

12 December 2016

**Company Announcements Office, ASX Ltd** 

## **CSA Review Summary**

**Mount Ridley Mines Ltd** (ASX: **MRD**) (or "**the Company**") is pleased to announce that the Company's independent technical review has been received and summarised below.

The CSA Global - Mt Ridley Review has been well received by the Board and the Company has already been active in implementing exploration techniques and methods on a regional scale to best place the Project and the Company for success in 2017.

The Company appreciates the dedicated efforts by CSA's Nickel expert Tony Donaghy and CSA Global for the review and look forward to a successful partnership at the Company's flagship Mt Ridley Project.

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.

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## **Executive Summary – Review Key Findings:**

The Mt Ridley Nickel-Copper sulphide project has demonstrated potential for discovery of magmatic nickelcopper sulphide. The geology and geochemistry of the mafic-ultramafic intrusive-hosted nickel-copper sulphide systems drilled to date offer significant encouragement to continue exploration efforts.

The Mt Ridley project area most likely represents a previously unidentified Fraser Zone crustal element with what appear to be identical geochemical, geological and geophysical characteristics. The Fraser Zone is the host tectonic terrane to the Nova nickel-copper sulphide ore body some 400 kilometres to the northeast.

Previous exploration has apparently followed a somewhat narrow focus and an exploration model based on an incomplete understanding of the geological processes and physical properties of tholeiite intrusivehosted nickel sulphide systems. Exploration targeting has been limited to follow-up on selected regional aeromagnetic anomalies interpreted to be intrusive complexes. To date, only four such features have received detailed follow-up – Targets 1, 2, 19 and 20. Other features, and other applicable techniques such as regional gravity and regional geochemistry, have not been tested. The great majority of the project area remains essentially unexplored, with many features indicated from the aeromagnetic and ongoing gravity data collection requiring follow-up exploration. Also, potential exists for intrusive complexes in the area with poor or no recognised aeromagnetic expression. To avoid missed opportunity, a targeting approach of utilising as a minimum a combined magnetics and gravity data set is recommended.

Initial assay geochemistry conducted by MRD utilised a very basic eight-element package that did not allow for meaningful assessment of mineralisation potential. A newer, expanded assay package now in use allows comparative geochemistry within the project as well as correlation with the Fraser Zone mafic intrusive suites from publicly available data. Such correlation shows that the Mt Ridley intrusive complexes drilled to date share telling similarities in magmatic and mineralisation history with the Fraser Zone mafic intrusives, and particularly the mineralised intrusive system that hosts the Nova orebody. Texturally, the mafic-ultramafic intrusive suites comprise for the main part varitextured gabbronorites, the varitexture indicating significant magmatic interaction with the surrounding country rocks, an essential process in forming magmatic nickel-copper sulphides. Albeit of low grade due to low sulphide content in the disseminated systems intersected to date, the tenor of the sulphides, or the nickel content of the sulphide phase, is moderate at approximately 3.5 to 4% nickel in sulphide. This is average for a true magmatic nickel sulphide system and indicates that sulphur saturation has occurred sufficiently early in the magmatic history to form



good quality nickel sulphides. Such consistency of tenor offers encouragement that nickel grades can be reasonably expected to increase linearly with sulphide content.

The great majority of the drilling (14 of 16 diamond drill holes) has been concentrated into a limited area of target 19, leading to redundancy of drill and borehole geophysical data in such a limited space without consideration of the required size of target footprint. Within Target 19, targeting was driven primarily by poorly constrained geophysical interpretations, particularly of magnetotelluric data. The anomalies thought to be indicative of bedrock conductors interpreted in the 2D magnetotelluric data inversions have subsequently been repudiated by more sophisticated 3D inversion of the data. This 3D inversion shows these features are not real and are artificial artefacts of the 2D inversion process caused by a widespread highly conductive cover sequence. Such highly conductive cover means that magnetotellurics is ineffective as a direct detection technique in this type of terrain.

Target 19 has demonstrated excellent potential for hosting good tenor magmatic nickel-copper sulphides and remains open in all directions. Further exploration is recommended, utilising an approach of drilling and borehole geophysics that maximises area coverage while covering off the expected target footprint. The limited exploration conducted to date at Target 2 and Target 20 have not closed out opportunity for discovery at those targets. Target 2 offers encouragement for immediate continued exploration as previously identified ground EM anomalies have not been adequately tested. Further work is needed to constrain these EM anomalies prior to further drilling.

Detailed interpretation of the magnetic and gravity data is recommended to provide a geological framework for exploration, not just for nickel-copper, but also for other base metals and gold. To constrain the geological framework, regional geochemistry of bedrock is also recommended on traverses across features, structures and horizons identified from the geophysical data as areas of interest for these commodities. The area is considered prospective for Broken Hill-type Lead-Zinc deposits, and although of a lesser priority exploration should remain opportunistic to gold. Base metal prospectivity is interpreted to be greatest at the transition from magnetically complicated areas to areas that are magnetically quiescent, as this may represent the transition from active rifting to sag-phase sedimentation analogous to the Broken Hill orebody setting in NSW.

Sincerely,

Tony Donaghy, P.Geo Principal Consultant – Nickel CSA Global Pty Ltd