Quarterly Exploration and Mining Activities Report

July to September 2020 (Q1 FY21)

For personal use only

Q1 Highlights

- Safety performance continued to improve, with a 12-month rolling Lost Time Injury Frequency Rate (LTIFR) of zero and a Total Reportable Injury Frequency Rate (TRIFR) of 3.19 at September 2020, an improvement of 3% over the quarter.
- COVID-19 Polymerase Chain Reaction (PCR) screening testing continued with 42,055 tests completed during the quarter and more than 75,000 completed this year through MRL's 10 screening facilities in metropolitan Perth and regional areas across Western Australia (WA).
- Mining Services volumes increased 24% versus Q120 and 7% versus Q420, in line with expectations. Guidance remains for FY21 volumes to increase 20 to 25%.
- Total iron ore production remained steady at 4.2 million (m) wet metric tonnes (wmt) for the quarter.
- Koolyanobbing operations shipped 2.2m wmt iron ore for the quarter with production expected to ramp up to meet full year guidance.
- Iron Valley shipped 1.3m wmt iron ore for the quarter, in line with the mine plan and guidance.
- Average iron ore revenue received of US$97 per dry metric tonne (dmt) during the quarter, 15% higher than the previous quarter.
- Mt Marion Lithium Project achieved record production of 133,000 dmt and record shipments of 118,000 dmt of spodumene concentrate during the quarter.
- During the quarter, MRL agreed to purchase the Wonmunna Iron Ore Project (Wonmunna) from Australian Aboriginal Mining Corporation Limited (AAMC). The purchase was for an immaterial cash consideration and a royalty which MRL will pay AAMC in respect of the first 40m dmt extracted and removed from the area. Wonmunna has a forecast capital cost of approximately $126m (including the acquisition cost) with an initial design of 5.0m wmt per annum production. Exports of 1.0m to 2.0m wmt are expected in H2 FY21. Operating costs are expected to be similar to MRL's nearby Iron Valley operation.

For personal use only

COVID-19 Update on Operations

MRL continues to monitor developments around the world along with guidelines introduced by the Federal and State Governments and health authorities to minimise the risks that COVID-19 presents to our community and the resource industry in WA. MRL continues to screen all workers and visitors to operational sites, with the aim of ensuring that anyone entering our sites is free of the virus.

MRL has conducted more than 75,000 COVID-19 PCR screening tests for resource industry workers through MRL's 10 screening facilities in metropolitan Perth and regional areas across WA.

This initiative complements other actions taken on our sites. Further details of our actions are available at www.mineralresources.com.au/home-page/covid19-response/.

Production and Commodity Shipments

'000 wet metric tonnes	Q1 FY21		Q4 FY20		Q1 FY20	
	PRODUCED	SHIPPED	PRODUCED	SHIPPED	PRODUCED	SHIPPED
IRON ORE ('000 wet metric tonnes)						
Iron Valley	1,543	1,313	1,674	1,783	1,409	2,056
Koolyanobbing	2,644	2,236	2,521	2,647	1,679	1,413
TOTAL IRON ORE	4,187	3,549	4,195	4,430	3,088	3,469
SPODUMENE ('000 dry metric tonnes)						
Mount Marion [1]	133	118	116	110	93	92

[1] Volumes presented as 100% for the Mt Marion project. MRL operates 100% of the Mt Marion project, in which it owns a 50% interest.

IRON ORE

Koolyanobbing

'000 wet metric tonnes	Q1 FY21	Q4 FY20	Q1 FY20
Mined	2,076	2,236	1,852
Produced	2,644	2,521	1,679
Shipped	2,236	2,647	1,413

Ore delivery and hydrogeology issues in the Deception pit caused material handling issues in the supply chain, which hampered production for the quarter. This required changes to blending to allow efficient crushing and railing activities while still maintaining quality.

Mining operational procedures were amended to compensate for the hydrogeology issues by substituting low strip ratio material movement in W7. Work in the F1 pit commenced in earnest during the quarter, with access established in July. Windarling and Jackson pits remained in steady state with some delays experienced in August across all pits due to weather impacts.

Crushing operations, hampered in part by the impacts of Deception material, prompted MRL to introduce a new Mobile Crushing Plant to supplement the primary Koolyanobbing crusher in order to meet the required run rate. The new plant was successfully commissioned in early August.

Shipped tonnes of 2.2Mt in the quarter were down due to the material handling issues. Production and shipping are being ramped up in Q2 to Q4 as planned. FY21 guidance remains unchanged at 12 to 12.7mt with a year-end run rate of 13mtpa.

Iron Valley

'000 wet metric tonnes	Q1 FY21	Q4 FY20	Q1 FY20
Mined	1,601	2,313	1,167
Produced	1,543	1,674	1,409
Shipped	1,313	1,783	2,056

At Iron Valley, a successful dewatering campaign and robust risk management of ground conditions facilitated the completion of the C8 pit. Focussed effort on waste movement in Stage 1 and 2 in C10 has exposed the ore body to meet the shipping schedule in Q2.

Mining and crushing were supplemented by the recommenced Phils Creek pit, which will provide lower phosphorus blending options. Shipped tonnes of 1.3Mt in the quarter were down on Q4 FY20 because of the timing of the final shipment, which fell into Q2. FY21 Guidance remains unchanged at 7.5 to 8.5mt with a year-end run rate of 9mtpa.

LITHIUM

Mt Marion

SPODUMENE			
'000 dry metric tonnes	Q1 FY21	Q4 FY20	Q1 FY20
Mined	632	667	712
Produced	133	116	93
Shipped	118	110	92

Volumes presented as 100% for the Mt Marion project. MRL operates 100% of the Mt Marion project, in which it owns a 50% interest.
In response to requests from the market, Mt Marion volumes are reported on a dry metric tonne (dmt) basis

The MRL-operated Mt Marion Lithium Project is a joint project between MRL (50%) and one of the world's largest lithium producers, Jiangxi Ganfeng Lithium Co., Ltd (50%) (Ganfeng).

During the quarter, operations continued in line with the optimised mine plan and with the product requirements of Ganfeng. This has resulted in improved lithium recovery and increased yields. During the quarter, 632,000 dmt of ore were mined and 7.4m dmt total material moved.

The processing plant's total utilisation remained in line with the prior quarter at 92% and the throughput rate remained at 292 tph, in line with the optimised mine plan. This resulted in beneficiated feed tonnes of 567,000 dmt compared to 559,000 dmt in the previous quarter. The proportion of high-grade spodumene concentrate produced during the quarter was 73%, compared to 74% in the previous quarter. Shipped tonnes increased to 118,000 dmt in the quarter as a result of the increase in produced tonnes.

Wodgina

The Wodgina Lithium Project is structured as an unincorporated joint venture (MARBL JV) between MRL (40%) and Albemarle Corporation (60%) (Albemarle) effective from 1 November 2019. The project is currently on care and maintenance due to the challenging global lithium market conditions and to preserve the value of the world-class Wodgina spodumene ore body. The MARBL JV regularly reviews market conditions with a view to resuming spodumene concentrate production as and when required and as driven by market demand.

Kemerton

MRL, through the MARBL JV, has a 40% interest in two 25ktpa (product) lithium hydroxide processing trains being constructed by Albemarle at Kemerton, located in Western Australia's South West near the regional city of Bunbury. Construction and receipt of equipment are ongoing with a ramp-up to 1,000 people on site. The Kemerton Lithium Hydroxide Plant is on track for completion in late CY21.

For personal use only

MINING EXPLORATION AND DEVELOPMENT ACTIVITY

Wonmunna Iron Ore

During the quarter, MRL agreed to purchase Wonmunna from Australian Aboriginal Mining Corporation Limited (AAMC). Wonmunna is located 80km north-west of Newman and 360km south of Port Hedland. The transaction is subject to an extended escrow period, expiring 7 November 2020. The purchase was for an immaterial cash consideration and a royalty, which MRL will pay AAMC in respect of the first 40m dmt extracted and removed from the area.

In 2018, the project was initially purchased by AAMC from Ascot Resources Limited (Ascot), a company at the time listed on the ASX. The Mineral Resources at Wonmunna are hosted within four primary deposits, North Marra Mamba (NMM), Central Marra Mamba (CMM), South Marra Mamba (SMM) and East Marra Mamba (EMM). The indicated and inferred JORC (2012) compliant resources that sit within these four deposits is estimated at a combined total of 84.3Mt @ 56.5% Fe, as shown in Table 1 below. Wonmunna's JORC (2012) compliant Probable Ore Reserve estimate is focused on the initial mining areas at CMM and NMM. The total reported Probable Ore Reserve estimate as at February 2015 is 28.86Mt @ 58% Fe, as shown in Table 2 below.

The resources and reserve estimates noted above have been extracted from the Wonmunna – Maiden Ore Reserve Estimate as announced by Ascot on 2 February 2015. The announcement contains production targets reported by Ascot that were based on the data available to Ascot at the time, which include a range of assumptions made by Ascot and an assessment of Ascot's capabilities at the time they were reported. These estimates are not reflective of MRL's production targets for the project.

Table 1: Wonmunna Iron Ore Project – Mineral Resource Estimate (in accordance with JORC (2012))

Deposit	JORC Category	Minimum Fe cut-off (%)	Resource (Mt)	Fe (%)	SiO_2 (%)	Al_2O_3 (%)	P (%)	LOI
NMM[1]	Inferred	50	1.9	59.2	4.2	2.5	0.08	8.8
		60	0.7	60.7	3.5	2.1	0.08	7.1
	Indicated	50	39.7	57.1	5.6	3.3	0.08	8.7
		60	7.4	61.1	3.3	1.9	0.08	7.0
CMM[1]	Inferred	50	3.8	57.0	5.2	3.3	0.11	9.3
		60	2.9	61.1	3.0	1.9	0.11	7.4
	Indicated	50	14.4	57.1	5.6	3.3	0.10	9.0
		60	0.8	60.8	3.2	2.0	0.11	7.3
SMM[2]	Inferred	50	17.2	55.3	6.7	3.8	0.07	9.7
		60	1.7	61.2	2.9	1.6	0.06	7.6
EMM[3]	Inferred	50	7.2	54.0	7.9	4.6	0.08	9.5
		60	0.1	61.1	3.5	2.2	0.08	7.9
TOTAL	**Inferred & Indicated**	**50**	**84.3**	**56.5**	**6.0**	**3.5**	**0.08**	**9.1**
		60	**13.5**	**61.0**	**3.2**	**1.9**	**0.09**	**7.2**

Notes:
1. Estimate provided by Coffey Mining in 2012
2. Estimate update provided by Quantitative Group 2012
3. Estimate by CSA Global 2012

For personal use only

Table 2: Wonmunna Iron Ore Project – Ore Reserve estimate

Table 1: Wonmunna Iron Ore Project - Ore Reserve estimate

Deposit	JORC Ore Category	Fe cut-off (%)	Tonnes (Mt)[1]	Fe (%)	CaFe (%)	SiO_2 (%)	Al_2O_3 (%)	P (%)	LOI (%)
CMM	Probable	54.2	10.03	58.0	63.5	4.99	2.94	0.10	8.76
NMM-East	Probable	52.8	12.41	58.0	63.1	5.29	3.10	0.07	8.20
NMM-West	Probable	51.2	6.42	58.0	63.9	4.37	2.75	0.09	9.36
Total	**Probable**		**28.86**	**58.0**	**63.4**	**4.98**	**2.97**	**0.09**	**8.65**

Notes:
1. Tonnes are dry metric tonnes and have been rounded.
2. CaFe represents calcined Fe and is calculated by Ascot using the formula CaFe = Fe%/((100-LOI)/100)

Fortescue Metals Group (ASX: FMG) (FMG) has commenced legal proceedings (writ of summons filed 22 September 2020 and statement of claim filed 6 October 2020) against the Minister for Mines and Petroleum, the DMIRS Registrar and AAMC subsidiary Wonmunna Iron Ore Pty Ltd (now owned by MRL), seeking declarations that the Wonmunna mining leases (M47/1423, M47/1424, M47/1425) are invalid. In its claim, FMG alleges that the Minister did not have jurisdiction to grant the mining leases in 2012 because the applications for the mining leases in 2008 were not accompanied by mineralisation reports. Wonmunna Iron Ore Pty Ltd denies these claims and will defend the action.

After reviewing FMG's claim, MRL started work on Wonmunnna's development to deliver a 5mt per annum iron ore operation. The Company expects the Wonmunna capital cost, including the purchase price, to be $126m. Exports of 1.0m to 2.0m wmt are expected in H2 FY21. Operating costs are expected to be similar to MRL's nearby Iron Valley operation.

West Pilbara Iron Ore

MRL is progressing exploration and drilling at Kumina and Bungaroo South. A regional soil sampling and mapping programme was conducted at Kumina during the quarter. A follow-up drill campaign for Kumina is scheduled to commence in Q2 FY21.

Marillana Iron Ore

MRL progressed drilling and metallurgical test work at Marillana in line with the Farm-in and Joint Venture Agreement (FJV Agreement) entered into on 26 July 2018 with Brockman Iron Pty Ltd, a subsidiary of Brockman Mining Limited (SEHK: 159; ASX: BCK). Pursuant to the FJV Agreement, and subject to the terms and conditions therein, MRL may farm in by satisfying the farm-in obligations and earn a 50% interest in the Marillana Project (the Joint Venture). The Farm-in Obligations are expected to be completed in the first half of FY21.

Central Pilbara Iron Ore

During the quarter, a 10,000m reverse circulation program and 700m of diamond drilling campaign commenced at the Lamb Creek Iron Ore project, located approximately 100km north-west of Newman.

Koolyanobbing Exploration

MRL commenced resource definition drilling at the Koolyanobbing Iron Ore Project during the quarter. The drilling program includes 6,000m RC at Windarling and 11,000m at Parker Range.

For personal use only

For personal use only

Energy

Upstream Energy

MRL, via its wholly owned subsidiary Energy Resources Limited (ERL), holds nine oil and gas exploration permits across the onshore Perth Basin, extending from south of the Perth metropolitan area to the Shire of Mingenew north of Perth. MRL continues to progress exploration programs as part of its vision for its Perth Basin acreage to one day underpin long-term access to low-cost, cleaner energy for current and future MRL mining operations.

The Lockyer Deep-1 well is a conventional gas well planned to be drilled in the northern Perth Basin. A land access agreement is in place and the Environment Plan has been submitted to the Department of Mines, Energy Regulation and Safety (DMIRS). Long lead items including casing, tubulars and wellhead have been ordered. Timing for drilling is dependent upon rig availability and regulatory approvals. However, the well is anticipated to spud in the second half of FY21.

The Romanesque seismic survey is planned for the second half of FY21. The objective of the survey is to identify drillable targets to bring the 10 terajoule per day Red Gully gas processing facility (currently on care and maintenance) back into production. Land access agreements are being finalised, to enable the survey to proceed.

Renewable Energy

MRL has a strong focus on implementing renewable energy solutions on existing and future projects. A business case is being developed for both small and large-scale solar and LNG installations using fixed and/or modular solutions, with a 2MW solar installation currently planned at Wonmunna. MRL continues to research renewable energy solutions and emerging technologies for power generation, mobile equipment and transport.

This announcement dated 23 October 2020 has been authorised for release to the ASX by Mark Wilson, Company Secretary of Mineral Resources Limited.

Further Information

Investor Relations
James Bruce
Head of Investor Relations
T: +61 8 9329 3706
E: james.bruce@mrl.com.au

Media
Peter Klinger
Cannings Purple
T: +61 (0)411 251 540
E: pklinger@canningspurple.com.au

Competent Person's Statement
The information presented is extracted from previous MIN ASX announcements available on the company website at www.mrl.com.au. The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

About Mineral Resources
Mineral Resources Limited (ASX: MIN) is a Perth-based leading mining services provider, with a particular focus on the iron ore and hard-rock lithium sectors in Western Australia. Using technical know-how and an innovative approach to deliver exceptional outcomes, Mineral Resources has become one of the ASX's best-performing contractors since listing in 2006.

To learn more, please visit www.mrl.com.au.
Mineral Resources Limited
1 Sleat Road
Applecross, WA 6153
Australia
T: +61 8 9329 3600
E: investorrelations@mrl.com.au
W: www.mrl.com.au
Follow us on: