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ASX ANNOUNCEMENT

LITHIUM AUSTRALIA PREPARES FEED FOR LARGE-SCALE PILOT PLANT

Highlights

- Lithium Australia proceeding with front-end engineering and design for its large-scale SiLeach[®] pilot plant ('LSPP').
- Feed sources for the first 12 months of operation being assessed.
- Ore sorting testwork results at Lepidolite Hill result in positive beneficiation.
- Potential for the Very Small Particle Company ('VSPC') to convert mine waste to lithium-ion cathode material.

Introduction

As Lithium Australia NL (ASX: LIT) proceeds with the final steps in engineering design for its planned LSPP, it is assessing feed sources for the first 12 months of operation.

Intrinsic to Lithium Australia's strategy of capitalising on various types of mine waste and the delivery of value-added products (lithium chemicals or cathode powders for lithium-ion batteries) is its identification of source materials and the most practical means of generating appropriate LSPP feed from such sources.

Lepidolite Hill – potential feed of lithium mica

The Lepidolite Hill lithium deposit – located about 520 kilometres east of Perth (Western Australia) and part of the Coolgardie Rare Metals Venture, an initiative of Lithium Australia (80%) and ASX-listed Focus Minerals Limited (ASX: FML) (20%) – has been the subject of recent innovative beneficiation testwork.



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



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

At Lepidolite Hill, the lithium mineralisation consists of petalite and lepidolite in a thick pegmatite that remains exposed in the quarry walls, with further large lepidolite accumulations exposed at surface at the southern end of the of the quarry.

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In the 1970s, petalite (a lithium aluminosilicate) was recovered during mining operations but the abundant lepidolite also mined in the 400,000-tonne campaign was consigned to the dumps. That lepidolite is associated with accessory petalite, spodumene and pollucite (a cesium mineral).



Figure 3: Lepidolite (blue-purple) with quartz, feldspar and accessory spodumene, petalite and pollucite.



Figure 4: Thick pegmatite exposed within the walls of the Lepidolite Hill quarry, 520 km east of Perth, Western Australia.

TOMRA Sorting Solutions carried out the testwork on bulk samples obtained from dumps surrounding the historic mine workings at Lepidolite Hill. The ore-sorting tests indicate the possibility of rejecting a large proportion of the waste material, thereby reducing the required capacity of the ore-preparation section

of the LSPP. Preparation of the ore prior to SiLeach® digestion will involve crushing, grinding and flotation, probably augmented by on-site ore sorting.

The material newly recovered by ore sorting will now be assayed and mass balances calculated. Further comminution and flotation tests will also be undertaken on the beneficiated product.

Lithium feed from mine waste

Subjecting rejected material from Lepidolite Hill to innovative ore-sorting technology perfectly illustrates how Lithium Australia intends to produce SiLeach® feed from mine waste. Further, similar lepidolite occurrences in Western Australia are also under investigation.

From mine waste to lithium-ion battery cathodes

Lithium Australia's recent acquisition of VSPC gives it access to the most advanced cathode-powder production technology. Potentially, that technology gives Lithium Australia the benefit of the most significant value-adding step in the lithium-ion battery production process. Critically, the application of VSPC technology may allow Lithium Australia to control the supply chain from waste material through to cathode powder.

COMMENT FROM THE MANAGING DIRECTOR

"Lithium Australia is striving to improve the sustainability of the energy-metal sector. Recovery of lithium from mine waste is a great example of that, and we are strongly focused on opportunities in both Europe and Western Australia.

"As demand for lithium grows, efficient resource utilisation will become essential. Our range of technologies allows us to seize opportunities as they arise, and that includes more than merely accessing mine waste – we're also developing the ability to rebirth used lithium-ion batteries. It's all part of Lithium Australia's plan to take greater responsibility for the stewardship of our finite resources."

For and on behalf of the Board

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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.

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