E3 Metals Successfully Produces Lithium Hydroxide from Alberta Brine

HIGHLIGHTS

- The Company successfully produced lithium hydroxide from lithium concentrate generated from brine within its project in lab tests
- The lithium concentrate was produced using E3’s proprietary ion-exchange extraction process and the results demonstrate the validity of E3’s process flowsheet
- This milestone achievement is another important step towards demonstrating commercial viability of the project

CALGARY, ALBERTA, May 29, 2019 – E3 METALS CORP. (TSXV: ETMC) (FSE: OU7A) (OTC: EEMMF) (the “Company” or “E3” or “E3 Metals”) is pleased to announce it has successfully produced lithium hydroxide at the Alessi Lab at the University of Alberta. Brine from E3 Metals’ Alberta Lithium project was first processed using the Company’s high-performing proprietary Ion Exchange Lithium Extraction Technology (“Extraction Technology”) to produce lithium concentrate, as outlined in the March 4 2019 news release². The lithium concentrate was then further refined and purified by polishing processes and electrolysis. Finally, the purified lithium solution was crystallized into lithium hydroxide.

Lithium hydroxide is used as a critical component in the production of high energy density Electric Vehicle (“EV”) batteries and demand for the material is projected to grow significantly as the automobile industry focuses on launching a wide range of new electric cars and trucks. This increase in demand for lithium hydroxide has attracted industry interest in E3’s project and as the project plan is validated should enable E3 to secure binding off take agreements from strategic customers requiring access to long-term lithium supply.

Lithium hydroxide is typically produced from lithium carbonate and can be very expensive to produce with existing technologies. By producing lithium hydroxide directly from brine using our Extraction Technology and process flowsheet, E3 aims to develop a highly efficient, low cost process having the potential of creating a new standard for the industry.
“Producing lithium hydroxide powder from brine within our Alberta Lithium project is a step towards a commercially sellable product aimed directly to lithium battery manufacturers. It offers an attractive economic value potential as we advance our project,” commented E3’s President and CEO Chris Doornbos. “This achievement gives us a high level of confidence that we can rapidly unlock the tremendous potential of our vast Alberta lithium resource with the right production process flow sheet.”

Testing at the University of Alberta was repeated successfully, and confirms the reproducibility of the hydroxide production process and methodology. E3’s lithium hydroxide production was achieved through the following processing steps:

1. Pre-Treatment: Removal of any oil and gas from the brine
2. Extraction: processing the brine with E3’s proprietary lithium Extraction Technology
3. Polish: pH adjustment and removal of divalent ions using commercially available Ion exchange resins
4. Electrolysis: utilizing a monovalent selective membrane cell to purify a LiOH stream
5. Crystallization of LiOH·H2O powder

E3 Metals’ ultimate goal is to maximize the performance of each processing step to demonstrate a commercially viable lithium extraction and production process. While these results do not guarantee that E3 Metals will achieve an economically viable lithium extraction process, the Company believes that continued advancements in the overall process flow sheet will progress the company towards its stated goals.

Click Here for more information on E3 Metals lithium production flow sheet and the Company’s development plans.

About E3 Metals Corp.

E3 Metals is a lithium development with 6.7 Mt LCE of inferred mineral resources in Alberta. Through the commercialization of its proprietary lithium extraction process, E3 plans to quickly move towards the production of high purity, battery grade, lithium hydroxide.

E3 Metals Corp combines a significant resource with the right technology solutions that have the potential to deliver lithium to market in one of the best jurisdictions in the world. Our prolific Leduc Reservoir hosts lithium enriched brine with 6.7 million tonnes LCE inferred mineral resource delineated to date. The development of this resource through brine production is a well understood venture in Alberta, where this brine is currently being produced to surface through extensive oil and gas development.

While the lithium brine and hydrocarbons are mutually exclusive, the Leduc Reservoir can support the production of brine few others can boast, with one well having the ability to bring up to 10,000 m3/day (115 L/s) to surface. With an average and consistent grade of 77.4 mg/L in the Clearwater Resource Area, E3 Metals’ proprietary lithium extraction process can quickly produce a
concentrate with a grade over 5000mg/L. With 99% of the impurities removed at the same time and recoveries averaging 90%\(^2\), this produces a concentrate feedstock that is likely to be processed directly by conventional lithium production technology to produce high purity lithium hydroxide (LiOH·H\(_2\)O). The Company’s plans are to deliver a process facility of 10,000 tonnes LCE/year LiOH by 2022 and continue expansion to an eventual 50,000 tonnes LCE/year.

More information about E3 Metals can be found on our website by visiting: www.e3metalscorp.com.

ON BEHALF OF THE BOARD OF DIRECTORS,

Chris Doornbos, President & CEO
E3 METALS CORP.

Chris Doornbos (P.Geo), CEO and Director of E3 Metals Corp., is a Qualified Person as defined by NI 43-101 and has read and approved the technical information contained in this announcement.

1: E3 Metals has released information on three 43-101 Technical Reports totalling a resource of 6.7 Mt LCE. The Central Clearwater Resource Area (CCRA) Technical Report, identifying 1.9Mt LCE (inferred), is dated effective October 27, 2017, and the North Rocky Resource Area (NRRA) Technical Report was dated effective October 27, 2017, identifies 0.9Mt LCE (inferred). A third report for the Exshaw West Resource Area (EWRA), identifies 3.9Mt LCE (inferred) and was filed on June 15\(^{th}\) 2018, effective June 4\(^{th}\) 2018. All reports are available on SEDAR (www.sedar.com)


Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.

This news release includes certain forward-looking statements concerning the potential of the Company’s projects and technology, as well as management’s objectives, strategies, beliefs and intentions. Forward looking statements are frequently identified by such words as “may”, “will”, “plan”, “expect”, “anticipate”, “estimate”, “intend” and similar words referring to future events and results. Forward-looking statements are based on the current opinions and expectations of management. All forward-looking information is inherently uncertain and subject to a variety of assumptions, risks and uncertainties, including the speculative nature of mineral exploration and development, fluctuating commodity prices, the effectiveness and feasibility of emerging lithium extraction technologies which have not yet been tested or proven on a commercial scale or on the Company’s brine, competitive risks and the availability of financing, as described in more detail in our recent securities filings available at www.sedar.com. Actual events or results may differ materially from those projected in the forward-looking statements and we caution against placing undue reliance thereon. We assume no obligation to revise or update these forward-looking statements except as required by applicable law.