

# QUARTERLY EXPLORATION AND MINING ACTIVITIES REPORT

## April to June 2021 (Q4 FY21)



30 June 2021

Mineral Resources Limited (ASX: MIN) ("MRL" or the "Company") is pleased to present its Quarterly Exploration and Mining Activities Report for the period to 30 June 2021.

## Q4 KEY POINTS

- Safety performance continued to improve in FY21 with the Total Reportable Injury Frequency Rate of 2.15 at June 2021. During the quarter, there was one lost time injury and the rolling 12-month Lost Time Injury Frequency Rate remained low at 0.11.
- Unplanned border closures and lockdowns implemented following COVID-19 outbreaks around the country continued to impact MRL operations, primarily through the forced curtailment of staff movements. This continued to impact our ability to transport iron ore from our operations as the shortage of road train drivers constrained material movements. MRL continued COVID-19 testing checks, using MRL's gold-standard PCR testing equipment, as part of the fit-for-work regime for all FIFO workers.
- Mining Services production volumes increased 20% in FY21.
- Iron ore shipments totalled a record 5.2 wmt during the quarter, 27% higher than Q3 FY21. Shipments for FY21 increased 23% to a record 17.3m wmt, slightly below the revised full-year guidance of 17.4m wmt to 18.0m wmt range provided in April as the final three planned shipments from the Kwinana port were delayed, due to port congestion.
- Iron ore production for the quarter was 5.2 wmt, up 6% on the prior quarter. FY21 production was a record 19.5m wmt, 38% higher than FY20. The Company ended the financial year with 2.0 mt of crushed iron ore stockpiles at site.
- The average realised iron ore price for the quarter was US\$178.0 per dmt, 23% higher than the previous quarter.
- Mt Marion produced 114,024 dmt spodumene during the quarter, 5% higher than Q3 FY21. FY21 production of 484,984 dmt was 34% higher than FY20 and above guidance of 450,000 to 475,000 dmt. Shipments during the quarter were 21% higher than Q3 FY21. Shipments of spodumene concentrate during FY21 of 484,942 dmt were 23% higher than FY20.
- During the quarter MRL and Brockman Mining Limited (ASX: BCK) (Brockman) amended their Joint Venture Agreement to include the development of the Marillana and Ophthalmia projects as part of the Company's proposed South West Creek Hub.
- MRL subsidiary, Onslow Steel Pty Ltd purchased a 15% interest in Aquila Resources Pty Ltd (Aquila) from Aurizon Operations Limited. Aquila's main asset is a 50% stake in the undeveloped West Pilbara Iron Ore Project in Western Australia.
- The Company secured a drilling rig for the conventional gas exploration well Lockyer Deep 1, situated in the onshore Perth Basin. The Lockyer Deep Prospect is located on exploration permit EP368, in the highly prospective northern section of the Perth Basin which is host to several significant recent conventional gas discoveries. Drilling commenced this month.
- Construction by Albemarle Corporation (NYSE: ALB) (Albemarle) of the 50ktpa Kemerton Lithium Hydroxide Plant continued. First production of battery grade hydroxide is expected by the end of 2021.

## Production and Commodity Shipments

'000 wet metric tonnes	FY21		Q4 FY21		Q3 FY21		Q4 FY20	
	PRODUCED	SHIPPED	PRODUCED	SHIPPED	PRODUCED	SHIPPED	PRODUCED	SHIPPED
<b>IRON ORE ('000 wet metric tonnes)</b>								
Yilgarn Hub	10,995	10,504	2,698	3,032	2,698	2,494	2,521	2,647
Utah Point Hub <sup>1</sup>	8,471	6,770	2,540	2,212	2,244	1,623	1,674	1,783
<b>TOTAL IRON ORE</b>	<b>19,466</b>	<b>17,274</b>	<b>5,238</b>	<b>5,244</b>	<b>4,942</b>	<b>4,117</b>	<b>4,195</b>	<b>4,430</b>
<b>SPODUMENE ('000 dry metric tonnes)</b>								
Mount Marion <sup>2</sup>	485	486	114	155	109	128	116	110

<sup>1</sup> Utah Point Hub consists of Iron Valley and Wonmunna.

<sup>2</sup> 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

### Yilgarn Hub

'000 wet metric tonnes	FY21	Q4 FY21	Q3 FY21	Q4 FY20
Mined	9,013	2,071	2,485	2,236
Produced	10,995	2,698	2,698	2,521
Shipped	10,504	3,032	2,494	2,647

Ore mined was 2.1m wmt during the quarter, driven by our existing mining fleet exiting from F-Pit and mobilising to Altair and Parker Range.

Successful conversion to an 'all-in fines' product saw improvements to our crushing operations across both Koolyanobbing and Carina, further supplemented with an additional mobile crushing plant arriving at Koolyanobbing.

Total shipped tonnes increased from the previous quarter, with haulage and shipping from both Esperance and Kwinana.

### Utah Point Hub

'000 wet metric tonnes	FY21	Q4 FY21	Q3 FY21	Q4 FY20
Mined	8,663	2,522	2,374	2,313
Produced	8,471	2,540	2,244	1,674
Shipped	6,770	2,212	1,623	1,783

Ore mined was 2.5m wmt during the quarter, with Wonmunna pit continuing to open up, noting an improvement in total material mined compared to the prior quarter.

Successful commissioning of the Wonmunna fixed plant in the previous quarter led to a full quarter of operations with 936,000 wmt mined and 678,000 wmt shipped.

## LITHIUM

### Mt Marion

SPODUMENE				
'000 dry metric tonnes	FY21	Q4 FY21	Q3 FY21	Q4 FY20
Mined	2,466	584	603	667
Produced	485	114	109	116
Shipped	486	155	128	110

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

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 (Ganfeng) (50%).

Mining was steady during the quarter at 0.6m dmt, compared to Q3 FY21. Total material mined increased to 8.4m from 6.8m dmt in Q3 FY21.

The processing plant's total utilisation was 94% while the throughput rate remained steady at 323 tph. This resulted in beneficiated feed tonnes of 580,000 dmt compared to 575,000 dmt in the previous quarter. The total spodumene concentrate produced in the quarter was 114,000 dmt, in line with the mine plan.

Shipped tonnes were higher in the quarter at 155,000 dmt because of the timing of shipments.

## MINING EXPLORATION AND DEVELOPMENT ACTIVITY

### IRON ORE

#### Yilgarn Hub

##### *Koolyanobbing*

MRL carried out an infill drill program in Q2-Q3 FY21 designed to close the drill spacing across the central part of the deposit to 30m by 30m and test down dip extensions. The drill program resulted in the addition of three diamond holes (197.8m), 17 water bore holes (609.5m), five reverse circulation (RC) drill holes with diamond tails (506.7m), and 126 RC holes for 11,664 m.

Exploration activities at Mt Richardson began ramping up in Q4 FY21 following environmental approval for earthworks and drilling. A 36-person mobile exploration camp has been mobilised to site to support the 27,000m drilling campaign. Earthworks are underway, with drilling commencing in Q1 FY22. The drilling is aimed at delivering a maiden Mineral Resource over the exploration target.

#### Utah Point Hub

##### *Wonmunna*

MRL completed a program of resource definition and geotechnical investigation drilling. Drilling was focused on the NMME and CMM mining areas. A total of 252 RC holes for 12,804 m and 10 diamond holes for 587 m was drilled.

##### *Lamb Creek*

MRL carried out an infill drill program in Q2-Q3 FY21 designed to close the drill spacing across the Boundary deposit to 50m by 50m. The drill program resulted in the addition of six diamond drill holes (369.1m), three water bore holes (354m), and 152 RC drill holes (9,456m).

## Ashburton Infrastructure Development

### *Kumina Bungaroo South and WPIOP*

MRL continues to progress development activities at Kumina and Bungaroo South. A total of 62 RC holes for 2,869 m was drilled at Kumina during the quarter. Drilling and on-ground project development activities at Kumina will continue into Q1 FY22. At Bungaroo South, a program of 5,000m of RC and 3,000m of diamond core is scheduled to commence in Q1 FY22.

During the quarter, MRL's subsidiary Onslow Steel Pty Ltd purchased a 15% shareholding in Aquila Resources Pty Ltd (Aquila) from Aurizon Operations Limited, a subsidiary of Aurizon Holdings Limited (ASX: AZJ). The terms of the agreement were confidential and not material to MRL. Aquila's main asset is a 50% stake in the undeveloped West Pilbara Iron Ore Project (WPIOP).

## South West Creek Development

### *Marillana*

MRL and Brockman Mining Limited (ASX: BCK) (Brockman) have Amended and Restated the FJV Agreement (JV). The JV will now include the development of the Marillana Project and the Ophthalmia Project capable of exporting iron ore through the Utah Point Hub. See MRL's ASX announcement dated 23 April 2021 for further details.

## LITHIUM

### Wodgina

The Wodgina Lithium Project, south of Port Hedland in the Pilbara, is an unincorporated joint venture - MARBL JV - between MRL (40%) and Albemarle Corporation (NYSE: ALB) (Albemarle) (60%) and came into effect on 1 November 2019. The project remains on care and maintenance. 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

Construction by Albemarle of the 50ktpa Kemerton Lithium Hydroxide Plant, near Bunbury in the South West, is continuing. The Kemerton plant is part of the MARBL JV. The plant is expected to be producing battery grade lithium hydroxide by the end of calendar year 2021.

## ENERGY

### Gas

MRL considers gas to be important in its strategy to secure low cost, long term energy supply that will enable the transition from diesel fuel to cleaner sources of energy.

The Company secured a drilling rig for the conventional gas exploration well Lockyer Deep 1, situated in the onshore Perth Basin. The Lockyer Deep Prospect is located on exploration permit EP368, in the highly prospective northern section of the Perth Basin which is host to several significant recent conventional gas discoveries. MRL's subsidiary, Energy Resources Limited (ERL) is operator of the EP368 Joint Venture between ERL (80%) and Norwest Energy NL (ASX: NWE; 20%). See the Company's ASX announcement dated 6 July 2021 for further details.

The Ensign 970 rig commenced drilling the Lockyer Deep 1 well on 18 July 2021. The drilling program will last for approximately 35 days, with the final target formations being the Kingia and High Cliff Sandstone formations, the same

formations where three recent significant gas discoveries in the region have been made. A 3D seismic survey is planned for later this year over this acreage to help to plan future wells.

The Romanesque seismic survey has been completed. Data analysis will now commence, with the objective to find drillable targets surrounding MRL's 10TJ/day Red Gully Gas Processing Facility. The data review process will take between three and six months.

The Perth Basin acreage won in the competitive 2020 WA State Government gazettal round was formally awarded to ERL in the middle of June and has been named EP 507. Work has commenced on preparing for drilling and 3D seismic on this prospective acreage.

## **Renewable energy**

MRL is developing a Decarbonisation Roadmap to lead the Company to Net Zero Emissions by 2050. This Roadmap will provide the operational framework to support reaching the target as soon as practical. MRL expects to outline the detailed Roadmap in the FY21 Sustainability Report.

Work has begun to install a 1.5MW solar array and battery at the Wonmunna mine site. Wonmunna is currently powered by diesel and this solar installation will:

- Reduce the diesel consumption on site by approximately 600,000 litres per annum: and
- Reduce the carbon emissions on site by approximately 1,800 tonnes of CO<sub>2</sub> per annum.

The combined solar/battery system will provide approximately 30% of the site's installed power requirements. The system has been designed with an expected life of up to 20 years.

In addition to solar energy, MRL continues to look at all forms of renewable energy for power generation, road transport and mining equipment in the quest to reduce emissions as rapidly as possible.

*This announcement dated 30 July 2021 has been authorised for release to the ASX by Mark Wilson, Company Secretary of Mineral Resources Limited.*

## **Further Information**

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### **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](http://www.mrl.com.au).

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