

**NEWS RELEASE**  
December 6, 2017

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

## **STRATEGIC ALLIANCE FOR LITHIUM BRINE EXPLORATION IN RAILROAD VALLEY, NEVADA**

**Macarthur Minerals Limited (TSX-V: MMS)** (the “Company” or “Macarthur Minerals”) is pleased to announce that it has entered into a strategic alliance with 3PL Operating Inc (“3PL”) for exploration of the Company’s Reynolds Springs lithium brine Project in the Railroad Valley in Nevada. 3PL has a wealth of experience in drilling, development and production of oil and gas, which is similar to lithium development since the metal is contained in liquid brines and also produced from shallow wells. The alliance contemplates the appointment of 3PL, to drill or re-enter existing oil wells on the Railroad Valley playa for the purpose of obtaining brine samples and evaluating lithium concentrations at the Reynolds Springs Project.

David Taplin, Joint CEO and Director of Macarthur Minerals commented:

*“Macarthur Minerals is pleased to form a strategic alliance with 3PL Operating Inc to progress our Reynolds Springs Lithium Brine Project in the Railroad Valley, Nevada. 3PL has a wealth of experience in oil drilling and production, for which similar techniques are used for brine exploration. The Railroad Valley has emerged as potentially the largest brine deposit in Nevada, and is more than six times the area of Clayton Valley, in a similar closed basin. Based on 3PL’s work to date within the Railroad Valley, 3PL believes that the Railroad Valley brine pool could potentially be several times larger than the Clayton Valley due to the significant brine host formation thickness, up to 3,000 feet total, based on well log data obtained from surrounding oil wells.”*

### **Strategic Alliance with 3PL Operating Inc**

3PL is a privately held mining development firm engaged in the exploration and development of lithium carbonate deposits within the Western Nevada Basin. 3PL owns 2,843 claims, covering an area of 94 square miles (244 km<sup>2</sup>), which are immediately adjacent to the Company’s Reynolds Springs project in Railroad Valley, in East-Central Nevada.

3PL has mapped a large sub-surface brine pool (~ 300 m thick and ~ 300 m deep), which underlies the Railroad Valley Playa. Over 90 oil and gas well geophysical logs were used to define a large and significant electrical conductivity anomaly, which is interpreted to be a concentrated brine deposit.

Recently discovered salt water leakage from a water well on the 3PL ground indicates that the brine pool exists, and that lithium is a component of the brine. The exact concentration of the lithium in the brine is unable to be determined at this time however.

The alliance contemplates the appointment of 3PL to drill or re-enter wells for the purpose of obtaining brine samples at the Reynolds Springs Project.

It is intended to expand the alliance to other claim holders in the Railroad Valley to avoid the disputes that have arisen in the Clayton Valley over water rights.

### **3PL Team**

3PL’s management team has over a combined 70 years global oil and gas exploration, development and production experience. The 3PL team includes Vincent Ramirez who was former Chairman of Vostochnaya Transnational, Lead Exploration & Operations Geologist for Shell Oil and Exploration

Geologist for Shell Western E&P Inc.

3PL's team has a proven track record of successfully exploring for oil and gas. 3PL's aim in the Railroad Valley is to delineate a drilled-out brine resource capable of producing 30 billion barrels of brine. The lithium content of this hypothetical resource is unknown at this time, and future exploration drilling will be required to determine this.

### **Reynolds Springs Project**

The Reynolds Springs Project consists of 210 new unpatented placer mining claims, covering an area of 7 square miles (18 km<sup>2</sup>) located in Railroad Valley, near the town of Carrant, in Nye County, Nevada (Figure 2). The Reynolds Springs Project is located approximately 180 miles (300 km) North of Las Vegas, Nevada, and 330 miles (531 km) South East of Tesla's new Gigafactory (Figure 2).

Railroad Valley is a large topographically closed playa basin (dry salt lake bed). The basin is fault bounded with numerous active thermal springs (anomalous in lithium) emerging along the faults. The fault sets have strike lengths of 25–30 miles (42–50 km) and are parallel to each other, about 8-12 miles apart (13-19 km). The faults that bound the basin form an elongate rectangular shaped basin of about 300 square miles (777 km<sup>2</sup>) in size.

Numerous thermal springs emerge along the basin bounding fault systems, which form the North-West and South-East flanks of the playa basin. Thermal waters which discharge from the springs carry moderately anomalous values of Lithium. Water samples collected from Reynolds Springs by Macarthur Minerals' consulting geologists averaged 230 parts per billion ("ppb") lithium ("Li") and 445 ppb boron. This is about twice the concentration for these elements detected from water samples collected at other springs that were sampled in the Railroad Valley.

The mountains that surround the basin contain outcropping rock units also anomalous in lithium. This closely matches the geologic criteria for the United State Geological Survey ("USGS") ore deposit model for Clayton Valley type lithium brine deposits. Macarthur Minerals believes that the combination of anomalous lithium in soils (+250 ppm) and anomalous lithium in thermal spring waters (230 ppb Li) indicates that the Reynolds Springs area is favourable for further exploration.

As previously reported on June 25, 2017, a total of 206 soil samples were collected across the full extent of the placer claims located on the Railroad Valley playa. Soil samples were collected from a depth of approximately 1.5 feet (45.7 cm) every 660 feet (201 m) from 12 lines spaced 1,320 feet apart (402 m) (Figure 1).

Lithium values in the soil samples ranged from a low of 39.3 ppm to a high of 405 ppm Li. Samples were consistently high averaging 168.3 ppm Li with 85% of samples recording over 100 ppm Li and 19% greater than 200 ppm Li. These results are considered high in comparison to the majority of non-lithium producing playas and amongst the highest seen outside of the Clayton Valley.

The Reynolds Springs claims were staked along the NW basin bounding fault. The anomalous lithium values found in the playa clays are interpreted to result from low intensity hydrothermal alteration. The mineralogical alteration is caused by chemical interaction of Li rich waters with upwelling hot water zones along the fault. The anomalous Li values in the clays are thought to mark the "foot print" of high Li values in the underlying subsurface brines.

### **Letter of Agreement for Services**

The strategic alliance is based on a Letter of Agreement, which will be formalized into a binding Definitive Agreement.

### **QA/QC of Sampling Program**

After collection in the field, the samples were submitted to the ALS Minerals laboratory in Reno, Nevada for analysis by four-acid digestion and inductively coupled plasma-atomic emission spectrometry (ICP-AES) and inductively coupled plasma-mass spectrometry (ICP-MS) multi-element analysis. ALS Minerals laboratory of Reno, Nevada maintains ISO/IEC 17025:2005 accreditation and operates under a mature Quality Management System. Internal laboratory quality control includes both control standards and replicate sample analysis.

### **Next Steps for the Reynolds Springs Project**

The next steps for the Reynolds Springs Project will be to interpret the downhole geophysical logs for 12 – 15 abandoned oil and gas wells that are found both within (5 wells) and in the near vicinity of the project. Once the anomalous conductive zone is identified in these wells, it will then be correlated to the same zone in wells which are included in the 3PL study.

Once the zone is identified and mapped on the Reynolds Spring ground, the Company will pursue permits to either re-enter one or more of the old wells or to drill new test wells or both.

### **RIGHTS OFFERING**

The Company would like to again remind its shareholders of record, that they have until 5:00 p.m. (Toronto time) on December 12, 2017 to exercise their rights as part of the Rights Offering.

It is important to note that many broker dealers may have different cut off times prior to the official subscription period deadline. As such, Macarthur Minerals recommends that all record date rights holders contact their broker or financial advisor about the Rights Offering to ensure that they can participate by the broker dealer's cut off time for subscriptions.

### **QUALIFIED PERSON**

Mr Randy Henkle, a Registered Member of the Society of Mining and Exploration and a Professional Geologist licensed in British Columbia, Canada, is a Qualified Person as defined in National Instrument 43-101. Mr Henkle 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 company that is focused on identifying high grade lithium and gold. Macarthur Minerals has significant lithium, gold and iron ore exploration interests in Australia and Nevada. Macarthur Minerals 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, Executive Chairman

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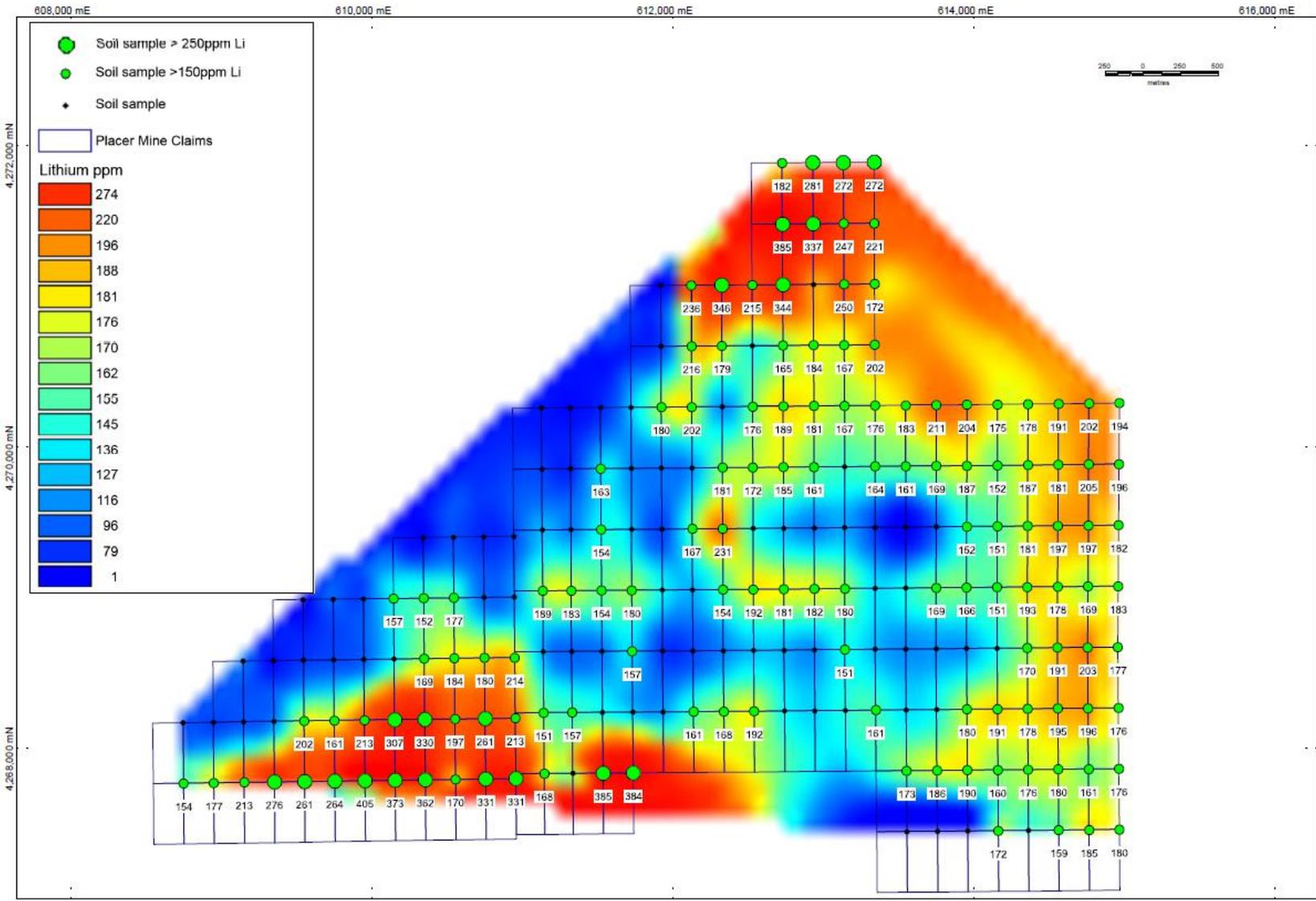


Figure 1: Soil sampling locations and results from the Reynolds Springs Lithium Project



**Figure 2:** Regional location of Macarthur Mineral's Reynolds Springs Project