# Critical Elements Confirms the Economic Potential Value of Mica, a Second By-Product at its Rose Lithium-Tantalum Project

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MONTREAL, QUEBEC--(Marketwired - Oct 1, 2014) - <u>Critical Elements Corp.</u> (TSX VENTURE:CRE) (OTCQX:CRECF) (FRANKFURT:F12) is pleased to announce an update on recent testing of mica, one of the by-products at the Rose tantalum-lithium project.

One by-product of the Rose tantalum-lithium project with good economic potential is mica. The results of laboratory-scale metallurgical testing to date indicate the potential for production of around **58,000 tonnes of mica concentrate** per year. (This annual mica concentrate production potential has not yet been the subject of a 43-101 report or a 43-101 preliminary economic assessment).

X-ray diffraction (XRD) analysis of a mica concentrate sample shows that it is a potassic mica containing over **80% muscovite**. Some additional processing of the concentrate would be needed to give it the qualities of the best muscovite concentrates on the market, including grinding the coarse fraction to reduce it to -100 mesh (-150 microns) and additional cleaning to minimize impurities. This would not only increase the muscovite grade to over 85%, it would also improve the colour of the concentrate, which is currently **off-white**.

Muscovite and phlogopite micas have unique characteristics and are highly valued for their mechanical, electrical and thermal properties, which include high dielectric strength, low expansion coefficients, heat and cold resistance, and high tensile strength. These properties make such micas an excellent raw material for electrical insulators and coating, strengthening and sealing materials, as well as for high-temperature applications.

Given its many qualities, the mica (muscovite-type) recovered in the context of the beneficiation of by-products from the **Rose lithium-tantalum** project therefore has strong potential for penetration of the (wet) ground mica market, where the biggest demand is in the paint industry, especially automotive paints. When mica is used as a mastic in coating applications, its platy structure lends positive rheological properties that strengthen the paint film during the drying process and reduce the effects of oxidation and of thermal expansion and contraction. Adding this type of mica to paints also enhances flexibility, reduces cracking, and improves adhesion. This type of mica is also compatible with all pigments and is easily wetted with oils, thinners, water or emulsions, thus ensuring uniform dispersion in the paint film. In outdoor paint and roofing applications, mica offers UV protection by limiting light penetration and enhances weather resistance by controlling moisture and gas permeability.

The Company is also pleased to announce that it has started shipping samples of mica concentrate to a number of users for analysis, specification recommendation and validation of the product specifications. Validation of the Rose project material by some of the largest consumers of mica concentrate is part of the process of setting up long-term off-take contracts.

Jean-Sébastien Lavallée (OGQ #773), geologist, shareholder and President 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**

<u>Critical Elements Corp.</u> is actively developing its 100%-owned Rose lithium-tantalum flagship project in Quebec.

A recent financial analysis (Technical Report and Preliminary Economic Assessment (PEA) on the Rose lithium-tantalum Project, Genivar, December 2011) of the Rose project 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 \$488 million at a discount rate of 8%. (Mineral resources that 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 operation is scheduled to produce 26,606 tons of high purity (99.9% battery grade) Li<sub>2</sub>CO<sub>3</sub> and 206,670 pounds of Ta<sub>2</sub>O<sub>5</sub> per year over a 17-year mine life.

The project hosts a current Indicated resource of 26.5 million tonnes of 1.30%  $Li_2O$  Eq. or 0.98%  $Li_2O$  and 163 ppm  $Ta_2O_5$  and an Inferred resource of 10.7 million tonnes of 1.14%  $Li_2O$  Eq. or 0.86%  $Li_2O$  and 145 ppm  $Ta_2O_5$ .

### **Cautionary Statement Concerning Forward-Looking Statements**

This news release contains "forward-looking information" including without limitation statements relating to the potential annual production of mica concentrate and the mica concentrate potential them self. Readers should not place undue reliance on forward-looking statements.

Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Until a positive feasibility study has been completed, and even with the completion of a positive feasibility study, there are no assurances that the Rose project will be placed into production. Factors that could affect the outcome include, among others: the actual results of development activities; project delays; inability to raise the funds necessary to complete development; general business, economic, competitive, political and social uncertainties; future prices of metals; availability of alternative lithium or tantalum sources; actual rates of recovery; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; accidents, labour disputes and other risks of the mining industry; political instability, terrorism, insurrection or war; delays in obtaining governmental approvals, necessary permitting or in the completion of development or construction activities. For a more detailed discussion of such risks and other factors that could cause actual results to differ materially from those expressed or implied by such forward-looking statements, refer to the Company's filings with Canadian securities regulators available on SEDAR at <u>www.sedar.com</u>.

Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results to differ from those anticipated, estimated or intended. Forward-looking statements contained herein are made as of the date of this news release and the Company disclaims any obligation to update any forward-looking statements, whether as a result of new information, future events or results or otherwise, except as required by applicable securities laws.

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