

NEWS RELEASE May 17, 2016 Symbol: TSX-V: MMS For Immediate Dissemination

# MACARTHUR MINERALS STAKES FURTHER ACREAGE IN THE PILBARA FOR HARD ROCK LITHIUM

**Macarthur Minerals Limited (TSX-V: MMS)** (the "Company" or "Macarthur Minerals") is pleased to announce that it has applied for an additional exploration licence in the Pilbara region of Western Australia to expand its total tenement acreage under application in the region to 1,379 square kilometres (341,000 acres) and a total of 1,505 square kilometres (371,893 acres) in Western Australia.

The Company continues to expand its acreage under application and has one of the largest acreages prospective for 'hard rock' lithium of any junior exploration company globally and is one of a few TSX-V listed companies to have projects acquired specifically for lithium in Australia. The expansion of the Company's acreage package is consistent with the Company's focus on exploration for lithium.

#### New Pilbara Tenement

The location of the new Pilbara exploration licence application (E45/4779), which covers an area of 127 square kilometres is shown in Figure 1.

The Pilbara applications cover similar geological settings to the Pilgangoora Li-Ta pegmatite deposits, which host the lithium projects of Australian Securities Exchange listed companies, Pilbara Minerals Limited (ASX: PLS) and Altura Mining Limited (ASX: AJM).

#### Geological Setting of the Tenement Applications

Macarthur's applications in the Pilbara are selected on the basis of geological attributes that are broadly consistent with the currently accepted exploration/mineral system model for Lithium-Caesium-Tantalum ("LCT" type) rare element pegmatites. The tenement applications cover areas of potential LCT pegmatite host rocks such as greenstone belts (meta-volcanic sequences), earlier granitoids and gneisses. The tenement applications are located within 5–10 km of ~2.89 to 2.83 Ga<sup>1</sup> post-tectonic monzogranite (S-type) intrusions, which are considered to be the source of magmatic melts from which the LCT pegmatites evolved. The fertile character of the highly fractionated younger monzogranites<sup>2</sup>, and their potential link to lithium mineralisation, adjacent to and within the new application is supported by numerous associated occurrences of lithium (Li), tantalum (Ta), tin (Sn), and beryl (Be).

### Lithium Strategy

The Company's strategy is to apply for prospective acreage proximate to known lithium occurrences or where there are either, producing lithium mines or lithium mines under development. Consistent with this strategy, the Company has applied for acreage in the Pilbara region where Pilbara Minerals Limited (ASX: PLS) has its Pilgangoora lithium-tantalum project for which it recently raised A\$100 million for further development<sup>3</sup> and Dakota Minerals Limited (ASX: DKO) has its Lynas Find Project for which it recently raised A\$12.3 million to conduct further exploration<sup>4</sup>. The Company has also applied for

 $<sup>\</sup>frac{1}{2}$  Ga is giga anna – 1 Billion years.

<sup>&</sup>lt;sup>2</sup>S-type monzogranites are biotite-bearing granitoids considered to have formed by crystallisation of melts from metasedimentary protoliths.

<sup>&</sup>lt;sup>3</sup> Pilbara Minerals Limited's ASX announcement dated April 7, 2016,

http://www.asx.com.au/asxpdf/20160407/pdf/436cb822nflw3w.pdf

<sup>&</sup>lt;sup>4</sup> Dakota Minerals Limited's ASX announcement dated May 2, 2016,

http://www.asx.com.au/asx/statistics/displayAnnouncement.do?display=pdf&idsId=01736822



acreage in the Ravensthorpe region where Galaxy Resources Limited (ASX: GXY) has commenced production for spodumene and tantalum concentrate at its Mt Cattlin project.

The Company completed its first round of reconnaissance across a portion of the tenement package in the Pilbara and located a number of pegmatites which contain one or more visually identified minerals indicative of rare element Lithium-Caesium-Tantalum (LCT) pegmatites, such as beryl, lepidolite, cassiterite and tantalite.

Macarthur is currently evaluating its acreage and commencing discussions with various third parties concerning potential joint ventures to maximise the exploration effort throughout 2016.

The Company has undertaken an extensive review of geological datasets for available acreage prospective for lithium in Western Australia based on geological attributes referred to above. That review indicates that available acreage in Western Australia having those geological attributes is becoming scarce.

## Acreage Package

The Company now holds 20 exploration licence applications covering a total area of 1,505 square kilometres (371,893 acres) in the Pilbara Craton, and in the Ravensthorpe and the Edah regions of the Yilgarn Craton.

# ABOUT CSA GLOBAL

As previously announced on February 15, 2016, the Company appointed CSA Global Pty Ltd ("CSA Global") as independent global lithium and mining exploration experts to assist it in project development.

CSA Global is a leading geological, mining and management consulting company whose staff includes geologists, mining engineers, project managers, data management professionals, and technical personnel. CSA Global has been operating from Perth, Western Australia since 1986. It is an independent company, with origins dating back to 1984 as part of the CSA Group founded in Ireland. CSA Global now has offices in the UK, Indonesia, Johannesburg, Vancouver, Darwin, and Brisbane. CSA has a high level of expertise in most mineral commodities gained from over twenty years' experience within the exploration and mining industry at an international level. It has experience in all stages of the mining cycle from project generation to production. For further information regarding CSA Global, please refer to the company website at <a href="http://www.csaglobal.com">www.csaglobal.com</a>.

Dr Andrew Scogings MSc, PhD, MAIG, MAusIMM, has more than 30 years of experience in industrial minerals exploration, geology, mining, product development, and marketing. During his time with CSA, he has undertaken project management and technical advice for a diverse range of industrial minerals exploration and mining projects including lithium, graphite, chromite, potash, mineral sands, silica, and REE in Australia, Africa, Greenland, Indonesia and Norway. Andrew is a regular contributor to Industrial Minerals Magazine (UK), SME Mining Engineering (USA) and Geobulletin (RSA) having published several papers on the requirements of JORC 2012 Clause 49, highlighting the need to report industrial minerals resources according to market specifications. Andrew was lead author for Industrial Minerals Research's recently published *'Natural Graphite Report- Strategic outlook to 2020'*. He is a member of the AIG and AusIMM and is a Registered Professional Geoscientist (RP Geo.) specializing in industrial minerals.

Mr Ralph Porter MSc, BSc (Geology), MAIG, MSEG is a geologist with over 35 years' of mineral exploration experience. He is highly experienced in target generation, project evaluation and exploration program implementation for gold, base metals, tantalum, nickel and PGM's. He has a strong understanding of many deposit styles with particular strength in orogenic gold, epithermal gold and porphyry copper-gold systems. He is credited with the discovery of the Pajingo epithermal gold deposits, North Queensland, Australia and was involved in the early exploration and discovery phases of Thunder Bay North PGM-Ni-Cu deposit, Ontario, Canada. Ralph was Special Projects Manager for Sons of Gwalia in Western Australia for nearly 10 years, which included responsibility for tantalum exploration (hosted within pegmatites and other deposit styles) for 5 years.



### ABOUT PROFESSOR KEN COLLERSON

Professor Collerson a member of the Company's Lithium Advisory Board, who has more than 40 years' experience as a geoscientist. He will provide a significant depth of knowledge and breadth of lithium experience to the Company that is unsurpassed.

Professor Collerson is a world leading authority on the geology and geochemistry of strategic metal mineralization including lithium. He has significant experience with LCT (lithium-caesium-tantalum) spodumene-bearing pegmatites and has worked extensively in the Pilbara region where the Company's acreage is located in Western Australia. Most recently Ken worked on a hard rock lithium project in the Jarkvissle area of Sweden. Professor Collerson believes that the Company's acreage in the Pilbara region of Western Australia is highly prospective for lithium.

Professor Collerson has a PhD from the University of Adelaide and is an internationally recognized thought leader in the geosciences. He has published extensively and his work is highly cited.

### QUALIFIED PERSONS

Mr Porter, a member of the Australian Institute of Geoscientists, is a full-time employee of CSA Global and is a Qualified Person as defined in National Instrument 43-101. Mr Porter has reviewed and approved the technical information contained in this news release.

Dr Scogings, a member of the Australian Institute of Geoscientists and Registered Professional Geoscientist (Industrial Minerals), is a full-time employee of CSA Global and is a Qualified Person as defined in National Instrument 43-101. Dr Scogings has reviewed and approved the technical information contained in this news release.

Professor Kenneth D. Collerson is a Fellow of the AusIMM, is a member of the Lithium Advisory Board of Macarthur and is a Qualified Person as defined in National Instrument 43-101. Professor Collerson has reviewed and approved the technical information 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 that complement Macarthur's capabilities.





Figure 1 – Macarthur's new and existing lithium acreage in the Pilbara region of Western Australia.



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

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