

**NEWS RELEASE**  
December 16, 2016

**Symbol: TSX-V: MMS**  
For Immediate Dissemination

## **MACARTHUR MINERALS RECEIVES RENEWED INTEREST IN ITS WESTERN AUSTRALIAN IRON ORE PROJECTS**

**Macarthur Minerals Limited (TSX-V: MMS)** (the “Company” or “Macarthur Minerals”) is pleased to announce that the Company is receiving renewed corporate interest in its two iron ore projects in Western Australia with recovery of the iron ore price from its historic lows of US\$38.30<sup>1</sup> (approximately A\$53) a tonne in December 2015 to a spot price today to US\$82 (A\$111) a tonne<sup>2</sup>. The Ularring Hematite Project is a “shovel ready” project as it has full State and Australian Government environmental approvals to develop an iron ore mine and associated infrastructure.

**David Taplin, President, CEO and Director of Macarthur Minerals, commented:**

*“There is real potential for our iron ore assets to again add considerable market value in the future, with the Company having previously spent over \$60 million to develop them, including the hematite project to a “shovel ready” stage. Our advanced iron ore projects for hematite and magnetite remain very valuable assets, which in 2011, gave the Company a market capitalisation of approximately C\$165 million. Both iron ore projects are located within 100 kilometres of a railway line, which currently transports iron ore to export facilities at the Port of Esperance in southern Western Australia. We are now observing good indications that the price of iron ore has recovered from its 2015 low of US\$38.30 per tonne to a spot price today of US\$82 per tonne with the advantage of a favourable exchange rate due to depreciation of the Australian dollar against US dollar.”*

**Australian Iron Ore Projects**

Macarthur Minerals’ Iron Ore Projects are located on mining tenements covering approximately 62km<sup>2</sup> located 175 km northwest of Kalgoorlie in Western Australia (Figure 1 and Figure 2). Within the tenements, at least 35 km strike extent of outcropping banded iron formation (“BIF”) occurs as low ridges, surrounded by intensely weathered and mostly unexposed granites, basalts and ultramafic rocks.

The Iron Ore Projects consist of two distinct mineral projects:

1. The Ularring Hematite Project: encompassing hematite iron ore (“hematite”), to be marketed as potential direct shipping and/or beneficiated iron ore; and
2. The Moonshine Magnetite Project: encompassing magnetite iron ore (“magnetite”), to be marketed as a beneficiated magnetite concentrate.

The Company has been maintaining the core Iron Ore Projects’ assets and they remain valuable assets. There is real potential for the Iron Ore Projects to add significant value with the recovery of global iron ore markets.

Macarthur Minerals’ early focus from 2005 to 2009 was upon the exploration for iron ore mineralisation and the estimation of Mineral Resources for magnetite iron ore. From 2010 the focus shifted to the exploration and delineation of Mineral Resources and Ore Reserves for hematite mineralisation.

Exploration of the Iron Ore Projects since 2005 included geological mapping, geophysical surveying, auger sampling of pisolite targets and reverse circulation percussion (“RCP”) drilling of magnetite ore targets. Since July 2006 Macarthur Minerals has drilled 1,841 RCP drill holes (142,443 m) and 49 diamond holes (4,170 m) targeting iron mineralisation associated with BIF units. Analytical data for mineralised portions of Macarthur’s RCP holes include XRF assay results and Davis Tube Recovery (“DTR”) tests, which measure the proportion of sample extractable by magnetic separation from fresh BIF

<sup>1</sup> Jasmine Ng, ‘Iron ore sheds 4.3pc on week, ending at record low’, Australian Financial Review, Dec 12, 2015.

<sup>2</sup> Australian Financial Review, December 13, 2016.

samples containing magnetite mineralisation. Material concentrated by the DTR tests was assayed by XRF methods for iron and other elements of interest.

The outcropping geology of the Iron Ore Project area is comprised of a combination of un-altered silica-rich BIFs and altered, enriched hematite / goethite BIFs. The un-altered silica-rich BIFs have been targeted for magnetite mineralisation, an iron mineral species ( $\text{Fe}_3\text{O}_4$ ) with strong magnetic properties, making it amenable for separation from the crushed and ground ore by magnetic separation techniques. The hematite / goethite mineralisation is a product of weathering of the top 50 m (on average) of BIF strata, and the leaching out of silica and alteration of magnetite to hematite ( $\text{Fe}_2\text{O}_3$ ) and goethite, a hydrous (water bearing) form of hematite. Hematite is weakly magnetic, and requires a different ore processing route to that of magnetite.

For this reason the magnetite and hematite/goethite mineralised deposits were separated into two projects, because they require different infrastructure and ore processing routes and hence the impost of different anticipated costs of development. Macarthur Minerals has grouped the hematite / goethite deposits into the Ularring Hematite Project, and the magnetite deposits into the Moonshine Magnetite Project.

Exploration at both Ularring Hematite and Moonshine Magnetite projects has been sufficient to allow the estimation of Mineral Resources for both projects.

The Ularring Hematite Project's Mineral Resource consists of Indicated 54.46 Mt @ 47.2% Fe and Inferred 25.99Mt @ 45.4% Fe<sup>3</sup>. Macarthur Minerals published a Pre-Feasibility Study in 2012, reporting Mineral Reserves<sup>4</sup>.

The Company has received approval to develop an iron ore mine for the Ularring Hematite Project and associated infrastructure at the project location under the *Environmental Protection Act 1986* and the *Environmental and Biodiversity Conservation Act 1999*.

The Inferred Mineral Resource estimate for the Moonshine Magnetite Project was initially prepared by CSA Global Pty Ltd<sup>5</sup> and was updated by Snowden Mining Industry Consultants, with an Inferred Mineral Resource consisting of 1,316 Mt @ 30.1% Fe<sup>6</sup>.

A Preliminary Assessment Report was prepared on the Moonshine Magnetite Project by Snowden Mining Industry Consultants in 2011<sup>7</sup>.

### **Australian 'Hard Rock' Lithium Projects**

The Company has one of the largest lithium hard rock acreage packages in Australia, covering an area of 2,138 square kilometres (528,311 acres) across the Pilbara, Ravensthorpe and the Yalgoo/Edah regions of Western Australia. Initial reconnaissance across the Company's acreage has been encouraging, including initial assay results from rock chips of up to 3.75% lithium ( $\text{Li}_2\text{O}$ ) received at the Yalgoo Lithium Project (see the Company's announcement dated October 12, 2016).

### **Australian Securities Exchange Listing Update**

The previously announced Australian Securities Exchange ("ASX") Initial Public Offering ("IPO") of the Company's Australian lithium and iron ore projects, is well advanced. Macarthur Minerals will maintain

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<sup>3</sup> Previously announced on August 16, 2012 NI 43-101 Technical Report filed October 1, 2012, titled "NI 43-101 Technical Report, Macarthur Minerals Limited, Pre-Feasibility Study, Ularring Hematite Project, Western Australia

<sup>4</sup> Previously announced on August 16, 2012 NI 43-101 Technical Report filed October 1, 2012, titled "NI 43-101 Technical Report, Macarthur Minerals Limited, Pre-Feasibility Study, Ularring Hematite Project, Western Australia

<sup>5</sup> NI43-101 Technical Report filed December 17, 2009, titled "NI43-101 Technical Report on Lake Giles Iron Ore Project: Western Australia

<sup>6</sup> NI43-101 Technical Report filed March 25, 2011, titled "Macarthur Minerals Limited: Moonshine and Moonshine North Prospects, Lake Giles Iron Project, Western Australia, NI43-101 Technical Report – Preliminary Assessment

<sup>7</sup> NI43-101 Technical Report filed March 25, 2011, titled "Macarthur Minerals Limited: Moonshine and Moonshine North Prospects, Lake Giles Iron Project, Western Australia, NI43-101 Technical Report – Preliminary Assessment

majority ownership and control of the ASX IPO listed entity.

The board of Macarthur Minerals believes that an ASX IPO of its Australian subsidiaries, which hold its Australian 'hard rock' lithium and iron ore projects, will provide improved price realisation for those projects more consistent with its ASX listed peers.

The Company's wholly owned subsidiary, Macarthur Lithium Nevada Limited, will continue to advance the Stonewall Lithium Project, located in Nevada.

## QUALIFIED PERSONS

Mr David Williams, a member of the Australian Institute of Geoscientists, is a part-time employee of CSA Global Pty Ltd and is a Qualified Person as defined in National Instrument 43-101. Mr Williams has reviewed and approved the technical information in relation to the Iron Ore Projects contained in this news release.

Mr Ralph Porter, a member of the Australian Institute of Geoscientists, is a full-time employee of CSA Global Pty Ltd and is a Qualified Person as defined in National Instrument 43-101. Mr Porter has reviewed and approved the technical information in relation to Macarthur's lithium acreage (excluding any technical information under the Stonewall Project) contained in this news release.

## ABOUT MACARTHUR MINERALS LIMITED (TSX-V: MMS)

Macarthur Minerals Limited is an exploration and development company that is focused on identifying and developing high grade lithium and counter cyclical investments, with significant lithium exploration interest in Australia and Nevada. In addition, Macarthur has two iron ore projects in Western Australia; the Ularring hematite project and the Moonshine magnetite project.

On behalf of the Board of Directors,

### MACARTHUR MINERALS LIMITED

*"Cameron McCall"*

Cameron McCall, Chairman

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unforeseen technology changes that results in a reduction in iron ore demand or substitution by other metals or materials, the discovery of new large low cost deposits of iron ore, uncertainty in successfully returning the project into full operation, and the general level of global economic activity. 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.

Figure 1 – Location of the Macarthur Iron Ore projects.

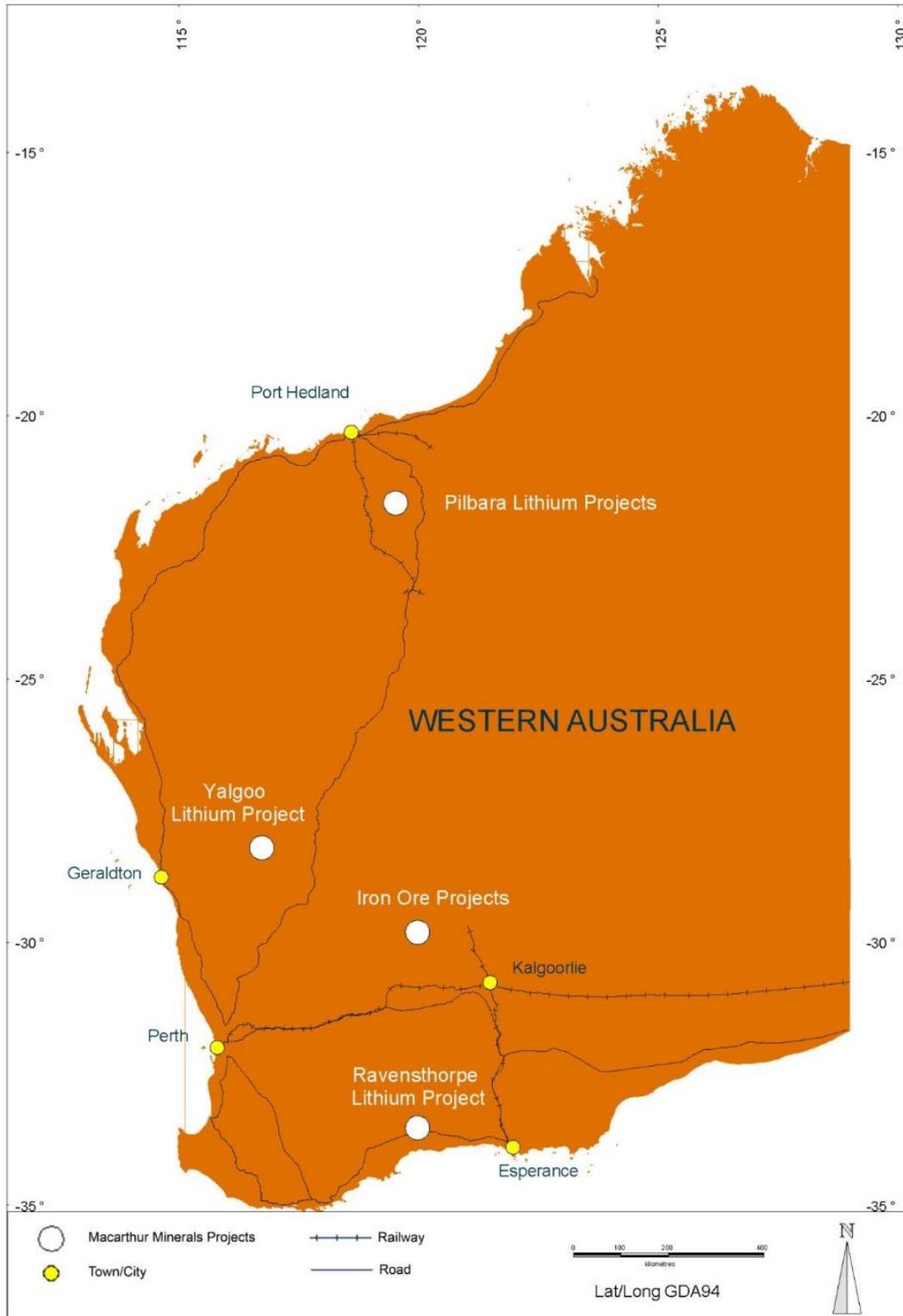


Figure 2–Macarthur Iron Ore Project tenements

