Quarterly Exploration and Mining Activities Report

April to June 2019 (Q4 FY19)

Q4 Highlights

- Mineral Resources Limited (ASX: MIN, MRL) completed a debut US$700 million 8.125% 8-year Senior Unsecured Notes Offering (ASX: 23/04/19). MRL has used the net cash proceeds from the offering to refinance certain of its existing credit facilities and will use the remainder for general corporate purposes, including capital expenditures.
- Iron ore shipments totalled 3.3 million tonnes (Mt) in Q4 FY19, in line with the previous quarter, and up 49% on the prior corresponding period in FY18.
- Koolyanobbing was in full production during the quarter, operating at its target annualised run rate of 6Mtpa of iron ore production. Additional road train haulage units were obtained and a fourth rail consist was brought online during the quarter, with plans to increase production to 7.5Mtpa by Q1 FY20.
- Spodumene concentrate production from the Mt Marion Lithium Project in Q4 FY19 was 15% less than the previous quarter, however the proportion of high-grade 6% spodumene concentrate product increased to 69% compared to 66% in the previous quarter.
- Construction of the Wodgina Lithium Project's three-stage 750,000 dry tonne per annum spodumene concentrate plant and associated non-process infrastructure progressed during the quarter. Train one is complete with the current focus on optimising lithium recoveries, train two commissioning is underway and construction of train three is progressing. First ore is expected in Q1 FY20. The Wodgina aerodrome runway is complete with the first charter flight planned for Q2 FY20.
- The binding Asset Sale and Share Subscription Agreement (Sale Agreement) between MRL and Albemarle Corporation (NYSE: ALB, Albemarle) regarding the sale of a 50% interest in the Wodgina Lithium Project continues to be subject to approvals from the relevant regulatory authorities in Australia and China and third party consents. Completion of the transaction is still expected to occur during the 2019 calendar year (CY19).
- Construction of the Mt Marion All-in 6% Concentrate Upgrade Project (Ai6) is complete. A study is presently underway to optimise production levels while managing water and energy demands. Until the study is complete (expected Q1 FY20), Mt Marion will continue to produce both 6% and 4% spodumene concentrate.
- A RC drilling program was completed during the quarter at Mt Marion. The program included approximately 6,200m of RC drilling focused on exploration and resource extension holes and has delivered increases of indicated and inferred resources (refer Mt Marion Project Resource Update below).

Production and Commodity Shipments

'000 WMTs	Q4 FY19		Q3 FY19		Q4 FY18		YTD FY19	
	PRODUCED	SHIPPED	PRODUCED	SHIPPED	PRODUCED	SHIPPED	PRODUCED	SHIPPED
IRON ORE								
Iron Valley	1,136	1,945	1,368	1,788	1,821	1,597	6,133	7,406
Koolyanobbing	1,398	1,346	1,303	1,518	-	-	3,353	3,156
Carina & J4	-	-	-	-	282	618	-	-
TOTAL IRON ORE	2,534	3,291	2,671	3,307	2,103	2,215	9,486	10,562
SPODUMENE								
Mount Marion [1]	90	81	107	111	109	95	423	378
TOTAL SPODUMENE	90	81	107	111	109	95	423	378
DSO LITHIUM								
Wodgina [2]	-	-	-	-	845	754	398	422
TOTAL DSO LITHIUM	-	-	-	-	845	754	398	422
GRAND TOTAL	**2,624**	**3,372**	**2,777**	**3,418**	**3,057**	**3,064**	**10,307**	**11,361**

[1] Volume produced and shipped is presented as 100% for the Mt Marion project.
MRL's ownership interest in the Mt Marion project increased from 43.1% to 50% on 18 March 2019 (ASX: 18/03/19).

[2] Volumes presented as 100% for the Wodgina Lithium project.
MRL currently owns and operates 100% of the Wodgina Lithium project. A 50% interest has been sold to Albemarle Corporation; which, subject to regulatory approval, is expected to complete during the 2019 calendar year.

LITHIUM

Wodgina Lithium Project

'000 WMTs	Q4 FY19	Q3 FY19	Q4 FY18
LITHIUM DSO			
Mined	-	-	1,103
Produced	-	-	845
Shipped	-	-	754
LITHIUM SPODUMENE			
Mined	253	-	-
Produced	-	-	-
Shipped	-	-	-

Volumes presented as 100% for the Wodgina Lithium project. MRL currently owns and operates 100% of the Wodgina Lithium project. A 50% interest has been sold to Albemarle Corporation; which, subject to regulatory approval, is expected to complete during the 2019 calendar year.

Construction of the three-stage 750,000 dry tonne per annum Wodgina spodumene concentrate plant and associated non-process infrastructure progressed during the quarter. Train one is complete with the current focus on optimising lithium recoveries, train two commissioning is underway and construction of train three is progressing. First ore is expected in Q1 FY20. The airport runway is complete with the first charter flight planned for Q2 FY20.

Completion of the binding Sale Agreement with Albemarle in relation to the sale of a 50% interest in the Wodgina Lithium Project and formation of the joint venture (ASX: 14/12/18) is subject to remaining conditions precedent relating to regulatory approvals, including Foreign Investments Review Board (FIRB), Chinese State Administration for Market Regulation (SAMR) anti-trust approvals, and the consents of certain third parties with interests in the underlying tenements. Completion under the Sale Agreement is still expected during the 2019 calendar year at which stage the Joint Venture between MRL and Albemarle will become effective (the Effective Date). Prior to the Effective Date, Wodgina spodumene concentrate produced by MRL will be marketed by Albemarle pursuant to a marketing agreement between MRL and Albemarle.

Mt Marion Lithium Project

'000 WMTs	Q4 FY19	Q3 FY19	Q4 FY18
LITHIUM SPODUMENE			
Mined	668	757	799
Produced	90	107	109
Shipped	81	111	95

Volumes presented as 100% for the Mt Marion project. MRL operates 100% of the Mt Marion project, in which it owns a 50% interest effective 18 March 2019 (ASX: 18/03/19).

Mining continued with total material movement of 6.6 million wet metric tonne (WMT) achieved during the quarter. The mining activities provide ongoing access to the ore body to meet processing requirements.

The processing plant's utilisation decreased to 81%, down 5% from the previous quarter. However, this was offset by an increase in throughput rate from 325 tonnes per hour (tph) to 334 tph. This has resulted in beneficiated tonnes increasing to 600,216 WMT compared to 599,495 WMT in the previous quarter.

Spodumene concentrate production was impacted by construction of the All-in 6% Concentrate Upgrade Project (Ai6 Project) and was less than the previous quarter with a total production of 90,168 WMT. However, the proportion of high-grade (6%) spodumene concentrate was up to 69% compared to 66% in the previous quarter. A total of 81,080 WMT was shipped during the quarter; a decrease of 27% against the prior quarter's shipments due to the ramp up phase associated with the Ai6 project.

Construction of the Ai6 is complete. A study is presently underway to optimise production levels while managing water and energy demands. Until the study is complete (expected Q1 FY20), Mt Marion will continue to produce both 6% and 4% spodumene concentrate.

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%).

Mt Marion Resource Update

A RC drilling program was completed in February at Mt Marion. This included approximately 6,200m of RC drilling focusing on exploration and resource extension holes. The program has delivered increases of indicated and inferred resources as follows:

- Extensional down-plunge drilling of the Area 2 ('a2w_01') pegmatite lense has added 750Kt @ 1.48% Li_2O of inferred resources using a cut-off grade of 0.5% Li_2O.
- Extensional down-plunge drilling of the Area 6 ('a6') pegmatite lense has added 1.9 Mt @ 1.34% Li_2O of inferred resources using a cut-off grade of 0.5% Li_2O.
- Discovery of several new Area 8 ('a8') pegmatite lenses has added 1.6 Mt @ 1.04% Li_2O of indicated resources using a cut-off grade of 0.5% Li_2O.

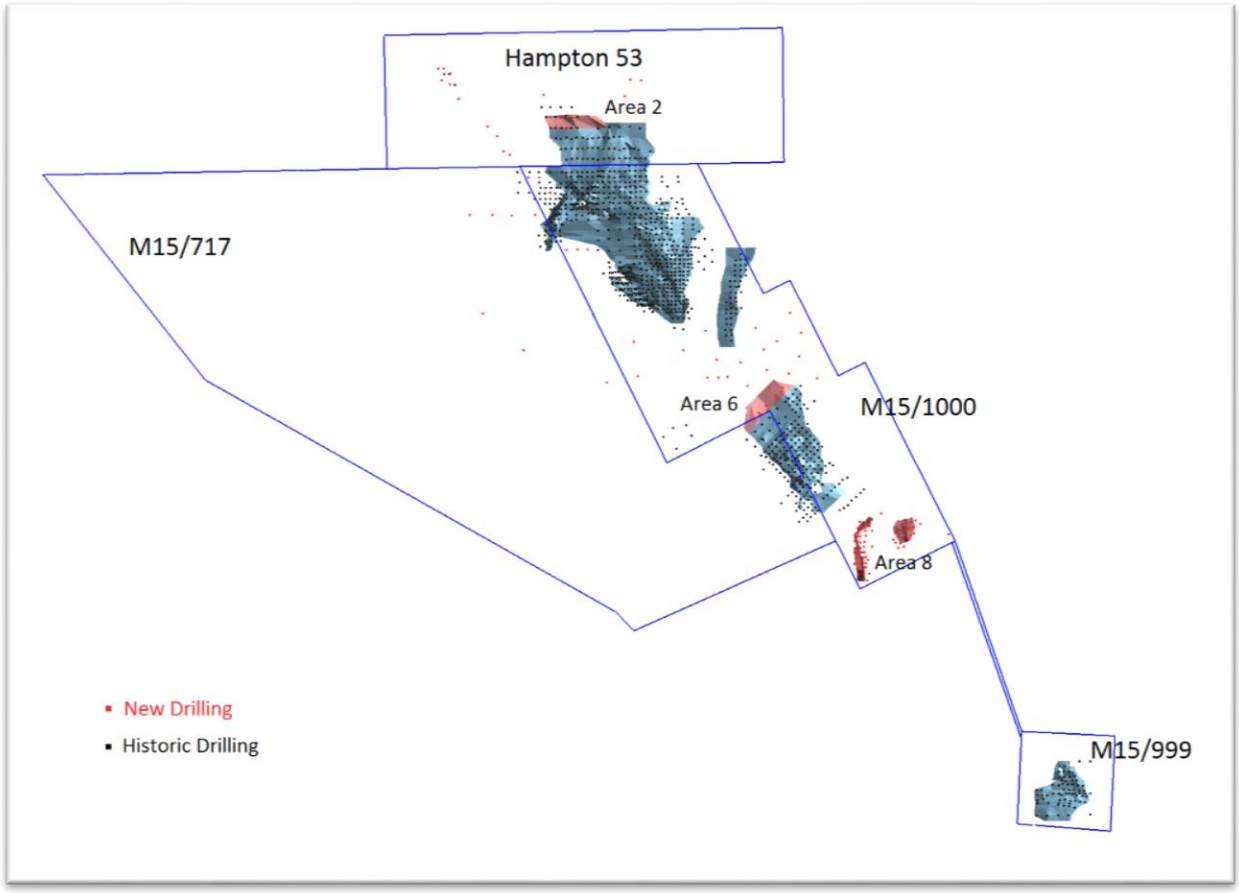
MRL has updated the previous reported Mineral Resource dated 30 October 2018. Taking account of the additional delineated mineralisation and mining depletion during the period finishing 30 June 2019, indicated and inferred resources now total 72.9Mt at 1.37% Li_2O and 1.05% Fe; reported above a cut-off grade of 0.5% Li_2O. This was based on an update in May 2019 of the Mineral Resource model, carried out by the MRL Competent Person, Mr Matthew Watson.

Note: Small discrepancies may occur due to rounding.

Table 1 Mt Marion Total Mineral Resource Estimate

RESOURCE	Cut-off Grade	Tonnes	Li_2O	Fe
CLASSIFICATION	Li_2O%	(Millions)	%	%
INDICATED	0.5	21.7	1.33	1.04
INFERRED	0.5	51.2	1.38	1.06
TOTAL	**0.5**	**72.9**	**1.37**	**1.05**

Figure 1 Mt Marion Resource Extensions and New Discoveries



IRON ORE

Iron Valley

'000 WMTs	Q4 FY19	Q3 FY19	Q4 FY18
Mined	1,263	1,186	1,406
Produced	1,136	1,368	1,821
Shipped	1,945	1,788	1,597

Continued strong iron ore prices and on-site fines stockpiles underpinned the shipping of 1.9Mt from Iron Valley for the quarter.

Mining continued in the C7 pit during the quarter for blended feed with groundwater inflows increasing with depth. Mining in C7 has concentrated on deepening sumps and pumping groundwater to dewater ore ahead of mining. This creates buffer ore for draining and drying prior to crushing to assist in throughput and product quality. C9 pit mining continued to provide low-phosphate ore for blending. The C8 cutback continued through the month and is progressing in line with forecast.

The Iron Valley crushing operations produced 1.1Mt of product for the quarter, performing below forecast because of the fine damp feed being mined from the C7 pit. The crusher feed strategy was changed late in the quarter from blended ore to ore by source, with post-crusher blending. Initial results are showing throughput improvements of 20%. The demand for fines continued through the quarter with all produced fines shipped. The 1.9Mt of lump and fines product shipped for the quarter exceeded the prior quarter's shipments by 9%.

Koolyanobbing

'000 WMTs	Q4 FY19	Q3 FY19	Q4 FY18
Mined	1,467	1,591	-
Produced	1,398	1,303	-
Shipped	1,346	1,518	-

Koolyanobbing continued to mine at the targeted rate and met shipping and railing schedules. Winter rains had minor impacts during the quarter on ROM stocks, but not shipped material with 1.3Mt shipped in Q4 FY19. Shipping was impacted by a planned port shutdown for two weeks during the quarter.

All mining areas are now in full production and additional road train haulage units were obtained during the quarter to increase tonnages for FY20. A fourth rail consist was brought on line during Q4 FY19 and will reach full capacity by August 2019.

MINING EXPLORATION AND DEVELOPMENT ACTIVITY

Kumina Iron Ore Project

MRL acquired the Kumina Iron Ore Project (Kumina Project), located in the West Pilbara region, from BCI Minerals Limited (ASX: BCI, BCI) in December 2018 (ASX: 21/12/18). The acquisition of the Kumina Project is consistent with MRL's strategy of identifying new value-adding development opportunities and will enable MRL to leverage its existing workforce and logistics supply chain in the Pilbara, with the ore to be exported out of Port Hedland.

The Kumina exploration camp mobilisation was completed during the current quarter and is fully functional with exploration teams on site. MRL's heritage team is working closely with traditional owners and work continued on project planning and environmental studies during the quarter. Drilling programmes are being planned for Q1 FY20 to extend known resources and increase confidence in existing resources.

McIntosh Joint Venture

On 11 January 2019, MRL advised Hexagon Resources Limited (ASX: HXG) that it had earned its 51% interest in the McIntosh Graphite Project under the Joint Venture Agreement (JVA), effective as at 28 September 2018.

Under the JVA, MRL must meet certain "end-dates" to retain its joint venture interest, comprising:

- Completion of feasibility studies before 14 October 2019;
- Commencing activities for the development of the project before 13 April 2020; and
- Achieving commercial production of graphite concentrate before 14 April 2021.

MRL will provide all mining, processing and logistical services for the project under a life-of-mine Project Services Agreement.

Metallurgical test work continued during the current quarter to develop the knowledge required to optimise the concentrate flow sheets, with modelling outcomes to be determined once the test results are finalised.

ENERGY

Energy Resources Limited (ERL), a wholly-owned MRL subsidiary, holds nine oil and gas exploration permits across the onshore Perth Basin, extending from south of the Perth metropolitan area to the Mingenew Shire north of Perth and covering an area of 6,603 square kilometres. This makes ERL one of the largest permit holders in the onshore Perth Basin.

The exploration strategy is primarily to explore for gas resources and to provide MRL with self-sufficiency in gas supply. This strategy extends further to building a significant and profitable oil and gas portfolio, primarily focused within Western Australia.

Further Information

Investor Relations
Mark Wilson
Chief Financial Officer/Company Secretary
T: +61 8 9329 3600
E: mark.wilson@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 in this report that relates to Mineral Resources in the Mt Marion Resource Update is based on information compiled by Mr Matthew Watson, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Watson is a full time employee of Mineral Resources Limited. Mr Watson has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves'. Mr Watson consents to the inclusion in the report of the matters based on his information in the form and context that the information appears.

The information otherwise presented is extracted from previous MIN ASX announcements available on the company website at www.mineralresources.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.

Mineral Resources Limited
1 Sleat Road
Applecross, WA 6153
Australia

T: +61 8 9329 3600
E: Investorrelations@mrl.com.au
W: www.mineralresources.com.au

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Mt Marion Deposit

JORC Code, 2012 Edition – Table 1 Report

Section 1 – Sampling Techniques and Data

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

Criteria	JORC Code Explanation	Commentary
Sampling Techniques	• *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.* • *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 (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.*	• The bulk of the data used for resource estimation is based on the logging and sampling of RC drilling (Approximately 97% of the data). Reverse circulation (RC) samples were collected at 1 m intervals within the logged pegmatite using a static cone splitter mounted below the cyclone. RC samples were split using a static cone splitter with approximately 2 kg to 3 kg samples collected. Sample bags are pre-number.
Drilling Techniques	• *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).*	• The vast majority (>92% of drilled metres) of drilling was completed using vertical RC holes using a face sampling bit. Water injection was used for the 2015-16, 2018 & 2019 drill programs on account of the presence of fibrous materials in the surrounding host rocks. • Some diamond core drilling (NQ, HQ3 and PQ3 diameter core) was undertaken to collect samples for metallurgical/geotechnical test work. Additionally, diamond tails were drilled at Area 2W in the deep feeder zone. • Historical drilling completed in the 1970s accounts for less than 1% of the drilled metres, with the remainder drilled by Reed Resources Ltd (Reed) and Reed Industrial Minerals Pty Ltd (RIM) in 2009 to 2011 and Mineral Resources Limited (MRL) in 2015 to 2016 and 2018.

Criteria	JORC Code Explanation	Commentary
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 occurred due to preferential loss/gain of fine/coarse material.*	• RC recovery was estimated for 76 RC drillholes during the 2011 drilling campaign at the Area 4 deposit by weighing the residue bags, with an average recovery of 95% (with a range of 86% up to 100% recovery). • Core recovery from the 2015 and 2016 diamond drilling averages 98%, with a standard deviation of 15% recovery. • Sample recovery was visually estimated for the 2015 to 2016 RC, 2018 & 2019 drilling programs. • No relationship was observed between sample recovery and grade.
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.*	• Qualitative geological logging of most drillhole intervals was done with sufficient detail to meet the requirements of resource estimation. • Where logging is available all intervals were logged, however some of the pre-2015 do not have any geological logging.
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.*	• A nominal 1 m sample interval was used for the RC drilling and diamond core within the pegmatite intervals plus two samples ether side. Outside the logged pegmatite, a 6 m composite sample was collected by scooping from each 1 m pile for RC drilling for the 2015 – 2016 program, and 1 m composite samples were collected for the 2018 and 2019 programs. • Diamond drillholes, where sampled, were sampled using quarter core (2009 to 2011) or half core (2016 Area 2W diamond tails) samples, cut with a diamond saw. RC samples were split using a static cone splitter with approximately 2 kg – 3 kg samples collected. • Laboratory sample preparation conducted at Genalysis in Kalgoorlie, Western Australia, Nagrom in Perth, Western Australia, and the site lab at Mt Marion, Western Australia follow very similar processes comprising: - Drying at 105°C - Crush to a nominal top size of 6.3 mm - Pulverising to 80% to 85% passing 75 µm - Approximate 200 g subsample collected from pulp using a rotary divider (Genalysis / Mt Marion) or by scooping (Nagrom) • The sample sizes are considered to be reasonable to correctly represent the mineralisation based on the style of mineralisation (spodumene-bearing pegmatite), the thickness and consistency of intersections and the drilling methodology.

Criteria	JORC Code Explanation	Commentary
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• No QAQC of historical drilling, however, this comprises less than 1% of drilled metres and is not considered material. • Pulps from 2009 – 2011 samples forwarded to Genalysis in Perth, Western Australia for analysis. Samples from the 2015 – 2016 drilling were prepared and analysed at the Nagrom laboratory in Perth, Western Australia. Samples from the 2018 and 2019 drilling were prepared and analysed at the Mt Marion laboratory on Site, Western Australia. • Li_20 determined by four-acid digest with AAS finish for 2009 – 2011 data and by peroxide fusion digest with ICP finish for the 2015 – 2016, 2018 and 2019 samples. XRF analysis for Al_2O_3, CaO, Cr_2O_3, Fe, K_2O, Mgo, MnO, Na_2O, Nb, P, SiO_2, SO_3, Ta and TiO_2. Loss on ignition (LOI) at 1000°C measured by thermogravimetric analysis (TGA). • In-house pulp standards generated by Gannet Holdings Ltd from Mt Marion material. The standards were not certified, with the standard results assessed by RIM in 2009 – 2011 against the raw average of the round robin assays. • 2009 – 2011 drilling: Quality control samples, including field duplicates and uncertified standards, were inserted in each sample batch. One uncertified standard was inserted every 20 samples along with one field duplicate sample per drillhole. A total of 230 field duplicates were collected. • 2015 – 2016 drilling: Quality control samples, including field duplicates and uncertified standards, were inserted in each sample batch. One uncertified standard was inserted every 25 samples and one field duplicate every 20 samples. A total of 975 field duplicates were collected. • 2018 and 2019 drilling: Quality control samples, including field duplicates, were inserted every 20 samples. • Results show reasonable accuracy and precision was achieved during sampling, sample preparation and assaying. However, the in-house standards used from 2009 – 2016 do not have a certified expected value or standard deviation and only provide an indicative assessment of the analytical accuracy.
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.*	• No verification of significant intersections of the assay data for pre-2016 drilling has been carried out. • Procedures for all aspects of drilling, sampling and geological logging are documented by MRL. • Ten drillholes have been twinned by RC drillholes. Analysis of the twinned holes shows reasonable comparison between the drilling techniques. • Values below the analytical detection limit were replaced with half the detection limit value. Due to the different generations of data some assay conversions from ppm to percent were made (by dividing by 10,000). Additionally, in some cases conversion from Li to Li_2O and from Fe_2O_3 to Fe was required. No other adjustments have been made to the assay data.

Criteria	JORC Code Explanation	Commentary
Location of data points	• *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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• The grid is based on the MGA94 Zone 51 grid system. • Drillhole collar locations for the 2009 – 2016 drilling were surveyed by a contract surveyor using RTK GPS with a nominal accuracy of 20mm horizontally and 30mm vertically. Drillhole collar locations for the 2018 and 2019 drilling were surveyed by the Site surveyor using RTK GPS with a nominal accuracy of 20mm horizontally and 30mm vertically. 14 drillholes were found to have incorrect coordinates for the collar and were subsequently projected to the topographic surface. • No downhole survey information was collected. The vast majority of holes were drilled vertically. Some shallow inclined holes were drilled at the Area 5 deposit. • Given that almost all the drillholes at the Mt Marion deposit are vertical, the downhole deviation (and lack of adequate downhole surveys) is not considered to be a major risk with respect to the shallow portions of the Mt Marion resource. Below 100 m vertical depth the Mineral Resource has been classified as inferred, partly to reflect uncertainty associated with potential drillhole deviation. • A LIDAR topographic survey based on 1 m contours, completed in 2015 by AAM Group is available across the tenement package. The topographic surface is validated by the drillhole collar surveys.
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.*	• The drilling was completed along a set of east-west trending sections for Areas 1, 2, 2W, 4, 5, 7 and 8. The drill sections are oriented northeast-southwest for Area 6. The drill spacing ranges from 30 m to 40 m apart (in the along strike and down dip directions) for the majority of the deposit. The northern portions of Area 2, 2W and 6 area drilled to a nominal 80 m spacing. • The section spacing is sufficient to establish the degree of geological and grade continuity necessary to support the resource classifications that were applied. • The drilling was composited downhole using a 1 m interval within the pegmatite and 6 m within the surrounding host rocks.
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.*	• The vast majority of the drilling is vertical. • The location and orientation of the majority of the Mt Marion drilling is appropriate given the strike and morphology of the lithium pegmatite mineralisation. However, for the sub-vertical feeder zone at Area 2W, the vertical drilling is not considered appropriate given the strike and morphology of the lithium pegmatite mineralisation. However, for the sub-vertical feeder zone at Area 2W, the vertical drilling is not considered appropriate and is reflected in the inferred classification in this area.

Criteria	JORC Code Explanation	Commentary
Sample security	• *The measures taken to ensure sample security.*	• No specific measures have been taken to ensure sample security. • Once received at the laboratory, samples were compared by the laboratory to the sample dispatch documents. • Sample security is not considered to pose a major risk to the integrity of the assay data used in the Mineral Resource estimate.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Snowden Group carried out an independent review of the drilling, sampling and assaying protocols, and the assay database, for the Mt Marion project for the 2016 Mineral Resource estimate. No critical issues were found. Drilling, sampling and assaying for the 2018 & 2019 programs follows the same protocols as the 2016 program.

Section 2 – Reporting of Exploration Results

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

Criteria	JORC Code Explanation	Commentary
General tenement and land tenure status	• *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.*	• Granted Mining Leases M15/717, M15/999 and M15/1000. Leases granted to Reed Industrial Minerals Pty Ltd (RIM), which is a joint venture between Mineral Resources Limited (50%) and Jiangxi Ganfeng Lithium Co. Ltd (50%). • Northern portion of project occurs on Hampton Area Location 53, which is owned by Metals X Limited. RIM has agreed to lease the lithium mining rights over a portion of Hampton Area Location 53, adjoining the Mt Marion project. The agreement allows RIM to explore and develop the lithium project within the agreed portion of Hampton Area Location 53. For details, refer to Neometals Ltd announcement dated 7 July 2015 entitled "Completion of transaction with Metals X".
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• A total of 1154 drillholes have been drilled as at 30 April 2019 totalling approximately 98,647 m in length. Initial drilling at Mt Marion was completed by Western Mining Corporation in the 1970s. Approximately 19% of the drilled metres were completed by Reed and later by RIM between 2009 and 2011, with the remainder completed by MRL between 2015 and 2019.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• 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° and 30° to the west. Individual pegmatites vary in strike length from approximately 300 m to 1,500 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. • To the southwest of Area 2W, large intervals of spodumene-bearing pegmatite intersected during the 2016 drilling are interpreted to be part of a sub-vertical, northeast striking feeder zone. The feeder zone is interpreted to be around 40 m to 80 m wide, extending approximately 400 m along strike and down to over 500 m below surface, and is open at depth. • The lithium occurs as 5 cm to 30 cm long grey-white spodumene crystals within medium grained pegmatites comprising primarily of quartz, feldspar, spodumene and muscovite. The spodumene crystals are broadly 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.

Criteria	JORC Code Explanation	Commentary

Drill hole Information	• *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:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole 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.*
		• No exploration results being reported.

Data aggregation methods	• *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.* • *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.*	• No exploration results being reported.
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 (eg 'down hole length, true width not known').*	• No exploration results being reported.
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.*	• No significant discoveries being reported.
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.*	• No exploration results being reported.

Criteria	JORC Code Explanation	Commentary
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.*	• No exploration results being reported. • Outcrop of spodumene-bearing pegmatite along with exposure in the open-pit supports the interpreted pegmatite in these areas.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• An additional drill program of angled holes designed to perpendicularly intersect the down dip axis of the sub-vertical feeder zone at Area 2W, to improve confidence the spatial extent and grade of the pegmatite, and ultimately improve the resource classification in this area. • A wide spaced drill pattern designed to sterilize the area in the north eastern area of the Hampton 53 area.

Section 3 – Estimation and Reporting of Mineral Resources

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

Criteria	JORC Code Explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• MRL stores all of the Mt Marion drilling information in an AcQuire database. The database is managed by Mineral Resources Ltd. • Basic checks of the data for potential errors were carried out as a preliminary step to compiling the 2016 resource estimate, and again for the 2018 and 2019 resource estimate updates. No significant flaws were identified.
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.*	• Multiple site visits to the Mt Marion project were carried out by the Snowden Principal Consultant, John Graindorge as part of the previous 2016 Mineral Resource estimate. • Competent Person sign-off for the 2018 and 2019 is Matthew Watson. He assumes responsibility for the data quality, geological interpretation and resource modelling. • Matthew Watson has not conducted a site visit
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.*	• The local geology is reasonably well understood as a result of work undertaken by RIM and MRL. • Lithium mineralisation occurs as spodumene crystals which are hosted within quartz-feldspar-muscovite pegmatites. • The spodumene-bearing pegmatites were interpreted and wireframed in section based largely on the geological logging of pegmatite intersections, along with geochemistry (e.g. Li_2O, Fe and MgO content). The pegmatite intersections are easily identified in the drilling. • The feeder zone at Area 2W is interpreted to be sub-vertical, however the vertical orientation of the drilling (and lack of downhole surveys) means that there is significant uncertainty associated with this zone. • No changes were made to Area 5 from the 2011 interpretation as no further drilling has been conducted in this area. • Area 7 was delineated in the 2018 drilling program, it previously formed a poorly defined small scale (<150Kt) pegmatite lense in Area 1. • Area 8 pegmatites have been delineated in the 2019 drill program. They comprise two shallow dipping lenses and a sub vertical lense. • Outcrops and exposure of the pegmatite confirms the validity of the geological interpretation based on the drilling. • Alternative interpretations of the mineralisation are unlikely to significantly change the overall volume of the mineralised envelopes in terms of the reported classified resources.

Criteria	JORC Code Explanation	Commentary
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 Mt Marion lithium mineralisation is hosted within a number of sub-parallel, northeast to northwest trending pegmatite intrusive bodies which dip at between 10° and 30° to the west. Individual pegmatites vary in strike length from approximately 300 m to 1,500 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 are currently defined to a depth of up to 250 m below surface, with the feeder zone extending down to a depth of 400 m below surface.
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 (eg 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 drill hole data, and use of reconciliation data if available.*	• Estimation of Li_2O, Fe, Al_2O_3, CaO, K_2O, LOI, MgO, MnO, Na_2O, P, SiO_2, Ta and TiO_2 using ordinary block kriging with hard domain boundaries and top-cuts where required to control the impact of outlier grades. No top-cuts were applied to Li2O or Fe. Dynamic anisotropy was used to adjust the search ellipse and variogram orientation based on the local dip and dip direction of the geological interpretation. Grade estimation was completed using Datamine Studio 3 (Datamine) software for the 2016 model, and Micromine for the 2018 and 2019 model updates. • Block model constructed using a parent block size of 15 mE by 15mN by 2.5mRL based on half the nominal drillhole spacing along with an assessment of grade continuity. The search ellipse orientation and radius was based on the results of the grade continuity analysis, with the same search neighbourhood parameters used for all elements to maintain the metal balance and correlations between elements. An initial search of 50 m by 35 m by 4 m thick was used, with a minimum of 8 and maximum of 20 samples. The number of samples per drillhole was limited to four. • Lithium mineralisation was modelled, along with the surrounding host rock domains. • Grade estimates were validated against the input drillhole composites (globally and using grade trend plots) and show a good comparison. • John Graindorge of Snowden previously estimated the Mt Marion Mineral Resource in October 2016. • The May 2018 and April 2019 Mineral Resource updates were carried out by the MRL Competent Person, Matthew Watson using the Snowden 2016 search neighbourhood parameters. Additional variography was completed for the Area 8 pegmatites.
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 mineralisation has been reported above a 0.5% Li_2O cut-off grade. The sensitivity of the Mineral Resource to the reporting cut-off grade is minimal at cut-offs below 0.5% Li_2O.

Criteria	JORC Code Explanation	Commentary
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.*	• Mining of the deposit is via conventional drill and blast open cut mining methods, with on-site processing and road train haulage of the spodumene concentrate.
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.*	• Ore is processed on site to produce spodumene concentrates. • A prefeasibility study completed by Reed in October 2012 indicates that lithium hydroxide can be produced from Mt Marion spodumene concentrates.
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.*	• Mining waste is considered to be non-acid forming ("NAF") and formed waste dumps will conform to WA standards. Waste will be formed as dumps. In the case of fibre mitigation, MRL uses industry standard procedures. • No environmental factors have been identified that would further development at the Mt Marion site.
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.*	• Bulk density measurements were completed in 2010 at Genalysis laboratory on eleven 10 cm pieces of unoxidised PQ drill core from the Area 1, 2 and 2W deposits, from drill holes MMD103 to MMD108. The average bulk density of the 11 samples is 2.72 t/m^3, varying from 2.62 t/m^3 up to 2.86 t/m^3. In 2016, Nagrom completed a further 36 bulk density measurements on 10 cm pieces of fresh diamond core from four diamond drillholes from the Area 2W feeder zone. • For some of the 2016 density samples, Nagrom used multiple techniques to determine the bulk density based on the Archimedes principle – uncoated, wax-coated and clingwrap. A comparison of the different techniques shows that for fresh rock at Mt Marion, the uncoated measurements match very closely with the coated

Criteria	JORC Code Explanation	Commentary
		measurements, suggesting that the porosity is negligible and wax-coating is not required. However, the cling-wrapped measurements have a significantly lower bulk density due to excess air trapped under the wrap. Cling-wrapped bulk density measurements were excluded from the analysis. • A number of diamond core holes were drilled in 2015 to provide material for metallurgical testwork. No bulk density measurements were taken prior to sampling the core; however, whilst no direct density measurements were taken, full core trays were weighed and the core diameter was measured. This data was used to estimate the bulk density for each tray, given the core diameter, interval length and weight (factored to remove the weight of the empty core tray). These calculated density values (219 in total) were then merged with the drillhole database and coded with the oxidation state and whether the interval was within the pegmatite interpretations. This data was analysed to derive bulk density values for each combination of rock type (i.e. pegmatite or host rock) and oxidation state. Whilst not ideal, these measurements provide a reasonable estimate of the bulk density of the Mt Marion pegmatite and show similar density to the direct measurements for the Area 2W core. • Based on the limited available bulk density data, bulk density values have been applied to the 2016 2018 and 2019 model blocks as follows: - Oxidised Pegmatite: 2.60 t/m^3 - Transitional Pegmatite: 2.70 t/m^3 - Fresh Pegmatite: 2.72 t/m^3 - Oxidised Mafic: 2.25 t/m^3 - Transitional Mafic: 2.60 t/m^3 - Fresh Mafic: 3.00 t/m^3

Criteria	JORC Code Explanation	Commentary
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie 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.*	• The resources have been classified based on the continuity of both the geology and the grades, along with the drillhole spacing and data quality. • The Mineral Resource has been classified as a combination of Indicated and Inferred Resources using the following criteria: - Indicated Resource – Area 1, 2, 2W, 4, 6, 7 and 8 mineralisation with good geological continuity and defined by drilling on a 40 mE by 40 mN grid or better. The Indicated Resource is limited to a vertical depth of approximately 100 m below surface. - Inferred Resource – mineralisation with poor geological continuity or which is defined by drilling on a grid greater than 40 mE by 40 mN. Area 5 is classified as Inferred in its entirety. - The Mineral Resource has been limited to pegmatite mineralisation above 0 mRL (an approximate vertical depth of 400 m below surface). Pegmatite below this level (deep portion of Area 2W feeder zone) does not, in the Competent Persons opinion, have reasonable prospects for eventual economic extraction at this stage. • The Mineral Resource classification appropriately reflects the view of the Competent Person, namely Mr John Graindorge for the 2016 Resource Model, and Mr Matthew Watson for those parts of the 2016 model that were updated for the 2018 and 2019 Resource Models..
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• An external review of the Mt Marion Mineral Resource estimate was carried out by the CSA Global Principal Consultant Matthew Cobb in March 2018. The 2016 Snowden Mineral Resource estimate was found to be robust.
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.*	• The Mineral Resource has been validated both globally and locally against the input composite data. The Indicated portion of the Mineral Resource estimate is considered to be locally accurate at the scale of the parent block size. Close spaced drilling is required to assess the confidence of the short range grade continuity.