result of applying dilution using this method, the model reported dilution of 2.5% at a grade of 14% DTR and ore loss of 2.0% at grade of 30% DTR. All grades were diluted in this manner. The low dilution numbers are considered consistent with the wide orebodies at Moonshine and Moonshine North.

Criteria	JORC Code Explanation	Commentary
	The mining recovery factors used.	No additional recovery factors were applied.
	Any minimum mining widths used.	The mine design used minimum mining width of 30 m for the base of pits. The stage designs targeted a minimum mining width of 120 m as a practical mining without compromising operability. This was reduced to 50 m over short distances to maintain access.
	The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.	Only Indicated and Measured Mineral Resources were used for the reporting of the Ore Reserve estimate. Inferred Mineral Resource was treated as waste.
	The infrastructure requirements of the selected mining methods.	The Project contains no site facilities with all mining infrastructure to be supplied and constructed by the Mining Contractor including: • ROM pad • Mine haul roads to pits and waste dumps • Magazine and bulk explosives storage • Heavy and light vehicle maintenance workshops and wash bays • Mine administration facilities, ablutions, crib rooms and training rooms • Water storage dams for dust suppression and dewatering. The mining contractor will be supplied power, water, accommodation, flights, fuel and fuel storage facilities by the Company. Such facilities have been considered in the Feasibility Study and designed by Engenium.
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?*	Conventional crushing, grinding and magnetic separation processing is proposed with flotation to remove silica, which will yield a saleable magnetite concentrate with a LOM grade of 66% Fe. The process is well tested, widely used in the mining industry and there are no novel steps in the flowsheet. Metallurgical test work was undertaken on two bulk samples representing two broad geological domains of the Moonshine and Moonshine North deposits. Recovery factors used in mine schedule were based on DTR assays in the Mineral Resource block model. The recovery factors are considered to align with the bulk sample test work. The bulk sample test work included two composite samples from several diamond drill holes from across the extent of the Moonshine and Moonshine North deposits. Head grade assays of the bulk composites are similar to the average grades of the Mineral Resource. No penalties were applied for any deleterious elements as the Company advised the product specification achieved in the test work is of saleable grade and no price penalty should apply.

Criteria	JORC Code Explanation	Commentary
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.*	Some ecological surveys have been conducted across parts of the project. Baseline environmental factors to be addressed in an environmental impact assessment (EIA) have been scoped and assessment of the approval process and risks has been completed. The Company intends to commence the EIA and approval process on completion of the Feasibility Study. Infrastructure placement was a key consideration in the design phase of the study to minimise impacts to the surrounding environment. From desktop studies there is potential for listed species to occur in the area but none have been identified across the mining area. Further studies will be conducted, and mitigation strategies will be adopted ahead of final design. Waste rock characterisation will be undertaken as part of the EIA. Based on past waste rock characterisation of the oxide material north of the project, significant AMD issues are not expected to occur and could be managed through appropriate encapsulation in the waste dump. Waste dump locations are not expected to have significant impacts on sensitive environments or groundwater.
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.*	No infrastructure currently exists at the proposed mining area. The project is located in close proximity (200 km) to the regional mining town of Kalgoorlie which is easily accessible from the main capital of Perth. The Project is located within 100 km of an existing heavy haulage rail line with direct access to the Port of Esperance. The port is a deep-water port accessible by Cape class vessels and has ship loading infrastructure for iron ore export. The feasibility study has assessed the port and rail capacity and has made appropriate allowances for engineering works to support its export target. Land tenure for the mining area is held by the Company as described in section 2 of this table. Mining Leases are granted and provide adequate access to mine the deposit. The Company will require land tenure for the development of processing infrastructure, haul road, bore fields, accommodation, airstrip and a rail siding. Tenure surrounding the mining leases is Crown Land and accessible for mining related infrastructure. The Company has entered into an agreement with a neighbouring tenement holder to obtain the rights to the ground for its waste dumps and processing infrastructure. The Company is currently progressing the application of a General-Purpose Lease under the Mines Administration Act for this purpose. The Company is also progressing with land tenure applications to support development of its haul road, rail siding and bore field. On final definition of the project the Company will advance all other tenure applications for supporting facilities such as a camp and airstrip. The mine will operate on a mostly FIFO basis from Perth and the feasibility study has made adequate allowance for a private airfield located adjacent to the mine site.

<table>
<tr>
<td>Costs</td>
<td>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 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.</td>
<td>The mining costs in 2021 AUD prices are supported by contractor submissions provided during a Request for Pricing for mining services at LGIP, in accordance with a Class 3 estimate.

The capital cost estimate in 2021 AUD prices has been developed by Engenium based on a mechanical equipment list and material take-offs with vendor pricing for large mechanical items and in-house Engineering estimates for process and non-process infrastructure in accordance with Class 3 estimate.

Engenium developed capital cost estimates for:

• Camp accommodation
• Airfield
• Bulk earthworks
• Water supply, storage, and treatment facilities
• Crushing, concentrator and associated process service infrastructure
• Tailings storage facility
• Haul road, access roads and civils
• Mine supporting infrastructure
• Electrical services
• Rail loading facilities
• Port infrastructure including rail unload, product storage and reclaim.

Operating costs in 2021 AUD prices for the processing plant, mining, and site administration for a production rate of 9.7 Mtpa of ore have been estimated by appropriately experienced industry consultants.

Operating costs were developed by Engenium in accordance with the level of engineering for a Class 3 estimate for mineral processing and associated services. Cost estimation for product logistics including road and haulage and shipping were obtained by the Company from contractor submissions.

Capital costs that have been absorbed into operating costs include mine facilities and workshops, power generation and port infrastructure development.

Mine closure and rehabilitation liability costs have been included in the financial model based on areas of disturbance. These commitments are in line with the DMIRS cost estimates.

Operating and capital costs were estimated using the following exchange rate assumptions, based on historical Forex data over 5 years up to 30 June 2021 rounded to the nearest whole unit). Specific 5 year averages were: USD 0.7262 (rounded to 0.73); Euro 0.6261 (rounded to 0.63); JPY 79.17 (rounded to 79.0).

<table>
<tr><td>AUD: USD</td><td>0.73</td></tr>
<tr><td>AUD: EURO</td><td>0.63</td></tr>
<tr><td>AUD: JPY</td><td>79.0</td></tr>
</table>

Concentrate transport charges have been applied on a contractor-based solution for haulage to the rail head, rail charges to Esperance and port charges for loading of the ship for sea freight to China. Access to the existing rail line is based on quoted tariffs provided by the network operator.

No penalties for deleterious elements including have been applied in the financial model on the basis of the test work product specification and Company engagement with various end users.

Government royalties have been applied at the rate of 5%.</td>
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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.*	Price forecasts supplied by Macarthur for 66% magnetite iron ore product were applied in the pit optimisation, development of the mine schedule and financial model. Metal prices used to estimate the Ore Reserve were: • US$125/dmt for iron ore Selling cost used to estimate the Ore Reserve were: • Concentrate road transport of $9.09/t wet • Concentrate rail transport of $15.64/t wet • Port charge of $7.58/t wet
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.*	Demand for iron ore globally is strong. It is the key component used in the steel making process. Steel is the most widely used metal in modern society and it is the primary building material and indicator for industrialization, urbanisation and economic wealth. China dominates steel production and its industrialisation programs over the last several decades have seen it emerge as the largest consumer of iron ore products globally. China produced over 1000 Mt of steel in 2020 (Commonwealth Department of Industry, Innovation and Science,' Resources and Energy Quarterly', March 2021). However future iron ore consumption growth is expected to be driven from countries such as India and other developing south-east Asian nations. There have been no formal market assessment investigations or price and volume forecasts however, the product specification is a high-grade concentrate that is expected to be attractive to blend into sinter feed, improving the sinter quality, or potentially for blast furnace pellet production. The product grade is expected to be 66.1% Fe, with correspondingly low levels of silica and alumina. As a headline grade, the product is consistent with Anglo's Minas Rio BF product (which grades between 66-67% Fe) and Champion Iron's Bloom Lake product (66.5% Fe), both of which have achieved substantial sales at prices that are considerably higher than the major fines brands. All current and future iron ore product produced by Macarthur from the Lake Giles Iron Project will be traded by Glencore Plc under an existing binding Offtake Agreement. The likely markets are anticipated to be Asian customers. Demand in this market is driven by internal consumption.
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.*	A discount rate of 6% (using industry standard assumptions in calculating WACC) has been utilised to determine NPV for the Lake Giles Iron Project. Orelogy was provided with the Feasibility Study financial model demonstrating the economic viability of the project based on this Ore Reserve Estimate. A range of sensitivities was produced for the pit optimisation which showed that the project was moderately sensitive to most changes in the significant inputs and assumptions and highly sensitive to reductions in commodity price. The Ore Reserve Estimate is based on a FS level of accuracy with inputs from open pit mining, processing, sustaining capital and contingencies scheduled and costed to generate the Ore Reserve cost estimate and cashflows. The Ore Reserve returns a positive NPV based on the FS and associated modifying factors.

Criteria	JORC Code Explanation	Commentary
Social	*The status of agreements with key stakeholders and matters leading to social licence to operate.*	The Mining Leases are situated in the Marlinyu Ghoorlie Native Title Claim (WC2017/007) accepted for registration 28/3/19. The Company's mining leases were granted pre native title and are therefore not subject to any native title agreements. Future tenement applications will be subject to negotiation with the claimants. The Company is progressing tenure for its proposed rail siding. This tenure requires a lease under the Land Administration Act for which the Company is currently negotiating an Indigenous Land Use Agreement (ILUA) with the native title claimants. The tenements are free from any private royalties or encumbrances.

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.*	No material naturally occurring risks have been identified that would significantly impact the design basis employed in the Feasibility Study. Natural impacts such as weather and flooding have been addressed at an appropriate Average Recurrence Interval (ARI) for the relevant infrastructure. Approval status is addressed under the environmental section. There are reasonable grounds to assume that required Government approvals will continue to be granted within the timeframes anticipated in the mine schedules supporting the Ore Reserve reporting. Macarthur has entered into an Offtake Agreement with Glencore Plc for the sale and purchase of up to 4 Mtpa of iron ore from the Lake Giles Product for 10 years, with an option for a further 10 years. The Offtake Agreement is binding and guarantees the purchase of Macarthur's product after it passes the ship rail. Under the agreement, Glencore is responsible for the marketing of all product and Macarthur assumes no credit risk. There are no other material binding legal agreements or marketing agreements in place that are anticipated to impact on the Ore Reserve, however the Company has entered into the following arrangements: 1. Macarthur entered into a non-binding Memorandum of Understanding with Southern Ports Authority in January 2021 which provides a pathway for agreeing a potential access and operating solution for the export of Macarthur's high grade magnetite iron ore product via the Port of Esperance. The MOU contemplates engagement around the current master-planning process for Esperance Port. The agreement does not provide for access or an allocation of capacity at the Port, which will be conditional upon identification and approval of an acceptable infrastructure development solution at the port and various approvals, as well as agreed milestones being met by Macarthur (including securing project financing for its Lake Giles Iron Project). 2. Macarthur has received an Indicative Track Access Pricing proposal from Arc Infrastructure, which owns and operates the below rail assets between Macarthur's proposed rail siding west of Kalgoorlie and Esperance Port. The ITAP confirms that Arc will be able to make available sufficient below rail paths to transport Macarthur's product to Esperance Port, subject to a binding agreement being entered into. The extraction of the reserve is contingent upon binding port and rail agreements being finalised. Whilst matters concerning the final design and layout of any new infrastructure at Esperance Port is yet to be agreed with Southern Ports Authority and the Western Australian State Government, Macarthur considers that there are reasonable grounds to expect that all necessary third party and Government approvals will be received within the timeframes anticipated by the Feasibility Study.

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).*	Open Pit Ore Reserves have been derived from a mine plan that is based on extracting the magnetite mineralisation defined in the September 2020 Mineral Resource Estimate. Proven and Probable Ore Reserves were determined from Measured and Indicated material respectively after applying appropriate modifying factors as per the guidelines. These results reflect the Competent Person's view of the deposit.
Audits or reviews	*The results of any audits or reviews of Ore Reserve estimates.*	No audits have been undertaken.
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.*	The Mineral Resource Estimate and hence the Ore Reserve Estimate relate to global estimates. The Ore Reserve Estimate is an outcome of the 2022 Mining Feasibility Study with geological, mining, metallurgical, processing, engineering, marketing, and financial considerations to allow for the cost of finance and tax. Engineering and cost estimations have been completed to a -10%/+15% level of accuracy, consistent with a study of this nature. There has been an appropriate level of consideration given to all modifying factors to support the declaration and classification of the Ore Reserves. No production or reconciliation data is yet available for comparison.