

**NEWS RELEASE**  
October 30, 2019

**Symbols: TSX-V: MMS, OTCQB: MMSDF**  
For Immediate Dissemination

## MACARTHUR MINERALS THIRD QUARTER UPDATE

**Macarthur Minerals Limited (TSX-V: MMS)** (the “Company” or “Macarthur”) is pleased to provide an update to Shareholders outlining an active and significant third quarter 2019 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 across the lithium, gold, nickel and cobalt projects in Western Australia.

### THIRD QUARTER HIGHLIGHTS

- ❖ The Lake Giles Iron Project, Bankable Feasibility Study (BFS), is well underway with the infill drilling program drawing to a conclusion, with the Reverse Circulation Programme completed and the final five diamond drill holes to be completed within the next three weeks. The first batch of samples from the RC drilling have been submitted to the laboratory in Perth for XRF and Davis Tube analysis.
- ❖ Macarthur continues to build its delivery and commercial teams with the appointments of Andrew Bruton (Executive GM Commercial) and Geoff Fox (Engineering Manager).
- ❖ Completed and lodged the Macarthur Minerals Prospectus to support a dual listing of the Company’s securities on the Australian Stock Exchange.
- ❖ Engaged Shaw and Partners Limited (Shaw) as Lead Manager for the public offering of securities to Australian and Asian retail and institutional investors. To date the interest in the offering has been strong.
- ❖ Discovery of high-grade copper, silver, and base metals over a 14 kilometre strike at the Hillside Project by Joint Venture Partner, Fe Ltd (FEL).
- ❖ Identification of iron mineralisation that may represent an extension to Atlas Iron’s Abydos Leighton Pit at Strelley George.

Mr Cameron McCall, Executive Chairman of Macarthur Minerals commented:

*“The continued strong iron ore price to US\$85-\$90/tonne range for 62% Fe ore continues to create momentum in the iron ore industry.*

*The Company’s focus on delivering a high-quality, low-impurity magnetite fines product (+65% Fe) positions this product well for Chinese, Korean and Japanese steel mills that are focused on sourcing quality steel products, enhanced furnace efficiencies, reduced consumption of cooking coal and cleaner environment emissions.*

*The Company is also very pleased with the proactive approach demonstrated by our Joint Venture partner Fe Limited in the exploration of the Hillside, Strelley Gorge and Panorama tenements in the Pilbara region of Western Australia. Initial exploration of these areas has returned encouraging results from rock chip sampling. Such results include a potential extension of iron ore mineralisation along strike from Atlas Iron’s Abydos operation, and the discovery of high-grade manganese and copper at Hillside. Buoyed by these discoveries, Fe Limited is about to commence a drilling program to test the extent of the copper and gold mineralisation at the Hillside Project.*

## **Delivery and Commercial Team Appointments**

Macarthur continues to expand its team as the Company progresses to the next phase of development of its Lake Giles Iron Project with the appointment of Engineering Manager, Geoff Fox. Geoff brings a wealth of experience to the Company with extensive magnetite iron processing experience being responsible as Study and Engineering Manager of Gindalbie's Karara magnetite mine and process facility in Western Australia. Geoff's broad mining and processing career, including time spent with Promet Engineering and SNC Lavalin, will be of tremendous benefit, and his proven track record of developing projects through the development life cycle and producing results will be invaluable as we advance the Company's corporate strategy.

Mr Andrew Bruton was also appointed during the quarter in the role of Executive General Manager, Corporate and Company Secretary. Mr Bruton has a long and respected career of over 20 years of top tier professional experience in corporate, mining, energy and infrastructure law. He has been recognised as a leading transactional and project lawyer in the mining and energy sectors in Australia.

In senior leadership roles, Andrew has been responsible for large teams at both State and National levels. He is also an experienced company director.

Having advised major Australian and international mining and energy companies on complex projects, and being a strategic thinker and leader with strong business acumen and a focus on delivering outcomes, he brings a wealth of expertise to Macarthur Minerals.

## **IRON ORE**

During the third quarter, the following key project advancements have been undertaken or have been completed:

- Commencement of the Bankable Feasibility Study with the appointment of a key Engineering Manager to facilitate this program.
- Continuous engagement towards a rail haulage contract with Aurizon and ARC infrastructure and the appointment of a key commercial executive responsible for the negotiation and delivery of these key infrastructure agreements.
- Ongoing discussion with the Southern Ports Corporation for access to infrastructure at the Port Of Esperance.
- Identification of potential strategic partners for commercialisation of the Hematite ore.
- Infill drill program nearing completion to support a Bankable Feasibility Study.

The Lake Giles Preliminary Economic Study (PEA)<sup>1</sup> rationalised the Ularring Hematite and Moonshine Projects into a combined project resulting in substantial cost savings and efficiencies. The key highlights are summarised in the recent Independent Research Report undertaken by [Breakaway Research](#) in October 2019.

With the closure of the Convertible Note financing, as announced on July 10, 2019, the Company is now focused on completing the BFS to support debt funding for project construction.

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<sup>1</sup> Press Release filed June 17, 2019, titled "Macarthur Files Technical Report for Lake Giles Iron Ore Project"

## NON-IRON ASSETS

This year, Macarthur's primary focus has been on the West 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 commenced exploration on the areas and will commence drilling of copper and gold targets at the Hillside Project during the next quarter.

### Hillside tenements

As previously announced by the Company on August 23, 2019, rock chip samples collected by FEL's geological team from the Hillside Project returned strongly anomalous grades for base metals and gold from several locations. In early September FEL conducted follow-up reconnaissance, concentrating on the Hillside Project (E45/4824 and E45/4685). Exploration involved mapping and sampling of the partially outcropping gossan line and outcropping quartz reefs known to host gold mineralisation (from prospector reports).

The gossan line was traced over a 14km strike length with remnant outcrop identified at regular intervals along strike (Figure 1). A total of 36 rock chip samples were collected including 15 from outcropping gossan with several samples containing visible copper minerals such as malachite. Remaining samples were collected from quartz outcrops, many of which returned strongly anomalous gold grades.

The assay results are highly encouraging with eight samples returning copper values over 1% with a peak of 18.8% Cu and often accompanied with elevated gold, silver and zinc values (+/- cobalt). Significant results include:

- HS0014: 1.2ppm Au, 18.8% Cu, 77ppm Ag, 0.17% Zn, 0.057% Co
- HS0021: 0.77ppm Au, 3.7% Cu, 187ppm Ag, 0.5% Zn, 0.06% Co
- HS0023: 1.06ppm Au, 13.9% Cu, 79ppm Ag, 0.44% Zn,
- HS0024: 0.31ppm Au, 4.5% Cu, 76ppm Ag, 0.35% Zn, 0.05% Co
- HS0027: 0.28ppm Au, 1.3%Cu, 14ppm Ag, 0.17% Zn, 0.04% Co
- HS0028: 0.45ppm Au, 3.1% Cu, 50ppm Ag, 0.49% Zn
- HS0029: 0.34ppm Au, 3.0% Cu, 22ppm Ag
- HS0031: 0.83ppm Au, 7.2% Cu, 78ppm Ag, 0.93% Zn, 0.095% Co

Exploration at the Hillside Project also discovered high grade manganese mineralisation in sub parallel outcrops to the gossan line sampled above. Rock chips samples returned a maximum of 59.4% MnO (>46% Mn).

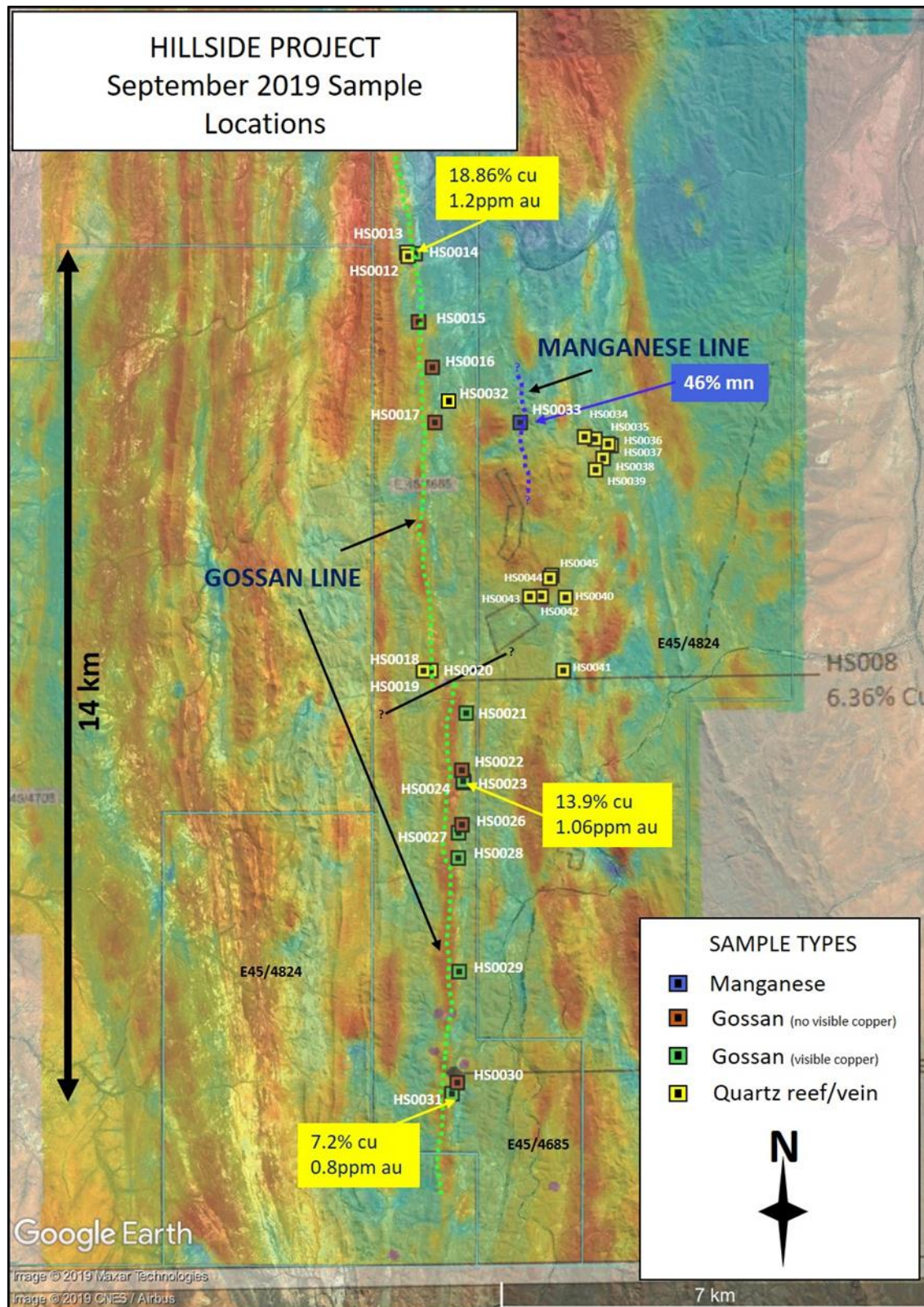


Figure 1 – Sample Location Map



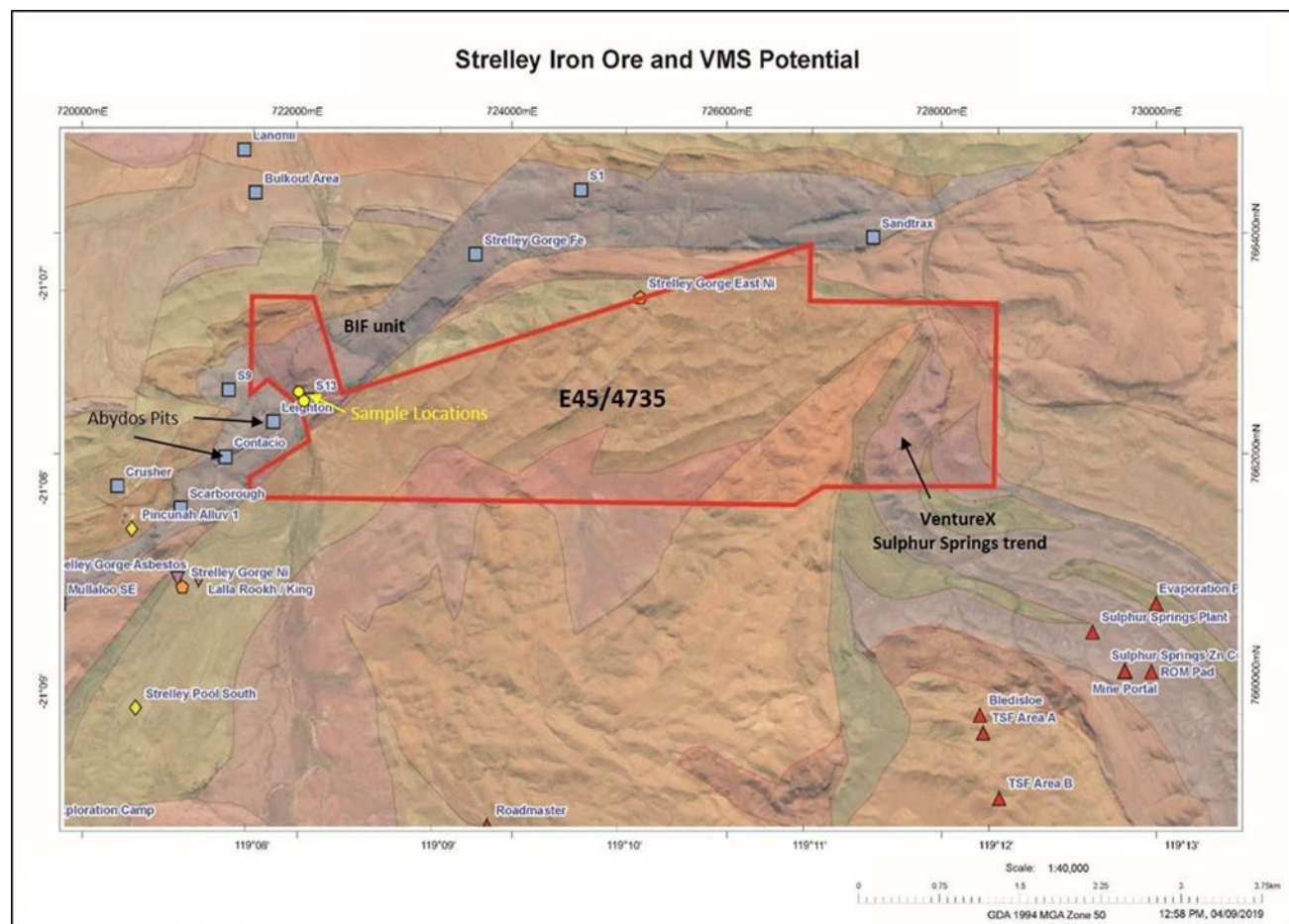
## Strelley Gorge

During FEL's recent reconnaissance trip to the Strelley Project in the Pilbara, samples were taken from the outcropping Banded Iron Formation ("BIF") continuing along strike from the previously mined Abydos iron ore project owned by Atlas Iron (Figure 1).

Two rock samples were taken from iron rich outcropping BIF with both returning significant iron assay results (Table 1).

**Table 1 – Sample Locations and Results**

STRELLEY										
Rock Chip Assay Results										
Sample	Latitude	Longitude	Al <sub>2</sub> O <sub>3</sub>	Fe	MgO	Mn	P	S	SiO <sub>2</sub>	LOI
			%	%	%	%	%	%	%	%
ST002	21° 7'33.02"S	119° 8'14.99"E	0.72	61.3	0.01	0.047	0.012	0.034	3.97	7.39
ST003	21° 7'30.83"S	119° 8'15.50"E	1.38	58.11	0.05	0.099	0.152	0.008	3.6	11.21



**Figure 2. Sample Locations**

## **About Fe Limited**

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 ~1,281 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.

## **NEVADA, USA REYNOLDS SPRINGS PROJECT**

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.

## **NEXT STEPS**

Macarthur will actively advance, with our key partners, its iron ore assets in Western Australia. Infill drilling of the Moonshine Magnetite deposit is nearing completion with samples submitted to the laboratory. On receipt of assay results, the Company will update the geological model of the Moonshine Magnetite deposits in conjunction with completing a Bankable 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.

## **ABOUT MACARTHUR MINERALS LIMITED (TSX-V: MMS, OTCQB: MMSDF)**

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 includes the 80 million tonne Ularring hematite resource (approved for development) and the 710 million tonne Moonshine magnetite resource. Macarthur has prominent (~1,281 square kilometer tenement area) gold, lithium and nickel exploration interests in Pilbara region of Western Australia. In addition, Macarthur has lithium brine Claims in the emerging Railroad Valley region in Nevada, USA.

## **QUALIFIED PERSON**

Mr Ian S Cooper, B.Sc., A.R.S.M., F.G.S. FAusIMM, a Fellow of the Australasian Institute of Mining and Metallurgy (membership number 107348), is a consultant of Macarthur and is a Qualified Person as defined in NI 43-101. Mr Cooper has reviewed and approved the technical information contained in this news release.

On behalf of the Board of Directors,  
**MACARTHUR MINERALS LIMITED**

"Cameron McCall"

Cameron McCall, Executive Chairman

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