

# MINERAL RESOURCES LIMITED

## QUARTERLY EXPLORATION AND MINING ACTIVITIES REPORT

### Quarter 2, FY 2016 - December 2015

#### HIGHLIGHTS

#### Iron Ore Operations

- Production from MRL's two operating mines was 3.1 million tonnes, which was in line with production volumes achieved in Q1.
- Total export volumes for the quarter of 3.26 million tonnes were 24% higher compared with Q1. This reflects an increase in both Carina and Iron Valley shipments.
- Operations at both Iron Valley and Carina continued to be profitable for the quarter with additional cost improvements partially offsetting a reduction in the achieved price per tonne.

'000 WMTs	Half 1 FY16		Q1 FY16		Q2 FY16	
	Produced	Shipped	Produced	Shipped	Produced	Shipped
<b>Utah Point</b>						
Iron Valley	3,567	3,126	1,764	1,401	1,803	1,725
Other	0	42	0	23	0	19
<b>Total Utah Point</b>	<b>3,567</b>	<b>3,168</b>	<b>1,764</b>	<b>1,424</b>	<b>1,803</b>	<b>1,744</b>
<b>KBT2 / Carina</b>	<b>2,590</b>	<b>2,733</b>	<b>1,316</b>	<b>1,212</b>	<b>1,274</b>	<b>1,521</b>
<b>Total Iron Ore</b>	<b>6,157</b>	<b>5,901</b>	<b>3,080</b>	<b>2,636</b>	<b>3,077</b>	<b>3,265</b>

#### Operational Highlights

##### Iron Valley

- Further operational efficiency improvements and cost reductions achieved.
- Mine to port haulage and shipping performance in line with budget.
- Crushing plant's performance consistently above name plate capacity, as planned to achieve production targets.
- Mobilisation of additional (lower-cost) Super Quad road trains on the haulage route.

##### Carina

- Further operational efficiency improvements and cost reductions achieved.
- Shipping performance in line with budgeted increase in volumes to offset the KBT2 throughput constraints in Q1.
- Construction of the haul road connecting J4 to the Carina central processing infrastructure hub and development of the mine at J4 were both completed as planned.
- Mining commenced at J4 in November 2015.
- Progress made with the environmental approvals for J5 and Bungalbin East with the Public Environmental Review (PER) due to be lodged in early Q4 FY 2016.

## **IRON VALLEY MINE**

Iron Valley mining and crushing operations achieved an annualised run rate of 7.2Mtpa for the quarter. Haulage and shipping of product were slightly below this rate.

Export of stockpiled fines continued in the quarter as part of the previously advised parcels of iron ore fines, which have been forward sold at a fixed price for delivery through until February 2016.

Additional operational cost savings were achieved during the quarter, primarily as a result of efficiency improvements in the key areas of crushing operations, mining fleet performance (including increased run hours and pay loads) and the increased utilisation of (lower-cost) Super Quad road trains.

### **Super Quad Road Trains**

MRL continued to progress the implementation of Super Quad road trains on the Iron Valley to Port Hedland road haulage route. In addition to the benefits of lower haulage costs and improved efficiency, the Super Quad's on-road safety performance has continued to exceed the expectations of both MRL and road transport authorities. The improved efficiency and safety performance reflects the design of the trailer fittings and utilisation of the latest braking and anti-sway technology. Additional Super Quads will be progressively introduced on the haulage route over the next few months.



Photo: Super Quad Road Train at the Iron Valley mine site

### **Bulk Ore Transportation System (BOTS)**

Confirmation of design elements, development of the project capital/operating costs and formalisation of route approvals with third parties, continues to be the key priority for this project.

Discussions with the Department of State Development (as the lead State Government agency) continued during Q2 on the development of a State Agreement Act for BOTS, which will form the regulatory foundation for the project.

Negotiations with tenement holders, traditional owner groups and pastoralists along the 331km initial BOTS corridor between Iron Valley and Port Hedland, also continued during Q2.

An environmental approval referral for BOTS was lodged with the Environmental Protection Authority (EPA) during the quarter. Subsequent to the end of Q2, the EPA determined that it will assess the project at an “Assessed on Proponent Information” level.

### **CARINA AND J4 MINES**

Carina and J4 mining and haulage operations are operating at an annualised rate of 5.2Mtpa. Shipping of product improved in response to a higher level of availability of the KBT2 ship loader, compared with Q1, enabling MRL to maintain annual export target levels.

Further cost reductions and productivity enhancements were achieved in the quarter through the continuation of in-pit dumping of waste (resulting in reduced mining fleet hours, fuel usage and labour), drill and blast improvements and maximising direct tipping to reduce re-handled ROM tonnages.

The Carina/J4 mining fleet was optimised during the quarter with introduction of two new EX2600 Hitachi excavators and eight Komatsu 8HD1500 trucks. The use of larger capacity equipment will deliver further operational efficiency improvements, including a reduction in fleet numbers and associated manning levels.



Photo: New Equipment being delivered to the Yilgarn operations in Q2

## **PROGRESS WITH FUTURE YILGARN EXPORT ARRANGEMENTS**

MRL is continuing to work with the Southern Ports Authority, CBH and Brookfield Rail to enable MRL to progressively transfer Yilgarn iron ore exports from the Kwinana port to the Esperance port.

The Esperance Port has existing iron ore export infrastructure and is able to accommodate cape sized vessels. In MRL's view, the port's existing iron ore circuit has potential unused capacity, which together with operational improvements and facility upgrades, could accommodate MRL's Yilgarn exports.

The progressive transfer of MRL's Yilgarn iron ore exports to Esperance would enable the existing port infrastructure to be more effectively utilised and generate economic benefits for the broader Esperance community. It is also expected to deliver lower port charges and shipping costs for MRL, compared with the current export arrangements at Kwinana.



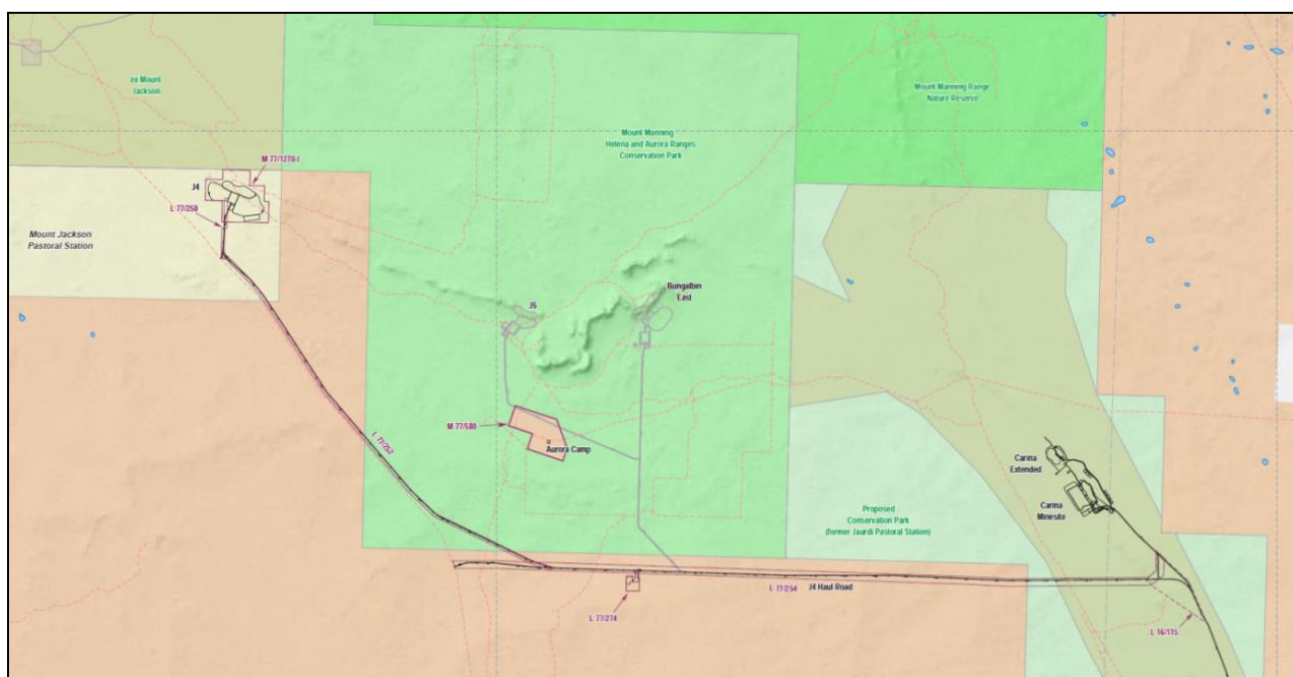
Photos: MRL train at the Esperance Port for on-site noise monitoring trials as part of the regulatory approvals process - December 2015



## **YILGARN REGIONAL MINING PROJECT**

MRL's plans to maximise the utilisation of the Carina central processing infrastructure hub through the mining of the additional deposits in the region, progressed during the quarter with the completion of the haul road and mine development for the J4 deposit. First ore from J4 was hauled to the regional crushing facility during November 2015.

MRL also continued to progress its application for environmental approvals for J5 and Bungalbin East. Detailed environmental studies to support MRL's mining applications are nearing completion and will be submitted to the Environmental Protection Authority as part of the Public Environmental Review (PER) process. The completed PER documentation is expected to be published in Q4 FY 2016.



## **MT MARION LITHIUM PROJECT**

MRL has a 30% equity interest in the project and a life of mine build-own-operate (BOO) arrangement for the entire mining, processing and supply chain to customer door. The other project participants are Neometals Ltd with a 45% interest and Jiangxi Ganfeng Lithium Co. Ltd with a 25% interest.

Construction activities commenced at the Mount Marion project site during Q2 FY 2016. By quarter end, site preparation work, installation of site offices and amenities, detailed engineering design work and construction of concrete civil works for the dry plant, had all been completed.

In addition, the procurement process for the project's long-lead items is well advanced and the manufacture and assembly of key on-site equipment at MRL's Kwinana workshop, is progressing as planned. The project remains on schedule to achieve first production by mid-2016.

Arrangements are being progressed with the Southern Ports Authority, to secure access to existing mineral storage and ship loading facilities at the Esperance Port to support annual exports of more than 200,000 tonnes of chemical grade spodumene concentrate. The export material will be purchased by Ganfeng Lithium Co. Ltd (China's leading lithium producer), under a life-of-mine Offtake Agreement.

Metallurgical Test work has identified an additional spodumene product which can be generated by adding a flotation circuit to the beneficiation plant. Subsequent to the end of Q2, Ganfeng agreed to expand the scope of the offtake arrangements to take this additional spodumene which has a Li<sub>2</sub>O content of between 4% and 6% and entered into an MOU to facilitate this agreement. Further test work is being undertaken to confirm the plant design criteria for this additional product.

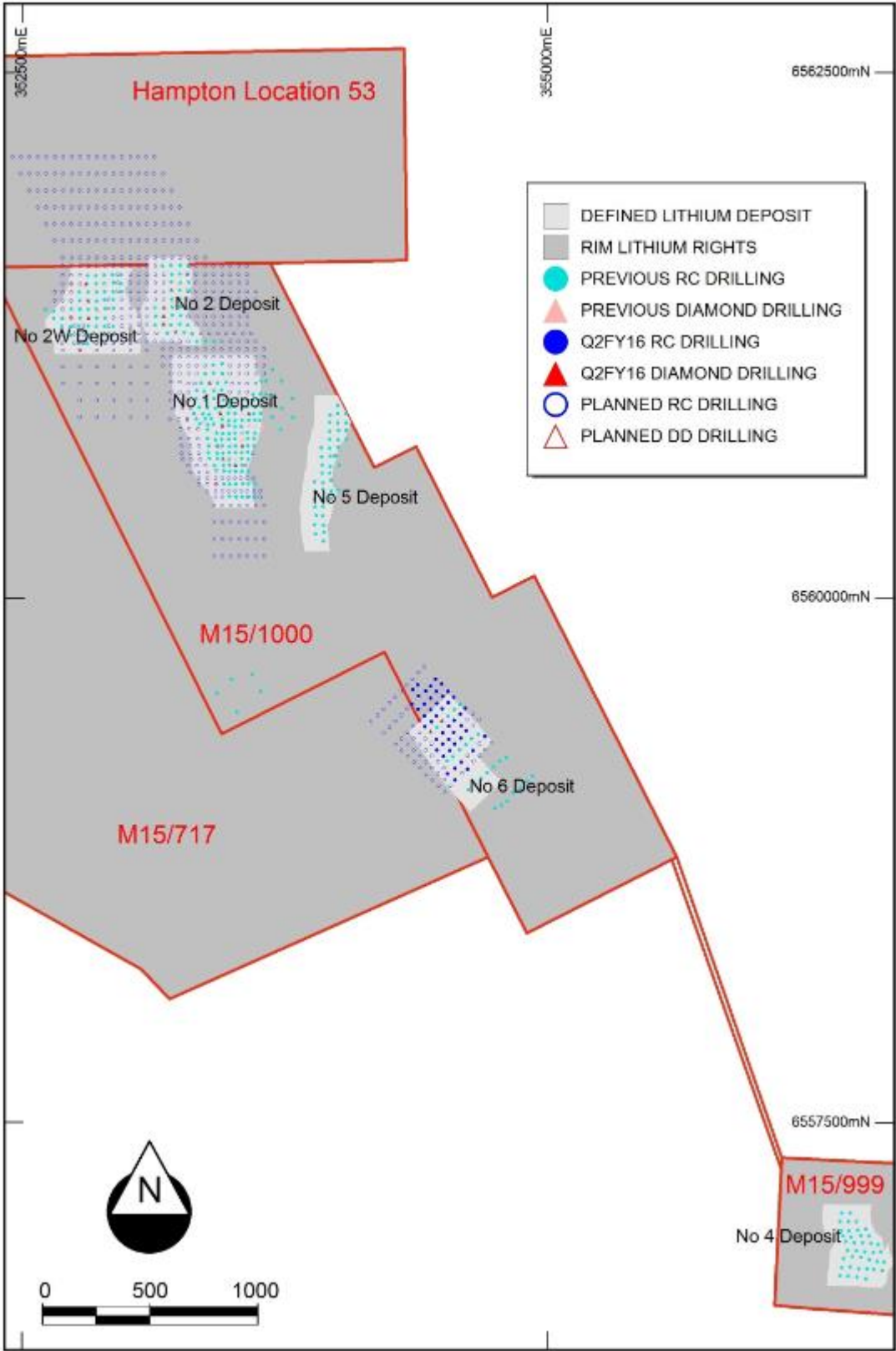
### **Mt MARION EXPLORATION PROGRAM**

A-330-hole Reverse Circulation (RC) and 30-hole Diamond drilling program consisting of infill drilling in the area of known mineralisation and extension drilling to expand the resource base (on both the existing tenement and the recently acquired lithium rights), commenced in the quarter.

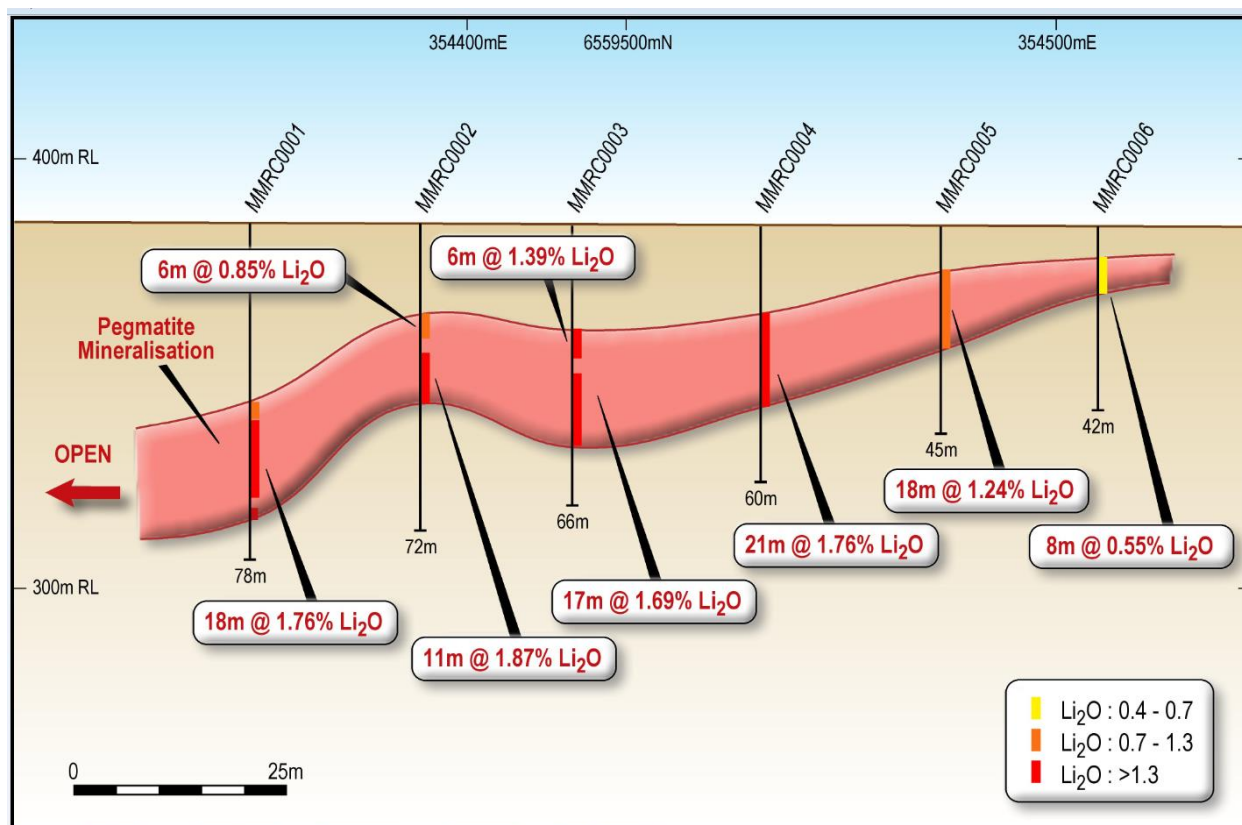
During the quarter, 46 RC holes were drilled at the No.6 Deposit for a total of 2,324 metres and 9 (83mm-PQ) Diamond holes were drilled for a total of 693.2 metres on Deposits 1, 2 and 2-West. Both RC and Diamond drilling activities are continuing and will be completed in Q3 FY 2016.

The infill and extension drilling program has prioritised the near surface mineralisation. The drilling to date has identified that the mineralisation is laterally wider to the east, open to the north and east and possibly faulted off to the west. Generally the ore horizon is thicker than previously reported.

Mt Marion Drilling Plan



## Mt Marion Area 6 - Typical Cross Section



## Mt Marion Area 6 - Significant Intercepts

Hole_ID	MGA94Z51_Easting (m)	MGA94Z51_Northing (m)	AHD_RL (m)	From (m)	To (m)	Apparent Thickness (m)	Li2O (%)	Lithology
MMRC0001	354367	6559436	385	45	63	18	1.76	Pegmatite
MMRC0002	354398	6559461	385	21	27	6	0.85	Pegmatite
				31	42	11	1.87	Pegmatite
MMRC0003	354421	6559488	385	25	31	6	1.39	Pegmatite
				35	52	17	1.69	Pegmatite
MMRC0004	354449	6559522	385	21	42	21	1.76	Pegmatite
MMRC0005	354478	6559552	384	10	28	18	1.24	Pegmatite
MMRC0006	354505	6559577	383	7	15	8	0.55	Pegmatite
MMRC0007	354365	6559488	386	54	73	19	1.69	Pegmatite
MMRC0008	354394	6559517	387	3	7	4	0.44	Pegmatite
				42	60	18	1.74	Pegmatite
MMRC0009	354424	6559548	386	34	51	17	1.49	Pegmatite
MMRC0011	354476	6559604	385	10	18	8	1.22	Pegmatite
MMRC0012	354394	6559519	387	78	96	18	1.47	Pegmatite
MMRC0013	354365	6559545	389	62	78	16	1.29	Pegmatite



Hole_ID	MGA94Z51_Easting (m)	MGA94Z51_Northing (m)	AHD_RL (m)	From (m)	To (m)	Apparent Thickness (m)	Li2O (%)	Lithology
MMRC0014	354393	6559573	387	47	66	19	1.42	Pegmatite
MMRC0015	354422	6559375	383	0	27	27	0.92	Pegmatite
MMRC0016	354452	6559407	383	6	24	18	1.78	Pegmatite
				26	40	14	1.55	Pegmatite
MMRC0017	354481	6559438	383	0	30	30	1.43	Pegmatite
MMRC0018	354506	6559467	383	0	24	24	1.10	Pegmatite
MMRC0019	354535	6559497	382	0	9	9	0.81	Pegmatite
MMRC0021	354424	6559324	382	4	31	27	1.60	Pegmatite
MMRC0022	354451	6559354	383	0	27	27	0.27	Pegmatite
MMRC0023	354480	6559375	382	0	15	15	0.15	Pegmatite
MMRC0024	354505	6559409	381	1	23	22	0.08	Pegmatite
MMRC0026	354456	6559296	381	0	20	20	0.83	Pegmatite
MMRC0027	354484	6559323	381	0	19	19	0.18	Pegmatite
MMRC0028	354509	6559355	381	0	11	11	0.09	Pegmatite
				22	30	8	1.06	Pegmatite
MMRC0029	354538	6559382	380	1	12	11	0.05	Pegmatite
MMRC0038	354336	6559582	390	72	89	17	1.70	Pegmatite
MMRC0039	354305	6559545	389	5	18	13	1.12	Pegmatite
				39	56	17	1.18	Pegmatite
MMRC0040	354370	6559606	389	28	35	7	0.67	Pegmatite
				58	75	17	1.84	Pegmatite
MMRC0041	354393	6559629	389	44	64	20	1.33	Pegmatite
MMRC0042	354417	6559663	388	30	42	12	1.32	Pegmatite
MMRC0043	354422	6559605	387	36	51	15	1.40	Pegmatite
MMRC0044	354447	6559640	386	22	32	10	1.39	Pegmatite
MMRC0045	354309	6559612	391	38	47	9	1.51	Pegmatite
				68	83	15	0.75	Pegmatite
MMRC0046	354333	6559636	391	32	40	8	0.50	Pegmatite
				79	97	18	1.61	Pegmatite

\*Significant intercept: Interval of continuous pegmatite >= 4m

\*\*Li2O grades: Weighted average using assay interval length

## **COMPETENT PERSON'S STATEMENT**

*The information in this report that relates to Exploration Results is based on information compiled by Derrick Kettlewell, who is a full time employee of Mineral Resources Limited. Mr Kettlewell is a Member of The Australasian Institute of Mining and Metallurgy and has sufficient experience which is 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 Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. The Competent Person consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.*

## JORC Code, 2012 Edition – Table 1 Report: Mt Marion exploration drilling – As at 31 December 2015

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li><i>Nature and quality of sampling (eg 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.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>In cases where ‘industry standard’ work has been done this would be relatively simple (eg ‘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 (eg submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	<ul style="list-style-type: none"> <li>Deposits have been sampled by diamond drilling (DD) and Reverse Circulation (RC) drilling.</li> <li>DD – Sampled sections are PQ3. Core sample intervals are defined by the geologist to honour geological boundaries.</li> <li>RC – Rig mounted cone splitter used, with samples falling through an inverted cone splitter, splitting the sample in 90/10 ratio. 10% off-split retained in a calico bag. 90% split residue stored on ground and sampled using a ‘spear’ sampling tool. All intervals sampled as 1m composites. 1m composites of mineralisation and adjacent waste sent for lab analysis. Remaining waste composited from split residue using a ‘spear’ into 6m composites and sent to the lab. All intervals were drilled wet. Where asbestiform minerals were identified in the waste, lab analysis was not commissioned.</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li><i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).</i></li> </ul>	<ul style="list-style-type: none"> <li>RC – Reverse circulation drilling was carried out using a face sampling hammer and a 142mm diameter bit.</li> <li>DD – Diamond drilling was carried out using PQ3 (triple tube) technique. Drill holes are vertical, core was not orientated.</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li><i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i></li> </ul>	<ul style="list-style-type: none"> <li>RC – Approximate recoveries are recorded as a percentage based on visual and weight estimates of the sample.</li> <li>DD – Recoveries are recorded as absolute values calculated from measured core versus drilled interval.</li> <li>There is no known relationship between sample recovery and grade, diamond drill recovery is very high.</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Core and chip samples have been logged by qualified Geologists to a level of detail sufficient to support a Mineral Resource estimate, mining studies and metallurgical studies.</li> <li>RC – logging was carried out on a metre by metre basis and at the</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<p>time of drilling. All intervals were logged.</p> <ul style="list-style-type: none"> <li>DD – logging was carried out according to geological boundary. All intervals were logged.</li> <li>Logging is qualitative and quantitative. All core was photographed both wet and dry.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>DD – Resource definition drilling uses PQ3: All core is taken. Sample intervals are defined by a qualified geologist to honour geological boundaries. All mineralised zones are sampled. Core is sampled on the width of the geological/mineralised structure in recognized ore zones.</li> <li>RC – Cyclone mounted cone splitter used. All samples drilled wet.</li> <li>Diamond core is not dried. Sample cut to requirement based on geological logging. Whole sample crushed to -5.6mm prior to being passed through a rotary splitting device (RSD) to generate 5kg or 1/10<sup>th</sup> subsamples and reserved for Size by Assay. Remainder retained for compositing.</li> <li>RC chips were dried at 100C. All samples below approximately 4kg were totally pulverized in LM5's to nominally 85% passing a 75µm screen. The few samples generated above 4kg were crushed to &lt;6mm and riffle split first prior to pulverization.</li> <li>The measures taken to ensure the RC sampling is representative of the in situ material collected included the insertion of a duplicate sample at an incidence of 1 in 25. No commercially prepared certified reference materials (CRM) or blanks were inserted amongst the drill samples.</li> <li>For RC samples, no formal heterogeneity study has been carried out or nomographed. An informal analysis suggests that the sampling protocols currently in use are appropriate to the mineralisation encountered and should provide representative results. As such samples sizes are considered appropriate.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>Nature of quality control procedures adopted (eg standards, blanks,</li> </ul>	<ul style="list-style-type: none"> <li>The lab QAQC protocols used for the RC drill samples included the insertion of a duplicate sample at an incidence of 1 in 20, one of four types of CRM's at an incidence of 1 in 10, and repeats at an incidence of 1 in 10.</li> <li>No hand held analytical instruments were used in the field.</li> <li>QAQC data is assessed on import into the database and reported yearly.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li>• The verification of significant intersections by either independent or alternative company personnel.</li> <li>• The use of twinned holes.</li> <li>• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>• Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>• Significant intersections not verified.</li> <li>• Diamond holes twinning existing RC holes have been drilled for metallurgical purposes. Currently waiting on Diamond assay results.</li> <li>• Sample data is stored using a customized Access database using semi-automated or automated data entry. Hard copies of primary data stay in the field during the exploration campaign. To be brought back to the Perth office post campaign for storage.</li> <li>• No adjustments were made to the assay data.</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>• Collar positions were recorded using a hand held Global Positioning System (GPS). All holes were drilled vertically.</li> <li>• The grid system is MGA Zone 51 (GDA94) for horizontal data and AHD (based on AusGeoid09) for vertical data.</li> <li>• Topographic control is from Digital Elevation Contours (DEM) 2015 based on 0.25m contour data.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>• Data spacing for reporting of Exploration Results.</li> <li>• 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.</li> <li>• Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>• RC holes are generally based on 40m x 40m drill spacing.</li> <li>• DD holes are spaced to provide representative samples from the larger deposits for the purpose of metallurgical test work.</li> <li>• The data spacing and distribution is sufficient to establish geological and or grade continuity appropriate for future Mineral Resource and classifications to be applied.</li> <li>• RC samples are composited to 1m through the mineralisation and two metres either side. Remaining waste is composited to 6m.</li> <li>• Diamond core is sampled to geology; sample compositing is not applied until the estimation stage.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• The orientation of sampling is perpendicular to the main mineralisation trends.</li> <li>• The orientation achieves unbiased sampling of all possible mineralisation and the extent to which this is known.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• RC – All samples are bagged in numbered calico bags, grouped into larger tied polyweave bags, and placed in a large bulka bag with a sample submission sheet. The bulka bags are transported via freight truck to Perth, with consignment note and receipted by external</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>laboratory (NAGROM).</p> <ul style="list-style-type: none"> <li>• DD – All core trays are loaded onto a pallet, held in place with steel cable. The core tray pallets are transported via freight truck to Perth, with consignment note and receipted by external laboratory (NAGROM).</li> <li>• All sample submissions are documented and all assays are returned via email.</li> <li>• Sample pulp splits are stored in Mineral Resources Limited (MRL) Facilities.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All recent sample data has been reviewed internally by MRL geologists.</li> <li>• No external audits have been carried out on the sample data.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The drilling is located on M15/1000 held in the name of Reed Industrial Minerals Pty Ltd (RIM). MRL is a 30% shareholder in RIM. The other project participants are Neometals Ltd with a 45% interest and Jiangxi Ganfeng Lithium Co. Ltd with a 25% interest. M15/1000 is not up for renewal until 2030.</li> <li>• All WA EP Act and Mining Act approvals are in place for the commencement of the project and construction is underway.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>• <i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All exploration during the current reporting period was carried out by MRL.</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Mt Marion lithium mineralisation is hosted within a number of sub-parallel, northeast to northwest trending pegmatite intrusive bodies which dip at between 10° to 30° to the west.</li> <li>• Individual pegmatites vary in strike length from approximately 300 m to 700 m and average 15 m to 20 m in thickness, but vary locally from less than 2 m to up to 35 m thick. The pegmatites intrude the mafic volcanic host rocks of the surrounding greenstone belt.</li> <li>• The lithium occurs as 10 - 30 cm long grey-white spodumene crystals</li> </ul>

Criteria	JORC Code explanation	Commentary
		within medium grained pegmatites comprising primarily of quartz, feldspar, spodumene and muscovite. Typically the spodumene crystals are oriented orthogonal to the pegmatite contacts. Some zoning of the pegmatites parallel to the contacts is observed, with higher concentrations of spodumene occurring close to the upper contact.
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li>• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>○ easting and northing of the drill hole collar</li> <li>○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>○ dip and azimuth of the hole</li> <li>○ down hole length and interception depth</li> <li>○ hole length.</li> </ul> </li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• A summary of the exploration drilling into the Mt Marion deposits is attached.</li> </ul>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>• 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.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>• Reported exploration results are uncut.</li> <li>• Reported aggregate Li<sub>2</sub>O intercepts based on geological intervals of continuous pegmatite greater than or equal to 4m.</li> <li>• Reported aggregate Li<sub>2</sub>O intercept grades are a weighted average based on assay interval length.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>• If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>• Apparent thickness as downhole length is reported.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>• Appropriate maps and sections (with scales) and tabulations of</li> </ul>	<ul style="list-style-type: none"> <li>• Plan view and typical cross section of Mt Marion showing drill collars</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>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.</i>	is attached.
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All holes related to the Mt Marion drilling program for the December 2015 reporting period are reported here.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No other meaningful data to report.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration drilling is ongoing.</li> <li>As part of the main document (Plan View).</li> </ul>