

17 June 2020

MACARTHUR MINERALS FIRST QUARTER UPDATE

Macarthur Minerals Limited (ASX: MIO) (TSX-V: MMS) (the “Company” or “Macarthur”) is pleased to provide an update to Shareholders outlining an active First Quarter 2020 in the ongoing development of the Company’s flagship, Lake Giles Iron Project. The Company is pleased to also provide an update on the very positive early exploration results and next stage exploration program across the iron ore, gold, nickel and cobalt projects in Western Australia.

FIRST QUARTER HIGHLIGHTS

- ❖ Macarthur responded swiftly to the onset of the global Covid-19 pandemic. The Company has continued its highly productive “business as usual” focus with limited disruption to activities over the last quarter.
- ❖ CSA Global Pty Ltd has been engaged to update the resource model with results from the infill drilling. Several drill holes intersected a zone of high-grade magnetite mineralisation previously identified at the Moonshine North deposit.
- ❖ The Lake Giles Iron Project Feasibility Study (Feasibility Study), is well underway following the completion of the infill drilling program in December 2019.
- ❖ The Company maintains confidence in its objective of working with service providers to achieve conditional capacity allocation on the rail network and through Esperance Port during 2020 to support completion of the Feasibility Study. This key achievement will be a milestone for the Company and will also vindicate the integrity of the open access rail and port infrastructure regime in the region.
- ❖ Despite robust iron ore prices, the Kalgoorlie to Esperance rail line and Esperance Port iron ore export infrastructure has only seen a total run-rate of iron ore shipments during the last four quarters to 31 March 2020 of just over six million tonnes. The combined run-rate is far less than the notional 15-20 Mtpa system capacity and is considerably less than the peak run-rate achieved by Cliffs Natural Resources which operated the Koolyanobbing mine prior to departing Australia in mid-2018.
- ❖ A drilling program was completed at the Hillside Gold and Copper Project in the Pilbara region of Western Australia to test potential supergene and hypogene mineralisation along the majority of a 14-kilometre Gossan line where previous rock chip sampling identified anomalous copper (Figure 1). This program also tested outcropping quartz vein mineralisation identified through prospecting activities. Macarthur’s Joint Venture Partner, Fe Limited (FEL) are due to complete a Fixed Loop Electromagnetic (FLEM) survey across several targets at the Hillside project in July 2020.
- ❖ New York based EAS Corporate Advisors have been appointed to assist in the financing strategy for the Lake Giles Iron Project. EAS Advisors have participated in over US\$6 billion of transactions to date.
- ❖ Northland Securities Inc, which acts as OTCQB Sponsor and Advisor to the Company has submitted a Form 211 with the Financial Industry Regulatory Authority (“FINRA”) to satisfy requirements of FINRA Rule 6432, as part of the requirement to initiate quotation as defined in rule 15c2-119(e)(i) under the Securities Exchange Act of 1934 (“1934 Act”).

Premium Australian iron ore



- ❖ Macarthur was admitted to the Official List of Australian Securities Exchange (ASX) on 4 December 2019 and commenced quotation of its securities on ASX: MIO on 6 December 2019. Over the period from 6 May 2020 the Company's securities have been trading on ASX within a range of A\$0.13 to A\$0.21. Over the same period, the Company's securities have been trading on TSXV within a range of C\$0.14 to C\$0.23. Post listing on the ASX, the securities on both exchanges now appear to be synchronising well.

Mr Cameron McCall, Executive Chairman of Macarthur Minerals commented:

"The Iron ore price has remained strong during the Covid-19 pandemic trading between US\$81.65 and US\$103.59 for 62% Fe ore, and this price stability is creating momentum in the global iron ore industry. Due to the strength and stability of the global iron ore market, Macarthur is examining project opportunities that have the potential to generate early revenue flows including a possible acceleration of development of the Company's Ularring Hematite Project at Lake Giles.

The Company's core focus will remain on delivering a high-quality, low-impurity magnetite fines product (+65% Fe) at its Lake Giles Iron Project which will target Asian steel mills that are focused on producing quality steel products, enhanced furnace efficiencies, reduced consumption of coking coal and improved environment emissions standards.

During the last quarter our Joint Venture partner Fe Limited completed the sale of its Evanston Iron Ore Royalty for \$7m and announced priority exploration of the Company's Hillside tenements in the Pilbara region.

It's pleasing the Company's share price has been resilient through a very volatile period in the market."

ROUTE TO MARKET

Macarthur has continued to progress discussions with key rail and port service providers, as well as the Western Australian Government, to develop the capacity and infrastructure solutions which are necessary to secure a fully contracted route to market for the Lake Giles Iron Project.

Achieving this will be a milestone for the Company and it will also vindicate the integrity of the open access rail and port infrastructure regime in the region which, despite robust iron ore prices, has only seen a total combined run-rate of iron ore shipments along the Kalgoorlie to Esperance rail line and through Esperance Port during the last four quarters to 31 March 2020 of just over 6 million tonnes. The current run rate remains significantly below the notional annualised capacity of the system and well below the historic annualised run rates achieved by Cliffs Natural Resources prior to its departure from the Australian market in mid-2018.

RCD / CONVEYOR SOLUTION AT ESPERANCE

Macarthur is working collaboratively with rail and port service providers to develop a unique infrastructure solution which the Company considers will provide the potential for future growth in trade through the Esperance Port without disruption to existing users. The Company engaged Engenium Pty Ltd to undertake a conceptual engineering design study in March for an "Off-Port" solution which involves construction of a standard rotary car dumper (RCD) outside the Esperance Port and connected by a covered tube conveyor feeding into an on-port 300kt iron ore storage shed. That design study has been completed and the Company is about to commission further conceptual engineering design study work to be completed during June/July for an "On-Port" solution which would involve the construction of a hybrid RCD on an area of land within the boundary of the Esperance Port at a suitable location, linked by a conveyor that will connect to the on-port 300kt iron ore storage shed.



Following completion of the design work, the Company will work with rail and port service providers to select a preferred development option for its unloading infrastructure, which has the potential to facilitate an increase in throughput capacity at Esperance Port for other emerging miners in the region, subject to available rail and ship-loader capacity.

Macarthur supports open access principles for regional infrastructure and is proposing to contract on a firm take-or-pay basis for a minimum 10-year period. The Company considers that a take-or-pay contract structure is a model that can offer a genuinely sustainable revenue stream for rail and port service providers in a region which could be exposed to the potential for movements in the more volatile <62% Fe product market, especially if not underpinned by firm take or pay commitments. Macarthur's contracting and infrastructure solution is therefore intended to demonstrate its commitment, through the development of the Lake Giles Iron Project, to building sustainable growth and long-term job security in the region.

Management is optimistic that, with the continued positive co-operation and engagement of rail and port service providers, and the State of Western Australia, agreements providing a conditional route to market pathway that will facilitate completion of its Feasibility Study for the Lake Giles Iron Project, can be achieved during 2020. The Company remains committed to working towards securing unconditional above and below rail paths and port capacity allocations as soon as possible after that.

COVID-19 IMPACTS

Macarthur responded swiftly to the onset of the global Covid-19 pandemic. The Company has continued its highly productive "business as usual" focus with limited disruption to activities over the last quarter. The impacts of travel restrictions on operations have so far been minimal, but the Company will continue to monitor whether sustained access restrictions may impact timing for completion of some components of the Feasibility Study for the Lake Giles Iron Project, including the conduct of seasonal environmental surveys.

EARLY REVENUE IRON ORE OPPORTUNITIES

Macarthur continues to monitor and assess the potential for opportunities to transition to early revenue generating iron ore operations, including a possible acceleration of development of the Company's Ularring Hematite Project at Lake Giles. The Company will ensure that the development of any potential opportunity compliments (and does not detract from) the pathway and timeframes to production of its flagship high grade Moonshine Magnetite deposits at Lake Giles. The Lake Giles Iron Project remains the Company's core focus.

SUMMARY OF PROGRESS ON IRON ASSETS

Moonshine Magnetite Infill Drilling Program

The majority of the Moonshine and Moonshine North deposits are defined by drill hole spacing of 200m X 200m and classified as an Inferred Mineral Resource of approximately 710 mt at 30.2% Fe¹.

The infill drilling program was designed at closer drill hole spacing to upgrade the resource classification for some of the Moonshine and Moonshine North deposits. The planned program included 21 RC drill holes and 9 diamond drill holes. The program concluded with a total of 3,674 meters of RC drilling and 2,673 meters of diamond drilling completed.

¹ NI43-101 Technical Report filed June 17, 2019, titled "Macarthur Minerals Limited, Preliminary Economic Assessment Lake Giles Iron Project, Western Australia", NI43-101 Technical Report – Preliminary Assessment



The drilling program was designed with the goal of upgrading the resource classification to include Indicated and Measured Mineral Resources. The updated mineral resource, when completed, will underpin the Feasibility Study to be completed for the Lake Giles Iron Project.

Macarthur has now engaged CSA Global Pty Ltd to complete an updated resource model and classification.

Moonshine North Magnetite Results

Reverse Circulation and Diamond drilling at the Moonshine North deposit successfully intersected the previously identified high grade magnetite mineralisation. Assay results for intervals of high-grade magnetite are provided in the table below. (NOTE these are drill intersections and not true widths).

| Hole | mFrom | mTo | Fe% | SiO2% |
|-----------|-------|-----|-------|-------|
| LGRC_2160 | 131 | 168 | 50.28 | 12.64 |
| Including | 139 | 155 | 55.44 | 8.03 |
| and | 141 | 145 | 61.00 | 6.28 |
| LGRC_2166 | 115 | 149 | 50.07 | 15.67 |
| Including | 127 | 150 | 55.45 | 9.49 |
| and | 129 | 148 | 60.03 | 7.02 |

Ore grade XRF assays were previously released to the market on 10 December 2019 and 17 January 2020. Samples were subsequently submitted for DTR analysis to determine the magnetite fraction and concentrate grade.

DTR analysis has been completed for 25 holes intersecting magnetite mineralisation at the Moonshine and Moonshine North deposits. DTR assays were completed for sample composites ranging from 3m to 5m intervals based on head grade XRF assays and geological logging.

Average concentrate grades across holes ranged from 63.7% Fe to 68.9% Fe with mass recoveries ranging from 15.5% to 51.6% (Table 1). Weighted average ore grades across mineralised intervals approximated 30.4% Fe with weighted average DTR concentrate of 66.6% Fe with a mass recovery of 31.2%. These data are in accordance with the mineral resource estimate at 30.2% Fe and 31.4% mass recovery¹.

Several holes intersected intervals with high DTR mass recovery and iron concentrate grades as shown in the table below.

| Hole | mFrom | mTo | DTR Mass Recovery % | Fe Concentrate % |
|-----------|-------|-----|---------------------|------------------|
| LGRC_2165 | 52 | 110 | 39.9 | 68.88 |
| LGRC_2160 | 96 | 179 | 41.3 | 68.78 |
| LGRC_2147 | 139 | 199 | 42.4 | 67.17 |
| Including | 139 | 167 | 45.2 | 66.63 |
| LGRC_2166 | 114 | 149 | 51.6 | 68.61 |



Exploration Licence E30/522

On 23 April 2020 Macarthur increased its landholding in the Lake Giles region of Western Australia with an application for Exploration Licence E30/522. This tenement is located 9km north of the Snark deposit of the Ularring Hematite Project. The Company previously held this ground and completed early stage drilling targeting iron mineralisation. The area is prospective for nickel exploration and Macarthur holds drilling samples that could be assayed for gold and base metals. This ground complements the nearby Snark and Moonshine nickel targets that the Company is actively working towards seeking a Joint Venture or Farm-in partner.

MRL Haul Road Application

Mineral Resources Ltd (MRL) has applied for tenure to construct a haul road between their existing Carina operation, 45km south of Moonshine Magnetite Deposit through to their Mt Richardson iron ore deposit north of Macarthur's projects. The haul road is located within 2 kilometers of the Company's Ularring Hematite and Moonshine Magnetite deposits. Construction of the new haul road will link through to an existing haul road for MRL's Carina project that runs through to the Perth to Kalgoorlie rail line.

MRL is due to commence environmental surveys of the haul road within the next week to support its environmental approvals.

SUMMARY OF NON-IRON ASSETS

In 2019 Macarthur's primary focus was on its Western Australian Iron Ore assets. To support this strategy, the Company ventured out the gold and lithium tenements in the Pilbara region to ASX listed Australian explorer, Fe Limited ("FEL"). FEL has the ability to earn up to 75% of these Projects through exploration and staged cash payments to Macarthur. During the quarter FEL conducted exploration on these areas and completed a drilling program of copper and gold targets at the Hillside Project.

Hillside tenements

As previously announced by the Company on 29 April 2020 results from drilling by Macarthur's JV partner FEL were very encouraging with three holes positively identified to have intercepted down dip extensions of a surface gossan. Significant results included:

- HRC 001: 1m @ 0.19% Cu, 230ppm Co, 0.14% Zn, 0.07ppm Au from 28m
- HRC 022: 1m @ 0.74% Cu, 349ppm Co, 0.41% Zn, 0.14ppm Au from 83m
- HRC 036: 1m @ 0.18% Cu, 0.12% Zn from 25m, 1m @ 0.27% Cu from 40m

These three holes showed anomalous intercepts spanning the full length of the 14 km strike. In a cost saving measure, roughly half of the drilled samples were assayed in the lab where there was a logged record of visible quartz or sulphides in the samples. The remaining samples are now being analysed using a portable XRF in case any anomalous samples were missed. If any are found, these will be sent to the lab for formal assay.

Once the results are received (lab and pXRF), the data will be interpreted using geochemistry to try to differentiate between different flows of basalt as a method of targeting possible sedimentary horizons deposited during volcanic hiatus. It is not yet clear whether outcropping and downhole mineralisation is the result of a volcano-stratigraphic massive sulphide deposit or a hydrothermal shear hosted depositional model.



FEL is currently finalising plans to conduct a Fixed Loop Electromagnetic Survey (FLEM) ground survey at the Hillside project. The survey will cover a section of the previously identified gossan line as well as a series of individual FELM surveys over previously identified high priority SkyTEM electromagnetic targets across the wider project area.

Results are expected to better indicate any massive sulphide mineralisation which may exist to assist targeting the next drilling campaign which is expected to occur later this year.

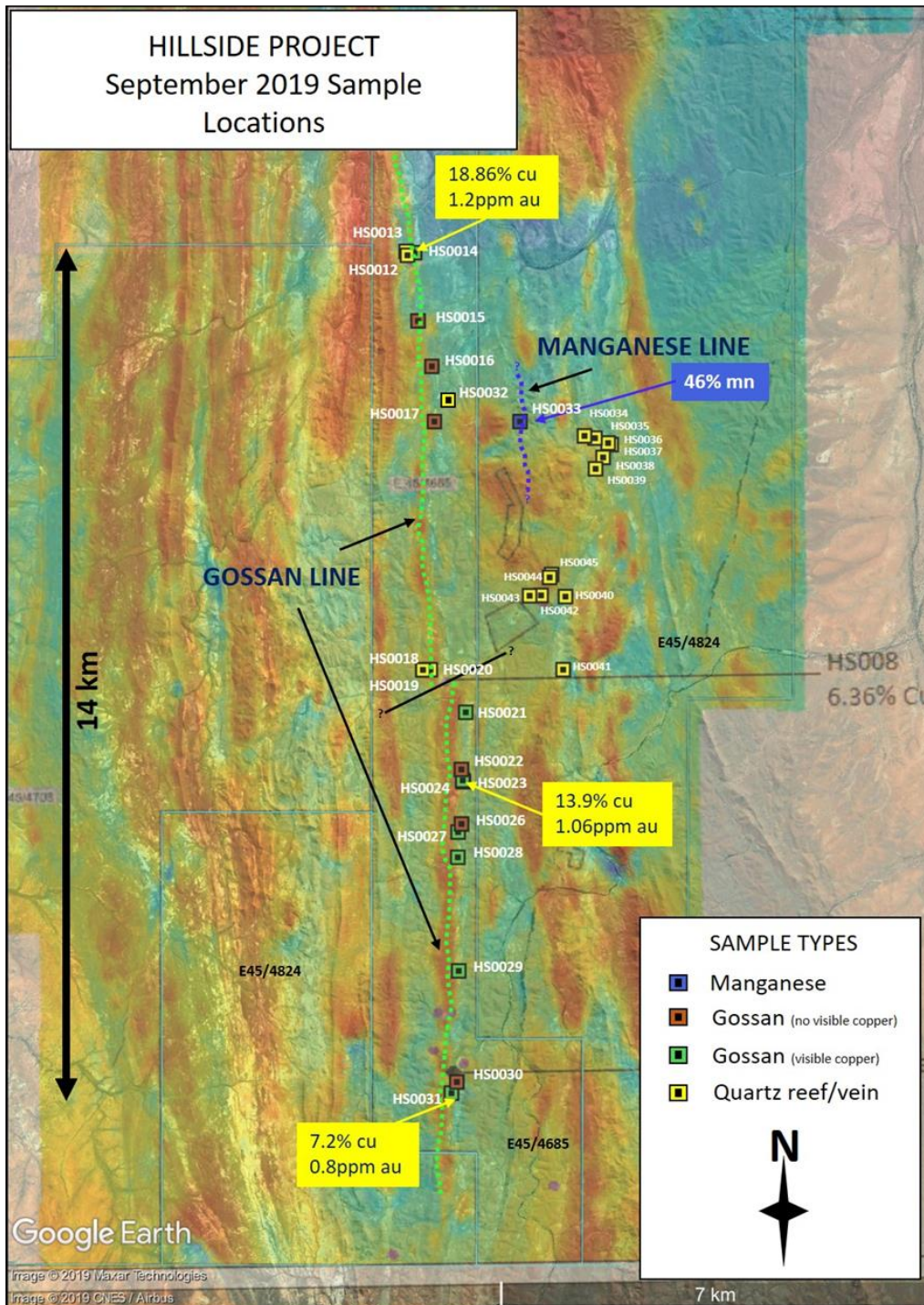


Figure 1 – Sample Location Map



Fe Limited (ASX: FEL) is a listed mineral exploration Company that holds or has rights or interests in various projects and tenements prospective for battery metals, copper, iron ore, gold and base metals located in Australia. The Company is focused on the exploration of battery metal projects. In March 2019, FEL entered into an agreement to acquire the Pippingarra Lithium Project and the Marble Bar Lithium Project (Project) from Mercury Resources Group Pty Ltd. These areas complement the tenement portfolio of Macarthur Minerals, establishing a 1800 square kilometre exploration footprint in the important Lithium and Gold region of Western Australia.

PILBARA HARD ROCK LITHIUM

Macarthur's Pilbara lithium portfolio covers an area of ~723 square kilometers, have regulatory exploration licence approval and cover similar geological settings to that of "world class" Pilbara lithium deposits and producing spodumene mines. These areas are included in the earn-in Joint Venture program that is targeting battery metal deposits. These areas have been added to during 2019 with the lithium potential tenements held by Fe Limited.

REYNOLDS SPRINGS PROJECT - NEVADA, USA

Macarthur holds 210 unpatented mining claims at its Reynolds Springs Lithium Brine Project in the Railroad Valley, Nevada, USA. Analysis of geochemical soil sampling found up to 405ppm Li.

Macarthur conducted further review of several historic well logs drilled on the claims and identified numerous conductive, faulted zones that indicate the presence of a brine aquifer. The Company is seeking interested parties in further exploring this asset portfolio.

OTCQB - NORTHLAND SECURITIES INC

Northland Securities Inc, which acts as OTCQB Sponsor and Advisor to the Company has submitted a Form 211 with the Financial Industry Regulatory Authority ("FINRA") to satisfy requirements of FINRA Rule 6432, as part of the requirement to initiate quotation as defined in rule 15c2-119(e)(i) under the Securities Exchange Act of 1934 ("1934 Act"). This form is currently subject to review and approval by FINRA. Once FINRA is satisfied that the disclosures satisfy the requirement of Rule 15c2-11 and the application to reinstate trading on the OTCQB is reviewed and approved by OTC Markets Group, the Company will trade on the OTCQB again.

FINANCIAL ADVISORS

Macarthur Minerals has appointed New York based EAS Advisors as its corporate advisor to assist it in the financing strategy for its Lake Giles Iron Project. Founded by Edward Sugar in 2008, EAS is a boutique global advisory firm focused on backing early stage mining and industrial groups to access US and international financial markets and institutional capital. Having participated in over US\$6 billion of transactions to date, EAS has been instrumental in a number of financing arrangements and has an exceptional record for backing early finance deals for a number of ASX listed companies.

NEXT STEPS

Macarthur will actively advance, with our key partners, its iron ore assets in Western Australia. Infill drilling of the Moonshine Magnetite deposit has been completed with the resource model currently being updated. This updated model along with rail and port capacity will be integrated into the Feasibility Study of the Lake Giles Iron Project. Further, the Company will work closely with Fe Limited to advance exploration of its high-quality lithium, gold and base metal tenements in the Pilbara region.



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

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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 (~721 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, beliefs, plans, statements about future events, trends or performance, assumptions or developments that the Company believes, expects or anticipates will or may occur in the future 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. Readers are cautioned not to attribute undue certainty and 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 (including, but not limited to, risks related to the Company's inability to identify one or more economic deposits on its properties, variations in the nature, quality and quantity of any mineral deposits that may be located, variations in the market price of any mineral products the Company may produce or plans to produce, the Company's inability to obtain any necessary permits, consents or authorisations required for its activities, to produce minerals from its properties successfully or profitably, to continue its projected growth, to raise the necessary capital or to be fully able to implement its business strategies). 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.