

## Enhanced development option for Alvarrões

- Testwork on Alvarrões lithium mica rich mineralisation produced marketable quality samples of feldspar and quartz concentrates for ceramics use, in addition to the primary lithium mica concentrate
- Lower capital and operating costs are envisaged as the relatively small mass of fines generated from a flotation plant could negate the requirement for a tailings storage facility
- Modular flotation plant with small footprint being evaluated for integration with the Phase 1 Plant feasibility study

Lepidico Ltd (ASX:LPD) (“Lepidico” or “Company”) is pleased to announce that a lower capital and operating cost development option has been identified for the brownfield expansion of the Alvarrões pegmatite mine in Portugal, controlled by Grupo Mota, which is now being evaluated as part of the Phase 1 L-Max<sup>®</sup> Plant integrated feasibility study. Flotation testwork on Alvarrões pegmatite mineralisation has successfully generated separate feldspar and quartz concentrates, in addition to a quality lithium mica concentrate suitable for Phase 1 Plant feed. Aside from the additional revenue potential, the large increase in product mass means that co-disposal of relatively small quantities of plant fines with mine waste can be considered, thereby negating the requirement for a tailing storage facility.

Lepidico has received a proposal from Outotec for the complete supply of a modular mill and concentrator with capacity of 150,000 tonnes per annum (tpa) ore feed and capable of producing more than the required lithium mica concentrate of 30,000tpa for a downstream Phase 1 L-Max<sup>®</sup> Plant. Opportunities for cost savings for a plant in Portugal have been identified and will be evaluated during the integrated feasibility study. Lepidico budgeted A\$15 million for a concentrator under the Phase 1 Plant pre-feasibility study. A further 20% is estimated for the additional plant to produce feldspar and quartz concentrates. A formal estimate is planned to be undertaken for the integrated feasibility study during the September 2018 quarter.

The Outotec cPlant Concentrator (Figure 1) offers a cost effective, flexible solution ideal for projects with modest capacity needs and/or in remote locations. The plant is based on pre-fabricated and functionally tested modules inside container-sized steel frames that can be easily transported and installed, and quickly connected. Some of the benefits of cPlant include: reduced EPC project costs compared to a conventional flotation plant; up to 20% lower capital investment; requires 30% less labour resources; 95% of installation and pre-commissioning done prior to delivery; minimal civil engineering work required; and ease of relocation.

Lepidico’s Managing Director, Joe Walsh said, “the collaboration between Grupo Mota and Lepidico allows each company’s expertise to be leveraged to maximise the potential of the Alvarrões pegmatite deposit. Grupo Mota is an established supplier of feldspar and quartz products to the substantial ceramics industry in the Iberian Peninsula and has advised that concentrate samples produced by Lepidico are of marketable quality. As part of the current feasibility study Lepidico has identified that staged conventional flotation allows these further mineral concentrates to be generated as by-products to the primary lithium mica concentrate. Advantages of this approach include a significantly

reduced footprint at Alvarrões along with the option to employ modular concentrator technology, reduced capital and operating costs, and maximisation of the mineral potential of the pegmatite.”



Figure 1: Outotec cPlant Flotation showing modular construction

Image source: Outotec

Several sites close to the existing Alvarrões mine have been identified as preferred locations for a mill and concentrator development allowing for short ore haulage distances. The compact design of the cPlant coupled with modest throughput mean that the plant footprint is also relatively small. Permitting activities have commenced with the first joint Grupo Mota-Lepidico meeting held with regulators in late March. A permitting plan and schedule will be developed during the June 2018 quarter. Furthermore, a more definitive arrangement to the current binding ore offtake agreement between Lepidico and Grupo Mota is being evaluated with the intention of providing a sustainable framework for operations.

### Background

Lepidico is evaluating a number of deposits in addition to Alvarrões as possible feed sources to both the Phase 1 L-Max® Plant Project in Sudbury, Canada and for a potential full-scale L-Max® development. Preliminary assessment indicates that the Outotec cPlant Concentrator and mill could provide a generic solution for the development of small to medium sized lithium mica deposits that do not benefit from access to existing nearby concentration capacity.

## **Further Information**

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## **About Lepidico Ltd**

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. The L-Max<sup>®</sup> Process has the potential to enter the lithium market by providing additional low-cost lithium supply from alternative sources. The Company is currently conducting a feasibility study for a Phase 1 L-Max<sup>®</sup> plant, scheduled for completion in the December 2018 quarter. Three potential sources of feed to the planned Phase 1 Plant are being evaluated for integration with the Phase 1 Plant feasibility study.

Lepidico's current exploration interests include an ore access agreement with Grupo Mota over the Alvarrões Lepidolite Mine in Portugal where it has identified a JORC Code compliant Inferred Mineral Resource estimate of 1.5 Mt grading 1.1% Li<sub>2</sub>O (see ASX Announcement of 7 December 2017); and farm-in agreements with both Maximus Resources (ASX:MXR) and Pioneer Resources (ASX:PIO) over the Moriarty Lithium Project and PEG 9 lepidolite prospect respectively, both in Western Australia. Lepidico has also entered into a Letter of Intent with TSX listed Avalon Advanced Materials Inc. for planned lithium mica concentrate supply from its Separation Rapids Project in Ontario, Canada.

Lepidico has a strategic alliance with Galaxy Resources Limited (ASX: GXY, which holds a 12% interest in LPD) based on a shared vision for the significant global opportunity provided by the commercialisation of L-Max<sup>®</sup>. With its strong industry contacts and relationships in the lithium industry, Galaxy will assist Lepidico with future business and growth opportunities, that include the evaluation of potential synergies with its Mt Cattlin Mine and James Bay Project.