

**4 October 2016**

## ASX ANNOUNCEMENT

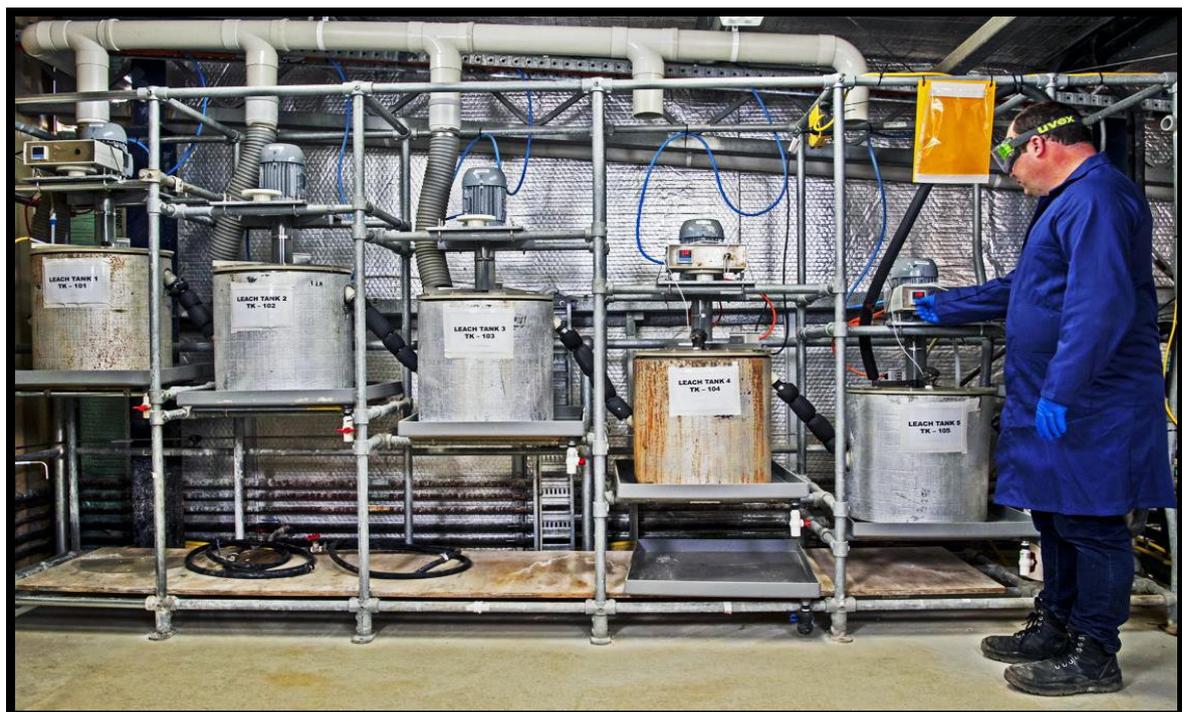
### LITHIUM AUSTRALIA ACHIEVES EXCEPTIONAL RESULTS IN CONTINUOUS SILEACH™ PILOT PLANT RUN

#### Highlights

- Lithium Australia (ASX:LIT) completes successful Sileach™ pilot plant campaign
- Continuous operation over a scheduled six-day period
- Very high plant availability
- Exceptional lithium extraction
- High-purity lithium solutions for the production of lithium carbonate

#### Pilot plant campaign preparation

On 1 September 2016, Lithium Australia announced the commencement of pilot plant testing at ANSTO Minerals' (a division of the Australian Nuclear Science and Technology Organisation) Lucas Heights testing facility, located on the outskirts of Sydney, NSW. "Hot commissioning" of the plant (photograph below) was undertaken over a one day run, the nature of leach liquors and residues was evaluated and final adjustments made to plant components in preparation for continuous operation.



*Sileach™ continuous pilot plant operation, ANSTO Minerals, Lucas Heights, NSW.*

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## Continuous pilot plant operation

The pilot plant was fed continuously from 12-17 September 2016, treating ore from Lepidolite Hill, W.A., using Lithium Australia's halogen based Sileach™ process. Approximately 650 kg of lepidolite ore was processed at an average throughput of 6 kg/h.

## Circuit design and performance

The pilot plant consisted of leaching and impurity removal circuits. The design was based on test work conducted by ANSTO Minerals on similar ore to that processed during the continuous pilot plant run. The campaign produced a purified lithium-containing liquor, devoid of impurities. This purified liquor will be processed through to high-purity lithium carbonate in a second pilot campaign in the near future.

Extraction of lithium in the Sileach™ process exceeded 95% in the leach circuit, validating both the overall extraction and accelerated rate of extraction of lithium achieved in the laboratory test work program. The performance in the impurity removal circuits was comparable with the laboratory test work program, producing a liquor suitable for further processing. The operation of the pilot plant was robust and provided valuable materials handling and additional engineering design data for Lithium Australia's Sileach™ process.

## Statement from the Managing Director

Lithium Australia's managing director, Adrian Griffin said:

*"Plant performance could not have been better. The results show that exceptional lithium extractions can be achieved without the need for fine grinding, or the production of clean concentrates. The material processed was not subjected to pre-concentration but still achieved outstanding performance with minimal feed preparation. These are key parameters for processing at low cost.*

*Lower-grade spodumene concentrates (about 4.5% Li<sub>2</sub>O) from Pilbara Minerals' Pilgangoora project, will be processed in one of the subsequent test runs. We are intentionally concentrating on the lower-grade, hard rock products, from which no other processes can recover lithium commercially. Sileach™ provides significant processing advantages.*

*Successful processing of spodumene from Pilgangoora is the first step of our commercialisation agreement with Pilbara Minerals, aimed at establishing a lithium chemical processing plant in Port Hedland."*

### Adrian Griffin

Managing Director

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### About Lithium Australia

Lithium Australia NL is a dedicated developer of disruptive lithium extraction technologies, and 100% owner of the Sileach™ process for the recovery of lithium from silicates. LIT has strategic alliances with a number of companies, potentially providing access to a diversified lithium mineral inventory. LIT aspires to create the union between resources and the best available technology and to establish a global lithium processing business.

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