

18 April 2018

ACN: 126 129 413

ASX: LIT

Level 1

675 Murray St
West Perth WA 6005

PO Box 1088
West Perth WA 6872

Phone +61 (0) 8 6145 0288

Fax +61 (0) 8 9475 0847

info@lithium-au.com

lithium-au.com

ASX ANNOUNCEMENT

Abundant lithium in mine waste at Lepidolite Hill, Western Australia

HIGHLIGHTS

- **Successful concentration of lithium micas via ore-sorting**
- **Beneficiation via ore-sorting may enhance economics as a source of feed for Lithium Australia's large-scale pilot plant (LSPP)**
- **Ore-sorting reject material contains lithium, probably in the form of petalite**
- **Petalite may provide an additional revenue stream**

Further testwork on ore-sorting products from Lepidolite Hill indicates successful separation of lithium micas using an X-ray transmission ore-sorting method.

As announced on [8 March 2018](#), successful separation was visually apparent in initial ore-sorting testwork at TOMRA's facility in Sydney, and also as shown below.



Figure 1: Ore-sorting beneficiated product from Lepidolite Hill mine dumps.



Figure 2: Ore-sorting reject material (mainly feldspar) from Lepidolite Hill mine dumps.

Chemical analysis of product and waste streams supports the successful partitioning of lepidolite lithium (more than 90%) in ore-sorting product versus ore-sorting reject material.

Lithium distribution in the product and waste streams is more even, with ore-sorting product grading 1.6% Li₂O and the reject fraction grading 1.8% Li₂O. The unexpectedly high lithium assay in the waste probably indicates the presence of petalite which has physical characteristics similar to other minerals being rejected by the ore sorting process. (During the 1970s petalite was commercially produced from Lepidolite Hill for use in the ceramics industry.) Further analytical work, including quantitative X-ray diffraction analysis, is being undertaken to confirm this.

For personal use only

Existing stockpiles at Lepidolite Hill are potentially an attractive source of feed for Lithium Australia's proposed LSPP, either as supplementary feed or a major source of feed.



Figure 3: Lepidolite Hill mine dumps, which contain lepidolite.

In summary, on the basis of these initial results Lithium Australia considers there is the potential to not only separate out petalite, as well as lepidolite, from surface stockpiles but also to undertake further exploration at the project; the latter would target possible *in-situ* lithium resources outside and/or below the current historic open-pit mine workings.

COMMENT FROM LIT MANAGING DIRECTOR ADRIAN GRIFFIN:

“Although our aim at Lepidolite Hill is exploitation of lithium mica, it's not surprising to find such abundant petalite in the mine dumps. Lepidolite Hill operated as a petalite mine in the 1970s, and perhaps the recovery of the target minerals was not as good as the operators would have liked!

Ore-sorting will certainly enhance rapid separation of the lepidolite. That said, we'll also devote significant attention to the recovery of other lithium minerals that result in a grade of about 1.8% Li₂O in the reject material.

We'll probably drill at the south end of the existing pit, to see how far the lithium mineralisation extends beyond what was left in the pit wall.”

Adrian Griffin

Managing Director

Mobile +61 (0) 418 927 658

Adrian.Griffin@lithium-au.com

About Lithium Australia NL

Lithium Australia aspires to 'close the loop' on the energy-metal cycle. Its disruptive extraction processes are designed to convert *all* lithium silicates to lithium chemicals, from which advanced components for the battery industry can be created. By uniting resources and the best available technology, Lithium Australia seeks to establish a vertically integrated lithium processing business.

MEDIA CONTACTS

Adrian Griffin, Lithium Australia NL 08 6145 0288 | 0418 927 658

Kevin Skinner, Field Public Relations 08 8234 9555 | 0414 822 631

For personal use only