

4th April 2017

The Company Announcement Platform  
ASX Limited  
Exchange Centre  
20 Bridge Road  
SYDNEY NSW 2000

## **MARY VALLEY MANGANESE PROJECT** **FIELD CONFIRMATION OF DRILLING TARGETS FROM GRAVITY SURVEYS**

### **HIGHLIGHTS:**

- ***Ground checking of gravity results and outcrop at both Amamoor and Eel Creek indicate most if not all substantial gravity features are likely to represent areas of significant manganese mineralisation***
- ***Drill testing being planned for principle target areas***
- ***Passive Seismic data indicates only shallow overburden which will facilitate shallower drilling***
- ***The company has increased confidence in the size of a potential Direct Shipping Ore (DSO) manganese mining operation on its Mary Valley tenure as a result of recent field investigations***
- ***Bulk sample and additional prospect samples collected for mineralogical and metallurgical test work***

Eclipse Metals (ASX:EPM or the Company) is pleased to announce that it has conducted on-site checking of geophysical survey results over known manganese deposits in its Mary Valley manganese project centred 14km southwest of Gympie in Queensland (Figure 1 and 2). The Company believes that mining these deposits has demonstrable potential to produce manganese as Direct Shipping Ore (DSO) .

The primary objective of these surveys was to generate manganese targets near pre-existing workings by assessing the area for discrete, dense anomalies in open rural land and beneath areas of heavily vegetated regrowth.

The geophysical surveys consisted of on-ground gravity and passive seismic measurements at the Amamoor, Eel Creek and Upper Kandanga prospects (Figure 2), where historical high grade Mn mineralisation has been mined and which the company had previously prioritised from fieldwork.

Survey boundaries were expanded due to the level of anomalism at several sites, in particular at Eel Creek. These surveys were completed in February 2017 and have been reported to market.

Recent fieldwork by the Company included extensive examination of old workings at Amamoor and Eel Creek; collection of bulk samples and prospect samples which have been dispatched to Perth for chemical analysis and metallurgical characterisation.

Eclipse Metals Ltd is an Australian exploration company focused on exploring the Northern Territory and Queensland for multi commodity mineralisation. The company has an impressive portfolio of assets prospective for gold, manganese, base metals and uranium mineralisation. The Company's mission is to increase Shareholder wealth through capital growth and ultimately, dividends. Eclipse plans to achieve this goal by exploring for and developing viable mineral deposits to generate mining or joint venture income.

### **BOARD**

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A review of gravity data against outcrop and previous mapping indicates strongly that manganese mineralised formations extend substantially to the south in both the Amamoor and Eel Creek prospect areas. A final report on the Passive Seismic survey shows that the technique has worked in defining shallow soil / overburden, but local conditions and the near-surface high density manganese mineralised layer precluded deeper sensitivity

Overall, the survey results indicate that Amamoor and Eel Creek are presently the top priority prospects with Upper Kandanga now considered to be second priority within the 206sqkm tenement area..

Final interpretation of the data from surveys and fieldwork is progressing, including drill planning and will be reported in due course.

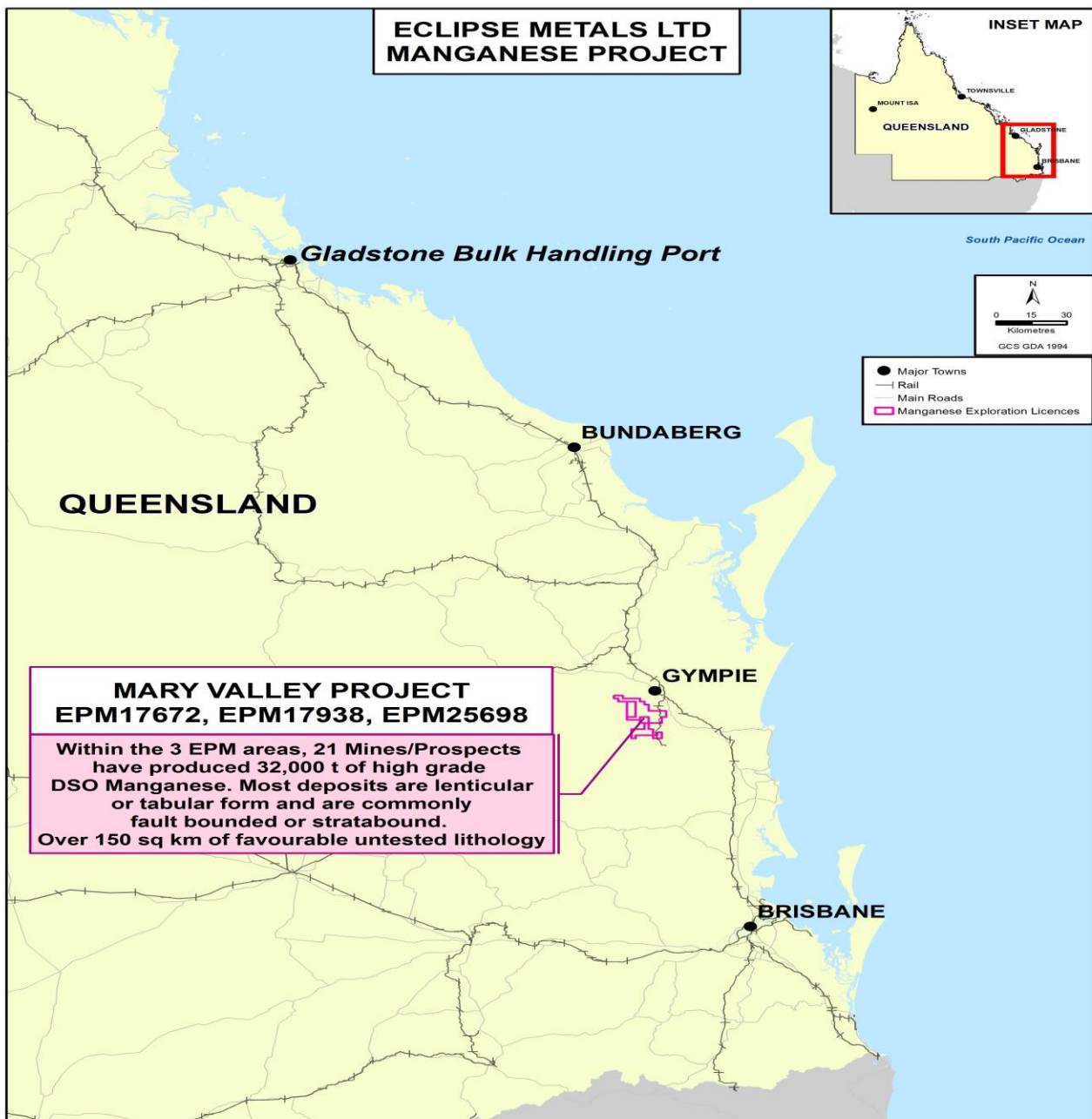


Figure 1. Location Plan for Eclipse’s Mary Valley Manganese Project Amamoor Prospect

Strong gravity anomalism (Figure 3) down-dip (towards the NE) from the central and southern workings was checked by field observation and field traverses along-strike to the south and southeast indicates presence of further, previously unmapped manganese mineralisation, now confirmed by sampling.

The Company considers that the highest likelihood of encountering significant thicknesses of manganese mineralisation in planned drilling will be in the newly discovered southern extensions to the Amamoor workings.

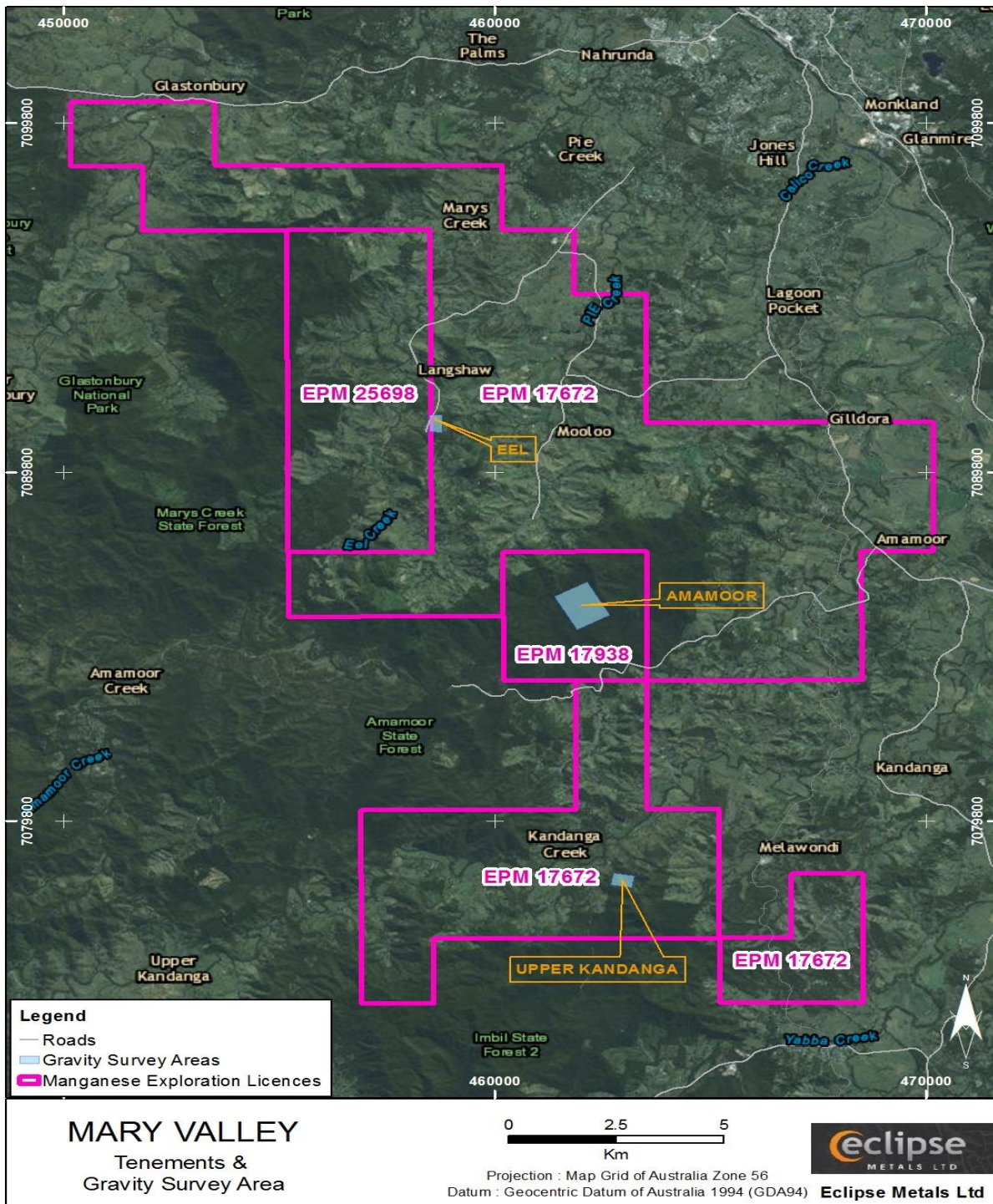


Figure 2. Mary Valley Project tenements and main prospects



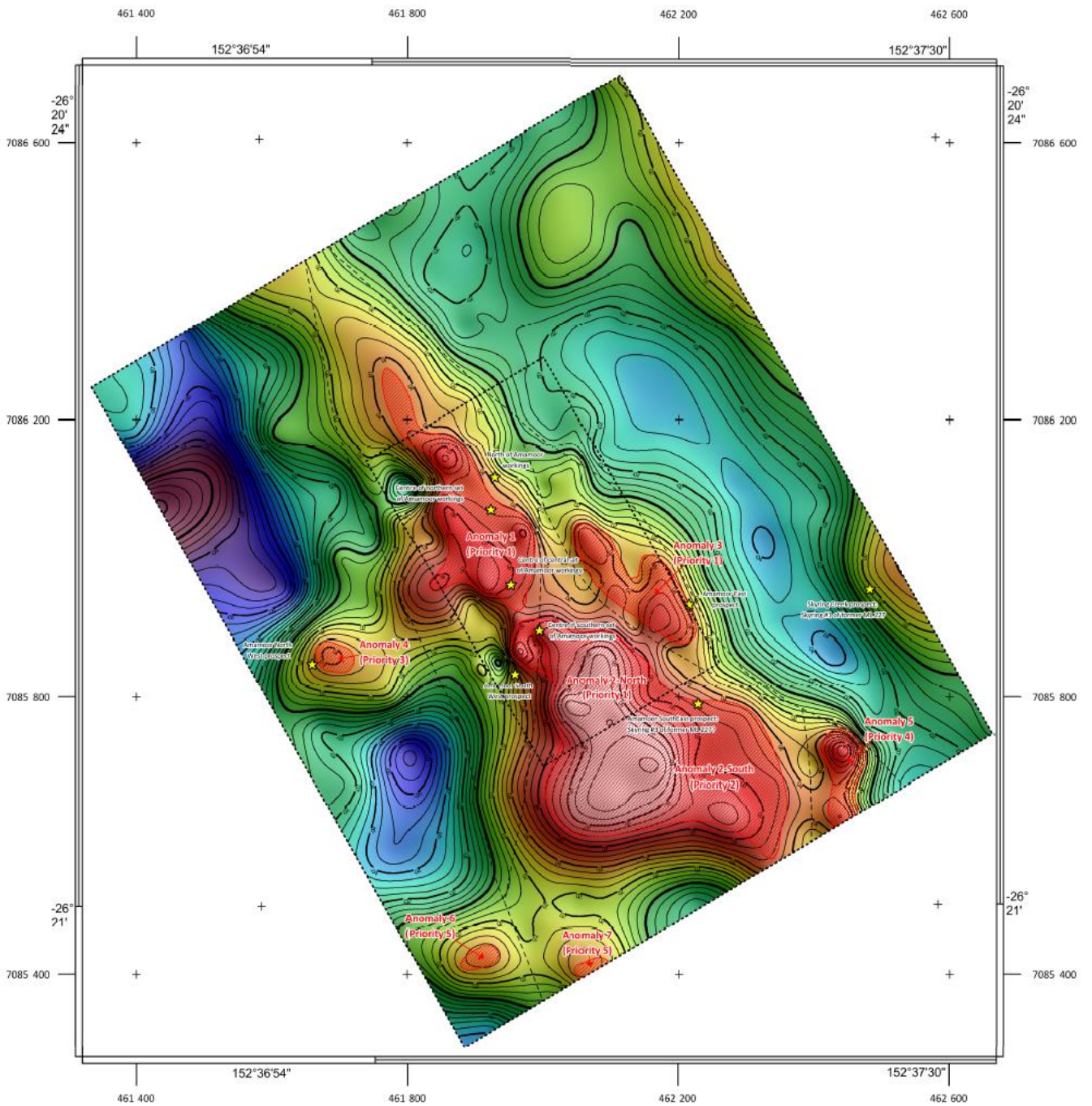


Figure 3: Amamoor Gravity anomaly map

**Eel Creek Prospect**

At Eel Creek, the large gravity high (Figure 4) extends to the east and south of known manganese mineralisation, confirming field observations of the orientation and likely continuation of the mineralisation.

The mangiferous horizon dips into the hillside (i.e. dips east) above the old workings, which removed only part of the surface cap. Field observations of the gravity anomalies suggest that manganese mineralisation can be expected to extend east into the hillside with the strong likelihood of mineralisation continuing along strike to the south

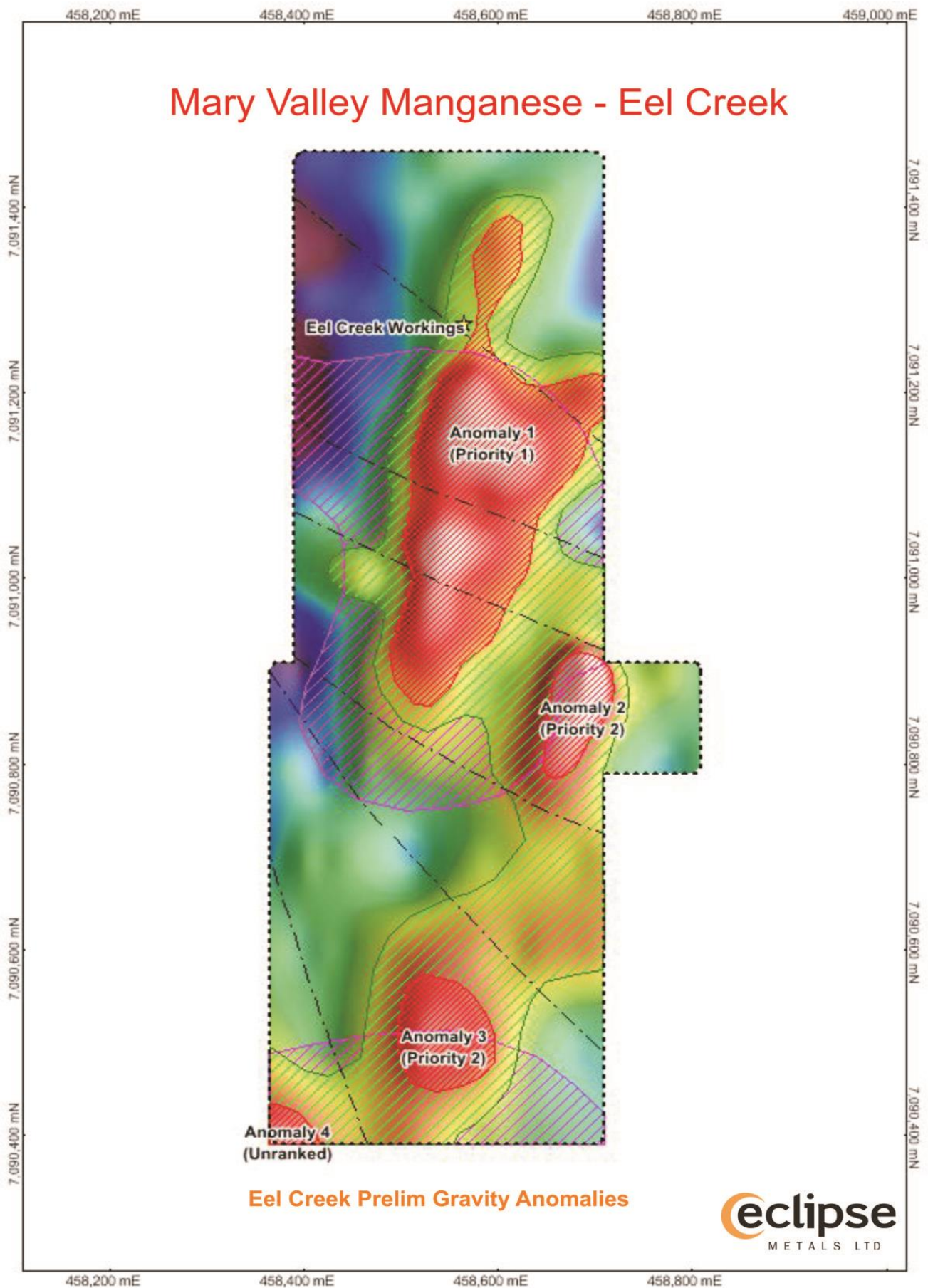


Figure 4. Eel Creek Preliminary Gravity anomaly map



## METALLURGICAL TESTWORK

The collection of 113.4kg of bulk samples and 10kg of prospect samples was undertaken and samples have been transported to Perth for chemical analysis and metallurgical characterisation by a local laboratory.

The company considers there is a further requirement to characterise Mary Valley manganese mineralisation as a guide to possible products, markets and processing routes. While these tests are preliminary in nature, they will point to important considerations prior to drilling, analysis and the anticipated eventual establishment of resources.



Figure 5. Mary Valley Managanese Outcrop from recent fieldtrip.

## BACKGROUND

The Mary Valley Manganese Project tenements are located approximately 14 road kilometres southwest from Gympie in Queensland. The project area is comprised of three granted Exploration Permit's for Minerals, EPM's 17672, 17938 and 25698, with a combined area of 210sqkm (Figure 5). The Project area is easily accessed via the Brooloo Road from Gympie and is only 165 rail kilometres from the port of Brisbane. (Refer Figure 1).

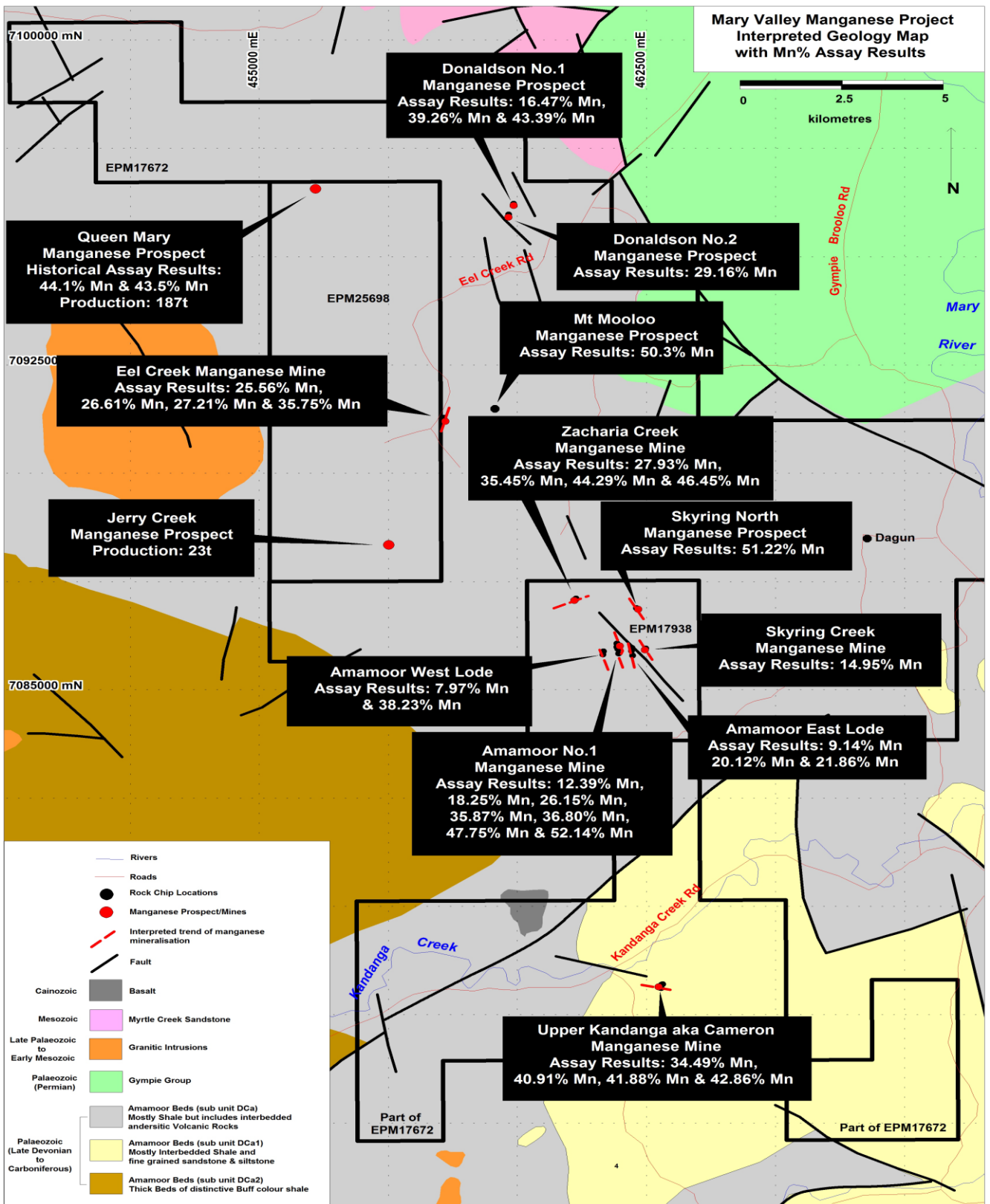


Figure 6. Mary Valley geological interpretation map with tenements and main prospects

Historically approximately 32,000 tonnes of ore was mined from the area with a manganese grade ranging from 42% to 51% Mn. Limits of all the deposits are not known either along strike or at depth. The largest mine on the tenements controlled by Eclipse was at Amamoor No.1 manganese deposit which has produced 19,630t at 51% Mn. Historical assays indicate that the silica, iron and phosphate levels are all within direct shipping ore parameters, which supports the potential for stand-alone mining operations in the Mary Valley Manganese Project. In the past 50 years little to no geological activities have been recorded over the Mary Valley prospects for manganese.

Geological surveys by the Company have indicated structural potential for development of approximately 167,000 tonnes of high grade manganese mineralisation within 15m from surface. Geological mapping suggests that the observed mineralised formations could have a larger aerial extent and continue to a greater depth.

Historically, it appears that mining concentrated on selectively extracting high grade manganese mineralisation. Now, with development of more efficient ore beneficiation technologies, there is potential to develop much larger manganese resources consisting of higher and lower grade mineralisation, amenable to lower cost mining to produce a high grade product.

Manganese is a critical ingredient for the booming battery market. Demand is increasing for lithium batteries and the Company believes it is important to further develop the Mary Valley Manganese project in parallel with its uranium projects in the Northern Territory.

### **Competent Person Statement**

*The information contained in this release that pertains to Exploration Results comprised of the gravity survey in relation to the Mary Valley manganese project, is based upon, and fairly represents, the information and supporting documentation prepared by Mr Rodney Dale, 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 and of behalf of the board.**

**Carl Popal**  
**Executive Chairman**

For further information please contact:

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**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>Not applicable</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>Not applicable</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>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li>   <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable as no drilling was undertaken.</li> <li>• Not applicable</li> <li>• Electronic data capture, storage and transfer as .csv. Routine QC checks performed by contractor and independent geophysical consultant. Data were found to be of high quality and in accordance with contract specifications</li> <li>• The gravity data were reprocessed by an independent geophysical consultant using in-house gravity reduction software, utilising the GDA94/MGA56 datum/projection, AAGD07 gravity datum and GDA94 ellipsoidal elevation datum. Bouguer anomaly data were calculated using a correction density of 2.2 g/cm<sup>3</sup> for Amamoor and Upper Kandanga, and 2.3 g/cm<sup>3</sup> (BA230) for Eel. Additionally, terrain-corrected Bouguer anomaly data were generated in order to account for the influence of local and regional variations in topography</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li>   <li>• <i>Specification of the grid system used.</i></li>   <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Most coordinate information was collected using a differential GPS using MGA Zone 56 (GDA 94). Chain and level measuring employed at Amamoor and part of Upper Kandanga due to limited GPS reception. Coordinates of reading points will be included in the final geophysical report.</li> <li>• Local grids employed normal to geological feature: <ul style="list-style-type: none"> <li>-<b>Amamoor</b> line direction 045-135°</li> <li>-<b>Eel Creek</b> line direction 090-270°</li> <li>-<b>Upper Kandanga</b> line direction 015-195°</li> </ul> </li> <li>• Most height information was collected using a differential GPS using MGA Zone 56 (GDA 94). Chain and level measuring employed at Amamoor and part of Upper Kandanga due to limited GPS reception. Coordinates of reading points will be included in the final geophysical report.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li><i>Data spacing for reporting of Exploration Results.</i></li> <li><i>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.</i></li> <li><i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li><b>-Amamoor</b> Survey lines every 100m along strike, readings every 50m</li> <li><b>-Eel Creek</b> Survey lines every 50m along strike, readings every 50m-some 25m infill; extended in south with 100m lines with readings every 25m</li> <li><b>-Upper Kandanga</b> Survey lines every 50m along strike, readings every 25m</li> <li>Not applicable as no drilling undertaken.</li> <li>Not applicable as no drilling undertaken.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Survey lines normal to geological strike trend.</li> <li>Not applicable as no drilling undertaken.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></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><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>Data reviewed and checked for Quality Control by independent geophysical consultant</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> </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>The Mary Valley Manganese Project, 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>
<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>



Criteria	JORC Code explanation	Commentary
<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>Refer figures this report.</li> </ul>

