

20 April 2017

#### Company Announcements Office, ASX Ltd

## **Exploration Update**

- ➢ Bedrock conductors identified at the Tyrrell's Prospect using SAMSON high powered MLTEM surveying
- ➤ 2 high priority conductors identified on lines 8B/9B are being refined with additional infill surveying currently in progress
- Diamond, RC drilling and Heritage survey planning has commenced

**Mount Ridley Mines Ltd** (ASX: **MRD**) (or "the **Company**") is pleased to announce an exploration update of the Company's activities at its 100% owned Mt Ridley project in the Albany Fraser Range Province WA.

High Powered Moving Loop Time Domain Electromagnetics (HP MLTEM) surveying of the Tyrrell's Prospect using the SAMSON receiver has identified several, localised bedrock anomalies (**Figure 1**). The most significant to date has been detected along lines 8B/9B of the HP MLTEM survey. These anomalies on lines 8B/9B have subsequently been followed up with a 3-component fluxgate B-field MLTEM receiver system to confirm the anomalism and model their characteristics/signature in preparation for potential drill testing. Further SAMSON MLTEM surveying at Tyrrell's is ongoing.

Interpreted geophysics plates A and B on lines 8B/9B are modelled at approximately 4,000 - 6,000S conductance and are situated 150m - 250m from the surface. The plates are steeply dipping in a north westerly direction, with modelled surface strike extents of 50-90m and a down dip extent of at least 150m for each conductor.

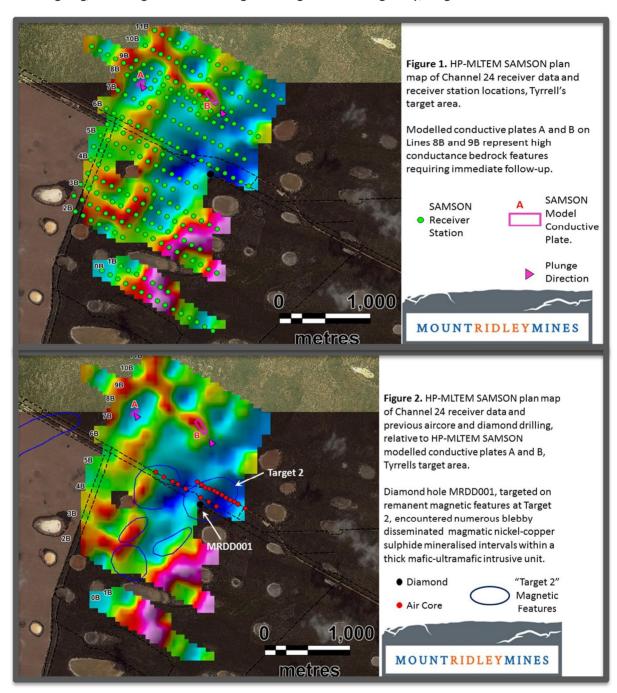
Historical diamond drill-hole MRDD001 was drilled within the Tyrrell's Prospect, approximately 1,000m south-southeast of the current conductivity anomalies. This hole targeted a circular magnetic feature interpreted to represent a buried mafic-ultramafic intrusive complex (**Figure 2**: Target 2 – see ASX Announcement 27 July 2015). This drill hole encountered numerous zones of disseminated blebby magmatic nickel-copper sulphides with visible pentlandite and chalcopyrite in a thick package of magmatic mafic/ultramafic intrusive lithology.

These MLTEM anomalies represent the first unambiguous bedrock conductivity features identified at the Mt Ridley project to date from surface geophysical surveys. The Company believes the conductivity properties of the modelled plate targets are very encouraging due to the mafic/ultramafic magmatic geological setting interpreted from geophysical characteristics in magnetic and gravity data, nearby mafic intrusive surface outcrop, and previous regional drilling within the Tyrrells target area. To date, no diamond or air core hole within the Mt Ridley project has intersected any shale or graphitic bedrock units that may possibly give rise to similar conductivity anomalies.



The Company is currently in the process of planning a combined RC and diamond drilling campaign to test these modelled conductivity features.

Regionally, surface exploration activities on other target areas within the Mt Ridley project are ongoing, including air core and auger drilling on selected gravity/magnetic features.





For and on behalf of the board

Mr Ashley Hood

**Managing Director** 

#### **Competent Persons Statement**

The information in this announcement that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Tony Donaghy who is a Registered Professional Geoscientist (P.Geo) with the Association of Professional Geoscientists of Ontario (APGO), a Recognised Professional Organisation. Mr Donaghy is a technical advisor to the Company. Mr Donaghy has sufficient experience which is relevant to the style and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Mr Donaghy consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### Forward Looking Statements Disclaimer

This announcement contains forward-looking statements that involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.



### **About Mount Ridley Mines Ltd**

Mount Ridley Mines Ltd is a Perth based Australian Exploration Company focusing primarily on projects in the Albany Fraser Range region of Western Australia, 70kms north east of a major port in Esperance. The project has the potential to host major mineral deposits in base and precious metals including nickel, copper, cobalt, silver and gold.

The Company is managed by a team of highly motivated professionals with significant expertise in mineral exploration, mining operations, finance and corporate management with a proven track record of successfully delivering value to shareholders.

Mount Ridley Mines Ltd is actively targeting nickel and copper sulphide deposits in the Albany Fraser Range Province of Western Australia, the site of Independence Groups Nova Nickel-Copper Deposit discovered by Sirius Resources NL. The Company currently has a tenement portfolio of approximately 1,000sq/kms in what is fast becoming the world's most exciting emerging nickel and copper province.





# **Appendix 1** Mt Ridley Mining Limited – Mt Ridley Project – Diamond Drilling JORC CODE 2012.

## **Section1 Sampling Techniques and Data**

Criteria		JORC Code explanation		Commentary
Sampling technique	•	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.  Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used  Aspects of the determination of mineralisation that are material to the Public report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1m samples from which 3kg was pulverised to produce a 30g 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 (e.g. submarine nodules) may warrant disclosure of detailed information.	•	No drilling results are included in this release
Drilling techniques	•	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic etc.) and details (e.g. 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.).	•	No drilling results are included in this release
Drill sample recovery	•	Method of recording and assessing core and chip sample recoveries and results assessed Measurements taken to maximise sample recovery and ensure representative nature of the samples.  Whether a relationship exists between sample recovery and grade and wether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	•	No drilling results are included in this release



	JORC Code explanation	Commentary
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged</li> </ul>	No drilling results are included in this release
Sub- sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and wether quarter, half or all core taken.</li> <li>If non-core, whether riffles, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, 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>	No drilling results are included in this release
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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	No drilling results are included in this release



(ASX: MRD)	ronge 1	MOUNTRIDLETMINES
	JORC Code explanation	Commentary
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physically and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	No drilling results are included in this release
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 Resources estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	No drilling results are included in this release
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 Reserve and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	No drilling results are included in this release
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	No drilling results are included in this release

(ASX: MRD)



(11011 . 1111(D)		
	JORC Code explanation	Commentary
Sample security	The measures taken to ensure sample security.	No drilling results are included in this release
Audits or reviews	The results of and audits or reviews of sampling techniques and data.	No drilling results are included in this release

# **Section2 Reporting of Exploration Results**

Criteria	JORC Code explanation	Commentary
Mineral tenements and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interest, 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> <li>Tenement E 63 /1547. Dundas mineral field. The tenement is 100% held by Mt Ridley Mines Ltd.</li> <li>The tenure is secure and in good standing at the time of writing</li> </ul>
Exploration done by other parties	Acknowledgement and appraisal of exploration by other parties.	Previous exploration has primarily targeted lignite
Geology	Deposit type, geological settings and style of mineralisation.	<ul> <li>Mt Ridley Mines is exploring primarily for magmatic hosted Ni- Cu sulphide.</li> </ul>
Drill hole information	<ul> <li>A summary of all information material for 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 levelelevation above sea level in metres) and 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> </ul>	No drilling results are included in this release



Criteria	JORC Code explanation	Commentary
	• 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.	
Data aggregation methods	<ul> <li>In reporting Exploration results, weighing averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>No assay results are reported</li> <li>No assay results are reported</li> <li>No metal equivalent values have been reported.</li> </ul>
Relationship 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 only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known')</li> </ul>	<ul> <li>The geometry of any potential mineralized horizon is unknown</li> <li>No drilling results are included in this release</li> </ul>
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts would be included for any significant discovery being reported. These should include, but not be limited too plan view of drill hole collar locations and appropriate sectional views.	Appropriate plans have been included in the body of the report
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	Not applicable at this early stage of exploration



Criteria	JORC Code explanation	Commentary
Other substantive exploration data	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 containing substances.	<ul> <li>A detailed aeromagnetic survey was completed in October 2014 and a detailed ground gravity survey was completed in March 2017.</li> <li>The ground moving loop time domain electromagnetic (MLTDEM) survey was targeted based on the interpretation of the magnetic and gravity datasets for intrusive features that could potentially be associated with magmatic hosted nickel sulphides. The magnetic and gravity data and interpretation have been discussed in previous ASX releases and exploration updates.</li> <li>Ground ML-TDEM surveys have been undertaken that have identified conductive features.</li> <li>The target conductors have not been intersected or confirmed by drilling and downhole EM.</li> <li>Some uncertainty exists in the interpretation of the surface EM data due to the highly conductive overburden.</li> <li>The nature of the conductive features is currently unknown and untested.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (e.g. 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, providing this information is not commercially sensitive.</li> </ul>	<ul> <li>RC and Diamond drilling are being planned to follow-up on the ML-TDEM surveying results.</li> <li>ML_TDEM surveying of additional lines and infill is currently underway to test other interpreted intrusive features in the vicinity.</li> </ul>