

**NEWS RELEASE** February 29, 2016 Symbol: TSX-V: MMS For Immediate Dissemination

# MACARTHUR MINERALS COMPLETES DESKTOP REVIEW AND EXPANDS LITHIUM PROJECTS IN THE EASTERN PILBARA

**Macarthur Minerals Limited (TSX-V: MMS)** (the "Company" or "Macarthur Minerals") is pleased to announce that it has made applications for additional exploration licences in the Eastern Pilbara region of Western Australia for potential lithium projects. In addition, CSA Global Pty Ltd ("CSA Global") has completed a desktop review of the Company's Eastern Pilbara projects, which concludes that the applications are prospective for lithium-bearing pegmatites.

## Expansion of Lithium Projects in the Eastern Pilbara

In addition to the Company's existing Pilgangoora applications for exploration licences (E45/4693, E45/4694 and E45/4702), the Company has applied for a further six exploration licenses **(Table 1)** covering a total area of 531 square kilometres located in the Eastern Pilbara region of Western Australia. The location of the additional exploration licence applications in the Eastern Pilbara adjacent to existing Pilgangoora application E45/4702 is shown in **Figure 1**.

## **Table 1 New Exploration Licence Applications**

Application	Area km <sup>2</sup>
E45/4708	86
E45/4709	70
E45/4710	70
E45/4711	127
E46/1114	111
E46/1115	67
Total	531

#### Aggregate Area of 946 square kilometres

The Company now holds a total of 10 applications for exploration licences covering a total area of 946 square kilometres in the Pilgangoora district, the Eastern Pilbara, and the Mid-West region of Western Australia. **Figure 2** shows the location of those applications in the Pilbara. The Edah Hill Project in the Mid-West is located further south, although not indicated in **Figure 2**.

#### CSA Global Desk Top Review

CSA Global has completed a desktop review, which concludes that the applications in the Eastern Pilbara, including an adjoining previous Pilgangoora application (E47/4702) are considered prospective for lithiumbearing pegmatites. CSA Global, a leading geological, mining and management consulting company have substantial experience in the field of industrial minerals exploration, including for lithium.

CSA Global reports that the applications contain similar geological settings to the Wodgina Tin-Tantalum (Ta-Sn) and Pilgangoora Lithium-Tantalum (Li-Ta) pegmatite deposits, which host the lithium projects of Australian Securities Exchange listed companies, Pilbara Minerals Limited and Altura Mining Limited.

The broader Eastern Pilbara district has been the subject of extensive historical exploration for a range of minerals and is known to host many granitic pegmatites such as those hosting the Pilbara Minerals Limited and Altura Mining Limited lithium projects. The largest concentrations of lithium-containing



minerals, such as spodumene are found in pegmatites. Due to its lithium content and abundance, spodumene is considered the most important lithium-bearing mineral.

The new applications in the Eastern Pilbara were selected based on their geological attributes compared with the currently accepted exploration model for Lithium-Caesium-Tantalum (LCT) type rare element pegmatites. The tenements cover areas of potential pegmatite host rock sequences ('greenstone belts') and are located within 5–10 kilometres of interpreted syn- to post-tectonic monzogranite intrusions, which are the expected magmatic fluid source for the pegmatites. The fertile character of the monzogranites<sup>1</sup>, and potential link to lithium mineralisation, adjacent to and within the new applications is highlighted by the numerous occurrences of lithium (Li), tantalum (Ta), tin (Sn), and beryl (Be) associated with these monzogranites.

#### Next Steps

The Company with the assistance of CSA Global, will initially undertake geological reconnaissance to locate outcropping pegmatites. In areas of outcrop, pegmatites, intrusives, and host rocks, will be mapped to ascertain the mineral assemblages and rockchip sampled to determine key geochemical fractionation trends and lithium contents. Areas with subcropping potential host rock units, with no evidence of surface based pegmatites, will be soil sampled to locate geochemical haloes related to lithium-bearing pegmatites. Target areas under transported cover, will require drilling to sample bedrock and locate pegmatites and/or related geochemical aureoles.

#### Lithium Market

The global lithium market is growing rapidly due to developments in the technology and energy sectors, especially in the use of lithium-ion batteries for portable electronic devices, hybrid electric motor vehicles, and storage battery industries.

Industry experts comment that overall lithium demand may more than double from present levels through to 2025, while incumbent producers of lithium are limited in their ability to bring on additional supply to satisfy growing demand. Industry experts further comment that lithium has been one of the few commodities to enjoy recent price appreciation, and that they expect this pattern to continue over the next 10 years.<sup>2</sup> The price of 99%-pure lithium carbonate imported to China more than doubled in the last 2 months to the end of December 2015, to US\$13,000 a tonne.<sup>3</sup>

## ABOUT CSA GLOBAL

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="https://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

<sup>2</sup> John Hykawy and Tom Chudnovsky, 'Industry Report//Lithium', Stormcrow Capital Ltd, May 29, 2015.

http://static1.squarespace.com/static/535e7e2de4b088f0b623c597/t/55689238e4b09f7c8dacebf1/1432916536166/Stormcrow-Lithium+Industry+Report-May2015-Final.pdf

<sup>&</sup>lt;sup>1</sup> Monzogranites are leucocratic biotite-bearing granitoids considered the final fractionation product of magma.

<sup>&</sup>lt;sup>3</sup> 'An increasingly precious metal', *The Economist Newspaper Limited (online),* Jan 16, 2016.

http://www.economist.com/news/business/21688386-amid-surge-demand-rechargeable-batteries-companies-are-scrambling-supplies



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 Exploration Manager for Sons of Gwalia in Western Australia for nearly 10 years including responsibility for tantalum pegmatites for 4 years. Ralph was Special Projects Manager for Sons of Gwalia in Western Australia for nearly 10 years, including responsibility for tantalum pegmatite evaluation and exploration for 4 years.

## QUALIFIED PERSONS

Mr 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 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 Pty Ltd 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.





Figure 1 – shows Macarthur's new exploration licence applications in the Eastern Pilbara adjacent to existing Pilgangoora application E45/4702.





Figure 2 – shows Macarthur's exploration licence applications in the Pilbara.



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

Macarthur Minerals Limited is an exploration and development company that is focused on identifying counter cyclical investments that complement Macarthur's capabilities.

On behalf of the Board of Directors, MACARTHUR MINERALS LIMITED

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