

**NEWS RELEASE**  
March 7, 2018

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

## **MACARTHUR MINERALS IDENTIFIES POTENTIAL LITHIUM BRINE ZONES IN RAILROAD VALLEY, NEVADA, USA**

**Macarthur Minerals Limited (TSX-V: MMS)** (the “Company” or “Macarthur Minerals”) is pleased to announce that it has identified several zones indicative of a lithium brine aquifer at its Reynolds Springs Lithium Brine Project in Railroad Valley, Nevada, USA.

**Cameron McCall, President and Executive Chairman of Macarthur Minerals commented:**

*“Macarthur Minerals believes this is the start of something very significant in the US lithium sector and is excited about the results of the down-hole logging study that shows several zones interpreted as potential brine aquifers at its Reynolds Springs Project in Nevada. These results reinforce the potential for the project to host lithium brines as suggested by a large geochemical shallow soils lithium anomaly in lake sediments that was previously reported by Macarthur Minerals. The Railroad Valley has geological attributes that closely match the Clayton Valley, which hosts North America’s only producing lithium mine, Albemarle’s Silver Peak Lithium Mine. Macarthur Minerals is moving forward to complete down-hole logging studies of additional nearby wells, with a view to re-entering one or more abandoned wells to sample the brine target zones.”*

### **Reynolds Springs Project – Geological Setting**

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 (dry Salt Lake bed) basin located in East-Central Nevada. 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. The faults that bound the basin form an elongate rectangular shaped basin of about 300 square miles (830 square km) 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”) Li and 445 ppb boron. This is approximately twice the concentration for these elements detected from water samples collected at other springs that were sampled in the valley.

The mountains that abut the western boundary of the claims contain outcropping rhyolitic volcanic rock units which are anomalous in lithium. This study has shown that rhyolite flows and rhyolitic tuffs underlie the Reynolds Springs Project. This geology, closely matches the geologic criteria for the United States Geological Survey (“USGS”) 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 Project area is prospective for further exploration.

### **Interpreted brine zones**

The Railroad Valley has been explored for many years by several oil and gas companies. Multiple abandoned and operational oil wells exist across the playa including 17 on, or in close proximity to,

## Macarthur Minerals' Reynolds Spring Project.

Historical logs of oil wells were obtained for eight holes spanning East-West across the claims. Down-hole logs comprised a combination of geological and geophysical data including lithologic logs and geophysical data from nuclear porosity and electrical resistivity logs. The dual laterologs contain resistivity and often conductivity records, both of which measure the change in the electrical properties of the rock. Where conductivity data was available (66% of the logs), conductive zones were easily identified. Resistivity data was converted mathematically to electrical conductivity (the reciprocal of resistivity), in the remainder of the geophysical logs. Liquids high in salt minerals freely allow the passage of an electrical current and therefore record high conductivity.

Multiple spikes in conductivity were observed in six of eight logs (Figure 1) and are interpreted to be zones that may contain brines. Conductive zones were typically 30 feet thick with a maximum thickness of 120 - 140 feet observed in wells 15 and 12 (Figure 1). Brine targets were observed from 860 feet to 2,685 feet below surface.

Conductive zones were contained mainly with the Tuff sequences which display high porosity. The Tuff sequences are rhyolitic in composition (anomalous in lithium). They also contain several ash fall units. Ash fall units are important brine aquifers in Clayton Valley.

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

The next steps for the Reynolds Springs Project will be to interpret the downhole geophysical logs for nine additional abandoned oil and gas wells that are found in the near vicinity of the project. Once the anomalous conductive zones are identified in these wells, they will then be correlated to the same zones in wells which are included in both Macarthur Minerals' current study and the study of the neighbouring claim holder, 3PL. This will help to develop a basin wide geological model.

The Company will then pursue permits to either re-enter one or more of the old wells or to drill new test wells or both.

### **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 gold and lithium. Macarthur Minerals has significant gold, lithium and iron ore exploration interests in Australia and Nevada. Macarthur Minerals has three iron ore projects in Western Australia; the Ularring hematite project, the Moonshine magnetite project and the Mt Manning iron ore project.

On behalf of the Board of Directors,

### **MACARTHUR MINERALS LIMITED**

"Cameron McCall"

Cameron McCall, Executive Chairman

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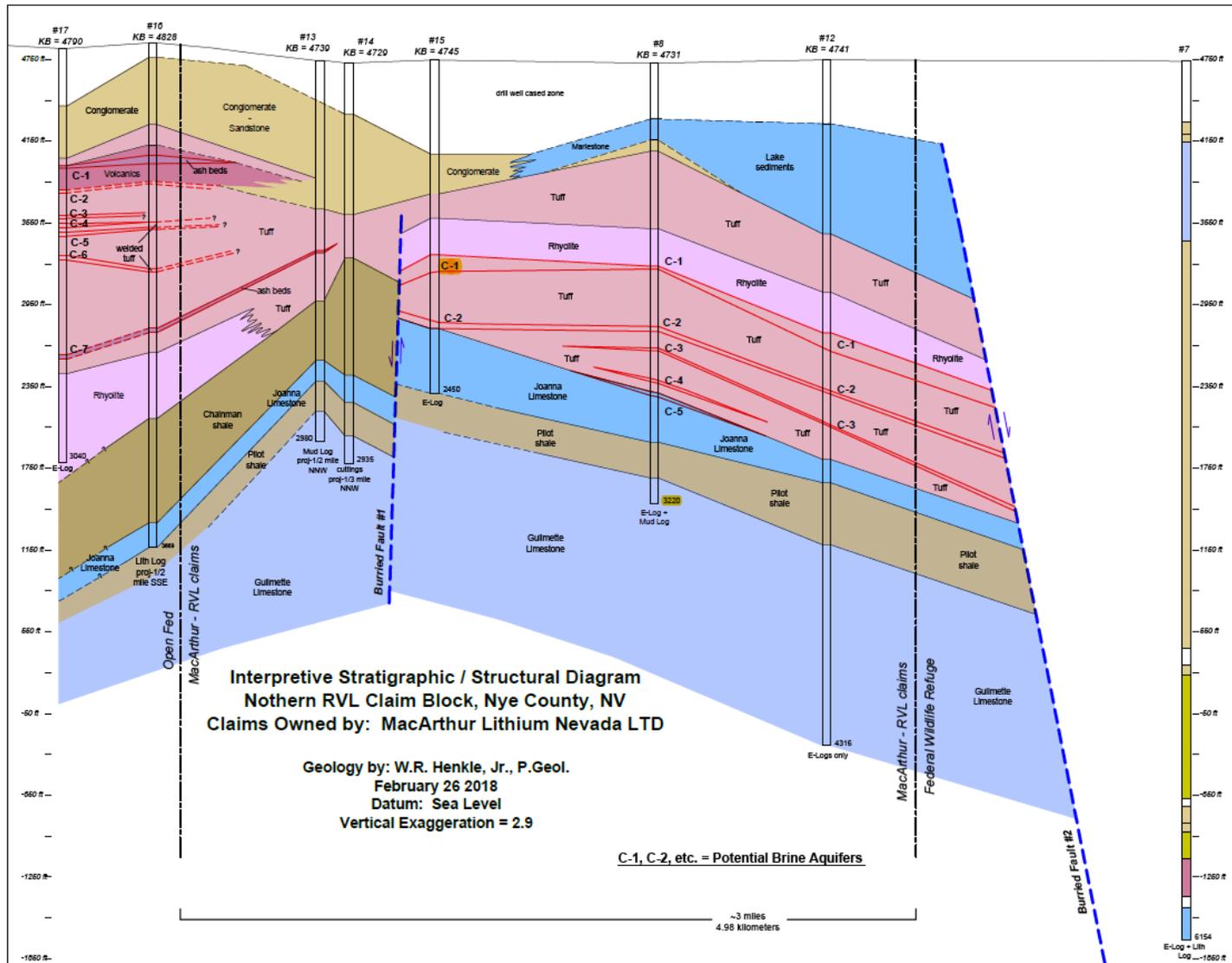
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**Figure 1:** Interpreted stratigraphy based on geological logging of oil wells across the Reynolds Springs Project



**Figure 2:** Regional location of Macarthur Minerals' Reynolds Spring Project