RNS Number : 7187C
CleanTech Lithium PLC
13 October 2022

13.10.22

CleanTech Lithium PLC ("CleanTech Lithium" or the "Company")
Direct Lithium Extraction Process Work Commences with SunResin

CleanTech Lithium PLC (AIM:CTL), an exploration and development company advancing the next generation of sustainable lithium projects in Chile, announces an update on direct lithium extraction ("DLE") processing work.

Highlights:

- Bulk samples of brine collected from the sub-surface aquifers of Laguna Verde and Francisco Basin have been dispatched to SunResin´s facilities in China
- SunResin will undertake DLE trials on the brine, as per the Memorandum of Understanding ("MOU") executed in August 2022 between the two companies
- Trials will provide key data on DLE parameters that will inform feasibility studies
- Previous trials on surface brines from both projects produced positive results
- The Company ordered a small scale DLE demonstration unit ("demo unit") from SunResin which was dispatched from its European subsidiary and will arrive in Chile in approximately two weeks
- The Company received from SunResin a highly attractive proposal for the DLE unit for a pilot plant which intends to produce 1 tonne per month of battery grade lithium carbonate and lithium hydroxide, targeted to commence in 1H2023
- The pilot plant is intended to replicate commercial scale production and importantly provide sufficient volumes of product for testing by potential customers (major lithium-ion battery producers and auto-makers)

Commenting, Aldo Boitano, Chief Executive Officer, of Cleantech Lithium PLC, said: *"We are delighted to move forward our process test-work with SunResin on multiple fronts including trials on brine from the sub-surface aquifers of our Laguna Verde and Francisco Basin projects, ordering of a DLE demo unit which will arrive in Chile this month and receiving a proposal for the DLE unit for a pilot plant that will produce battery grade lithium carbonate and lithium hydroxide for customer testing and verification."*

Further Information

Bulk Brine Samples Dispatched to China for DLE Trials

Resource drilling programmes were undertaken at both Laguna Verde and Francisco Basin in the first half of 2022. On completion of a resource drill hole brine samples were collected from cased holes using bailers operated with an electric winch (as shown in Figure 1) or via suction samples collected using a compressor. Bulk samples collected from the projects for process test-work were packaged in containers and dispatched to SunResin´s facilities in China, via the port of Caldera.



Fig. 1: Brine Collection Laguna Verde



Fig. 2: Packing of Brine for Dispatch to China

SunResin will undertake process trials on the brine samples from both Laguna Verde and Francisco Basin to measure the performance of selected resins as the brine is adsorbed and desorbed through multiple cycles in adsorption columns. SunResin has approximately 200 resins. The process work will provide data that will be used in feasibility studies with a pre-feasibility study planned to commence on the Laguna Verde project in the current quarter.

Update on Demo and Pilot Scale DLE Units

In addition to the trials being conducted by SunResin in China, the Company has ordered a demo unit and received a proposal for a pilot plant DLE unit from SunResin. Customers of battery grade lithium carbonate and lithium hydroxide, such as lithium-ion battery manufacturers or vertically integrated auto-makers, require volumes of lithium product from new producers for stringent product verification testing. This process requires volumes starting from several hundred grams for initial tests to up to 500kg for full scale production tests which test performance in battery cells.

The demo unit is a small scale DLE unit with a feed rate of 20l/second. This has been shipped from SunResin´s European subsidiary, based in Belgium, and is expected to arrive in Chile in approximately two weeks. The demo unit will be operated in Copiapo by the Company´s technical team and will produce lithium chloride solution, which will be further treated with the aim of producing volumes of lithium carbonate and lithium hydroxide for initial product testing by potential customers.

A proposal has been received from SunResin for the DLE unit of a pilot plant with an expected feed rate of approximately 2.6m^3 per hour and a planned output of 1 tonne of LCE per month. This quantity will be sufficient for advanced testing by multiple potential customers. The pilot plant DLE unit will take 20 - 26 weeks for manufacturing, delivery and commissioning. The pilot plant is planned to be located at Maricunga, which is roughly an equal distance of approximately 50km from both projects, as shown in Figure 3. Maricunga has existing power and other infrastructure required for the plant and connects to Laguna Verde with a paved highway and to Francisco Basin with a high-quality haul road. At the commercial scale, DLE plants are expected to be located at the project sites.

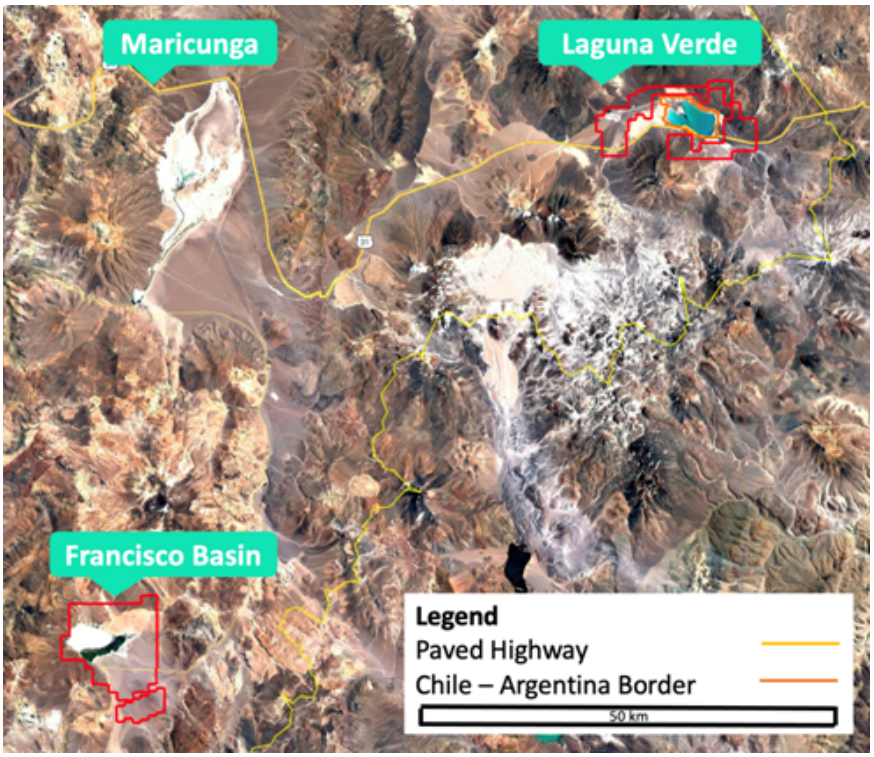


Fig. 3: Location of Maricunga in Relation to Projects

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considered to be in the public domain. The person who arranged for the release of this announcement on behalf of the Company was Gordon Stein, Director and CFO.

Notes

CleanTech Lithium (AIM:CTL) is an exploration and development company, advancing the next generation of sustainable lithium projects in Chile. The Company's mission is to produce material quantities of battery grade lithium by 2024/2025, with near zero carbon emissions and low environmental impact, offering the EU EV market a green lithium supply solution.

CleanTech Lithium has two prospective lithium projects - Laguna Verde and Francisco Basin projects located in the lithium triangle, the world's centre for battery grade lithium production. They are situated within basins entirely controlled by the Company, which affords significant potential development and operational advantages. The projects have direct access to excellent infrastructure and renewable power. The Company has also further applied for an additional 119 exploration licences at Llamara, as a low cost and commitment greenfield project to complement the existing more advanced projects.

CleanTech Lithium is committed to using renewable power for processing and reducing the environmental impact of its lithium production by utilising Direct Lithium Extraction. Direct Lithium Extraction is a transformative technology which only removes lithium from brine, with higher recoveries and purities. The method offers short development lead times, low upfront capex, with no extensive site construction and no evaporation pond development so there is no water depletion from the aquifer or harm to the local environment.

****ENDS****

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