MACARTHUR Minerals

News release

For Immediate Dissemination

24 March 2020

Macarthur set to advance Moonshine nickel prospect with EIS co-funded drilling

Macarthur Minerals Limited (TSX-V: MMS) (ASX: MIO) (the "Company" or "Macarthur") has been awarded a grant valued at $85,000 from the Western Australian Government to support drilling of a diamond drill hole at its Moonshine North Nickel Prospect, located within its Lake Giles Iron Project in Western Australia.

The grant is provided under the Exploration Incentive Scheme (EIS) administered by the Department of Mines, Industry Regulation and Safety (DMIRS). The program provides $5 million a year to encourage innovative drilling in greenfields and under-explored areas of the State and offers up to 50 per cent contribution to drilling costs.

Highlights

- The EIS grant of $85,000 was awarded to Macarthur for a diamond drilling program targeting nickel mineralisation at Moonshine.
- Deep drilling is planned, targeting two prospective targets:
    - A ~20,000 Siemens plate conductor (MC02) geophysical anomaly.
    - An anomalous nickel horizon found in a nearby drill hole (LGDD_054) close to surface. This hole intersected 19 meters @ 1% Ni (from 8 meters to 27 meters) including 1 meter @ 1.42% Ni (from 13m). This weathered surface expression could be a secondary dispersion of a massive sulphide source at depth.

Moonshine Nickel Prospect

The Moonshine North Nickel Prospect lies within the Lake Giles Iron Project located 150 kilometres northwest of Kalgoorlie and 450 kilometres north east of Perth in Western Australia.

The Project area covers part of the Yerilgee Archean Greenstone belt within the Yilgarn craton. The geology consists of volcanic sequences mainly comprising of high magnesium basalts, komatiitic and ultramafic flows with numerous interflow banded iron formations (BIFs). The ultramafic rocks at Lake Giles are considered of 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 those existing nickel mines within the Kalgoorlie Terrane (Figure 1).

Moonshine Targets

Anomalous nickel values of up to 1.42% were found within first 30 meters of historical diamond drill hole LGDD_054 from the Moonshine North prospect (Table 1).

This is uniquely high in nickel concentration in comparison to subsequent drill hole data. The elevated nickel values are within the weathered zone and may be classified through different theoretical explanations. One being that the mineralised zone is related to a stratabound magmatic sulphide source (secondary dispersion from a primary massive sulphide source), the other a lateritic supergene deposit i.e. a secondary by-product of chemical weathering producing a concentration of nickel within the saprolite regolith zone. Diamond hole LGDD_005, drilled for magnetite exploration in close proximity to the target was also investigated, however was not analysed for nickel or PGEs (Figure 2, Table 2).

Logging of LGDD_054 and LGDD_005 confirms that disseminated sulphides are abundant throughout the sequence including some sulphide mineralization within quartz veins believed to be a product of hydrothermal fluid convection. Metasedimentary rocks are abundant in this section that have been subject to significant alteration and may be associated with a volcanic massive sulphide deposit.

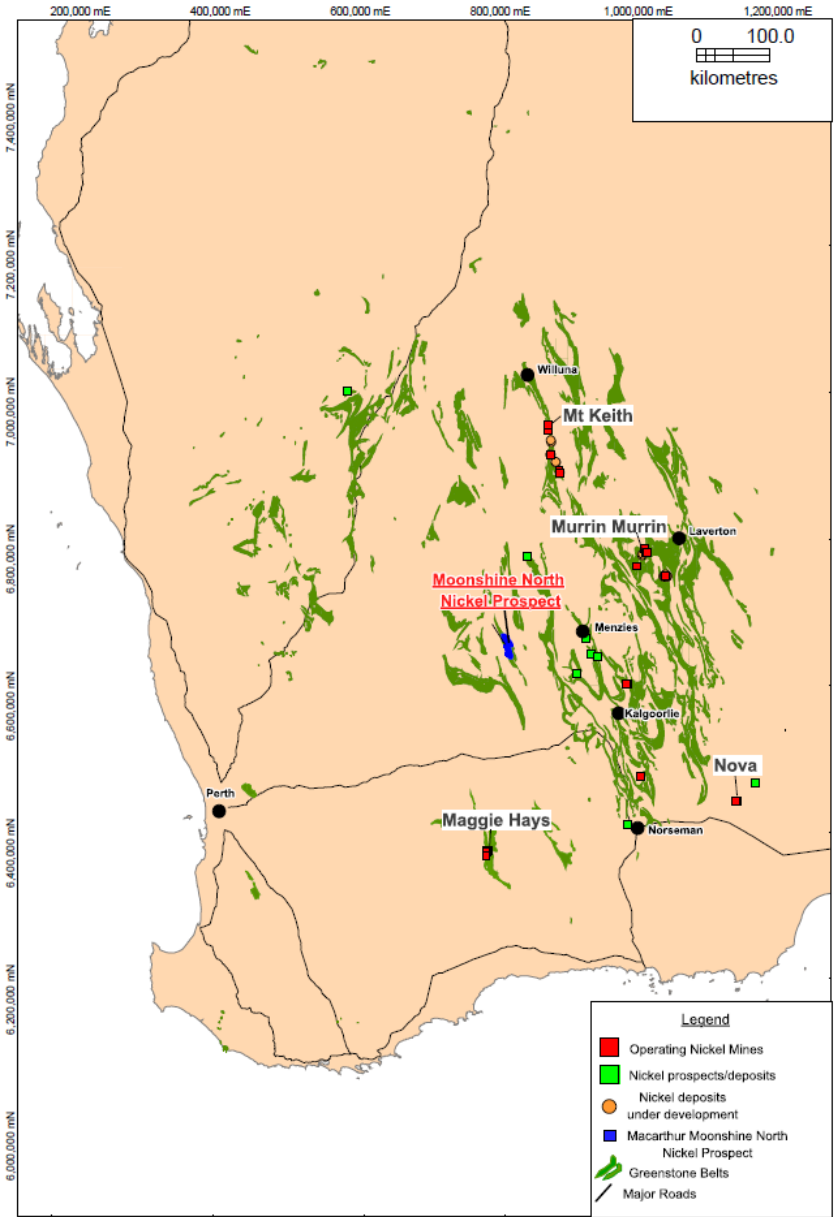

Figure 1. Moonshine North Nickel Prospect Location Map.

In 2018, the Company completed a MLEM survey successfully delineating two bedrock conductors, MC01 and MC02. MC01 and MC02 are interpreted to be the same geological source offset by faulting[1] . There was a standout anomaly on Line 50600N which had the highest amplitude Bz response and a conductance of 20,000 Siemens more than twice that used for modelling the same conductor on adjacent lines. Interpretation of the data recommended a target drill hole into MC02 and on or close to line 50600N. Although the Moonshine North prospect has been previously drilled for magnetite, no holes have adequately tested the conductor with historical drilling typically limited to a depth of 250m.

Following the MLEM survey, Macarthur commenced a two-hole Reverse Circulation (RC) drilling program in late 2018 targeting the identified conductor (Table 1). Both holes intersected massive and semi-massive sulphides at end of hole, however, were unsuccessful in effectively testing the conductor. Assay results for the two drill holes and historical holes did not identify any economic mineralisation, however trace elements such as chromium and potassium indicate marginal zones of potassic alteration that may be a distal expression of other mineralization or an ore deposit at depth. Significant sulphides intersected at E.O.H indicates the conductor was only just intersected.[2]

Table 1. Significant nickel assay intervals from diamond hole LGDD_054 drilled at Moonshine.

Hole ID	m From	m To	Interval	Ni %
LGDD_054	10.5	22	11.5	1.03
Including	14.0	15.0	1.0	1.42

Table 2. Drill hole locations

Hole ID	Type	EOH (m)	Easting (mE)*	Northing (mN)*	Dip
LGDD_054	DDH	370	788,083	6,674,746	-90
LGDD_005	DDH	175	788,118	6,674,791	-60
18MNRC001	RC	198	788,035	6,674,937	-60
18MNRC002	RC	197	787,947	6,675,113	-60

*GDA94, Zone 50

Planned Drill Hole

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

[2] Press Release filed January 15, 2019, titled "Macarthur Minerals Update on Nickel Exploration at Its Lake Giles Project in Western Australia"

A 460-meter depth diamond drill hole is planned (CFDD_2) to target two separate prospective horizons. The anomalous nickel horizon previously intersected by nearby historical drill hole LGDD_054 close to surface and the MC02 conductor plate identified in the 2018 MLEM survey at depth (Figure 2). This drill hole will also provide a better understanding of the genesis and lithogeochemistry of the komatiites at the Moonshine Nickel Prospect and aid further targeting for the possible discovery of a komatiitic nickel ore deposit.

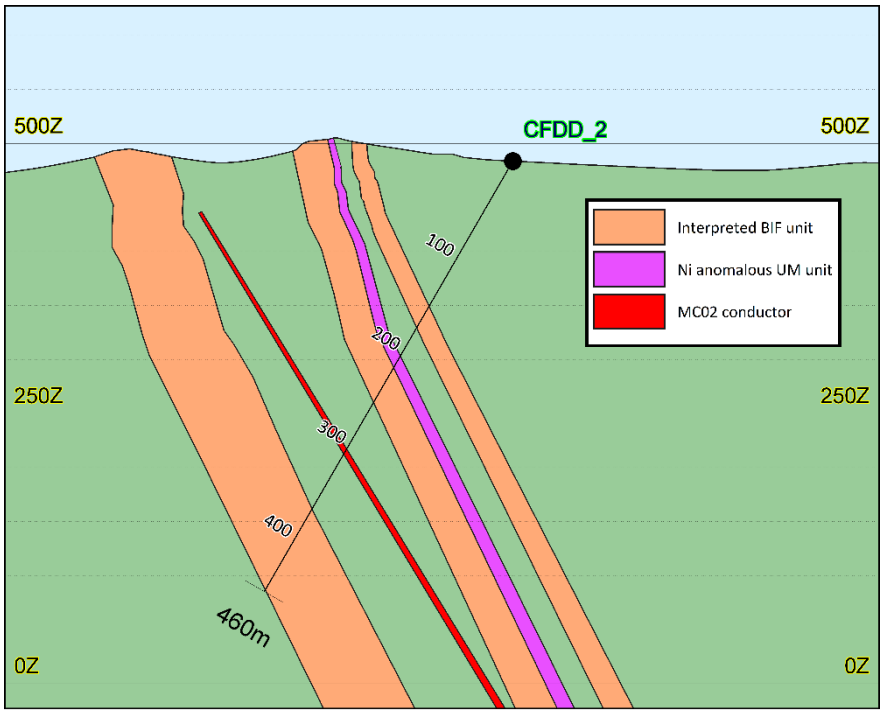

Figure 2. Map showing cross section of planned hole CFDD_2 illustrating the two targets; anomalous nickel horizon previously intersected by nearby hole LGDD_054 with up to 1.4% Ni close to surface, and MC02 conductor extending at depth detected from the 2018 MLEM survey.

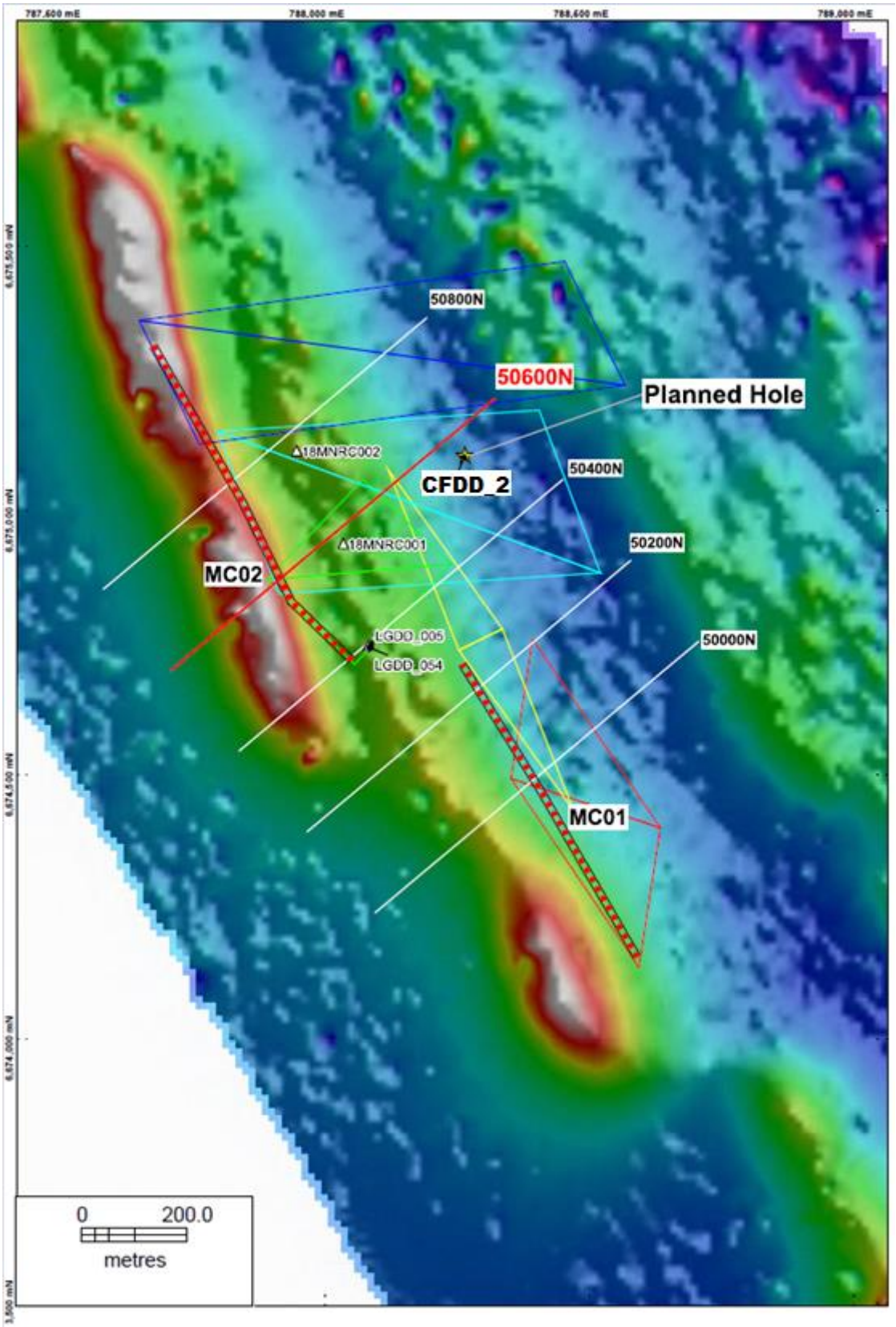

Figure 3. Total magnetic intensity from the 2018 MLEM survey with historical drill holes and planned drill hole location.

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.