

## L-Max® Process Generates High Specification Battery Grade Lithium Carbonate Using Pioneer Dome Lepidolite

**Perth, Western Australia: 20 March, 2017:** Pioneer Resources Limited (“Company” or “Pioneer”) (ASX: PIO) is pleased to announce that excellent results have been received from a sample of lepidolite-bearing pegmatite sourced from the Company’s 100%-owned Pioneer Dome Lithium-Caesium-Tantalum (“LCT”) Project. Lepidico Ltd (ASX:LPD) has reported\* to the Company the following information about the trial undertaken:

- **High specification battery grade lithium carbonate grading 99.7% produced using Lepidico’s L-Max® technology.**
- **L-Max® achieves over 93.9% lithium extraction from the flotation concentrate, with estimated lithium recovery to the final lithium carbonate product of 90%.**

### Final results from the recent bench scale L-Max® test programme include:

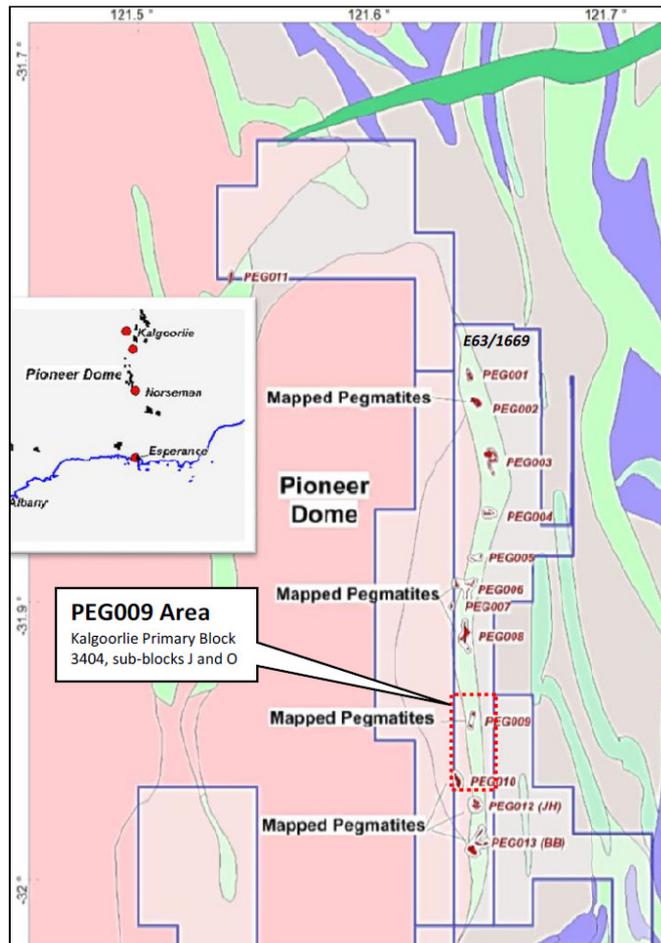
- Mineralised samples used in the test program contained approximately 57% lithium mica and graded 2.8% Li<sub>2</sub>O. From a 3kg sub-sample, a flotation concentrate was produced grading 3.6% Li<sub>2</sub>O. Lithium recovery to concentrate was over 99%.
- The sample was then subjected to leaching under standard L-Max® conditions, with extractions for lithium and caesium of approximately 94% and 93% respectively achieved.
- The leach liquor from the test was subjected to the usual L-Max® downstream process flowsheet in a series of batch tests. Lithium losses in the post leach L-Max® process were estimated at less than 3%, with total recovery from concentrate to lithium carbonate of approximately 90%.
- Battery grade lithium carbonate grading 99.7% Li<sub>2</sub>CO<sub>3</sub> was produced from these tests.
- Caesium and rubidium in residue also represent an excellent opportunity to extract further valuable by-products, as has been undertaken on previous samples tested by Lepidico.

### Pioneer – Lepidico Joint Venture at PEG009

On 23 February, 2017 Pioneer announced a Farm-in Agreement (“JV”) with Lepidico Ltd for the PEG009 Prospect at the Company’s Pioneer Dome LCT Pegmatite Project in the Eastern Goldfields of Western Australia.

Under the JV terms Lepidico may earn a 75% interest in Lepidolite mineralisation at the PEG009 Prospect by delineating at least 500,000 tonnes of mineralisation grading at least 1.2% Li<sub>2</sub>O in lepidolite within 2 years. This is considered sufficient to feed a proposed Phase 1 L-Max® Plant for 5 years.

The JV is restricted to lepidolite and minerals able to be treated by the L-Max® process sourced from the PEG009 Prospect only. The joint venture area is approximately 2% of the total Pioneer Dome LCT Project area of 338 km<sup>2</sup>.



**Figure 1. Location of the PEG009 Farm-in area within Pioneer's Pioneer Dome Project.**



**Photograph 1: Crushed Lepidolite mineralisation from the Pioneer Dome in preparation for the L-Max® test programme**

### **About Pioneer Resources Limited and Outlook**

The Company's strategy is to actively explore for key, global demand-driven commodities in highly prospective geological domains, in areas with low geopolitical risk and with established infrastructure. The Company's portfolio includes high quality lithium and caesium assets in Canada and WA, plus strategically located gold and nickel projects in mining regions of Western Australia.

The Company is currently awaiting assay results from a drilling programme recently completed at the Mavis Lake spodumene project in Ontario.

Pioneer is also actively advancing its Sinclair Caesium Prospect towards commercialisation, and advancing other lithium (in spodumene) and caesium (in pollucite) targets, including those at PEG004, PEG008 and PEG009, within the Pioneer Dome. An Industry consultant is presently completing a Mineral Resource Statement which will be used as the basis of a Mine Plan and economic study.

The Company recently announced a joint venture for its Acra Gold Project by which Northern Star Resources Limited may earn a 75% interest.

The Company also owns a portfolio of nickel, gold and base metal prospects. A drilling programme is forecast at the Blair Nickel Mine before May 2017, and an appraisal of the cobalt potential of the Golden Ridge Project is in progress.

### **About Lepidico Ltd and the L-Max® Process**

Lepidico Ltd is an ASX-listed company focused on exploration, development and production of lithium. Lepidico owns the technology to a metallurgical process that has successfully produced lithium carbonate from non-conventional sources, specifically lithium-rich mica minerals including lepidolite and zinnwaldite.

Lepidico has announced that the L-Max® Process has the potential to disrupt the lithium market by providing additional lithium supply from alternative sources. Lepidico is currently conducting a pre-feasibility study for a Phase 1 L-Max® plant, targeting production for 2019. Four potential sources of feed to the planned Phase 1 Plant are being evaluated, one of which is the Separation Rapids deposit in Ontario, Canada.

Yours faithfully



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\* The authorised information in this news release was provided to Pioneer by Mr Joe Walsh, Managing Director of Lepidico Ltd. The authorised information is extracted from a confidential report entitled "Norseman Lithium Project, L-Max® Amenability Testwork" dated March 2017, which was commissioned by Lepidico Ltd and authored by Strategic Metallurgy Pty Ltd.