



**MATSA**

R E S O U R C E S

LIMITED

ABN 48 106 732 487

**ASX Announcement**

**20 June 2014**

## **Strong Conductors Identified by Downhole EM at Killaloe JV Project**

### **Highlights**

- *Downhole EM (DHEM) survey identifies 2 strong off-hole conductors.*
- *Both targets are highly conductive, and are both interpreted to be centered at a distance of ~40m from diamond drillhole 14KLDH01 and are interpreted to be consistent with the presence of well-developed significant sulphides.*
- *Nickel rich semi-massive sulphide lenses intersected in diamond drillhole 14KLDH01 at Killaloe are interpreted to be extensions of the 2 DHEM conductors.*
- *Conductor HWG C1 at ~92m depth is interpreted to be an extension of semi-massive sulphide lens in komatiite lavas intersected between 93.15 and 93.35m and with XRF spot Ni values to 3.15% Ni.*
- *Conductor HWG C2 at ~143m depth is interpreted to be an extension of semi-massive sulphide lens in metabasalt intersected between 137.5 and 137.7m and with XRF spot Ni values to 1.75% Ni.*
- *Off-hole conductors are high priority targets and are considered extremely significant. Diamond drilling has re-commenced.*

### **CORPORATE SUMMARY**

#### **Executive Chairman**

Paul Poli

#### **Director**

Frank Sibbel

#### **Director & Company Secretary**

Andrew Chapman

#### **Shares on Issue**

144.15 million

#### **Unlisted Options**

8.3 million @ \$0.31 - \$0.43

#### **Top 20 shareholders**

Hold 48%

#### **Share Price on 19 June 2014**

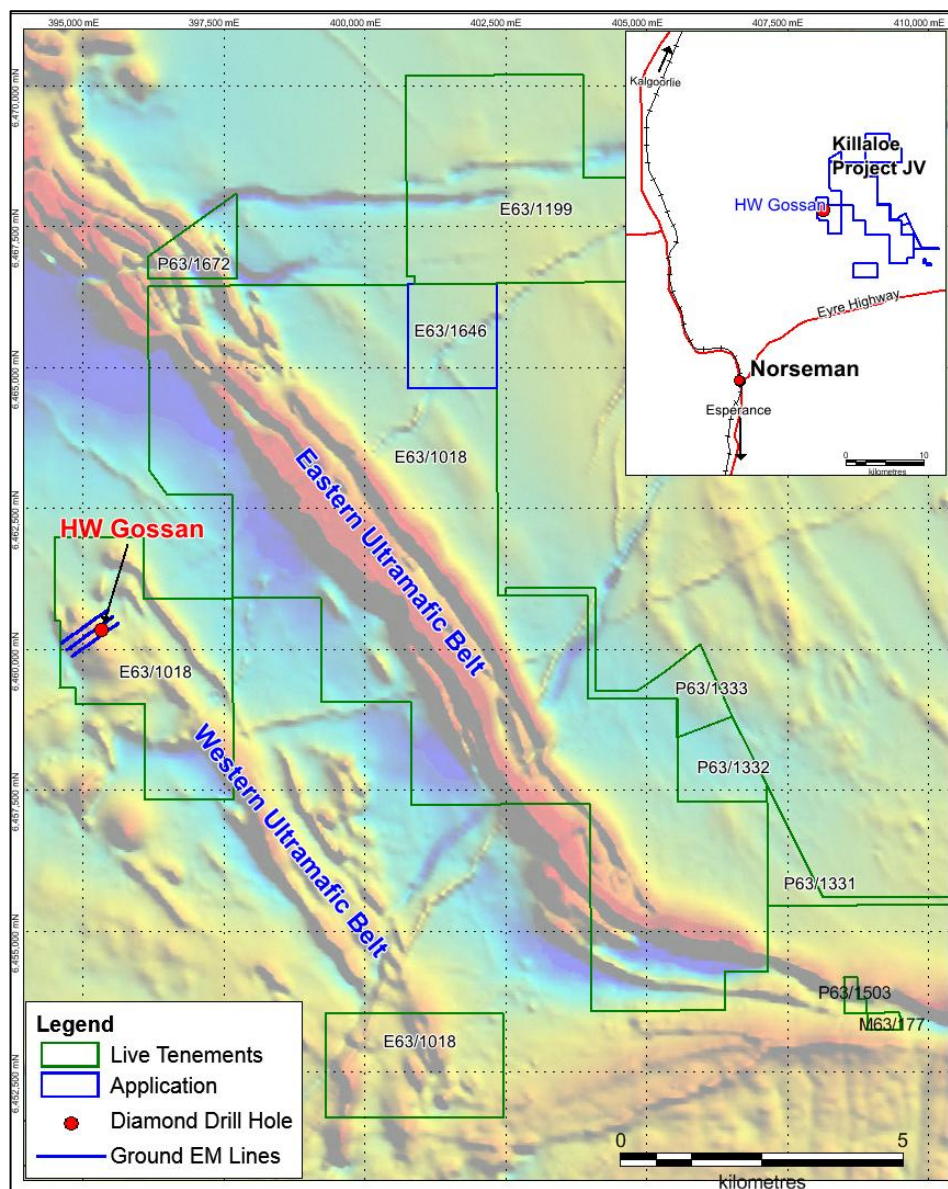
39 cents

#### **Market Capitalisation**

\$56.22million

## Killaloe Project (Matsa Resources 80%, Cullen Resources 20%)

Matsa is very pleased to report a preliminary interpretation of results from a DHEM survey completed in diamond drillhole 14KLDH01 which intersected significant Ni sulphide mineralisation at Killaloe as announced to the ASX on 17<sup>th</sup> June 2014.



**Figure 1: Killaloe JV Project and Location of HWG prospect and diamond drillhole 14KLDH01**

The Killaloe project comprises tenements as summarised in Figure 1, and is a joint venture between Matsa Resources Limited 80% and Cullen Resources Limited 20%. Exploration under the joint venture is managed by Matsa.

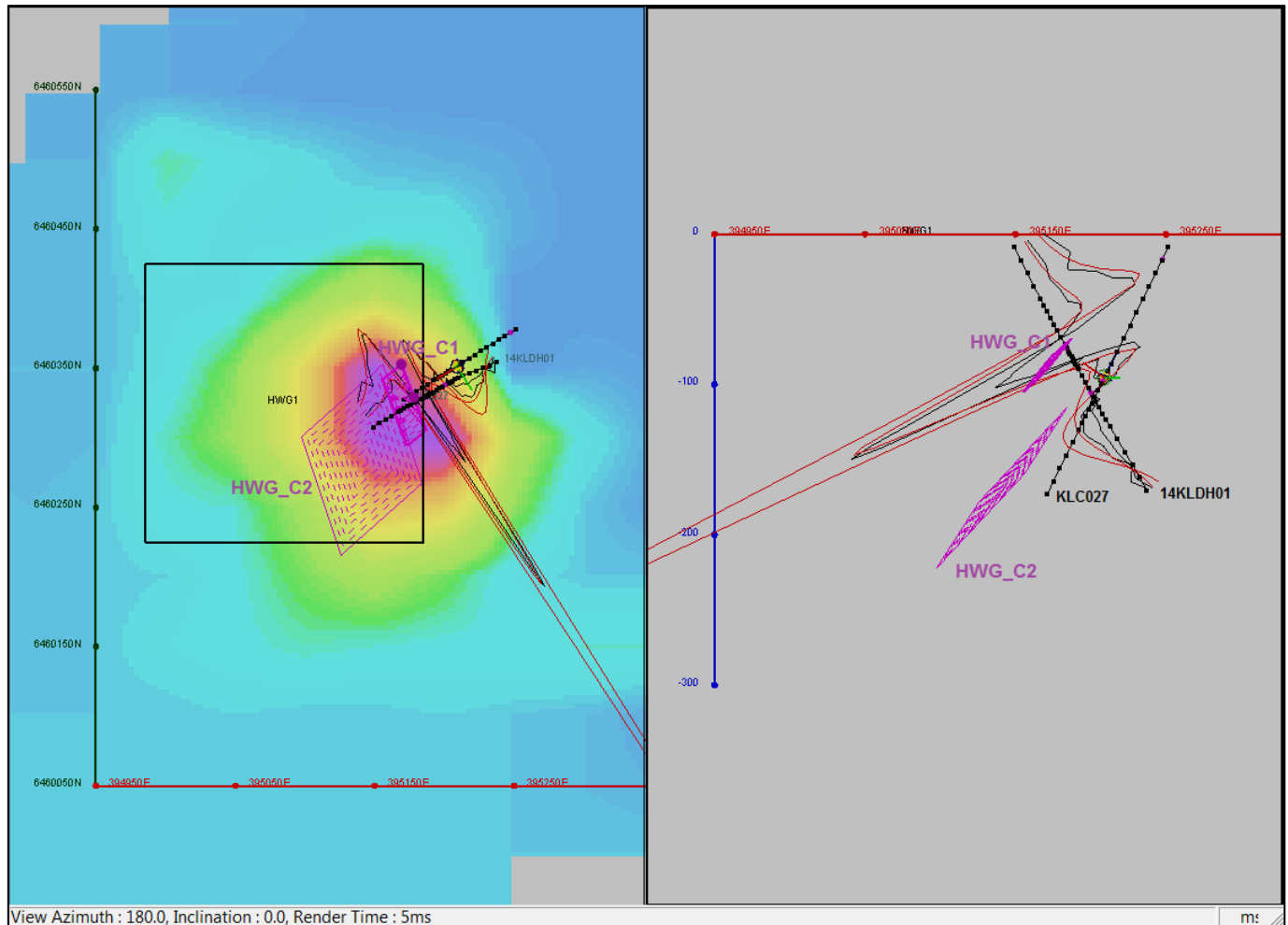
Diamond drillhole 14KLDH01 was designed to test a conductor identified by a ground EM survey over the HWG prospect (Figure 1).

Diamond drillhole 14KLDH01 was completed to a final depth of 198.5m (Table 1).

Hole	East	North	RL	GDA Zone	Depth	Azimuth	Dip
14KLDH01	395140	6460305	302mRL	MGA51	198.5	055 deg	-60

**Table 1: 14KLDH01 Locational Attributes**

Downhole surveys were carried out using a 200m loop designed to couple with semi-massive sulphide lenses intersected by diamond drillhole 14KLDH01. Information specific to the survey and the downhole system used is included in Appendix 1.



**Figure 2: Plan and Cross section showing DHEM Conductor Plates HWG\_C1 and HWG\_C2 in pink and historic hole KLC027**

Preliminary modelling and interpretation of downhole survey results in the diamond drillhole identifies the presence of two off hole conductors. Matsa’s geophysical consultant, Southern Geoscience Consultants made the following observations (Figure 2):

- HWG\_C1 – This conductor is interpreted to be consistent with the targeted highly conductive (~15000-20000 Siemens), FLTEM source identified in the 2013 survey. Results from the DHEM survey are currently interpreted to indicate that diamond drillhole 14KLDH01 intersected the edge of a moderate to steeply SW dipping conductive source. A new drill target is currently being defined based on low frequency, high powered DHEM surveying.
- HWG\_C2 – This offset DHEM conductor is present below HWG\_C1 and is also interpreted to be highly conductive (~10000 Siemens). Results from the DHEM survey are currently being interpreted in order to design a drill target for this high priority conductor.

The high conductivities are interpreted to be consistent with the presence of well-developed significant sulphides associated with both DHEM targets.

## Planned Activities

Up to 5 additional diamond drillholes targeting the conductors have been urgently scheduled and drilling will commence today (Friday 20<sup>th</sup> June). Additional ground EM surveys are also currently being planned and will commence as soon as possible.

For further information please contact:

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## Exploration results

*The information in this report that relates to Exploration results, is based on information compiled by David Fielding, who is a Fellow of the Australasian Institute of Mining and Metallurgy. David Fielding is a full time employee of Matsa Resources Limited. David Fielding has sufficient experience which is relevant to the style of mineralisation and the type of ore deposit under consideration and 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, Mineral Resources and Ore Reserves'. David Fielding consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

## Appendix 1 - Matsa Resources Limited - Killaloe JV Project

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<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>XRF Analysis on HQ core using a handheld Olympus Innovx Delta Premium (DP4000C model) XRF analyser. Measurements were taken on surface of the core and depth intervals recorded.</li> <li>Cutting and sampling of core still to be carried out.</li> </ul>
Drilling techniques	<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>Core drilling carried out by Frontline drilling using a track-mounted Desco 7000 diamond drill rig. Mud rotary bit used from surface down to the weathered zone and changed to triple tube HQ from fresh rock to end of hole. Core is oriented using Reflex ACT II RD digital core orientation tool.</li> </ul>
Drill sample recovery	<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</li> </ul>	<ul style="list-style-type: none"> <li>Core is currently logged and recovery will be measured.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>preferential loss/gain of fine/coarse material.</i>	
Logging	<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>• Geologic and geotechnical logging carried out on the core. Logging recorded as qualitative description of colour, lithological type, grain size, structures, minerals and alteration.</li> <li>• All cores are photographed using a digital camera.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <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>	<ul style="list-style-type: none"> <li>• Cores to be sawn and quarter core splits to be sampled and submitted to the lab. Sampling intervals still to be determined.</li> </ul>
Quality of assay data and laboratory tests	<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>• Olympus Innovx Delta Premium (DP4000C model) handheld XRF analyser.</li> <li>• Reading times employed was 90 sec/beam for a total of 270 sec using Soil Mode.</li> <li>• Handheld XRF QAQC includes duplicates, standards and blanks.</li> </ul>
Verification	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Handheld XRF QAQC includes duplicates, standards and blanks.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>of sampling and assaying</i>	<ul style="list-style-type: none"> <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>• Data entry carried out by field personnel thus minimizing transcription or other errors. Trial plots in field and rigorous database procedures ensure that field and assay data are merged accurately.</li> </ul>
<i>Location of data points</i>	<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>• Drill collars are surveyed by modern hand held GPS units with accuracy of 5m which is sufficient accuracy for the purpose of compiling and interpreting results.</li> <li>• Topographic control 2-5m accuracy using published maps or Shuttle Radar data is sufficient to evaluate topographic effects on assay distribution.</li> </ul>
<i>Data spacing and distribution</i>	<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 known at this stage.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<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>• Diamond drill hole is oriented at -60° and due NE (055degrees magnetic) targeting a modelled EM conductor.</li> <li>• More information on the mineralized intersection upon completion of geological and geotechnical logging.</li> </ul>
<i>Sample security</i>	<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>• Sampling intervals to be marked up on core accompanied by separate printed cutting interval sheet. Core trays to be secured with steel straps on a pallet for transport to the core cutting contractor. Samples to the laboratory will be placed in calico bags then onto green bags. The green bags will be sealed with cable ties for transport to the laboratory.</li> </ul>
<i>Audits or reviews</i>	<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>• N/A</li> </ul>

## 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 style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Cullen Exploration is the holder of the Killaloe JV project. Matsa has farmed in to the Killaloe Project and has earned 80% interest in the project.</li> <li>• The project consists of 2 ELs and 4 Prospecting licenses.</li> <li>• The Project is Located on Vacant Crown Land.</li> <li>• The project is located within Native Title Claim No. 99/002 by the Ngadju people.</li> <li>• A heritage agreement has been signed and exploration is carried out within the terms of that agreement.</li> <li>• At the time of writing these licenses expire between 14<sup>th</sup> June 2016 and 8<sup>th</sup> July 2017.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>• <i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Significant past work has been carried out by other parties for both Ni and Au exploration including, surface geochemical sampling, ground electromagnetic surveys, RAB, AC, RC and DD drilling.</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Target is komatiite hosted Ni sulphide mineralisation in ultramafic rocks within the project.</li> </ul>
<i>Drill hole Information</i>	<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>• Co ordinates and other attributes of diamond drillholes are included in Table 1 in the body of the text.</li> </ul>
<i>Data</i>	<ul style="list-style-type: none"> <li>• <i>In reporting Exploration Results, weighting averaging</i></li> </ul>	<ul style="list-style-type: none"> <li>• Downhole assay values will be reported when it becomes</li> </ul>



Criteria	JORC Code explanation	Commentary
aggregation methods	<p>techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</p> <ul style="list-style-type: none"> <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>	available.
Relationship between mineralisation widths and intercept lengths	<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>All intercepts reported are measured in down hole metres.</li> </ul>
Diagrams	<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>Suitable summary plans have been included in the body of the report.</li> </ul>
Balanced reporting	<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 required at this stage.</li> </ul>
Other substantive exploration data	<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>Trace Ni sulphides (3m @ 0.49% Ni from 88m – includes 1m @ 0.65% Ni and 1m @ 0.52% Ni from 99m) reported in previous RC drill hole (KLC21) nearby. No DHEM reported.</li> </ul> <p>DHEM Surveys carried out in 17<sup>th</sup> -19<sup>th</sup> June by Outer Rim, SURVEY PARAMETERS Configuration : Fixed Loop, Station Spacing : 2-10 m RECEIVER : Crone PEM, Frequency : 0.83 Hz, Component Z,X,Y, Rx Coil : Crone PEM probe, Rx Area : 8900m2 TRANSMITTER Transmitter : Crone-PEM, Tx Moment 40000: 2 turn-m, Tx Current : 40 A Turn Off : 1 ms</p>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>The survey was carried out with steel casing inserted from surface to 120m in order to take advantage of availability at short notice of geophysical survey crew. The presence of steel casing has had the effect of reducing the response from the conductor at ~90m. It also will have affected the interpreted geometry of the ~140m conductor.</li> </ul>
<p><i>Further work</i></p>	<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>Further DD drilling to define continuity of nickel sulphide mineralization within the komatiite host rock pending results of the DHTEM.</li> </ul>