

November 9, 2015

# Multiple zones of nickel-bearing sulphides intersected in first diamond hole at Roe Hills

Diamond Hole RHDD0023 intersects narrow intervals of nickel bearing disseminated, blebby and stringer sulphides with original DHEM conductor still unresolved

### **Key Points**

- First exploration diamond drill-hole at Talc Lake prospect, RHDD0023, successfully completed to a final depth of 395.2m down-hole
- Trace amounts of nickel-copper sulphides identified throughout targeted ultramafic
- Three narrow intervals of disseminated, blebby and stringer sulphides intersected
- Spot readings to 3% nickel confirmed with Portable XRF assays pending
- Targeted DHEM conductor remains unexplained
- Follow-up DHEM survey planned to commence in coming days
- Further drilling of this emerging prospect planned as part of the current program

Mining Projects Group (ASX: MPJ) is pleased to advise that the first diamond drill-hole completed as part of the current phase of exploration at its 100%-owned **Roe Hills Nickel Project**, located near Kambalda in WA, has been successfully completed (refer Figures 1-4).

The hole has intersected **multiple narrow intervals of nickel-bearing sulphides** between 190m down-hole and 260m, the depth of the modelled down-hole EM (DHEM) conductor being targeted by the hole. The nickeliferous sulphides have been confirmed by portable hand-held XRF analysis, which has returned spot readings of up to **3% Ni**.

The sulphide intervals can be seen in the drill core photos from RHDD0023 below:



Photo 1 – Stringer of nickel bearing Massive Sulphides (~191m depth) in hole RHDD0023



Photo 2 – Blebby nickel bearing sulphides containing Spot XRF result up to 3% Ni (~257m depth) in hole RHDD0023 with assays pending

Importantly, the sulphidic intervals are associated with strong shear fabrics, providing support for structural remobilisation of the mineralisation. Also, the modelled DHEM conductor remains unexplained, making this target a high priority for follow-up DHEM and further drilling.

Core from the sulphidic intervals in RHDD0023 have been dispatched for assaying on a priority basis.

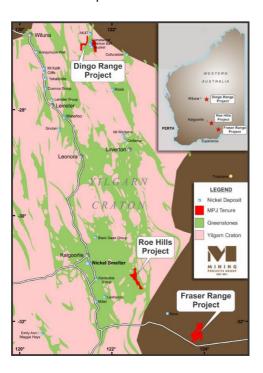


Figure 1. MPJ projects location in Western Australia

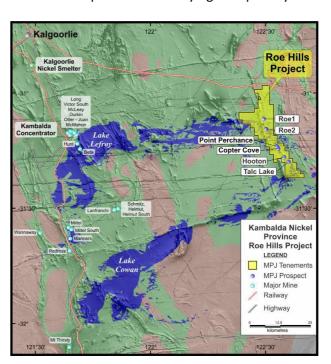


Figure 2. Roe Hills Nickel Project geographical location including relevant infrastructure

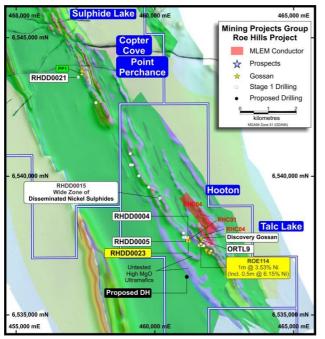
Diamond drill-hole RHDD0023 (Refer Table 1, Figures 3 & 4), was designed to test a strong off-hole conductor identified by MPJ's geophysical consultants Newexco, from DHEM surveys of earlier holes RHDD0004 and RHDD0005, located at the northern end of the Talc Lake Prospect (refer Figure 4).

The target depth of the modelled conductor was 260m down-hole.

**Table 1: Summary of Drill-hole Statistics** 

Hole ID	MGA_E	MGA_N	Dip	Azi	EOH
RHDD0023	461212	6537688	-60	057	395.2





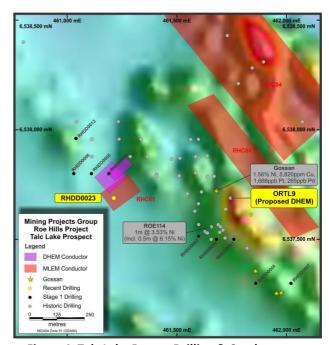


Figure 3. Diamond Hole RHDD0023 Location

Figure 4. Talc Lake Recent Drilling & Conductors

RHDD0023 traversed metabasalt from surface to 143m down-hole before entering an extensive sequence of low-to-moderate MgO ultramafics.

Narrow zones of disseminated, coarser blebby, stringer and thin veinlet sulphides have been identified over multiple intervals between depths of approximately 190.43 - 191.15m, 211.23 - 220.02m and at 256.80 - 257.60m down-hole. The latter interval occurs in close proximity to the hole's primary target depth.

Spot checks utilizing portable hand-held XRF analysis have provided preliminary confirmation of the nickeliferous nature of the sulphides, with values of up to 3% nickel being reported (see Core Photos in Photos 1&2 above).

At a down-hole depth of about 286m, the hole intersected a thin shale (~1.5m thick) unit, marking a contact with a dolerite intrusive. The hole remained within dolerite to its final depth of 395.2m. The shale is described as non-sulphidic/non-graphitic and is therefore not considered to be the source of the targeted conductor.

As a consequence, the conductor currently remains unexplained.

MPJ is highly encouraged by its preliminary assessment of RHDD0023, with this area representing a high priority for follow-up exploration.

A geophysical survey crew is currently mobilizing to site and will undertake a DHEM survey of RHDD0023 within the next week, as well as other planned DHEM surveys (including surveying of hole ORTL9, which was successfully re-entered and cased last week.

The drill rig is currently testing conductor RH\_C8, which is associated with an interpreted and previously unexplored buried high MgO ultramafic sequence located to the west of the main Talc Lake succession.

Subject to the results of the DHEM survey on RHDD0023, the rig may be prioritized to return to this area for follow-up drilling before moving on to other targets at Roe Hills as outlined in recent announcements.



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#### **COMPETENT PERSON STATEMENT:**

Competent Person: The information in this report that relates to Exploration Results or Mineral Resources is based on information compiled and reviewed by Mr N Hutchison, who is a Non-Exec Director for Mining Projects Group and who is a Member of The Australian Institute of Geoscientists. Mr Hutchison has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration 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, Mineral Resources and Ore Reserves.' (the JORC Code 2012). Mr Hutchison has consented to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The Australian Securities Exchange has not reviewed and does not accept responsibility for the accuracy or adequacy of this release.



# **Appendix 1 – Mining Projects Group – Roe Hills Project JORC Code, 2012 Edition – Table 1**

### **Section 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> <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>Geophysics</li> <li>Moving in-loop ground EM (MLEM) survey carried out at 200m line spacing using a SMARTemV system by ElectroMagnetic Imaging Technology Pty Ltd.</li> <li>EMIT Fluxgate sensor recording 3 orthogonal components: Bz, Bx and By.</li> <li>Survey done at ground level.</li> <li>SMARTEM standard window times used for a transmitter frequency of 0.27 to 1 Hz.</li> <li>200m x 200m transmitter loop producing a loop dipole moment for ~32000000 Am².</li> <li>Location of stations was accomplished with Garmin handheld GPS units with an accuracy of +/- 4m. Drilling</li> <li>NQ sized cores were sawn with manual brick saw and half split prior to sampling and submitted to the lab.</li> <li>Half core samples submitted for highest quality and best representation of the sampled material and sample intervals are checked by the supervising geologist and field technician throughout the sampling process.</li> <li>All sampling is based on diamond drill core and chips from RC pre- collars Sample selection is based on geological core logging and sampled to geological core logging and sampled to geological contacts. Individual assay samples typically vary in length from a minimum of 0.2m and a maximum length of 1.0m.</li> </ul>
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard type).	<ul> <li>All drilling was carried out by DDH 1         Drilling of North Fremantle Perth         WA using a Sandvik 1200 Multi-purpose truck mounted drill rig.     </li> </ul>

diameter, triple or standard tube,

depth of diamond tails, face-

drilling was used to establish pre-

Reverse circulation percussion (RCP)



Criteria	JORC Code explanation	Commentary
	sampling bit or other type, whether core is oriented and if so, by what method, etc).	collars from surface to competent rock. The hole was then advanced with HQ3 and NQ2 in 3 metre and six metre barrel configurations to hole termination depth. Core is oriented using Reflex ACT II RD digital core orientation tool.
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>	Diamond core is logged and recorded in the database. Overall recoveries are >95% and there was no core loss or significant sample recovery problems. Diamond core was reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths are checked against depth given on core blocks.
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>	<ul> <li>Geological logging is carried out on the core and recorded as qualitative description of colour, lithological type, grain size, structures, minerals, alteration and other features.</li> <li>All cores are photographed using a digital camera.</li> <li>Geotechnical logging comprises recovery, fracture frequency and RQD measurements.</li> </ul>
Sub- sampling techniques and sample preparation	<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 sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Cores were sawn and half split prior to sampling and submitted to SGS Laboratories in Kalgoorlie WA for subsequent transportation to SGS Perth WA.</li> <li>Half core samples submitted for highest quality and best representation of the sampled material. Duplicates not required.</li> <li>Cut sheets prepared and checked by geologist and field technician to ensure correct sample representation.</li> <li>All samples were collected from the same side of the core.</li> </ul>



Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>Geophysics</li> <li>Data acquired using SMARTemV receiver system.</li> <li>Data were delivered by Merlin Geophysical Solutions Pty Ltd who performed QA/QC on a daily basis.</li> <li>Data were again subject to QA/QC by consultants Newexco Services Pty Ltd on a daily basis. QA/QC was achieved using Maxwell software by ElectroMagnetic Imaging Technolgy Pty Ltd.</li> <li>Drill Sample Analysis</li> <li>Samples were submitted to SGS Laboratories in Kalgoorlie for sample preparation before pulps are freighted overnight to SGS Newburn Labs in Perth for multi-element analysis by sodium peroxide fusion followed by ICP-OES finish. PGEs are assayed using Fire Assay method.</li> <li>Hand Held XRF</li> <li>Field reading are estimated using Olympus Innovx Delta Premium (DP4000C model) handheld XRF analyser prior to laboratory analysis.</li> <li>Reading times employed was 15 sec/beam for a total of 30 sec using 2 beam Geochem Mode.</li> <li>Handheld XRF QAQC includes supplied standards and blanks.</li> </ul>
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>	Geophysics  Data were check and validated on a daily basis using Maxwell software by ElectroMagnetic Imaging Technology Pty Ltd.  Geological Logging  Primary data was collected using Excel templates utilizing lookup codes on laptop computers.  Steve Vallance MPJ Technical Manager (AIG Member) has visually verified the significant intersections
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> </ul>	<ul> <li>in the diamond core.</li> <li>Geophysics</li> <li>Locations were planned using a combination of GIS software packages.</li> <li>Location of stations was accomplished with Garmin handheld GPS units with an accuracy of +/- 4m.</li> </ul>



Criteria	JORC Code explanation	Commentary
	Quality and adequacy of topographic control.	<ul> <li>All data points were located using the Geocentric Datum of Australia 1994 and the Map Grid of Australia zone 51 projection.</li> <li>Drilling</li> <li>Drill collars are surveyed by modern hand held GPS units with accuracy of +/-4m which is sufficient accuracy for the purpose of compiling and interpreting results.</li> </ul>
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>	<ul> <li>interpreting results.</li> <li>Geophysics</li> <li>At least 3 readings were recorded per station.</li> <li>Stations were spaced 100m along line.</li> <li>Line spacing was 200m</li> <li>Drill Sampling</li> <li>Minimal sample spacing for assay samples is 0.2m and maximum sample spacing is 1.0m.</li> <li>Sample spacing width is dependent on geological or grade distribution boundaries.</li> <li>No sample compositing will be 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> <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>	<ul> <li>Geophysics</li> <li>Survey was oriented with E-W lines perpendicular to the main geological trend.</li> <li>Drilling</li> <li>Diamond drill holes oriented to MGA (magnetic) east Holes are designed to intersect the geological contacts as close to perpendicular as possible.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>Geophysics</li> <li>Data were acquired by Merlin         Geophysical Solutions Pty Ltd and         reported to the company director.</li> <li>Data were forwarded from Merlin         Geophysical Solutions Pty Ltd to         consultants Newexco Services Pty         Ltd.         </li> <li>Drilling</li> <li>Core samples are being cut in the         field at the project site by MPJ         personnel under the supervision of         senior geological staff. They will be         delivered to the laboratory by MPJ         field personnel.</li> </ul>



Criteria	JORC Code explanation	Commentary
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <li>Regular reviews and checks by Newexco Services Pty Ltd to maintain standards of logging and sample handling</li> </ul>

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## **Section 2 Reporting of Exploration Results**

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	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.	<ul> <li>Mining Project Group Limited owns 100% of the tenements.</li> <li>The project consists of 5 ELs.</li> <li>The Project is Located on Vacant Crown Land.</li> <li>At the time of writing extensions of terms for these licenses have been approved. Further review will be undertaken May 2016.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <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. This is acknowledged in past ASX</li> </ul>
Geology	<ul> <li>Deposit type, geological setting and style of</li> </ul>	<ul> <li>Target is Kambalda, Cosmos and Black/Silver</li> <li>Swan style Komatiitic Ni hosted in ultramafic</li> </ul>



### Drill hole Information

- 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:
  - easting and northing of the drill hole collar
  - elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar
  - dip and azimuth of the hole
  - down hole length and interception depth
  - o hole length.

 Co ordinates and other attributes of diamond drillholes are included in the release.



Criteria	JORC Code explanatio	n Commentary
Data aggregation methods	<ul> <li>In reporting</li> <li>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</li> </ul>	Exploration results will be reported lengthweight average where applicable, no cut-off grade applied.
Relation ship between mineralisation 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</li> </ul>	All intercepts reported are measured in down hole metres.
Diagram s	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should	Suitable summary plans have been included in the body of the report.
Balanced reporting	<ul> <li>Where         comprehensive         reporting of all         Exploration         Results is not         practicable,         representative         reporting of both low         and high grades</li> </ul>	Minimum, maximum and average PXRF results have been reported. Laboratory assay results are more accurate and will vary from the PXRF results. Lab results will supersede PXRF reported results.
Other substantive	Other     exploration data,     if meaningful     and material	Geophysics MLEM Survey designed and managed by Newexco Services Pty Ltd.

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Criteria	JORC Code explanation	on Commentary
exploration data	(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.	<ul> <li>Moving in-loop Transient Electromagnetic surveying was completed by Merlin Geophysical Solutions Pty Ltd.</li> <li>Geophysical surveying employed a SMARTemV receiver system, an EMIT Fluxgate magnetic field sensor, Zonge ZT-30 transmitter and 200m x 200m transmitter loops. Survey stations were spaced 100m along line and lines were spaced 200m.</li> <li>Interpretation of the Electromagnetic data is being undertaken by Newexco Services Pty Ltd.</li> </ul>
		<ul> <li>Drill Sampling</li> <li>Multi-element analysis is being conducted routinely on all samples for a base metal suite and potentially deleterious elements including Al, As, Co, Cr, Cu, Fe, Mg, Ni, S, Ti, Zn plus Au, Pt &amp; Pd.</li> </ul>
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>	<ul> <li>Geophysics</li> <li>Regional MLEM geophysical surveys are planned to continue to provide full coverage of the 40 kilometer length of prospective ultramafic stratigraphy secured by the project tenure.</li> <li>Down Hole Electro-Magnetics (DHEM) is proposed in conjunction with the already successful geochemical and geological modelling.</li> <li>Further DD drilling is continuing and targeted to locate the modelled centre of the host komatiitic lava channel which is interpreted to be the source of the Nickel sulphide mineralisation.</li> </ul>

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