

## GCM DRAMATICALLY EXTENDS NORTH BARKLY PROJECT AREA

### HIGHLIGHTS

- GCM expands on its NT North Barkly Project area.
- Potential new metal province recognised by the recent RC and Aircore drilling.
- 6 Additional Exploration Tenement Applications lodged.
- Base, precious metals and rare earth assays from this drilling are expected within a few more weeks after unusually long laboratory delays.

GCM exploration work over the past year has greatly increased the prospectivity over the northern Barkly region.

Previously, the geochemical anomalies and magnetic targets were believed to indicate likely mineralised bodies at depth, within the older Proterozoic sequences. The recent RC and Aircore drilling (ASX announcement 24 August 2023) and geochemical work demonstrated that the major potential for discovery is much shallower, and in some areas, actually outcropping.

The deeply weathered, poorly outcropping Cretaceous (100-million-year age) sequence that covers much of the region is now known to contain thick volcanic tuffs and explosive eruptive vents. One such vent, or diatreme, was discovered in the western drilling traverse, with hole NBG011 also intersecting the causative porphyry breccia intrusion.

Leached iron oxide infilled veinlets and breccias were intersected in several drillholes. These are believed to be the source of the anomalous metals detected by surface geochemistry, and by previous historic drilling.

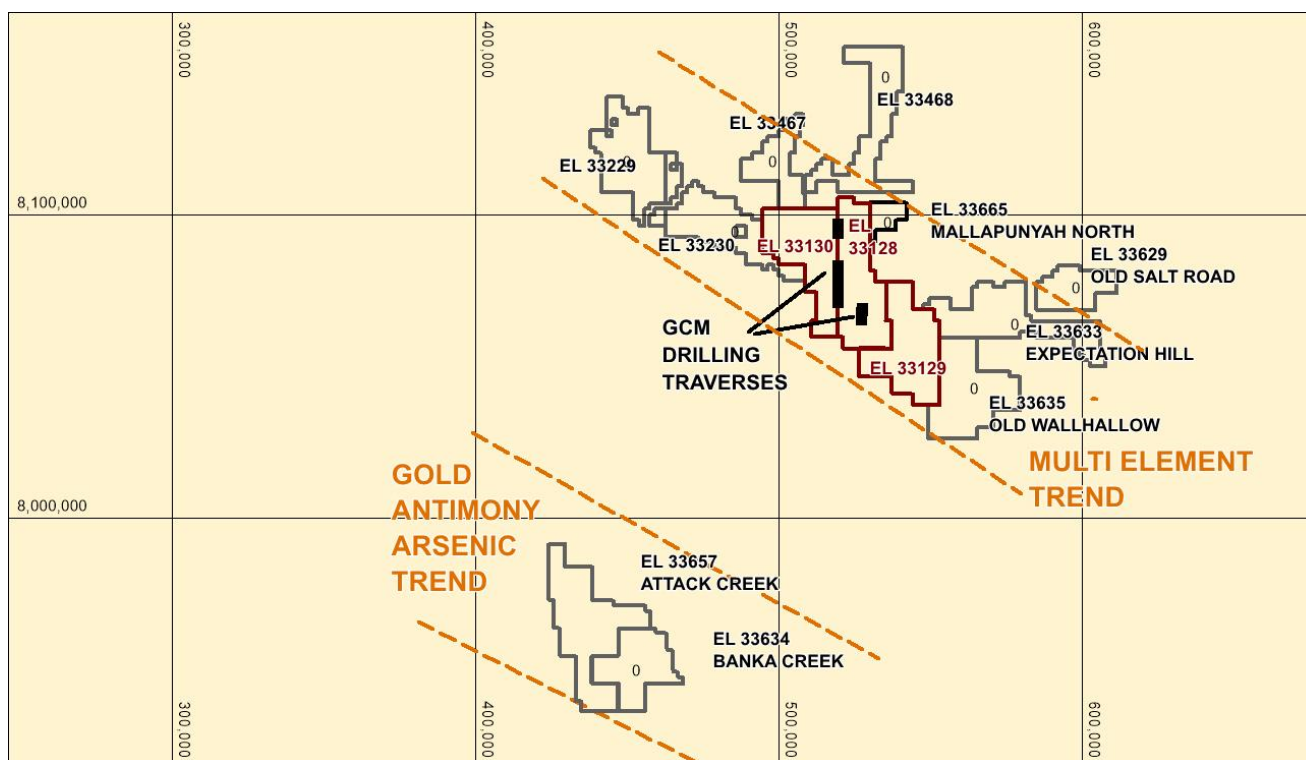


Figure 1: Granted ELs and EL applications – recent application numbers and names (Grid ~100km squares).

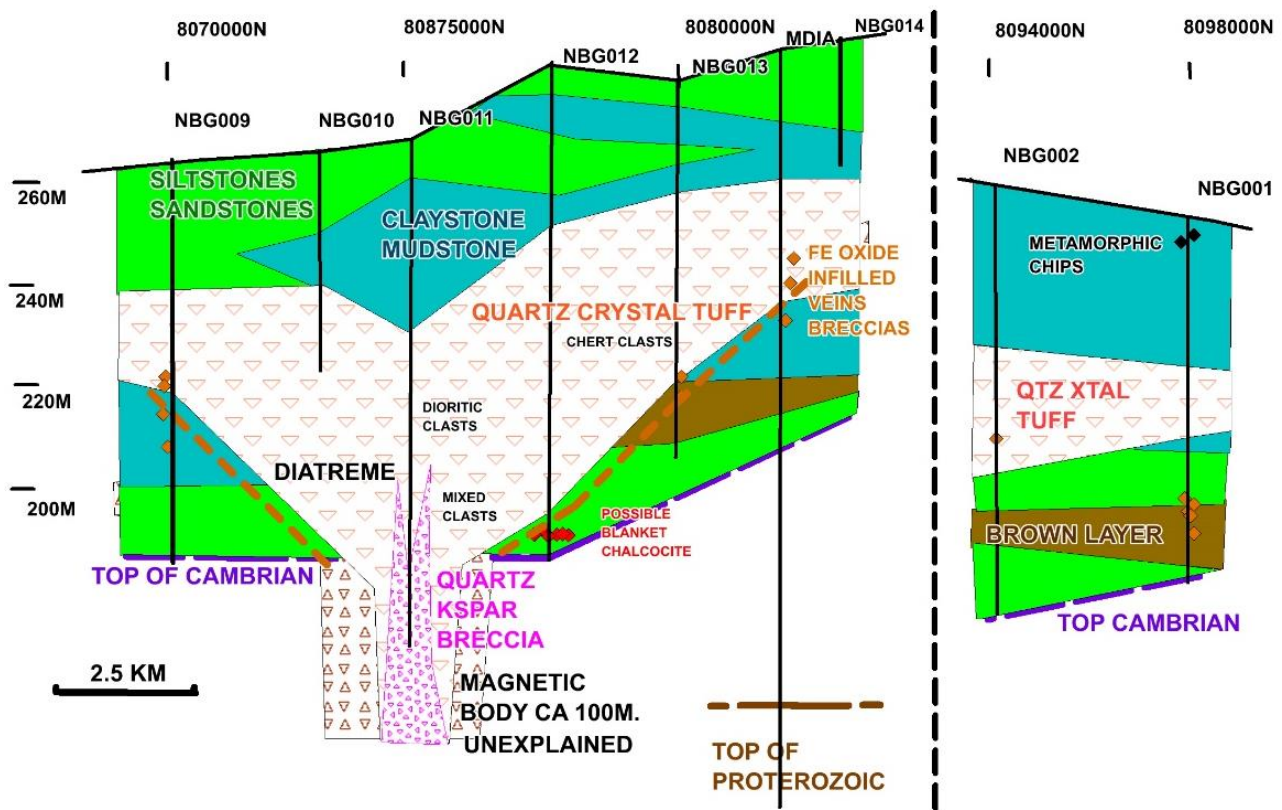


Figure 2: Cross Section – western GCM drill traverse including historic BHP core hole MD1A.



Figure 3: Quartz K-spar porphyry breccia chips at the base of NBG011. Large wet fragment ~15mm long.



GCM believes that, by following up the Geoscience Australia (GA) North Australian Geochemical Survey (NAGS), it has encountered a totally new mineral province.

Additional Exploration Licence Applications have been lodged to the east, in areas where the prospective sequence is generally shallower. These Applications include EL 33633 (Expectation Hill) EL 33635 (Old Wallhallow) EL33629 (Old Salt Road), and EL 33655 (Mallapunyah North).

Mallapunyah North contains the extension of a shallow rare earths structure along strike from GCM hole NBG001.

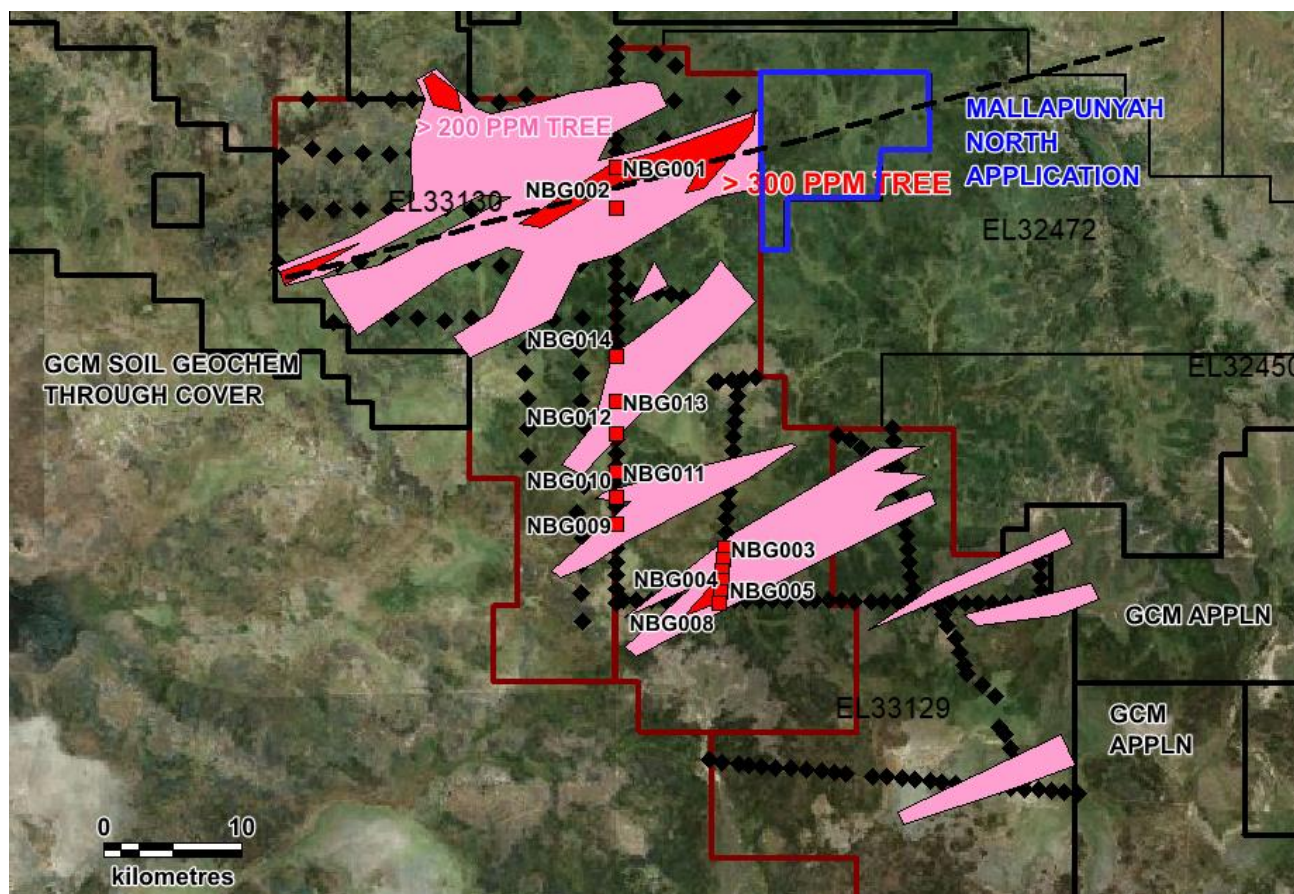


Figure 4: Mallapunyah North EL application

GCM applications EL 33634 (Banka Creek) and EL 33657 (Attack Creek) have also been lodged over gold and antimony areas detected by the GA survey. This appears to be a separate, parallel trend about 100 km south of the current North Barkly Project.

GCM has positioned itself in a dominant position within this emerging base metal, precious metal and rare earth province.

The next steps are to continue work on the granted Exploration Licences, extending the geochemical and geophysical coverage into the new applications as they are granted. Further drilling on the existing targets will depend upon the assay results from the recent programme expected within weeks, once the processing of the samples by ALS in Perth has been completed.



### **Competent Person Statement**

The information in this release that relates to exploration results is based on information compiled by Mr Neil Wilkins M.Sc. Exploration and Mining Geology, who is a Member of The Australian Institute of Geoscientists. Mr Wilkins is employed by Ascry Pty Ltd, which provides consultancy services to GCM. Mr Wilkins has previously worked in the North Barkly Project area and has more than five years' experience which is relevant to the styles of mineralisation and types of deposit mentioned in this report and to the activity, which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves' (the JORC Code). This public report is issued with the prior written consent of the Competent Person as to the form and context in which it appears. Mr Wilkins holds shares in Green Critical Minerals Limited.

### **Authorisation**

The provision of this announcement to the ASX has been authorised by the board of directors of Green Critical Minerals Limited.

Green Critical Minerals confirms that it is not aware of any new information or data that materially affects the exploration results contained in this announcement.

### **Forward Looking Statements**

Statements contained in this release, particularly those regarding possible or assumed future performance, costs, dividends, production levels or rates, prices, resources, reserves or potential growth of Green Critical Limited, are, or may be, forward looking statements. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. Actual results and developments may differ materially from those expressed or implied by these forward-looking statements depending on a variety of factors.

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

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li>• <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No new analyses announced.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>• <i>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).</i></li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• This was first pass exploration drilling not used for resource estimation. All chips are logged and reviewed and compiled as geological cross sections.</li> </ul>
<b>Sub-sampling</b>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> </ul>	<ul style="list-style-type: none"> <li>• NA</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>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.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• NA</li> </ul>
<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>• No drilling assay results as yet.</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>• Sites are recorded electronically and on paper by hand held GPS.</li> <li>• Not resource drilling.</li> </ul>
<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>• Not Resource drilling, and these exploration holes are too widely spaced to indicate a high degree of continuity.</li> </ul>
<b>Orientation of data in relation to</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> </ul>	<ul style="list-style-type: none"> <li>• Not applicable no assays</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>geological structure</b>	<ul style="list-style-type: none"> <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>	
<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>Not applicable no assays</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>Not applicable no assays</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>The announcement refers to 100% Green Critical Minerals Ltd (GCM) granted ELs 33128, 33129, and 33130, as well as EL applications 33229, 33230, 33467, 33468, 33629, 33633, 33634, 33635, and 33657. The granted ELs and applications cover a mix of freehold leasehold and solely in the case of 33468 Aboriginal land.</li> <li>There are no known security issues with the tenure at this time, however EL application 33468 may involve protracted negotiations to secure tenure.</li> <li>The drilling was within EL33128, with the main traverse being close to the boundary with EL33130.</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>There has been airborne EM by BHP (1993) and also by Geoscience Australia (2018) – Tempest wide spaced survey – EM and drilling details are available for download by the public. CRs 1993-191, 1994-139, 1995-181, 1996-210.</li> <li>Geoscience Australia (GA) has conducted wide spaced geochemical sampling throughout the region, as part of the North Australian Geochemical Survey. This has been reported previously, and is a public database.</li> <li>Rio held EL application 33629 for 12 months before surrendering it recently. No reports are available yet.</li> <li>There has been no known previous exploration for precious or base metals within the rocks of interest and the subject of this announcement.</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>An ionic clay hosted rare earths deposit within a Tertiary laterite weathering profile.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>• Epithermal and porphyry copper gold silver and molybdenum in the newly recognised volcanic sequence, previously thought to be cover.</li> <li>• At Depth - Iron Oxide Copper Gold (IOCG) deposits containing copper gold rare earths molybdenum and other elements in association with haematite or magnetite alteration and replacements.</li> <li>• At Depth- Mt. Isa (McArthur) Style zoned Co Cu Pb Zn, associated with basin margin faulting.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>• <i>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:</i> <ul style="list-style-type: none"> <li>○ <i>easting and northing of the drill hole collar</i></li> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> </ul> </li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No previous drilling targeting the new volcanic sequences, although BHP did log oxidised breccia and veins in the zone of current interest, but conducted no assaying.</li> <li>• No previous IOCG targeted drilling.</li> <li>• No previous rare earths drilling.</li> <li>• Drilling by BHP in 1994 and as previously reported.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></li> <li>• <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling analyses available.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>• The drilling is widely spaced but shows good geological correlations. Closer spaced drilling may indicate complexities.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• <i>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</i></li> </ul>	<ul style="list-style-type: none"> <li>• As shown in attached figures</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Balanced reporting</b>	<p><i>drill hole collar locations and appropriate sectional views.</i></p> <ul style="list-style-type: none"> <li>• <i>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.</i></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>• <i>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.</i></li> </ul>	<p>Geoscience Australia and NT Geological Survey public magnetic data has been modelled by Geodiscovery Geophysical consultants to produce imagery. The geological interpretation is by Neil Wilkins M.Sc who has had several years of mineral and petroleum experience across the McArthur Basin, and on Mallapunyah station.</p>
<b>Further work</b>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The company plans to conduct further drilling on the granted tenements and conduct rapid geochemical sampling within the new tenements as they are granted. Future drilling work may include either aircore RC or diamond drilling.</li> </ul>