



## PRESS RELEASE

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### CRITICAL ELEMENTS SUCCESSFULLY COMPLETES PILOT PLANT WORK FOR THERMAL SPODUMENE CONVERSION

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**APRIL 13, 2017** – MONTREAL, QUEBEC – **Critical Elements Corporation** (the “Corporation” or “Critical Elements”) (TSX-V: CRE) (US OTCQX: CRECF) (FSE: F12) is pleased to announce that it has retained the services of Outotec for the feasibility study on the conversion of spodumene into lithium carbonate.

Outotec is a leading technology company operating in multiple mineral mining and extraction industries, including lithium, with sites in Frankfurt / Germany, Pori / Finland and elsewhere. It offers expert knowledge on the various processing options for converting spodumene ore into salable lithium salts. Its lithium expertise derives from multiple years of research on lithium processing options, allowing understanding and optimization of the lithium extraction process selected by Critical Elements.

The multiple-test program recently completed by Critical Elements demonstrated that conversion of Critical Elements’ mineral resource into the traditionally extractable beta and gamma spodumene crystalline phase is easily achievable. In addition, extraction was achieved at very high conversion rates, with a yield of 97% or better. This compares to a worldwide average of 91% to 92%, which is accepted as the industry standard.

The very high extraction results validated Critical Elements’ approach to the spodumene ore processing plant (which includes the removal of most of the mica).

“The high yield we achieved during extraction confirms the low-impurity profile of our ore, which is what allows us to produce battery quality lithium carbonate at a competitive cost, without additional purification steps,” says Jean-Sébastien Lavallee, Chairman and CEO of Critical Elements.

Testing of the fluid bed system by Critical Elements has demonstrated the many advantages of this technology over the more traditional (and more often used) rotary kilns. Circulating fluid beds are commonly used in many other industries (such as the alumina industry). In addition to being more efficient in terms of energy use, including both thermal and electrical energy, this system also leads to a modest reduction in capital expenditures. In choosing the fluid bed calcination technology, Critical Elements has continued to demonstrate its technological leadership, which will result in a superior, lower-cost product.

Jean-Sébastien Lavallée (OGQ #773), geologist, shareholder, Chairman and Chief Executive Officer of the Company and a Qualified Person under NI 43-101, has reviewed and approved the technical content of this release.

#### ABOUT CRITICAL ELEMENTS CORPORATION

A recent financial analysis (Technical Report and Preliminary Economic Assessment (PEA) on the Rose lithium-tantalum Project, Genivar, December 2011) of the Rose project, 100% owned by Critical Elements, based on price forecasts of US \$260/kg (\$118/lb) for Ta<sub>2</sub>O<sub>5</sub> contained in a tantalite concentrate and US \$6,000/t for lithium carbonate (Li<sub>2</sub>CO<sub>3</sub>) showed an estimated after-tax Internal Rate of Return (IRR) of 25% for the Rose project, with an estimated Net Present Value (NPV) of CA \$279 million at an 8% discount rate. The payback period is estimated at 4.1 years. The pre-tax IRR is estimated at 33% and the NPV at CA \$488 million at a discount rate of 8%. (Mineral resources are not mineral reserves and do

not have demonstrated economic viability). (The preliminary economic assessment is preliminary in nature). (See press release dated November 21, 2011.) The PEA includes inferred mineral resources that are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves and there is no certainty that the preliminary economic assessment will be realized.

The conclusions of the PEA indicate that the operation would support a production rate of 26,606 tons of high purity (99.9% battery grade)  $\text{Li}_2\text{CO}_3$  and 206,670 pounds of  $\text{Ta}_2\text{O}_5$  per year over a 17-year mine life.

The project hosts a current Indicated resource of 26.5 million tonnes of 1.30%  $\text{Li}_2\text{O}$  Eq. or 0.98%  $\text{Li}_2\text{O}$  and 163 ppm  $\text{Ta}_2\text{O}_5$  and an Inferred resource of 10.7 million tonnes of 1.14%  $\text{Li}_2\text{O}$  Eq. or 0.86%  $\text{Li}_2\text{O}$  and 145 ppm  $\text{Ta}_2\text{O}_5$ .

**FOR MORE INFORMATION:**

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