

JULY TO SEPTEMBER Q1 FY2017



MINERAL RESOURCES LIMITED

QUARTERLY EXPLORATION AND MINING ACTIVITIES REPORT JULY TO SEPTEMBER, Q1 FY2017

HIGHLIGHTS

- Record Iron ore exports of 3.6 million tonnes a 18% increase on previous quarter.
- Bungalbin / J5 Approvals progressing with PER open for public comment until 31 October.
- MRL Acquires Wodgina mine assets and commences exploration operations.
- Construction complete on Mt Marion Lithium mine and commissioning nears completion.
- Mt Marion Resource upgraded by 29.5%.

COMMODITY SHIPMENTS

'000 WMTs	Q4 FY	16	Q1 F\	/17
	PRODUCED	SHIPPED	PRODUCED	SHIPPED
UTAH POINT				
Iron Valley Other Manganese	1,889	1,731 53 62	2,103	2,095 - 146
Total Utah Point	1,889	1,846	2,103	2,241
KWINANA BULK TERMINAL2 Carina/J4	1,264	1,180	1,327	1,330
TOTAL ORE	3,153	3,026	3,430	3,571



OPERATIONAL HIGHLIGHTS

IRON VALLEY IRON ORE PROJECT

- Record iron ore exports of 2.1 Mt achieved.
- Record iron ore mined; 2.1 Mt compared with 1.9 the previous quarter – up 11%.
- Construction of dewatering infrastructure and the implementation of dewatering program.

MINING OPERATIONS

Crushing plant performance was consistently above the annualised target rate of 7 Mtpa.

Upgrades to the plant took place this quarter to

prepare for wet material handling with current mining faces being below the water table.

The preliminary 130 litres/second dewatering scheme is in production after the completion of three large scale production bores, two in pit sumps, piping and monitoring infrastructure. Nine further bores have been drilled and tested to commence equipping during the next quarter

During the September Quarter rehabilitation of previous exploration works was completed at Phil's Creek and Lamb Creek in the Central Pilbara. A D7 dozer and field team were utilised to complete the work which included cutting, plugging, and burial of drill collars; removal of sample bags; filling in and contouring of sumps and cut and fill excavations and scarifying of drill pads and access tracks.

Image top left Iron Valley: 1900 excavator mining below the water table

Image top right Iron Valley: Discharging water from the pit at 100 litres per second



Image top: J4: Hitachi 2600 digger loading a Komatsu 1500 dump truck

YILGARN IRON ORE PROJECT

- MRL exported a record 1.3 Mt of iron ore from KBT for the quarter.
- J4 mine producing optimally with haul road sealing well under way.
- Progress towards the environmental approvals for proposed J5 and Bungalbin East mines is continuing with the Public Environmental Review submissions lodged with EPA and available for comment until October 31.

The Carina pit was completed according to plan and production was shifted to J4.

Performance at the J4 mine and Carina processing and load out facility continues to be on target and on budget.

The J4 haul road is progressively being sealed with over half of the 75 km length completed subsequent to quarter's end on 24 October.

PROPOSED BUNGALBIN EAST AND J5 MINES

Progress continues to be made on the approvals for two new iron ore mines proposed for Bungalbin East and J5.

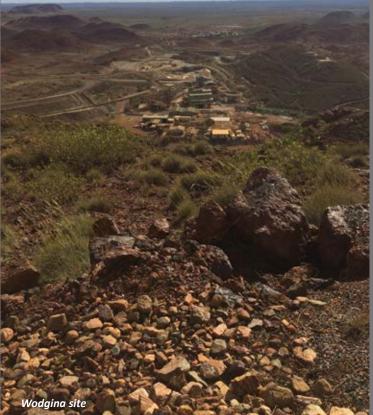
The EPA is currently assessing the Proposal by way of a Public Environmental Review (PER).

The PER identifies the potential environmental impacts of the project, and MRL's strategy to mitigate these in the first instance, minimise impacts during mining operations and rehabilitate the environment following mining.

The PER closes for public comment on October 31, 2016. Subsequent to this, the EPA will make a recommendation to the Minister of Environment based on environmental factors. The Ministers will then make a determination based on broader environmental, social and economic considerations as to whether the project will proceed and under what conditions.







WODGINA ACQUISITION

MRL's agreement with Global Advanced Metals Pty Ltd (GAM) for the purchase of the Wodgina mine assets was completed during the Quarter and MRL has taken control of the site. MRL safety standards and protocols are now in place across the site.

The agreement saw MRL acquire all associated infrastructure GAM assets at the site; including a 13MW gas fired power station, access to gas, 387 bed camp, mineral processing assets and mineral rights other than Tantalum.

The Wodgina acquisition has many synergies and efficiencies with existing MRL Pilbara operations, is prospective for lithium and lends itself as a regional hub for mineral processing activities.

Subsequent to quarters end, MRL resolved the issue of the first right of refusal and royalty over the Pilgangoora Lithium tenements with Pilbara Minerals, and will take a \$50million (8%) stake in Pilbara Minerals Limited (ASX: PLS) to extinguish its rights.

Under the agreement, MRL has committed its support to Pilbara Minerals during the development and operation of its Pilgangoora Project; including being willing to provide mining and mine related services to Pilbara Minerals to ensure a safe, low-cost development and operation of the project.

RC drilling of spodumene bearing pegmatites commenced at Wodgina during September 2016. Drilling has initially focussed on infill drilling of the existing lithium resource within Cassiterite Pit. During the quarter a total of 8 RC drill holes were completed for 1,351 metres.

Initial results from the drilling to date have been encouraging and a regional reconnaissance campaign is currently underway with new targets generated for drilling.



MRL ENERGY'S GAS STRATEGY

MRL Energy continues to build its capabilities as supplier of gas power generation.

During the quarter through the completion of its first gas-fuelled plant at the 43.1% MRL-owned Mt Marion Lithium Project.

The plant is now commissioned and the site is running on LNG. The installation is a harbinger of MRL's capability as the Company transitions its sites to gas. MRL plans to install and operate remote LNG and gas plants for itself and external clients.

MRL's gas and LNG supply chain solution is fully vertically integrated. The supply chain includes natural gas acquisition, capability for conversion to LNG, distribution and storage at remote sites and generation of power and fuelling of mine site equipment.

The access to gas resources was strengthened by MRL's 19.36% strategic investment in Empire Oil and Gas (ASX: EGO) to advance access to natural gas supplies. Empire is a Perth Basin onshore conventional gas and condensate producer and explorer with a production and processing facility located 150 km north of Perth.

MRL and Empire also executed final documentation of an A\$15.1m revolving working capital facility to refinance an ERM Power debt obligation. The new facility was used to repay Empire's existing ERM Power debt obligation.

MRL plans to transition diesel plants to gas at other remote sites. New Cryogenic plants will convert natural gas to LNG and distribute it to clients' remote operations where power generation and heavy plant will be progressively switched from expensive diesel to the more economical and environmentally friendly gas.



MT MARION LITHIUM PROJECT

MRL owns 43.1% of the Mt Marion Lithium Project with Neometals Limited (ASX:NMT) (13.85% Interest) and one of the world's largest lithium producers, Jiangxi Ganfeng Lithium Co. (Shenzhen: 002460:CH) (43.1% interest)

MRL, through its subsidiary company, Process Minerals International (PMI), is the operator of the project under a life of mine build, own, operate contract. Ganfeng has entered into an offtake agreement for 100% of the mines initial production.

Plant construction activities are well advanced at the site with wet commissioning currently being undertaken through all stages of the plant. Commissioning activities are progressing according to the project plan.

Mining and crushing operations, producing feed for the beneficiation process.

MRL has installed its first LNG power generation

system at Mt Marion with the site currently powered by five gensets. Diesel power was switched off and the relocatable diesel generators will be removed. Gas provides greater certainty over energy costs in the long term.

Shipping and storage arrangements are in place with Fremantle Port Authority, to export initial annual exports of 400,000 tonnes. Efficiencies are available co-location of the lithium export operations at MRL's iron ore export facility at Kwinana Bulk Terminal (KBT).

Product will be trucked from Mt Marion to storage pads immediately adjacent to MRL's iron ore stock piles. The pads were previously used by other bulk material producers in the region and provides FPA with a substantial improvement in capacity from the port.

MRL continues to investigate divestment of its Mt Marion shareholding.

Image top left: Mt Marion: construction well advanced

Image top right: Mt Marion: bird's eye view in the pit



MT MARION EXPLORATION PROGRAM

During the quarter, drilling was undertaken at Mt Marion's Area 2 West and at Area 4.

In Area 2 West, a total of 45 RC drill holes were completed for 7,153 metres and total of 7 diamond drill holes were completed for 3,587 metres.

RC and diamond drilling continued at Area 2 West to further define the bounds of the deep, sub vertical pegmatite 'feeder' previously reported in the March Quarterly. This unit is a 40 to 80 metre (horizontal width) spodumene bearing pegmatite with a continuous vertical thickness up to 370 metres, and a strike length of up to 350 metres (SSW-NNE). The unit remains open at depth to the north.

In Area 4, RC drilling was also undertaken at on an 80 m x 80 m grid testing potential extension of the existing mineralisation to the west, south and north. During the quarter, a total of 27 RC drill holes were completed for 1,910 metres.

The drilling confirmed the pegmatite unit continues at a shallow dip to the west at a fairly consistent thickness of approximately 10 metres. Low to

moderate visible spodumene was noted in the majority of pegmatite intercepts. Exploration drilling operations have now ceased.

In 2015, the project partners approved an exploration drilling program to extend the Mt Marion lithium resource.

The drilling campaign has been very successful and subsequent to the end of the quarter on 27 October, the Mineral Resources Estimate was increased to an Indicated and Inferred Mineral Resource now totalling 77.8Mt at 1.37% Li2O and 1.09% Fe; reported above a cut-off grade of 0.5% Li2O. (See ASX announcement on 27 October 2016).

The previous Mineral Resource estimate released on 5 July 2016 was 60.5Mt at 1.36% Li2O and 1.09% Fe; reported above a cut-off grade of 0.3% Li2O.

The revised estimate represents an increase in contained Lithium content of 29.5% with a slightly increased cut-off grade to align with pit optimisation parameters.



FURTHER INFORMATION

Bruce Goulds

Company Secretary & CFO

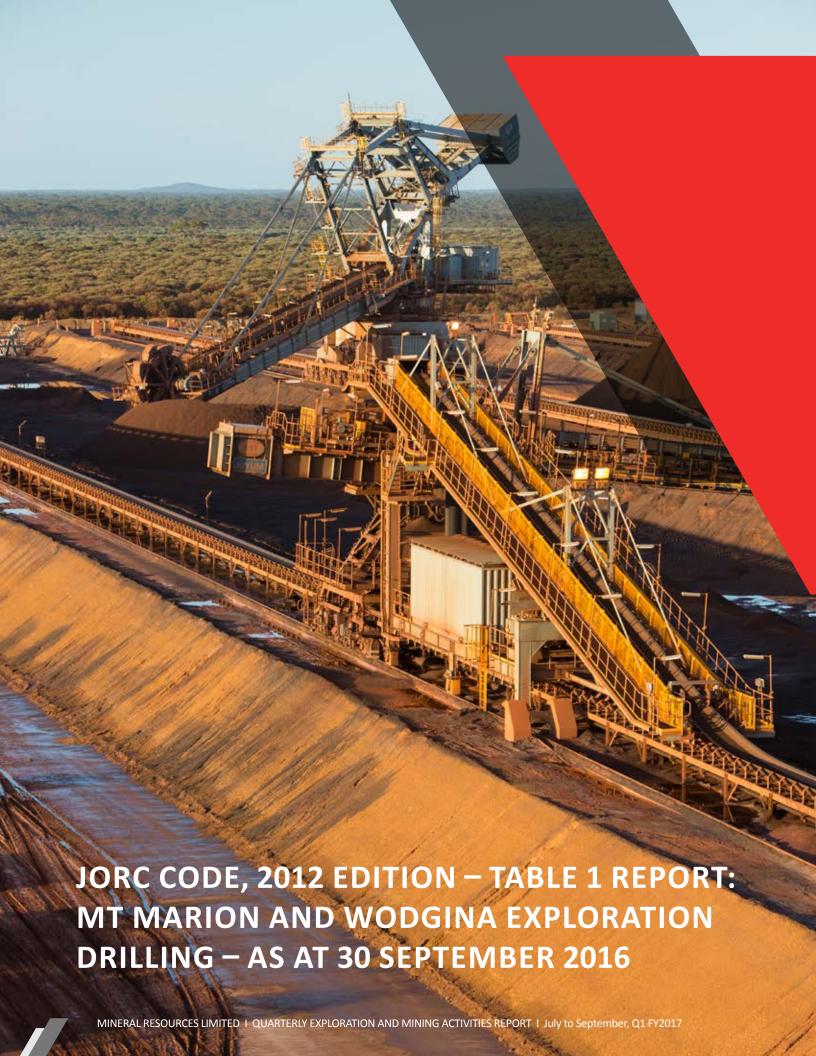
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COMPETENT PERSON'S STATEMENT

The information in this report that relates to Exploration Results is based on information compiled by Matthew Watson, who is a full time employee of Mineral Resources Limited. Mr Watson 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 AND WODGINA EXPLORATION DRILLING – AS AT 30 SEPTEMBER 2016 SECTION 1 SAMPLING TECHNIQUES AND DATA

(CRITERIA IN THIS SECTION APPLY TO ALL SUCCEEDING 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. 	 Deposits have been sampled by diamond drilling (DD) and Reverse Circulation (RC) drilling. DD – Sampled sections are NQ2. Core sample intervals are defined by the geologist to honour geological boundaries. 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.
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).	RC – Reverse circulation drilling was carried out using a face sampling hammer and a 142mm diameter bit. DD – Diamond drilling was carried out using NQ2 (double tube) technique. Drill holes are vertical, core was not orientated.
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 – Approximate recoveries are recorded as a percentage based on visual and weight estimates of the sample. DD – Recoveries are recorded as absolute values calculated from measured core versus drilled interval. There is no known relationship between sample recovery and grade, diamond drill recovery is very high.
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.	 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. RC – logging was carried out on a metre by metre basis and at the time of drilling. All intervals were logged. DD – logging was carried out according to geological boundary. All intervals were logged. Logging is qualitative and quantitative. All core was photographed both wet and dry.
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. 	 DD – Resource definition drilling uses NQ2: Half core is taken for sampling and half is retained for future work if required. 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. RC – Cyclone mounted cone splitter used. All samples drilled wet. 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 1/10th subsamples and reserved for Size by Assay. Remainder retained for compositing.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		• 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 <6mm and riffle split first prior to pulverization.
		 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.
		 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.
Quality of assay data and laboratory tests	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,	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. No hand held analytical instruments were used in the field. QAQC data is assessed on import into the database and
blanks, duplicates, external labor	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	reported yearly.
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	 Significant intersections not verified. Diamond holes twinning existing RC holes have been drilled for metallurgical purposes. 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.
		No adjustments were made to the assay data.
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. 	 Collar positions were recorded using a hand held Global Positioning System (GPS). All holes were drilled vertically. The grid system is MGA Zone 51 (GDA94) for horizontal data and AHD (based on AusGeoid09) for vertical data. Topographic control is from Digital Elevation Contours (DEM)
	• Quanty and adequacy of topographic control.	2015 based on 0.25m contour data.
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. 	 RC holes are generally based on 40m x 40m drill spacing. DD holes are to extend RC holes deeper thatn the efficient capability of the RC rigs. The data spacing and distribution is sufficient to establish geological and or grade continuity appropriate for future Mineral Resource and classifications to be applied. RC samples are composited to 1m through the mineralisation and two metres either side. Remaining waste is composited to 6m. Diamond core is sampled to geology; sample compositing is not applied until the estimation stage.
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 orientation of sampling is perpendicular to the main mineralisation trends. The orientation achieves unbiased sampling of all possible mineralisation and the extent to which this is known.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Sample security	The measures taken to ensure sample security.	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 laboratory (NAGROM).
		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).
		All sample submissions are documented and all assays are returned via email.
		Sample pulp splits are stored in Mineral Resources Limited (MRL) Facilities.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	All recent sample data has been reviewed internally by MRL geologists.
		No external audits have been carried out on the sample data.

SECTION 2 REPORTING OF EXPLORATION RESULTS

(CRITERIA LISTED IN THE PRECEDING SECTION ALSO APPLY TO THIS SECTION)

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Mineral 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. 	The drilling is located on M15/1000 and M15/717 held in the name of Reed Industrial Minerals Pty Ltd (RIM) as well on the Hamptons Location 53 ground to the north where RIM has the lithium rights MRL is a 43.1% shareholder in RIM. The other project participants are Neometals Ltd with a 43.1% interest and Jiangxi Ganfeng Lithium Co. Ltd with a 13.8% interest. All WA EP Act and Mining Act approvals are in place for the commencement of the project and construction is underway.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	All exploration during the current reporting period was carried out by MRL.
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° to 30° to the west. 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. More recently a large higher grade ore shoot 40-80m wide and drilled out to a length of >350m, plunging 25 degrees to the
		NNE, has been discovered and is interpreted to be the feeder pipe to the pegmatite system .
		The lithium occurs as 10 - 30 cm long grey-white spodumene crystals 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.
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:	A summary of the exploration drilling into the Mt Marion deposits is attached.
	o easting and northing of the drill hole collar	
	o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar	
	o dip and azimuth of the hole	
	o down hole length and interception depth	
	o 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.	
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. 	Reported exploration results are uncut. Reported aggregate Li2O intercepts based on geological intervals of continuous pegmatite greater than or equal to 4m.
	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.	Reported aggregate Li2O intercept grades are a weighted average based on assay interval length.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
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'). 	Apparent thickness as downhole length is 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. 	Plan view and typical cross section of Mt Marion showing drill collars is attached.
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.	All holes related to the Mt Marion drilling program for the December 2015 reporting period are reported here.
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 other meaningful data to report.
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. 	Exploration drilling is ongoing. As part of the main document (Plan View).



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