

## Quarterly Activities Report and Appendix 5B

For the Quarter ending 30 June 2017

### HIGHLIGHTS

- Sample analyses indicate that manganese mineralisation can be readily beneficiated
- Samples from Eel Ck appear to represent Direct Shipping Ore (DSO)
- Shallow diamond drilling being planned

### QUEENSLAND - MARY VALLEY MANGANESE PROJECT

During the quarter the company received laboratory analyses for several bulk and prospect samples from the Amamoor (MVAM) and Eel Creek (MVEC) prospects in its Mary Valley manganese project (refer Table of Sample Analyses below)

Following recent reductions in area, Eclipse now holds around 74sqkm in three EPM's centred 14km southwest of Gympie in Queensland covering the most prospective ground (Figure 1),. The Company believes that these deposits have demonstrable potential to produce manganese as a Direct Shipping Ore (DSO).

Work focused on the Amamoor and Eel Creek prospects (Figure 2) where historical high grade Mn mineralisation has been mined and had previously been prioritised by the company from earlier fieldwork and recently completed gravity surveys.

On-site checking of anomalous geophysical gravity survey results determined that there are significant extensions to known mineralisation, in particular at Amamoor and Eel Creek which prospects are now considered high priority drill targets (refer ASX releases dated 15 March and 8 June 2017)

Metallurgical characterisation of the samples determined that most of these products appear to be suitable for ferroalloy smelting. In particular, sample MVEC01 represents effectively DSO with an in-situ grade above 40% Mn. Concentrate phosphorous contents are all acceptably low, being below the 0.2% limit generally imposed. The iron contents are low, but this can be compensated for in ferroalloy smelters by adding iron ore to the furnace feed mix or by blending with high iron ores.

#### Metallurgical Results: Samples from Amamoor (MVAM) and Eel Ck (MVEC) Prospects

Sample	Head grade % Mn	Conc. grade % Mn	Conc. grade %P	Mn/Fe ratio	Conc. mass yield	Concentrate mineralogy
MVAM01	16.7	16.8	0.15	2.5	38%	Piemontite, bixbyite
MVAM02	33.9	43.2	0.06	18.9	50%	Hausmannite
MVAM03	12.9	13.2	0.14	2.5	62%	Piemontite
MVEC01	41.5	43.4	0.04	23.4	81%	Bixbyite, pyrolusite
MVEC02	15.9	33.9	0.04	4.2	27%	Andradite, pyrope

Two of the Amamoor samples, MVAM01 and MVAM03, did not respond to beneficiation and the mineralogy revealed high amorphous content related to weathering. It is expected that samples to be produced from diamond drilling exploration will better define the bulk character of fresh mineralisation below these sample sites (Figure 2).

Arrangements are advancing for a drilling campaign to delineate the manganese mineralisation at depth and to gain a better understanding of its extent, mineralogy and grade distribution.

## FUTURE EXPLORATION

The company will continue its exploration of other prospects such as Skyring Creek, Skyring North and Donaldsons that, in addition to the Amamoor and Eel Creek prospects, appear to have potential to contain significant quantities of manganese mineralisation. Other manganese prospects will be progressively evaluated.

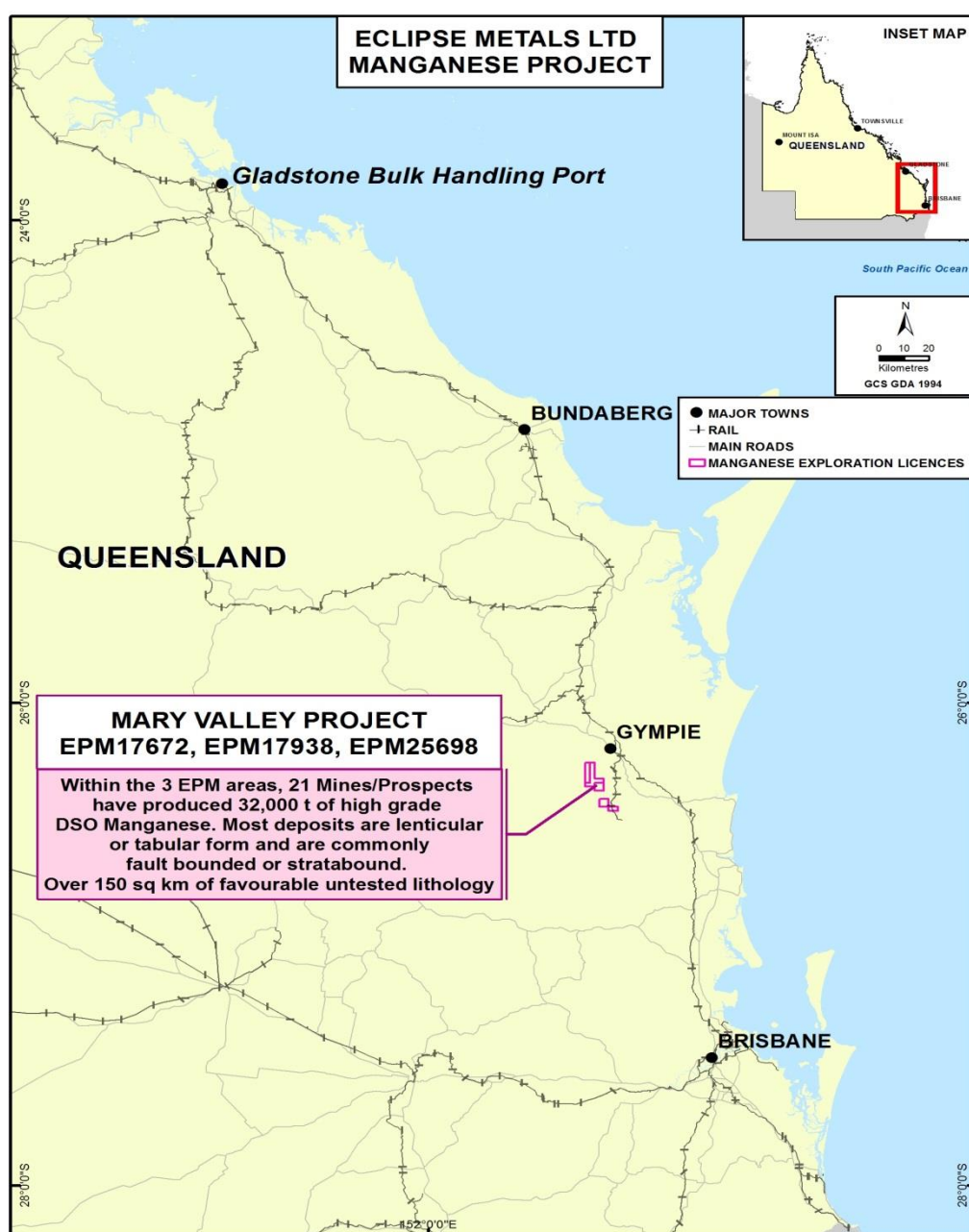


Figure 1 Location Plan for Eclipse's Mary Valley Manganese Project

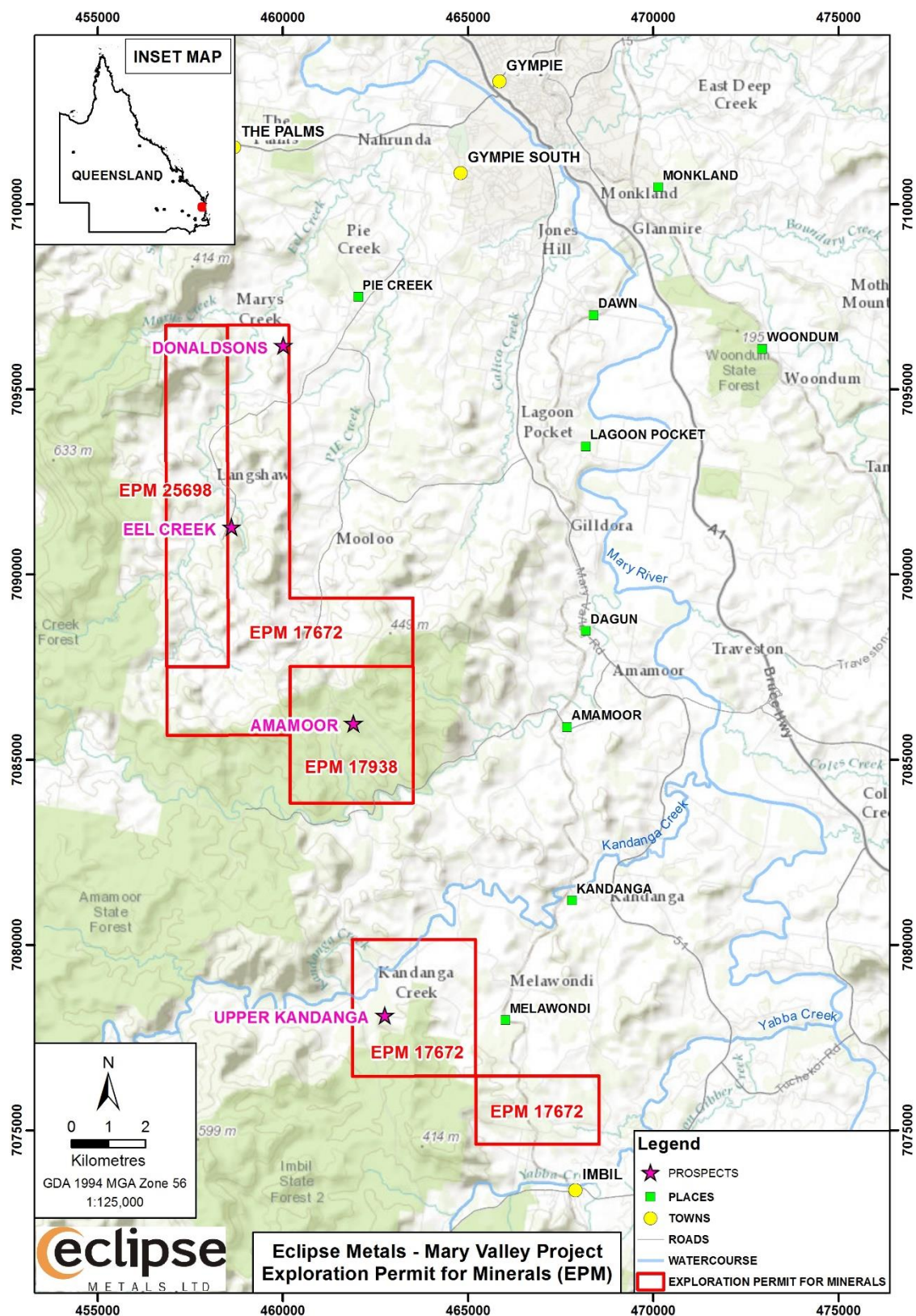


Figure 2. Mary Valley Tenement Map (updated)



## NORTHERN TERRITORY: DEVILS ELBOW- RIO TINTO FARM-IN / JV ELA 27584

Under the farm-in and joint venture arrangement with Eclipse, Rio Tinto Exploration (RTX) is continuing to pursuing an arrangement with the Northern Land Council (NLC) for a site anthropological survey to determine consent and non-consent areas by Traditional Owners to facilitate the application procedure.

RTX is hoping to conduct this site survey before the end of the 2017 field season prior to the commencement of the wet season in the Northern Territory. Following the results of the site survey a final meeting will be planned with the NLC Executive for endorsement of these areas by Traditional Owners.

### ECLIPSE METALS TENEMENT INTERESTS

#### Granted Tenements

Tenement	Project Name	Commodity	Status	State	Beneficial Holder	Graticular Blocks
EL 24808	Bigirlyi	Uranium	Granted	NT	Eclipse Metals Ltd	27
EPM 17672	Mary Valley	Manganese	Granted	Qld	Eclipse Metals Ltd	15
EPM 17938	Amamoor	Manganese	Granted	Qld	Eclipse Metals Ltd	4
EPM 25698	West Mary Valley	Manganese	Granted	Qld	Eclipse Metals Ltd	5

#### Tenement Applications

Tenement	Project Name	Commodity	Status	State	Beneficial Holder	Graticular Blocks
ELA 24623	Eclipse	Uranium	Application	NT	Eclipse Metals Ltd	305
ELA 24861	Lake Mackay	Uranium	Application	NT	Eclipse Metals Ltd	50
ELA 25666	Mt Pozieres	Uranium	Application	NT	Eclipse Metals Ltd	229
ELA 26193	Liverpool 1	Uranium	Application	NT	Eclipse Metals Ltd	240
ELA 26244	Liverpool 2	Uranium	Application	NT	Eclipse Metals Ltd	50
ELA 26487	Yuendi	Copper, Uranium	Application	NT	Eclipse Metals Ltd	320
ELA 27130	Flying Fox	Uranium	Application	NT	Eclipse Metals Ltd	482
ELA 27549	Liverpool 3	Uranium	Application	NT	Eclipse Metals Ltd	51
ELA 27584	Devil's Elbow	Uranium	Application	NT	Eclipse Metals Ltd	30
ELA 27703	Gumadeer	Uranium	Application	NT	Eclipse Metals Ltd	3
ELA 31065	Liverpool 4	Uranium	Application	NT	Eclipse Metals Ltd	68
ELA 31499	Ngalia 1	Uranium	Application	NT	Eclipse Metals Ltd	249
ELA 31500	Ngalia 2	Uranium	Application	NT	Eclipse Metals Ltd	250
ELA 31501	Ngalia 3	Uranium	Application	NT	Eclipse Metals Ltd	250
ELA 31502	Ngalia 4	Uranium	Application	NT	Eclipse Metals Ltd	226

**NOTE:-** EPM 17672 reduced from 54 to 15 sub-blocks

#### Competent Persons Statement

*The information contained in this quarterly report that relates to Exploration Results together with any related assessments and interpretations is based upon and fairly represents the information and supporting documentation prepared by Mr Rodney Dale, FRMIT, FAusIMM a Non-Executive Director of Eclipse Metals Limited. Mr Dale is a Fellow of the Australasian Institute of Mining and Metallurgy and has sufficient experience relevant to the styles of mineralisation under consideration and to the activity being reported to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.*

*Mr Dale has verified the data disclosed in this release and consents to the inclusion in this release of the matters based on the information in the form and context in which it appears.*

For further information please contact:

**Carl Popal - Executive Chairman**  
T: +61 8 9480 0420

**Rod Dale - Non-Executive Director**  
T: +61 8 9480 0420

JORC Code, 2012 Edition – Table 1 report**Section 1 Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Chip sampling from outcrop and old mining exposure. Over 100kg combined weight of samples collected.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable as no drilling was undertaken</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable as no drilling was undertaken</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>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.</li> <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>	<ul style="list-style-type: none"> <li>Not applicable as no drilling was undertaken</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<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>Not applicable as no drilling was undertaken.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<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, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>All assays carried out by Nagrom Metallurgical Laboratory to professional standards.</li> <li>Gravity measurements taken with a Scintrex CG-5. Passive Seismic with a Tromino instrument.</li> <li>Daily duplicate checks undertaken on completed work; acceptable levels of accuracy and precision established</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Verification of sampling and assaying</b>	<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>Not applicable as no drilling was undertaken.</li> <li>Not applicable</li> </ul>
<b>Location of data points</b>	<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>Coordinate information was collected using a hand-held GPS using MGA Zone 56 (GDA 94).</li> <li>Not applicable</li> <li>DEM derived from differential GPS survey as part of gravity survey</li> </ul>
<b>Data spacing and distribution</b>	<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>Samples collected from outcrop and exposure as available.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<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>Not applicable</li> <li>Not applicable as no drilling undertaken.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>All data transmitted in digital format</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>Standard laboratory QA / QC</li> </ul>

**Section 2 Reporting of Exploration Results**

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>EPM17672 &amp; EPM17938 are held beneficially for Eclipse Metals Limited in its subsidiary Walla Mines Pty Ltd. Eclipse holds 87% of the current securities within Walla Mines Pty Ltd.</li> <li>EPM 25698 held 100% by Eclipse Metals Ltd</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Manganese ore has been mined intermittently from deposit in the Mary Valley since 1920's, with the bulk of the output occurring from 1957-1960.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>In the Mary Valley Manganese Project, deposits were formed by geochemical separation of manganese from iron in a submarine exhalative system. Deposition of the manganese oxide has apparently been controlled by faulting and fracturing of the incompetent cherty and jasperoidal bed, with the fractures providing the fluid channel-way and replacement of the host rock by manganese oxides occurring progressively away from those fractures.</li> </ul>
<b>Drill hole Information</b>	<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>No applicable as no drilling was undertaken</li> </ul>
<b>Data aggregation methods</b>	<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>Not applicable as no data averaging has been used</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Relationship between mineralisation widths and intercept lengths</b>	<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>Not applicable as no drilling undertaken.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>See Map in release</li> </ul>
<b>Balanced reporting</b>	<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>Not applicable</li> </ul>
<b>Other substantive exploration data</b>	<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>Geological background provided in previous reports.</li> </ul>
<b>Further work</b>	<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>Diamond drilling programme being planned.</li> </ul>