Lithium Universe LIMITED
Building a Lithium Future

ASX ANNOUNCEMENT AND MEDIA RELEASE

19 December 2023

EXCELLENT PROGRESS OF LITHIUM CARBONATE REFINERY ENGINEERING STUDY

Highlights

- Hatch's outstanding progress in QLPH Li Carb Refinery engineering study
- Finalisation of design flow sheet and draft site layout
- Completion of Block Flow Diagram (BFD) and Process Flow Diagrams (PFD) and Mass Balance along with Process Design Criteria (PDC)

Lithium Universe Limited ("Lithium Universe", the "Company" or ASX: "LU7") is pleased to report the excellent progress of the Engineering Study by Hatch Ltd (**Hatch**) on the Company's Québec Lithium Processing Hub (QLPH) multi-purpose battery-grade lithium carbonate refinery. The Refinery is rated at 16,000 tpa with an assumed feed grade of spodumene at or around 5.5% Li_2O. The final lithium carbonate product should be at least 99.5% and 99.9% grade. Target plant availability is 84% and target overall recovery rate for lithium is 85%. Anhydrous sodium sulphate, generally used in the textile industry, will be sold as a by-product. The alumina-silicate residue from the leached spodumene will be sold to the cement industry.

The finalized design flow sheet (See Figure 1) illustrates how the front end loader operation and belt conveyors feed spodumene concentrate from the stockpile area to the calciner. The concentrate is calcined at 1080°C in a direct-fired rotary kiln to convert the alpha spodumene to the leachable beta spodumene. The calcining kiln off-gases will pass through a cyclone and an electrostatic precipitator to comply with environmental emissions limits. The hot calcine is indirectly cooled and dry-milled to less than 300 µm. After storage in a surge bin, the beta spodumene is mixed with concentrated sulphuric acid and roasted at 250°C in an indirectly heated kiln. The sulphating kiln off-gases will be cleaned in a wet scrubber to meet site environmental emissions limits. The sulphated spodumene is cooled and fed to the leach circuit. The combined leached solids and precipitated impurities are thickened prior to being filtered in a belt filter. The filtrate is combined with the thickener overflow and passed through a polishing sand filter and an ion exchange column to remove residual calcium, magnesium and other multivalent cations before the lithium carbonate area.

The solution entering the lithium carbonate production area is heated and then reacted with a hot sodium carbonate solution in a single crystalliser operating at 95°C. The coarse crystals from the crystalliser are thickened before passing to the centrifuge circuit. Raw lithium carbonate is further purified to battery grade using

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the carbonation process. After slurried in demin water, soluble lithium bi-carbonate is formed from the bubbling of carbon dioxide gas. The solution is filtered, and lithium carbonate is re-crystalised when the solution is heated using injected steam. Carbon dioxide gas is re-generated which is recycled to the front end of the purification process. Battery-grade lithium carbonate is centrifuged and dried in an indirect-fired kiln at 120°C. The dry coarse lithium carbonate is air-milled to less than 6 µm in a microniser and then pneumatically conveyed to the storage bins and bagging stations. Anhydrous sodium sulphate is produced from the vacuum evaporative crystallisation, dried, packaged and sold to the textile industry as a by-product. The design closely resembles that of the Jiangsu Lithium Carbonate Plant but is more robust and capable of processing various types of spodumene concentrate from Canada and around the world.

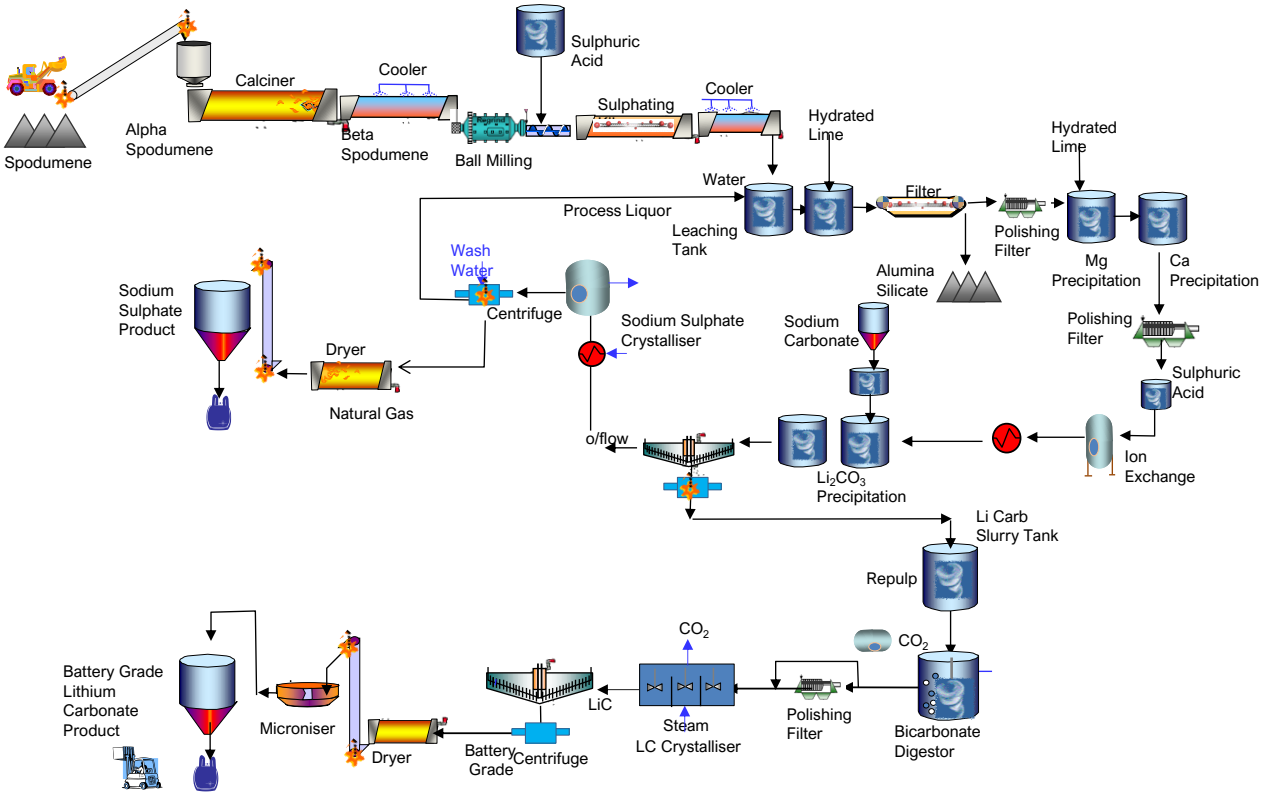

Figure 1 – Process Flow Diagram, QLPH Lithium Refinery

The company has developed a draft overall site layout to account for Canadian climate conditions, and defines roads required for delivery of raw materials and shipment of products and co-products. See Figure 2.

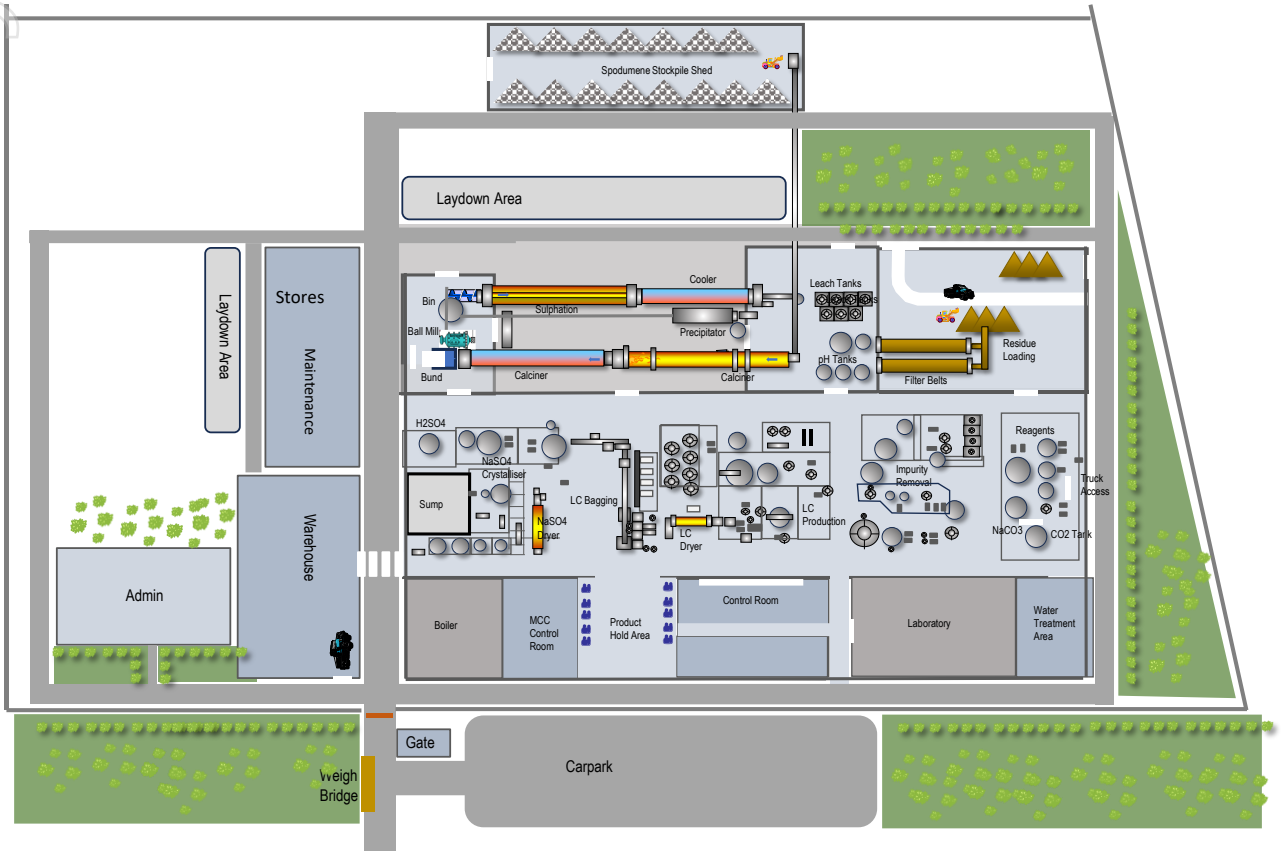

Figure 2 – Draft layout of QLPH Lithium Refinery

So far, the Hatch Study team has provided a Block Flow Diagram (BFD) and Process Flow Diagrams (PFD). They've also delivered a Mass Balance along with Process Design Criteria (PDC), which showcase mass flows, splits, and anticipated tonnages concerning significant equipment. The progress made thus far has been excellent. Hatch has also completed a location study for the optimal site selection for the Company's proposed 16,000 ton per annum battery-grade lithium carbonate refinery, which is an integral part of the Company's Québec Lithium Processing Hub (QLPH). The location study involved an evaluation of various potential locations, with more than 20 municipalities contacted, and relied on recent site location benchmarks from both 2021 and 2023. Based on the location study, Lithium Universe has opted to concentrate on the Bécancour Industrial Park located between Québec City and Montreal. The company has initiated discussions with the Société du parc industriel et portuaire de Bécancour (SPIPB) concerning the Bécancour Industrial Park.

Mr Iggy Tan, the Chairman of LU7 said "*The progress of the engineering study for the QLPH Lithium Refinery by Hatch has been excellent, setting the stage for the Definitive Feasibility Study (DFS). Considering our listing in early August this year, the pace and quality of work demonstrated by Hatch, guided by the Company's Lithium Dream Team, has been pleasing".*

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Authorised for release by Iggy Tan, Chairman of Lithium Universe Limited

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Lithium Universe Interactive Investor Hub

Engage with Lithium Universe directly by asking questions, watching video summaries and seeing what other shareholders have to say about this, as well as past announcements, at our Investor Hub https://investorhub.lithiumuniverse.com/

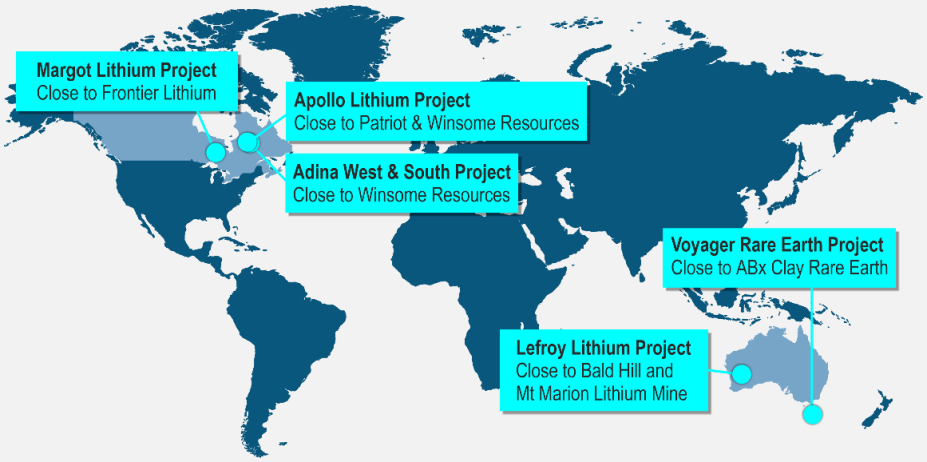
Forward-looking Statements

The Company wishes to remind investors that the presence of pegmatite does not necessarily equate to spodumene mineralization. Also that the presence of pegmatite and spodumene mineralization on nearby tenements does not necessarily equate to the occurrence on Lithium Universe Limited's tenements. This announcement contains forward-looking statements which are identified by words such as 'anticipates', 'forecasts', 'may', 'will', 'could', 'believes', 'estimates', 'targets', 'expects', 'plan' or 'intends' and other similar words that involve risks and uncertainties. Indications of, and guidelines or outlook on, future earnings, distributions or financial position or performance and targets, estimates and assumptions in respect of production, prices, operating costs, results, capital expenditures, reserves and resources are also forward looking statements. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions and estimates regarding future events and actions that, while considered reasonable as at the date of this announcement and are expected to take place, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of our Company, the Directors and management. We cannot and do not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this announcement will actually occur and readers are cautioned not to place undue reliance on these forward-looking statements. These forward looking statements are subject to various risk factors that could cause actual events or results to differ materially from the events or results estimated, expressed or anticipated in these statements.

About Lithium Universe Limited (ASX:LU7)

LU7's main objective is to establish itself as a prominent Lithium project builder by prioritizing swift and successful development of Lithium projects. Instead of exploring for the sake of exploration, LU7's mission is to quickly obtain a resource and construct a spodumene-producing mine in Québec, Canada. Unlike many other Lithium exploration companies, LU7 possesses the essential expertise and skill to develop and construct profitable projects. Additionally, Lithium Universe Limited has access to significant Lithium opportunities in Tier 1 mining jurisdictions in Canada and Australia.

Tier 1 Lithium Inventory



Apollo Lithium Project (80%)

Commanding a land position spanning over 240 km^2, Apollo is located in the same greenstone belt and only 29 kilometres south-east of the Corvette Lithium Project owned by Patriot Battery Metals (market cap of over A$1.4 billion). Patriot's most successful drill result was a remarkable 156 meters at 2.12% Li_2O at CV5. Similarly, 28 kilometres to the east, Winsome Resources Limited (market capitalization of over A$300 million) recently announced drilling hits of 107 meters at 1.34% Li_2O from 2.3 meters (AD-22-005) at their Adina Project. Apollo has 17 pegmatite outcrops reported on the tenement package. Given the exceptional results from these neighbouring projects, the Apollo Lithium Project has the potential to be equally successful.

Adina South & Adina West Lithium Project (80%)

The project is situated in close proximity to the Adina discovery, which is owned by Winsome Resources, a Company with a Market Capitalisation of over A$300m in the market. The Adina Project has produced a visual pegmatite intersection of over 160m in drills, lying beneath outcropping 4.89% Li_2O. Recently, Winsome Resources reported successful drilling results, with AD-22-005 yielding 107m at 1.34% Li_2O from 2.3m at their Adina Project. The Adina South & Adina West Lithium Project boasts one of the largest prospective land holdings near Winsome Resources Limited. Aerial satellite images have revealed similar pegmatite occurrences at the surface.

Margot Lake Lithium Project (80%)

The Margot Lake project is located in north-western Ontario, in the premium lithium mineral district of Ontario's Great Lakes region. The project is situated 16km southeast of Frontier Lithium's (TSX-V: FL) PAK Deposit, which contains 9.3Mt at 2.0% Li_2O, and 18km away from Frontier's Spark Deposit, which contains 32.5Mt at 1.4% Li_2O. The tenement contains nine confirmed and mapped pegmatites and is located in a highly competitive district due to recent major discoveries of lithium. Frontier Lithium, with a market capitalization more than CAD$450 million, is a significant player in the region.

Lefroy Lithium Project (100%)

Lefroy is in the mineral-rich Goldfields region of Western Australia. This strategically located project is in close proximity to the Bald Hill Lithium Mine, which has a top-quality spodumene concentrate with low levels of mica and iron, as well as significant tantalum by-product production. The Bald Hill mine has a resource of 26.5 million tonnes at 1.00% Li_2O. The Lefroy project is also located near the Mt. Marion Lithium Mine, which is owned by Mineral Resources and has a market capitalization of A$17B. Mt. Marion produces 900,000 tonnes of mixed-grade spodumene concentrate annually and is approximately 60 kilometres from the Lefroy project.

Voyager Rare Earth Project (80%)

The Voyager project is north tenements are positioned between ABx Group tenures, where clay-hosted rare earth elements (REE) and niobium have been discovered and hold resources of 27Mt. These areas are analogous with Ionic Adsorption Clay (IAC) deposits that have produced REE in southern China using simple leaching. ABx stated that early testwork indications show their rare earth elements are easily leached and could be concentrated at low cost, with no deleterious elements. Geological mapping of Voyager's tenures indicates the presence of various areas of clay and bauxite, which is the ideal geological environment for the occurrence of rare earth elements.