26 June 2017

COMPLETION OF PHYSICAL PROCESSING TESTWORK CONFIRMS BATTERY GRADE CONCENTRATE AT WOLFSBERG LITHIUM PROJECT

Highlights

- **Battery grade spodumene concentrate at 6.2% Li_2O produced by flotation**
- **High quality feldspar and quartz produced for the glass and ceramic industry as by-products from flotation**
- **Transformation to technical grade lithium hydroxide demonstrated, further testwork to produce battery grade lithium hydroxide in progress**

European Lithium Limited (ASX:**EUR,** FRA:**PF8**)(the **Company**) is pleased to report the results following completion of the physical processing testwork at its advanced Wolfsberg Lithium Project (**Wolfsberg**), in Austria. This work has shown that spodumene concentrate at 6.2% Li_2O can be produced that can be readily converted to battery grade lithium carbonate. Additionally, high quality feldspar and quartz concentrates with low iron content can be produced for the European glass and ceramic industry.

Steve Kesler, CEO, commented "This is another major step in the development of the Wolfsberg project demonstrating that the project has the potential to be a significant part of an integrated lithium supply chain for the coming lithium battery plants of Europe. The production of high quality feldspar and quartz for the European glass and ceramic industry will provide valuable by-product credits."

Dorfner Anzaplan (Germany), a leading independent consultant in lithium and industrial minerals, conducted the testwork programme to optimize the process design for Wolfsberg. The work was undertaken on 4 tonne samples of each of the ore types – amphibolite hosted pegmatite (**AHP**) and mica schist hosted pegmatite (**MHP**). These were representative samples from the 500 tonne bulk samples mined from each of the ore types.

Initial testwork was reported in the ASX release on 9 February 2017 'Wolfsberg Lithium Project Closer to Fast Track Production'. This showed that laser sorting was effective in rejecting the 30% waste rock from run of mine whilst enabling a high lithium recovery of 93%. Dense media separation (**DMS**) on the AHP resulted in a DMS concentrate of 5.3% Li_2O which can be used by the glass-ceramic producers in Europe. This simple process could potentially allow fast track production from Wolfsberg. The MHP, being more finely crystallised than the AHP, was not suitable for DMS.

Flotation testwork has been completed on a feed material comprising MHP after laser sorting to reject waste, the AHP fraction too fine for DMS and the DMS middling fraction.

The combined flotation feed had a head grade of 1.2% Li_2O. The final process design includes the following steps to prepare the feed for spodumene flotation:-

- crushing and grinding to -0.3mm
- attrition scrubbing to clean the surfaces of the particles
- desliming
- magnetic separation to remove iron bearing impurities associated with host rock (mainly hornblend and iron bearing mica)
- mica flotation to remove mica that would otherwise float with spodumene

The flotation feed is conditioned with collector and frother and a rougher flotation carried out. A rougher spodumene concentrate containing 5.5% Li_2O was obtained at a 86.2% lithium recovery. The rougher concentrate was upgraded in two cleaner stages to obtain a 6.2% Li_2O concentrate. Batch tests had an overall lithium recovery of 78.6% but the cleaner tails would be recycled and most of the spodumene in the cleaner tails will be recovered. Dorfner Anzaplan expect that in continuous operation the recycled cleaner tails would show similar distribution and recovery as in the batch test and that an overall lithium recovery of 85% should be obtained. This considers the lithium losses from the desliming, magnetic separation and mica flotation steps as well as losses in rougher flotation tailings. Locked cycle tests are planned to confirm this. The spodumene flotation flowsheet is shown in Figure 1.

The rougher tailings from spodumene flotation and the light fraction from DMS then underwent feldspar flotation. After conditioning with collector and frother the flotation feed went to feldspar rougher flotation to obtain a rougher feldspar concentrate. The rougher tails then underwent three stages of scavenger flotation to remove residual feldspar and obtain a quartz concentrate.

Both feldspar and quartz concentrates were screened into a +0.1-0.3mm fraction for glass applications and a -0.1mm fraction for ceramics and filler applications.

The +0.1-0.3mm feldspar fraction underwent a dry three stage magnetic separation to further improve the iron content. The -0.1+0.3mm feldspar concentrate was a mixed sodium/potassium feldspar with 0.05% Fe_2O_3 which is in the range for high quality feldspar products for glass, ceramic and filler applications. Residual lithium of 0.3-0.5% Li_2O in the feldspar concentrate can be a benefit in the glass and ceramics industry. The quartz concentrate had very low iron, less than 0.01% Fe_2O_3 and is suitable for all major glass applications.

32.2% of the run of mine fed to the processing plant was recovered as high quality feldspar and quartz which can provide a significant by-product credit against the lithium production cost. The by-product flowsheet is shown in Figure 2.

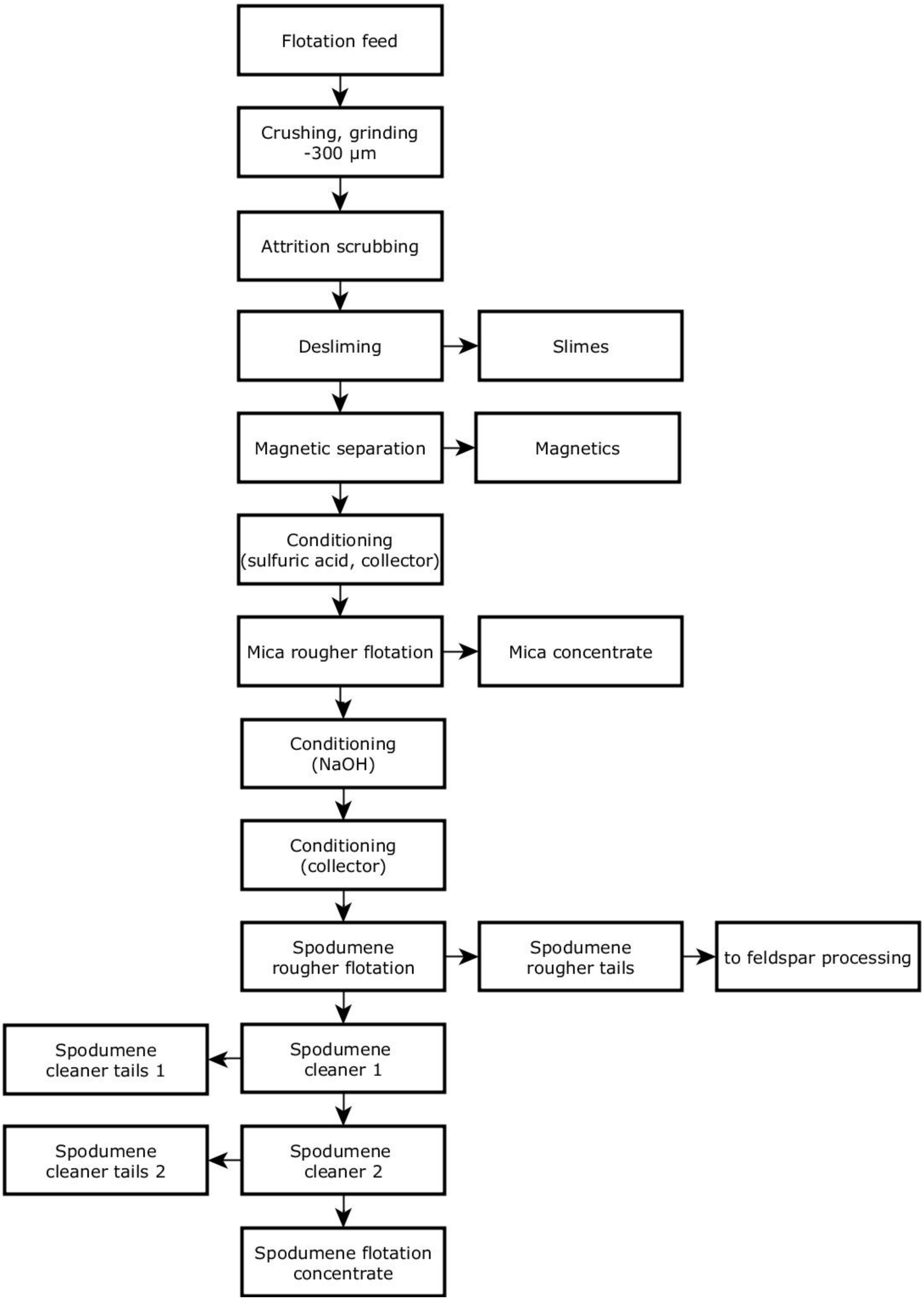

Figure 1: Spodumene flotation flowsheet

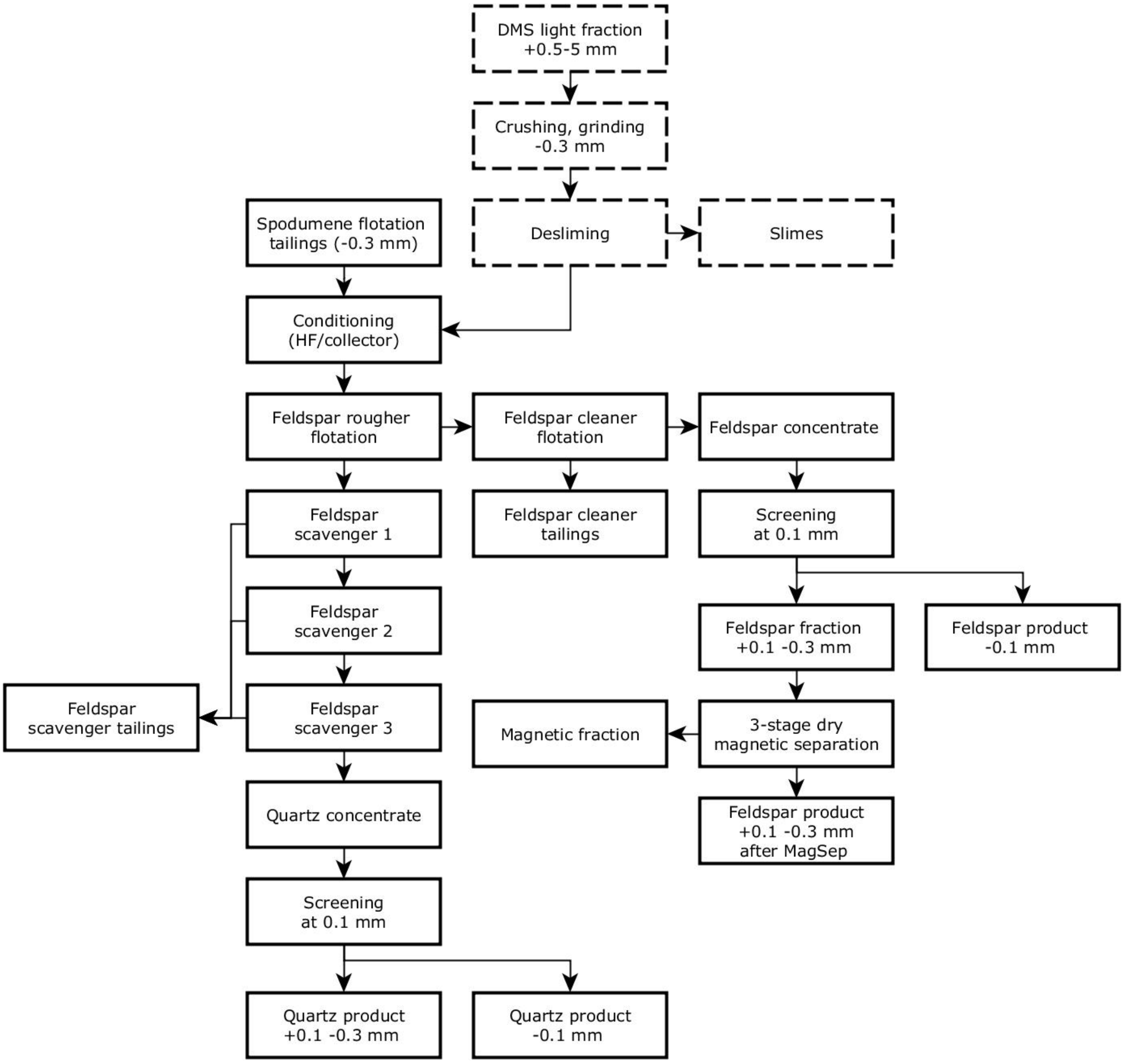

Figure 2: Byproduct flowsheet for feldspar and quart recovery

The mica concentrate produced as a preliminary step to spodumene flotation contained a significant amount of other minerals (mainly feldspar and quartz) and only about 65% mica.

An overall mass and lithium balance for the physical processing of Wolfsberg ore to spodumene (DMS and flotation), feldspar and quartz concentrates is given in Table 1 which shows that the overall lithium recovery was 75.4%.

Processing Step	Mass total [wt.-%]	Li_2O grade [wt.-%]	Li_2O distribution [wt.-%]
Mixed AHP/MHP ore (1:1)	100.0	1.0	100.0
Tailings			
Sorting	22.6	0.3	6.9
DMS (DMS light fraction)	14.7	0.4	5.8
DMS (magnetics)	1.1	1.8	2.0
MagSep & Flotation (Slimes, magnetics, mica)	14.8	0.6	8.3
MagSep & Flotation (spodumene tails)	32.9	0.05	1.6
Potential By-Products (from DMS light fraction & spodumene tails)			
Feldspar	19.2	0.3	5.4
Quartz	13.1	<0.1	< 1
Spodumene concentrates			
DMS spodumene conc. after MagSep	2.5	5.3	13.1
Flotation rougher concentrate	11.5	5.5	62.3
Total	14.0		75.4

Table 1: Overall mass and lithium balance for the production of spodumene, feldspar and quartz

Hydrometallurgical testwork to convert the spodumene and DMS concentrate to battery grade lithium carbonate and lithium hydroxide is almost complete. The spodumene flotation concentrate was very suitable for conversion using the acid roast method and battery grade lithium carbonate, >99.9% Li_2CO_3, has been obtained. Transformation to technical grade lithium hydroxide has been demonstrated and further purification testwork to produce battery grade lithium hydroxide is in progress.

DMS concentrate is only suitable for glass-ceramic applications and seems not to be suitable for conversion to lithium carbonate without further processing whereas flotation concentrate is well suited to both. The production of a DMS concentrate adds complications to mining in requiring separate handling of the AHP (which is used for DMS) and MHP (which is not) and then in separate crushing, screening and sorting operations.

The mining and processing of Wolfsberg ore will be considerably simplified by producing only a flotation concentrate. Dorfner Anzaplan expect that eliminating the DMS step and treating all sorted AHP and MHP ore by flotation will still result in the same flotation recovery of 85% estimated from a continuous operation. This needs to be confirmed by further testwork. Considering the lithium losses in laser sorting of 7% then an overall lithium recovery of 79% can be expected from sorting/flotation which is higher than the 75.4% achieved by sorting/DMS/flotation. Capital reduction from the use of DMS may not outweigh the loss in recovery. This will be confirmed during the pre-feasibility study which will use the sorting/flotation process as the base case.

Dr Steve Kesler
Chief Executive Officer
European Lithium Limited

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Visit the Company's website to find out more about the advanced Wolfsberg Lithium Project located in Austria.

Competent Person's Statement

The information in this announcement pertaining to the Wolfsberg Lithium Project, and to which this statement is attached, relates to Project Development and Metallurgical Studies and is based on and fairly represents information and supporting documentation provided by the Company and its Consultants and summarized by Dr Steve Kesler who is a Qualified Person and is a Fellow of the Institute of Materials, Minerals and Mining and a Charted Engineer with over 40 years' experience in the mining and resource development industry. Dr Kesler has sufficient experience, as to qualify as a Competent Person as defined in the 2012 edition of the "Australian Code for Reporting of Mineral Resources and Ore reserves". Dr Kesler consents to the inclusion in the report of the matters based on information in the form and context in which it appears. The company is reporting progress on project development and metallurgical results under the 2012 edition of the Australasian Code for the Reporting of Results, Minerals Resources and Ore reserves (JORC code 2012).