

**4 February 2015**

## **ASX ANNOUNCEMENT**

### **Final results confirm the veracity of lithium hydroxide production process**

#### **Highlights**

- Control assays confirm production of 99.9% lithium hydroxide from micas at Lepidolite Hill deposit near Kalgoorlie
- Impurity removal achieved through simple filtration
- Recycling also minimises lithium losses
- Process applicable to all mica feed sources

**Final assays have confirmed the potential for a second commercial lithium product – lithium hydroxide - to be produced from Lithium Australia NL's (ASX: LIT) Lepidolite Hill mica deposit, 55 kilometres southwest of Kalgoorlie in Western Australia.**

Final control assays from the Company's production of lithium hydroxide verify the potential to produce this product from lithium micas. The process is accomplished by conversion of lithium carbonate. The tests were conducted on lithium carbonate samples produced during a mini plant production run by Lithium Australia last July using lepidolite from Lepidolite Hill (ASX announcement 9 July 2015).

The lithium hydroxide was produced by dissolution of the lithium carbonate and addition of lime. Filtration of the solution removed most of the solid impurities (primarily calcium and magnesium).

The tests showed that while some lithium is precipitated with these solids, they can be recycled to the primary mica leach, prior to precipitation of the lithium carbonate feed. This mitigates any potential lithium losses from precipitated solids.

The test cycle also generated results showing 80% of the lithium can be easily recovered by evaporation, with any lithium remaining in solution recycled to the lithium hydroxide precipitation, therefore minimising solution losses.

The production of high purity lithium carbonate is the second breakthrough for Lithium Australia on testwork on Lepidolite Hill samples. Last year, the Company produced a 99.58% purity lithium carbonate from test work on Lepidolite Hill's micas.

Lithium hydroxide is used in high and low temperature greases, gas purification systems for spacecraft and submarines, heat transfer mediums, as a storage battery electrolyte, in ceramics and some cement formulae, and in corrosion control in water reactors.

Lithium carbonate is a key industrial chemical, used in ovenware, ceramics, glazes, cement, adhesives, aluminium processing, lithium ion batteries, and medical applications.

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### **Implications**

The latest assay results come amid a push by Lithium Australia to trial hydrometallurgical techniques for the recovery of lithium and other metals on a wide range of silicates.

In the case of lithium, the ability to digest the target mineral, and produce a final hydroxide product, remains a common thread, with hydroxide production potentially being one of the most significant value adding steps in the process.

The ability to achieve these outcomes potentially adds enormous value to Lithium Australia's Western Australian and international projects in Europe and Mexico.

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### **About Lithium Australia NL:**

LIT is a dedicated developer of disruptive lithium extraction technologies. LIT has strategic alliances with a number of companies, potentially providing access to a diversified lithium mineral inventory on three continents.

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