



1<sup>st</sup> April 2015

ASX: EPM

# <u>DRILLING PLANNED TO TEST HIGH GRADES AT UPPER KANDANGA.</u> <u>MARY VALLEY MANGANESE PROJECT</u>

# **Highlights**

- Recent rock-chip sampling at the Upper Kandanga prospect has yielded assays up to 40.91% Mn.
- Shallow exploration targets beneath and adjacent to historic workings have potential to contain more than 130,000t of mineralisation with grades of 40% Mn or greater.
- Historical near surface production between 1918 and 1966 has been reported as 7,930t at grades up to 44% Mn.
- First time that high grade manganese mineralisation has been geologically mapped and orientation determined.
- First time that geological control of mineralisation has been recognised which will enable classification of mineralisation style.
- Eclipse Metals has identified shallow exploration targets adjacent to the historic workings to be tested with a programme of 11 angled diamond drill-holes.

The Directors of Eclipse Metals Limited ("Eclipse Metals" or the "Company"; ASX: EPM) are pleased to provide an update of results of the third phase of exploration on the Company's Mary Valley Manganese Project. The project tenements are centred on the small town of Amamoor, which is about 14km south of Gympie, a major regional town of southeast Queensland. An operating railway from Gympie, 138km north of the metropolitan area of Brisbane, provides ready transport infrastructure. An important site of manganese mineralisation within the project area is the historical Upper Kandanga Manganese Mine within EPM 17672.

Commenting on these valuable results, Carl Popal, Executive Chairman of Eclipse Metals, said: "Based on the excellent results from the Upper Kandanga and Amamoor historical areas, the company is confident of the potential for high grade, mineable manganese mineralisation in the Mary Valley Project.

"Currently within the two areas, geological evaluation by Eclipse has indicated the potential for at least **167,000t** of high grade manganese mineralisation".

"To date we have only looked at a small part of the high grade mineralised areas within the overall Project. We still have another six historic mined areas to geologically assess with the objective of delineating larger potential resources of manganese mineralisation than apparent from historical production".

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, iron ore, base metals and uranium The Company's mineralisation. 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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"Petro-physical and petrographic studies have commenced with the view to determining the best geophysical method for delineation of blind manganese deposits and the basic processing requirements for treatment of mineralisation to produce a saleable product".

This update describes recent geological mapping, selection of drilling targets and other proposed activities at the historical Upper Kandanga mine site, about 6km west-southwest of the small town of Kandanga, which was the second largest producer of manganese ore from the Mary Valley region.

### **GEOLOGICAL MAPPING AND ASSAYS RESULTS**

The historical mine-site is within a north-trending steep-sided gully and is bisected by the small intermittent creek that carved the gully. The main production workings are an open-pit about 50m long (oriented eastwest) and about 20m wide (north-south).

The pit-floor is obscured by water but assumed to be about 5 to 9m below encircling near-vertical walls (Figure 1).

Mining took place in three phases; 1918 – 1919, 1958 – 1960 and 1965 - 1966 which resulted in the production of about 7,930t of manganese ore; the exact amount is not certain. From 1918 and 1919, only 911t was produced at a grade of 44% Mn. From 1958 to 1960, average ore grade was 46% manganese (Mn). The average grade of ore produced during the final production period (1965 – 1966) is uncertain, but it is likely to have exceeded 40% Mn as this was the lower grade-limit of marketable ore at the time.



Figure 1: The Upper Kandanga Mn Mine. View is from 462757mE/7078128mN.

Eclipse' fieldwork has confirmed the high-grade of the mineralisation in this deposit. Assay results of 10 samples collected in 2014 and 2015 from the historical Upper Kandanga Manganese Mine workings range from 15.46% Mn to 42.86% Mn with a mean of 34.39% Mn. Silica (SiO<sub>2</sub>) is the main impurity in this high-grade manganese mineralisation with a mean concentration of 40.05% SiO<sub>2</sub> (Table 1).

Sample Id	Year	Mn %	SiO <sub>2</sub> %	Fe <sub>2</sub> 0 <sub>3</sub> %	Al <sub>2</sub> O <sub>3</sub> %	CaO %	BaO %
PS039	2014	40.91	34.48	1.44	2.06	1.52	0.32
PS040	2014	41.88	33.1	0.77	1.34	1.28	0.12
PS041	2014	34.48	36.94	1.84	3.83	1.36	0.76
PS042	2014	42.85	25.55	2.24	2.59	1.23	0.14
PS114	2015	39.57	34.42	1.09	2.67	1.95	0.13
PS115	2015	15.46	68.97	1.47	2.96	0.75	0.15
PS116	2015	18.14	63.36	1.68	3.72	0.89	0.29
PS117	2015	40.64	28.17	0.98	2.01	0.41	0.16
PS118	2015	34.73	38.67	1.31	2.53	0.88	0.46
PS119	2015	35.24	36.88	2.03	0.28	1.6	0.28

Note: Full analysis of samples from this phase of exploration are listed in Table 3 at the end of this report.

The historical mine exploited a single lens of manganese mineralisation up to 4.5m thick, having an east-west trend and shallow dip towards the north (Figures 2 and 3). The mineralised lens is conformable with the shale, fine-grained sandstone and chert within which it is interbedded. Three main faults and several minor faults transect the lens, resulting in six separate sections of mineralisation. Each section is separated from adjacent sections by vertical displacements. The six sections of the mineralised lens identified at the historical Upper Kandanga Manganese Mine are referred to by Eclipse as sections A, B, C, D, E and F. Part of section E is exposed adjacent to the workings (Figures 4 and 5).



Figure 2: Exposure of Mn mineralisation. View towards the west from 462761mE/7078123mN shows the gentle apparent dip of the mineralisation towards the north (hammer for scale). Sample PS039 (40.91% Mn) was collected from the face adjacent to the hammer. The white material on the exposed Mn mineralisation is lichen.

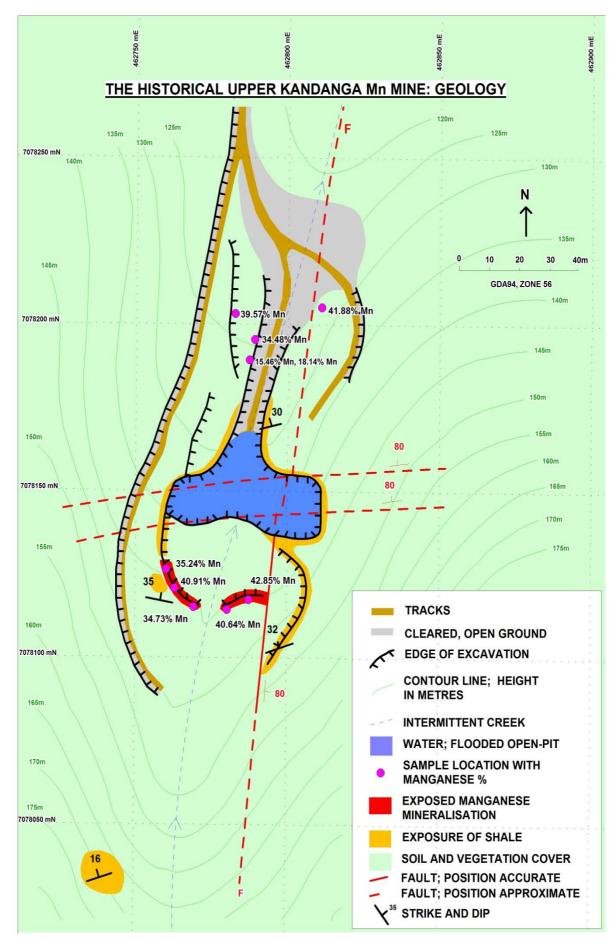


Figure 3: Geology sketch-map, Upper Kandanga Mn Mine, 2015.

Historical production was from sections E, C and F (Figure 4). Sections A, B and D are not exposed within the workings.

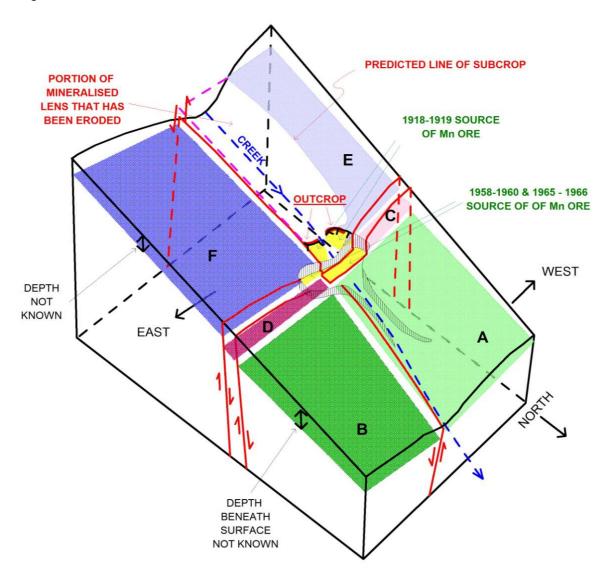


Figure 4: 3-D Block model of mineralisation, Upper Kandanga Mn Mine

Characteristics of the mineralisation at Upper Kandanga, based on historical records compiled during mining operations and Eclipse' recent observations, suggest that mineralisation extends beyond the historical workings. Interpretation of the Upper Kandanga mineralisation as an example of Cuban-type manganese mineralisation (Spitalny, 2015a and 2015b) supports the assertion that these workings exploited only part of a manganese deposit that is significantly larger than indicated by the size of the historical workings.

The entire manganese deposit at Upper Kandanga may exceed **130,000 tonnes** but it is unclear how much of it can be exploited as the depth of overburden is uncertain. Drilling will be required to confirm both continuity of mineralisation and depth of overburden. A programme of eleven angled diamond drill-holes is proposed to test the up-dip, down-dip and along-strike continuation of mineralisation beyond the historical workings (Figure 5 and Table 2).

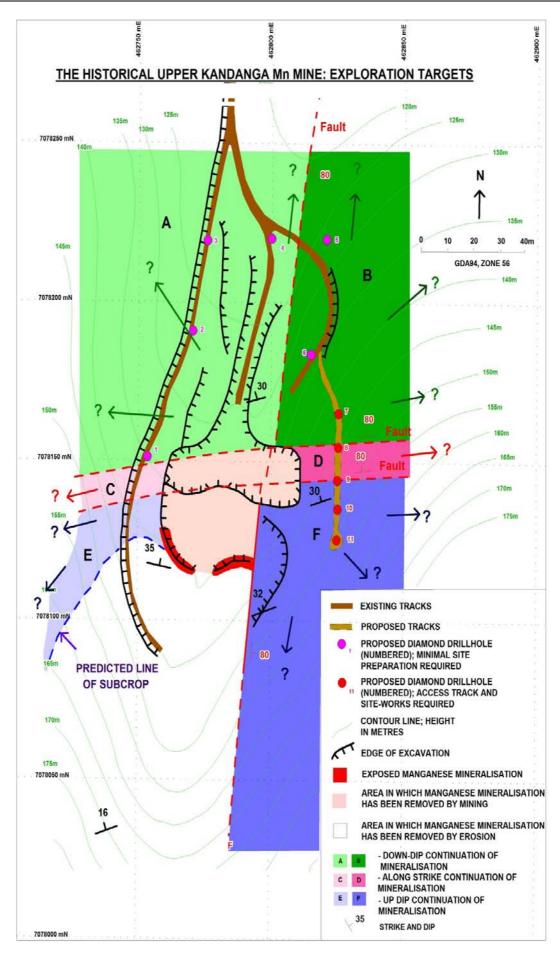


Figure 5: Exploration Targets, Upper Kandanga Mn Mine.

### **EXPLORATION PROGRAMME**

The proposed method of exploration is by diamond-drilling to provide oriented-core to better evaluate drilling results. The other reason being that small, relatively easily portable diamond-drill rigs are available, which would minimise the amount of site works required. Refer Figure 5 for proposed drill sites and targets.

Table 2: Collar Table of Proposed Drill-Holes

Drill-hole	Easting Northin		Azimuth	Dip	Planned	Target
Number	(mE)	(mN)	(degrees)	(degrees)	Depth (m)	Zone
1	462755	7078153	180	-60	25	С
2	462770	7078190	180	-60	35	Α
3	462775	7078220	180	-60	65	Α
4	462800	7078220	180	-60	65	Α
5	462820	7078220	180	-60	65	В
6	462815	7078183	180	-60	40	В
7	462825	7078165	180	-60	30	В
8	462825	7078155	180	-60	30	D
9	462825	7078145	180	-60	30	F
10	462825	7078135	180	-60	30	F
11	462825	7078125	180	-60	30	F

Investigation of the mineralogical and physical characteristics of mineralisation from the Upper Kandanga Manganese mine workings, to include petrographic and petro-physical studies, has commenced. This will assist in determination of exploration and processing requirements of mineralisation from the Upper Kandanga Manganese Deposit.

Eclipse' exploration to-date has consisted of an initial appraisal of the project (Phase 1), followed by onground location and preliminary inspection of some prospects (Phase 2) with recent work (Phase 3) focussing upon two prospects (Amamoor and Upper Kandanga) in more detail. Results to-date confirmed the possibility that the Mary Valley Manganese Project has the potential to contain a much larger quantity of manganese mineralisation than apparent from historical production.

The company will continue its exploration of other prospects such as Skyring Creek, Skyring North, Eel Creek and Queen Mary that, in addition to the Amamoor and Upper Kandanga prospects, appear to have potential to contain significant quantities of manganese mineralisation.

For and on behalf of the board.

Pedro Kastellorizos Executive Director

For further information please contact:

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The information in this report that relates to Exploration Results together with any related assessments and interpretations is based on information compiled by Mr Peter Spitalny on behalf of Mr Pedro Kastellorizos and Mr Giles Rodney (Rod) Dale, both Directors of Eclipse Metals Limited. Mr Spitalny is a Member of the Australasian Institute of Mining and Metallurgy and has sufficient experience relevant to the styles of mineralisation under consideration and to the activity which he has undertaken to qualify as a Competent Person

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 Kastellorizos is a geologist with over 17 years of experience relevant to the styles of mineralisation under consideration and to the activity which he is undertaking as Executive Director.

Mr Peter Spitalny consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. The Company is not aware of any new information or data that materially affects the information in this report and such information is based on the information compiled on behalf of company Geologists, Executive director Mr Pedro Kastellorizos and Non-Executive Director Mr Giles Rodney (Rod) Dale.

#### Reference

Spitalny, P. (2015a) <u>Mary Valley Manganese Project; The Historical Amamoor Manganese Mine.</u> <u>Internal Report for Eclipse Metals Ltd of fieldwork completed January 2015.</u>

Spitalny, P. (2015b) <u>Mary Valley Manganese Project; Upper Kandanga Historical Manganese Mine.</u> <u>Internal Report</u> for Eclipse Metals Ltd including discussion of fieldwork completed January 2015.

# Table 3: Upper Kandanga Rock Chip Sample Assay Results 2015

Sample I.D.	Easting (mE)	Northing (mN)	PROSPECT	Mn%	MnO%	Al2O3%	BaO%	CaO%	Cr2O3%	Fe2O3%	K20%	MgO%	Na20%	P2O5%	SO3%	SiO2%	TiO2%	Total%	LOI%
PS114	462782.55	7078203.14	Upper Kandanga	39.57	51.09	2.67	0.13	1.95	0.01	1.09	0.17	0.21	0.77	0.24	<0.01	34.42	0.11	99.46	2.46
PS115	462787.35	7078189.34	Upper Kandanga	15.46	19.96	2.96	0.15	0.75	<0.01	1.47	0.1	0.21	1.52	0.03	<0.01	68.97	0.11	99.18	1.36
PS116	462787.35	7078189.34	Upper Kandanga	18.145	23.43	3.72	0.29	0.89	0.01	1.68	0.13	0.19	1.8	0.03	<0.01	63.36	0.13	99.54	2
PS117	462780.30	7078114.44	Upper Kandanga	40.64	52.48	2.01	0.16	0.41	0.01	0.98	1.02	0.15	0.54	0.09	<0.01	28.17	0.09	99.58	9.23
PS118	462769.31	7078115.19	Upper Kandanga	34.73	44.84	2.53	0.46	0.88	0.01	1.31	0.7	0.17	0.72	0.07	<0.01	38.67	0.1	99.69	5.61
PS119	462760.22	7078126.41	Upper Kandanga	35.24	45.5	3.72	0.28	1.6	<0.01	2.03	0.17	0.2	1.7	0.08	<0.01	36.88	0.16	99.18	3.12

# JORC Code, 2012 Edition – Table 1 report

# **Section 1 Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <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> <li>Rock chip samples were collected as part of the field reconnaissance program. Samples were collected when visible mineralisation was identified in the field.</li> <li>Each rock chip sample was approximately 1 kg and 2kg in weight with the sample numbered from PS114 to PS119, totalling 6 rock chips from outcrop.</li> </ul>
Drilling techniques	<ul> <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>	No applicable as no drilling was undertaken
Drill sample recovery	<ul> <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>	No applicable as no drilling was undertaken

Criteria Criteria	JORC Code explanation	Commentary
Logging	<ul> <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>	No applicable as no drilling was undertaken
Sub-sampling techniques and sample	<ul> <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</li> </ul>	No applicable as no drilling was undertaken.
preparation	<ul> <li>whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> </ul>	
	<ul> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> </ul>	
	<ul> <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> </ul>	
	<ul> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	
Quality of assay data and	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	• Rock Chip samples were sent to ALS in Brisbane for XRF to determine content of CaO%, BaO%, Al <sub>2</sub> O <sub>3</sub> %, Cr <sub>2</sub> O <sub>3</sub> %, Fe <sub>2</sub> O <sub>3</sub> %, K <sub>2</sub> O%, MgO%, MnO%, Mn%, Na <sub>2</sub> O%, P <sub>2</sub> O <sub>5</sub> %, SO <sub>3</sub> %, SiO <sub>2</sub> %, TiO <sub>2</sub> % & LOI
laboratory tests	<ul> <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> </ul>	
	<ul> <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>	

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<ul> <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>	No applicable as no drilling was undertaken.
Location of data points	<ul> <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>	All coordinate information was collected using a hand held GPS using MGA Zone 56 (GDA 94). Coordinates of the samples are present within Tables 1 and 3 of the announcement and within the map.
Data spacing and distribution	<ul> <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>	The locations of samples is shown in the map as Figure 2
Orientation of data in relation to geological structure	<ul> <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>	No applicable as no drilling was undertaken
Sample security	The measures taken to ensure sample security.	Samples were labelled/bagged and taken straight to the analytical laboratory
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Not applicable as not audits were conducted

# **Section 2 Reporting of Exploration Results**

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

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	Criteria	JORC Code explanation	Commentary				

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Criteria	JORC Code explanation	Commentary					
Mineral tenement and land tenure status	<ul> <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>	EPM17672 is held beneficially for Eclipse Metals Limited in its subsidiary Walla Mines Pty Ltd. Eclipse holds 56% of the current securities within Walla Mines Pty Ltd.					
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <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>					
Geology	Deposit type, geological setting and style of mineralisation.	The mineralisation style at the historical Amamoor workings is best classified as belonging to the Cuban-type subclass of volcanic-exhalative manganese deposits					
Drill hole Information	<ul> <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> <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>	No applicable as no drilling was undertaken					

	ALS LIMITED	14				
Criteria	JORC Code explanation	Commentary				
Data aggregation methods	<ul> <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>	Not applicable as no data averaging has been used				
Relationship between mineralisatio n widths and intercept lengths	<ul> <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>	Samples collected are only from the surface and any potential depths of mineralisation can only be observed on the surface and hence are speculative in nature.				
Diagrams	<ul> <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>	Refer to Maps and Figures within the release				
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.	mineralisation observed to determine an average over the different				
Other substantive exploration data	<ul> <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>	Not applicable				

Criteria	JORC Code explanation	Commentary
Further work	<ul> <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>	studies to determine if airborne gravity or electro-magnetic surveys to delineate blind manganese mineralisation.