MACARTHUR Minerals

News release

For Immediate Dissemination

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Macarthur seeks Venture Partner to further explore its nickel projects in Western Australia

Macarthur Minerals Limited (TSX-V: MMS) (ASX: MIO) (the "Company" or "Macarthur") updates on the potential for cobalt and nickel mineralisation at its Lake Giles Iron Ore Project in Western Australia, following recent rock chip sampling that coincided with the Company's magnetite infill drilling.

In 2018, a rock chip sampling program across the Snark prospect discovered samples containing the cobalt mineral asbolite with assays returning up to 2.6% cobalt and 2.0% nickel[1]. In May 2018, a Moving Loop Electromagnetic (MLEM) geophysical survey was undertaken across the area that identified two compelling conductors coinciding with surface geochemical anomalies[2]. In October 2019, the Company undertook further rock chip sampling confirming anomalous Nickel, Cobalt and Chromium grades that warrant further exploration.

Macarthur is currently focusing on its Lake Giles Iron Ore Project and is seeking a venture partner to further advance exploration of its nickel projects.

Cameron McCall, President and Executive Chairman of Macarthur Minerals commented:

"On the back of the Company's initial exploration for nickel and base metals, the Company has undertaken a comprehensive review of its previous drilling and soil sample assays and targeted several areas for on-ground exploration. Recent exploration was successful in extending the anomalous nickel and cobalt rock samples along the extent of the bedrock conductor identified in mid-2018. The Company is now in the process of seeking a venture partner interested in furthering this opportunity at Lake Giles."

Lake Giles Nickel and Cobalt Potential

The Company has successfully identified two prospective areas for nickel mineralisation at its Lake Giles Project, Snark and Moonshine North. The Project lies within the Yerilgee Archean Greenstone belt with geology consisting of volcanic sequences mainly comprising of high-Mg basalts, komatiitic and ultramafic flows with numerous interflow banded iron formations (BIFs). The ultramafic rocks at Lake Giles are considered a Kambalda komatiite type. The extensive komatiite sequences of thick olivine cumulate flow units and felsic-intermediate volcanism indicates that the area fits a regional geological criterion for hosting komatiite nickel sulphide deposits such as the Mt Keith, Maggie Hays and Nova nickel mines within the Kalgoorlie Terrane (Figure 1).

Snark Nickel and Cobalt Targets

Exploration by Amax Exploration ("Amax") in the 1970's identified a potential nickel sulphide target in the Snark area. Rock samples collected from a gossan on the edge of a strong induced polarisation ("IP") anomaly returned assays to a maximum of 1.04% nickel.

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[1] Press Release filed March 5, 2018, titled "2.6% Cobalt and 2.0% Nickel Discovered at Macarthur Minerals' Lake Giles Iron Ore Projects in WA"

[2] Press Release filed August 28, 2018, titled "Macarthur Minerals Identifies Multiple Priority Metal Sulphide Targets at Lake Giles"

Subsequent exploration by Kalgoorlie Prospector, Mel Dalla-Costa, identified material suspected to be asbolite (a cobalt and nickel mineral) at the base of a 1.5m deep costean previously excavated by Amax.

Mapping completed by Keith Fox in 2002 for Internickel Australia Pty Ltd, identified two targets the subject of Macarthur's recent focus (Figure 2). Target A is based on aeromagnetic data showing a possible presence of lava channels. Macarthur collected several rock samples near this target focussing on the shallow costean excavated by Amax. Assay results returned up to 2.01% nickel and 2.61% cobalt (Table 1).

Target B defines a geophysical anomaly depicted from a historical aeromagnetic survey and recent MLEM survey described in further detail, below.

Snark Surface Geochemical and Drilling Anomalies

Macarthur has drilled several reverse circulation ("RC") holes in the vicinity of the targets described above and intersected anomalous nickel in holes LGRC0010 and LGRC0015 (Figure 2). Intercepts of interest include:

LGRC_0010 (288m): 128 meters @ 0.17% Ni (from 108m to 236m) including 1m @ 0.29% Ni
LGRC_0015 (168m): 106 meters @ 0.15% Ni (from 62m to 168m)

Rock chip samples have been collected across the Snark area and confirm anomalous nickel and cobalt across several areas. One area of interest includes float material containing the mineral asbolite returning assays up to 2.61% cobalt and 2.01% nickel (Table 1).

Table 1. Selected assays from the 2018 and 2019 rock chip sampling program.

Sample ID	Co %	Ni %	Cu ppm	Mn %
SNRC001	1.68	1.11	240	24.58
SNRC002	2.61	2.01	230	23.95
SNRC003	1.92	1.33	270	22.00
SNRC004	1.57	1.12	250	14.47
SNRC005	0.74	0.55	90	6.72
SN10020	1.86	1.27	200	

All samples were collected at 781,596mE, 6,698,934mN, MGA94, Zone 50

Snark MLEM Conductor

The MLEM survey at Snark covered an area of 310 ha and comprised 14 lines extending 1.2km at 200m spacing. Data was collected from 13 stations per line for a total of 182 stations.

The survey identified two bedrock conductors at Snark, SC01 and SC02 (Figure 2). SC01 is interpreted on most of the MLEM lines and is coincident with a magnetic high. On survey line 72150N, a good response was observed with well-defined twin peaks and decay analysis showing good exponential shape at late time which is characteristic of a bedrock conductor. SC01 is considered a high priority for drill testing and a drill hole, SC01_DH has been planned to intersect the conductor at 162m.

Conductor SC02 is only interpreted on the northernmost lines and is not coincident with a magnetic anomaly indicating a potential sedimentary source. The anomaly possesses good characteristics however the strike extent and lack of coincident magnetic anomaly are detractive qualities and indicative of a possible stratigraphic/sedimentary source.

Snark is considered a high priority nickel target to be tested by drilling. Interpretation and drill hole planning was conducted by Newexco with a drill hole planned to intersect the conductor at the point where it displays a high EM response (Table 2).

An initial drilling program to a depth of 200 m is warranted to further understand the nickel potential of this conductor.

Table 2. Planned drill hole to intersect MLEM conductor at Snark.

Hole ID	Easting	Northing	Dip	Azimuth	Length	Intersection
SC01_DH	782743	6698662	60	50	200	162

Next Steps for work on tenements

The Company has identified two areas prospective for sulphide hosted base metal deposits based on historical drill results. Most historical drilling for the Company's Lake Giles Iron Projects has been relatively shallow (<60m) and regionally, Kambalda style nickel mineralisation has only been found at depth. However, in several deep diamond holes, zones of semi-massive sulphide have been intersected. The interpretation of historical aeromagnetic data suggests possible presence of lava channels and Komatiite flows which are favourable for nickel-sulphide deposits.

The Company is seeking a venture partner to further the understanding of the nickel potential of the tenements with a drilling program warranted on targets identified to date.

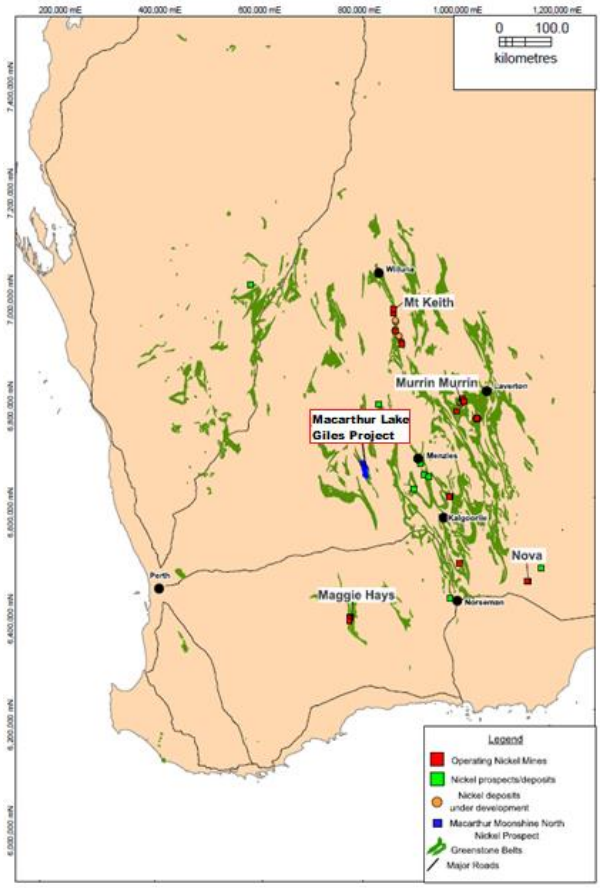

Figure 1. Macarthur Lake Giles Project Location and surrounding major Nickel Projects.

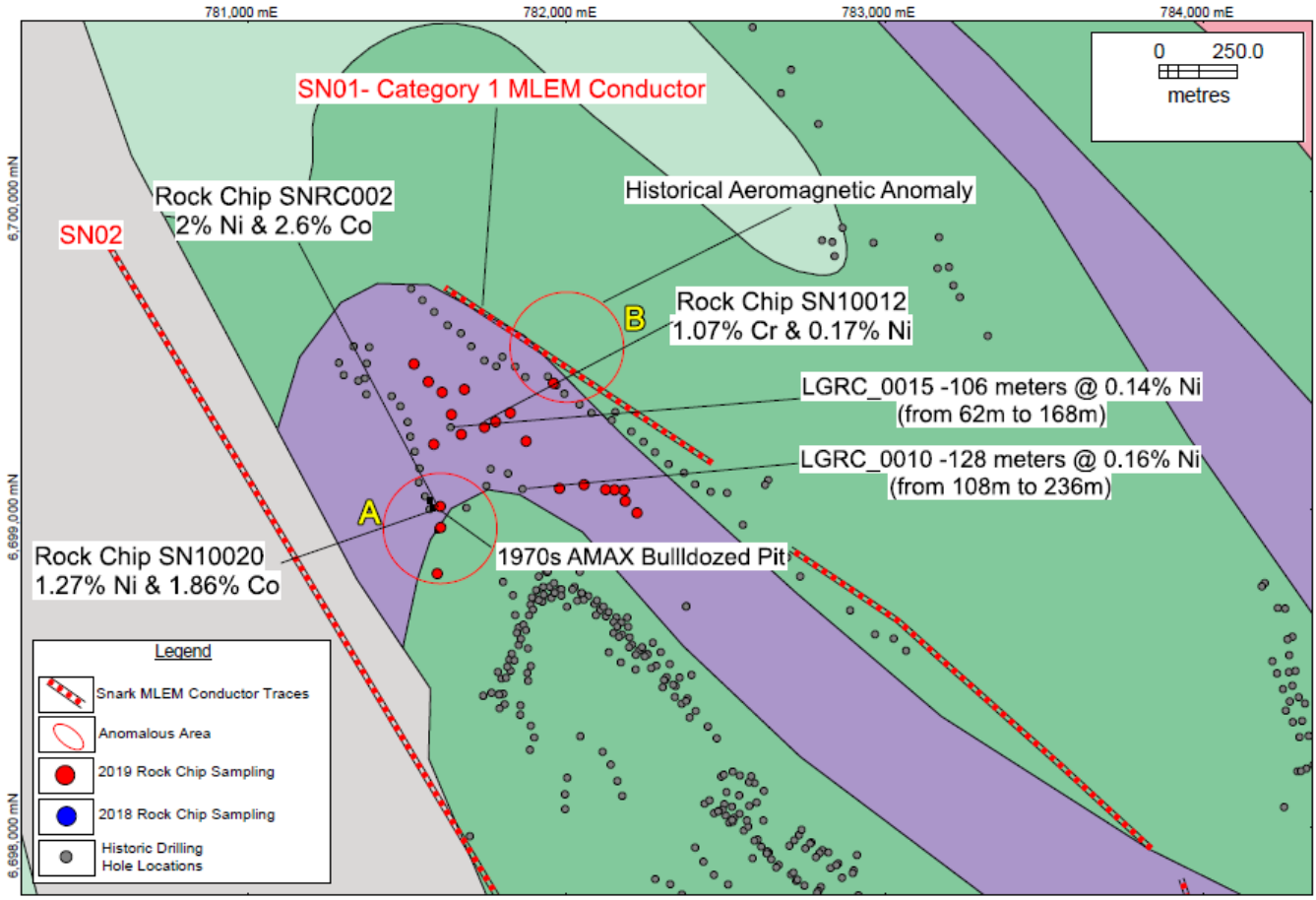

Figure 2. Location of rock samples containing elevated cobalt and nickel and Macarthur Minerals drill holes containing intercepts of anomalous nickel.

On behalf of the Board of Directors, Mr Cameron McCall, Executive Chairman

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Qualified person

Mr Andrew Hawker, BSc. Geol, MAusIMM and MAIG, a member of the Australian Institute of Geoscientists is a full-time employee of Hawker Geological Services Pty Ltd and a Qualified Person as defined in National Instrument 43-101. Mr Hawker has reviewed and approved the technical information contained in this news release.

Company profile

Macarthur is an iron ore development, gold and lithium exploration company that is focused on bringing to production its Western Australia iron ore projects. The Lake Giles Iron Project mineral resources include the Ularring hematite resource (approved for development) comprising Indicated resources of 54.5 million tonnes at 47.2% Fe and Inferred resources of 26 million tonnes at 45.4% Fe; and the Moonshine magnetite resource of 710 million tonnes (Inferred). Macarthur has prominent (~1,281 square kilometer tenement area) gold, lithium and copper exploration interests in Pilbara region of Western Australia. In addition, Macarthur has lithium brine Claims in the emerging Railroad Valley region in Nevada, USA.

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Caution Regarding Forward Looking Statements

Certain of the statements made and information contained in this press release may constitute forward-looking information and forward-looking statements (collectively, "forward-looking statements") within the meaning of applicable securities laws. All statements herein, other than statements of historical fact, that address activities, events or developments that the Company believes, expects or anticipates will or may occur in the future, including but limited to statements regarding: the proposed strategy regarding core mining, road and rail inputs at the Project; anticipated increases in annual production at the Project; anticipated decreases in Project costs; the possible reclassification of current inferred mineral resources on the Project as indicated mineral resources in the future; expected completion of the FS on the Project containing a new reserve calculation and a new economic assessment; the granting of a license for the Menzies rail siding; the status of the MRRT; and plans to secure mining approvals under the Mining Act, are forward-looking statements. The forward-looking statements in this press release reflect the current expectations, assumptions or beliefs of the Company based upon information currently available to the Company. With respect to forward-looking statements contained in this press release, assumptions have been made regarding, among other things, the reliability of information prepared and/or published by third parties that are referenced in this press release or was otherwise relied upon by the Company in preparing this press release. Although the Company believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and no assurance can be given that these expectations will prove to be correct as actual results or developments may differ materially from those projected in the forward-looking statements. Factors that could cause actual results to differ materially from those in forward-looking statements include but are not limited to: unforeseen technology changes that results in a reduction in iron or magnetite demand or substitution by other metals or materials; the discovery of new large low cost deposits of iron magnetite; the general level of global economic activity; future changes in strategy regarding core mining, road and rail inputs with respect to the Project; final Project costs varying from those determined from the EOI program; failure to successfully negotiate a BOO arrangement for the Project; failure to complete the FS; failure of the FS to reflect currently anticipated increases annual production and decreases in expected costs at the Project; the results of infill drilling being insufficient to reclassify current inferred mineral resources on the Project as indicated mineral resources; failure to receive a license for the Menzies rail siding; failure to repeal the MRRT; and failure to obtain mining approvals under the Mining Act. Readers are cautioned not to place undue reliance on forward-looking statements due to the inherent uncertainty thereof. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. The forward-looking statements contained in this press release are made as of the date of this press release and except as may otherwise be required pursuant to applicable laws, the Company does not assume any obligation to update or revise these forward-looking statements, whether as a result of new information, future events or otherwise.