

#### 06 March 2018

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

# Mary Valley Drilling Program

# HIGHLIGHTS

- Initial phase of diamond drilling completed
- Significant intersections of massive and brecciated Manganese Oxide mineralisation confirmed in several locations at Amamoor
- Multiple lenses of mineralisation confirmed at Amamoor
- Core processed and dispatched to laboratory for analysis

Eclipse Metals (ASX:EPM or the Company) has completed its maiden diamond drilling program on its Mary Valley manganese project tenements in Queensland (refer Figure 2) where the company is targeting shallow extensions to known high grade manganese mineralisation in historic workings. Previous metallurgical test-work results indicate that mineralisation in these deposits has demonstrable potential to produce manganese as Direct Shipping Ore (DSO – refer ASX: EPM announcement 6th June 2017).



Photograph 1. Massive MnO mineralisation in ADD006 (8.90m to 12.00m) Significant intersection of brecciated and massive (>50% MnO) manganese mineralisation.

## Program Update;

Diamond drilling commenced in late December at Eel Creek, where the company initially planned nine holes to test southern extensions to historic workings, supported by recent gravity surveys and reconnaissance. The company satisfactory tested the target with five holes for a total of 168.3m, to a maximum depth of 45.1m (refer Figure 3 and Table 1). Drilling results were disappointing as no massive manganese oxide mineralisation was encountered, and the company has downgraded the resource potential of the immediate Eel Creek area.

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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Rodney Dale Non-Executive Director

**COMPANY SECRETARY** 

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WEBSITE www.eclipsemetals.com.au Drilling activities then moved to Amamoor, some 6km to the south-east, where the company originally planned ten holes in a traverse-style programme commencing from the southern-eastern flank of Amamoor. The company drilled seven holes for a total of 151.4m, to a maximum depth of 30.2 m (refer Figure 4 and Table 2)

Four of the seven holes drilled at Amamoor returned massive manganese oxide intersections, with significant intersections of brecciated and massive (>50% MnO) manganese mineralisation with a combined down-hole thickness of up to 17.0m in hole ADD007. The company visually estimated an intersection of massive MnO mineralisation of 3.10m in ADD006. Manganese mineralisation encountered in Holes ADD002 and ADD002B (a redrill of ADD002) of around 7m thickness was significant as it was encountered some 250m from historical mining activity.

Geological logging and interpretation of oriented drill core at Amamoor (refer Figure 1) has revealed that the mineralisation cannot be interpreted as a single, relatively flat-lying bed, and that at least two lenses of steeper mineralised lenses occur in the immediate area of the historic workings, unless an additional faulted relationship can be demonstrated.

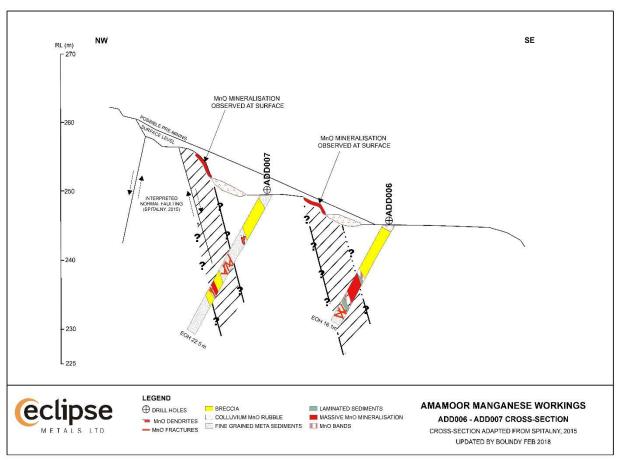


Figure 1. Cross section through drill-holes ADD006 and ADD007

As the preliminary geological model required review, the company truncated the programme to assess the implication of the new model for further targeted drilling. The company is currently reviewing the new structural and geological information and planning additional, more targeted follow-up drilling to develop structural information.

All mineralised intervals have been processed and despatched to the laboratory for analysis. The company will release all results as they come to hand.

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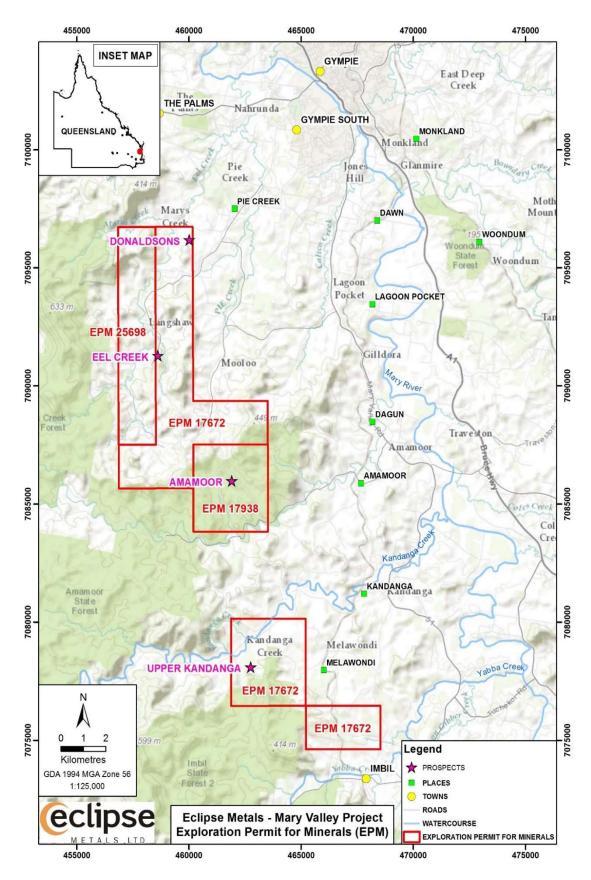


Figure 2. Mary Valley Exploration Tenements

#### DISCUSSION OF DRILLING ACTIVITIES:

#### EEL CREEK

Access for drilling on this steep hillside in open farmland was facilitated by construction of temporary tracks by local contractors using a digger and skid-steer equipment. The crawler-mounted drill rig readily accessed all required sites (see photograph 2). Broken ground and water loss made drilling difficult, generally requiring use of larger diameter coring equipment.

The area highlighted by the gravity anomaly was adequately tested with holes intersecting deeply weathered to fresh silty to siliceous sediments. Manganese mineralisation in the form of thin bands and blebs was recognised in most holes together with sections of black pyritic sediments and quartz / carbonate mineralisation.

Anticipated thicker layers of manganese mineralisation were not intersected in this program, but there is scope for future discoveries in this area as the Eclipse geological models evolve. Results from interpretation of geology, geophysics and sample analyses will be collated in due course to determine the nature of future exploration at this prospect.

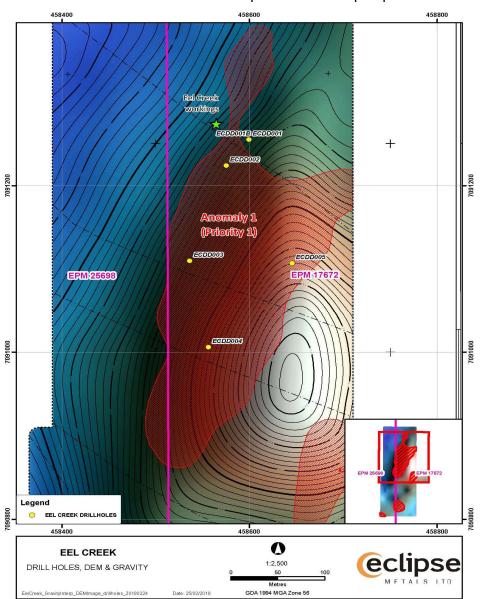


Figure 3. Eel Creek Drill-hole with Gravity Anomaly and DEM

Table 1. Drinnole Details, Eer Creek, Mary Valley					
Hole_ID	Easting	Northing	Azimuth	Dip	Depth m
ECDD001	458599	7091255	00	-90	7.6
ECDD001B	458598	7091255	00	-90	35.6
ECDD002	458575	7091224	360	-85	45.1
ECDD003	458536	7091110	360	-85	31.1
ECDD004	458556	7091006	360	-85	30.1
ECDD005	458645	7091107	360	-85	18.1

Table 1: Drillhole Details, Eel Creek, Mary Valley

# AMAMOOR

The Amamoor prospect is located in part of the Amamoor State Forest on a steep sided ridge. The original forest has been invaded by exotic weeds and undergrowth, including lantana, and sections of the forest have been cleared and replaced with hoop pine plantations.

Access to the site is via forestry tracks and historical mining tracks and benches, now largely overgrown with exotic shrubs. Four holes were drilled along the main access track which transected a section of the primary gravity anomaly; and three holes were drilled proximal to old workings, utilising historical benches cleared by a local contractor (see photograph 3).

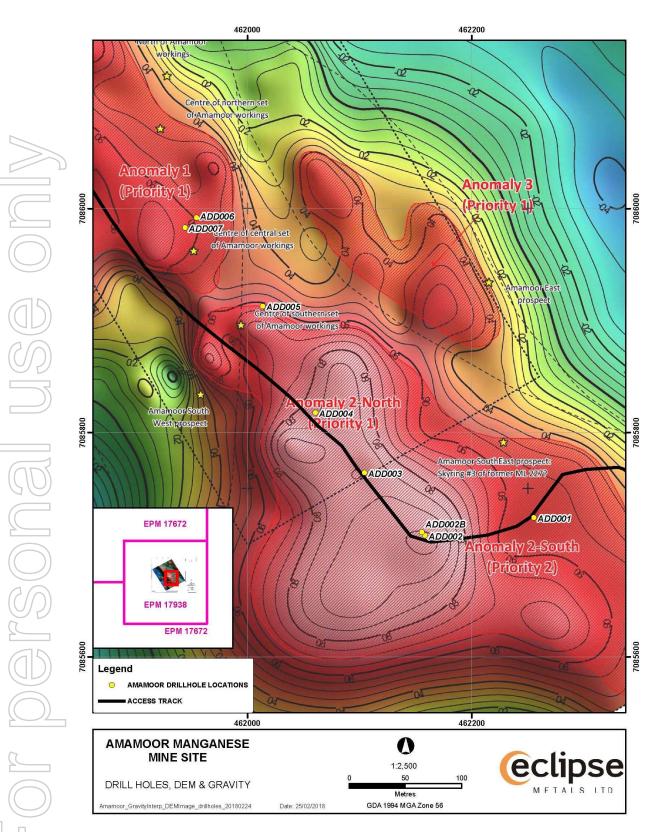
The first hole at Amamoor (ADD001) intersected geological units in the apparent hanging wall of the mine sequence but no mineralisation. Diamond drill holes ADD002, ADD2B (a redrill of ADD002 after unsatisfactory recovery from the mineralised zone) and ADD003 intersected layered to massive manganese mineralisation which demonstrated significant manganese presence in a previously unmined area. Hole ADD004 collared further northwest intersected traces of MnO mineralisation.

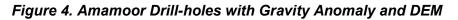
Within the area of old workings holes ADD006 and 007 intersected brecciated and massive manganese mineralisation with cumulative down-hole thicknesses totalling 15.6m and 17.0m respectively. Intersections of massive manganese mineralisation (ie. >50% MnO visual estimate) were 3.10m in hole ADD006 and 0.41m in hole ADD007 (refer cross section Figure 1 and core in Photograph 1).

Results from the recent drilling and further geological / geophysical modelling will be interpreted to assist with planning of the next phase of exploration.

Hole_ID	Easting	Northing	Azimuth	Dip	Depth
ADD001	462255	7085724	120	-85	16
ADD002	462158	7085708	120	-88	20.1
ADD002B	462155	7085011	120	-85	10.6
ADD003	462104	7085764	146	-85	16
ADD004	462060	7085818	125	-85	30.2
ADD005	462013	7085913	268	-72	20.9
ADD006	461954	7085992	270	-60	16.1
ADD007	461944	7085983	235	-60	22.5

#### Table 2: Drillhole Details, Amamoor, Mary Valley





## **ON-GOING STUDIES**

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Selected samples of quartered fresh drill core have been submitted to a geophysical contractor for determination of density, electrical and magnetic characteristics for comparison with previously tested, heavily oxidised surface samples.

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Other selected fresh quartered core samples are being examined in thin and polished section to determine mineral species and depositional genetic pointers to facilitate development of a new geological model.



Photograph 2. Eel Creek Drill-site

Photograph 3. Amamoor Drill-site



For and of behalf of the board.

**Carl Popal** Executive Chairman

For further information please contact:

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#### **Competent Persons Statements**

**Metallurgy** The information in this release that relates to metallurgy and metallurgical test work has been reviewed by Mr Noel O'Brien, FAusIMM, MBA, B. Met Eng. Mr O'Brien is employed as a contract consultant by Eclipse. Mr O'Brien is a Fellow of the Australasian Institute of Mining and Metallurgy, and he has sufficient experience with the style of processing response and type of deposit under consideration, and to the activities undertaken, to qualify as a competent person as defined in the 2012 edition of the "Australian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves" (The JORC Code). Mr O'Brien consents to the inclusion in this report of the contained technical information in the form and context as it appears. Mr O'Brien meets the requirements to act as a Qualified Person.

**Geology** 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, 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.

#### JORC Code, 2012 Edition – Table 1 report

#### Section 1 Sampling Techniques and Data

	ion 1 Sampling Techniques and Data	
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> </ul>	<ul> <li>Diamond core drilling, no speciailised measurement tools used</li> </ul>
	<ul> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	Not Application
	<ul> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> </ul>	Visual estimation of mineralisation by one or more persons familiar with Manganese Oxide mineralisation
	• 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.	• Industry standard diamond core drilling was completed to deliver core for orienting, logging and sample selection on a geological and/or metre sample basis.
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>	Oriented PQ and HQ triple tube diamond core
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> </ul>	• Field and core shed paper logs.
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Measures taken to maximise sample recovery and ensure	Triple tube and water control to
adi	<ul><li>representative nature of the samples.</li><li>Whether a relationship exists between sample recovery and grade</li></ul>	obtain best recoveries.
	and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	No relationship observed
	<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> </ul>	<ul> <li>Geological logging for recon program only. No resource drilling.</li> </ul>
	• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	All core photographed.
	• The total length and percentage of the relevant intersections logged.	All core logged for aggregate 319.7m
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 whether completed wat or dry.</li> </ul>	<ul><li>Quarter core saw cutting of mineralised sections</li><li>Not applicable</li></ul>
preparation	<ul> <li>sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> </ul>	<ul> <li>Quarter core allows full sample to be crushed and pulverised, which is appropriate</li> </ul>
~	<ul> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> </ul>	Appropriate sample preparation controls applied by laboratory
	<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>	Field duplicates employed
	<ul> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	Sample sized best available.
Quality of assay data and laboratory	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	<ul> <li>All assays being carried out by ALS Laboratory Brisbane to professional standards.</li> </ul>
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> <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> <li>Selected samples submitted for petophysical and petrological studies.</li> <li>Daily duplicate checks undertaken on completed work; acceptable levels of accuracy</li> </ul>
		and precision established.

Criteria	JORC Code explanation	Commentary
Verification	The verification of significant intersections by either independent or	<ul> <li>Significant intersections verified</li> </ul>
of sampling and assaying	alternative company personnel.	in field by Company officer.
	• The use of twinned holes.	Not applicable
	<ul> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> </ul>	• Electronic data capture, storage and transfer as .csv. Routine QC checks performed by contractor and independent geological consultant. Data were found to be of high quality and in accordance with contract specifications
	Discuss any adjustment to assay data.	No adjustment to assy data
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> </ul>	<ul> <li>Drill coordinate information from hand-held GPS (+/- 5m accuracy)</li> </ul>
	Specification of the grid system used.	MGA Zone56 (GDA94)
	• Quality and adequacy of topographic control.	<ul> <li>DEM control derived from diffential GPS survey as part of gravity survey (+/- 1m in area of survey)</li> </ul>
Data spacing and	Data spacing for reporting of Exploration Results.	<ul> <li>All drilling is reconnaissance only, on varying spacings</li> </ul>
distribution	<ul> <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> </ul>	• Drill spacing is not sufficient to establish a mineral resource
$\bigcirc$	Whether sample compositing has been applied.	<ul> <li>No sample compositing has been applied</li> </ul>
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> </ul>	• Sampling of the core is not expected to introduce a bias given the tabular style of massive and brecciated mineralisation
	• 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.	No bias expected.
Sample security	• The measures taken to ensure sample security.	<ul> <li>Core transported from drill site to locked core cutting facility under company direction. Core transported from core cutting facility to Laboratory by licensed freight courier</li> </ul>
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	None undertaken to date

# Section 2 Reporting of Exploration Results

((	(Criteria listed in the preceding section also apply to this section)				
	Criteria	JORC Code explanation		Commentary	
	<i>Mineral tenement and land tenure status</i>	<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 & 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. EPM 25698 held 100% by Eclipse Metals Ltd	
	Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	•	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.	
	Geology	Deposit type, geological setting and style of mineralisation.	•	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.	
	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>	•	As recorded without elevation data pending cadastral survey in due course. Full core logs in preparation for reporting with assays in due course.	
	Data aggregation methods Relationship	<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> <li>These relationships are particularly important in the reporting of</li> </ul>	•	Not applicable as no data averaging has been used Down-hole lengths of	
	between mineralisatio n widths and	<ul> <li>Finese 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</li> </ul>	•	mineralisation only reported. Approximately normal Reported downhole	

Criteria	JORC Code explanation	Commentary
intercept lengths	should be a clear statement to this effect (eg 'down hole length, true width not known').	intercepts will be slighty wider than true intercepts
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>	See Maps and Section in release
Balanced reporting	<ul> <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>	Not applicable
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>	<ul> <li>Geological background provided in previous reports. Details to be reported when laboratory results returned.</li> </ul>
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).	Further diamond drilling programme being planned pending interpretation of results from this reconnaissance program
	<ul> <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>	To follow after assay results received