# MidasLetter Financial GROUP LTD.

# FAST-TRACK ALERT: CRITICAL ELEMENTS CORP. (TSX.V:CRE)

#### by James West

October 2, 2012 - Critical Elements Corporation (TSX.V:CRE) is aiming to become the next lithium producer in Quebec, and is close to achieving some major milestones that bring that goal closer to reality. If it is successful, it may find itself a sought-after acquisition candidate, as the lithium carbonate industry

A recent financial analysis of its 100%-owned Rose Project in Quebec based on price forecasts of US\$260/kg (\$118/lb) for Ta 2 O 5 contained in a tantalite concentrate and US\$6,000/t for lithium carbonate (Li 2 CO 3 ) show an after-tax Internal Rate of Return (IRR) of an estimated 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%.

There are literally hundreds of new lithium projects on the drawing board, and many public companies are betting they can capture a share of the market. The reality, however, is that it is a race to get to market, and only companies who can move quickly are likely to find buyers for their lithium car-







| Shares Outstanding (Basic)<br>Fully Diluted   |                   |
|---|-------------------|
| Market Capitalization (as at October 1, 2012) |                   |
| Cash  | ~\$1 million      |
| 52 Week High-Low                              | \$0.275 - \$0.09  |
| Average Trading Volume: (3 month)             |                   |
| Focus:  | Lithium, Tantalum |
| Operating in:                                 | Quebec            |

#### bonates.

That's what sets Critical Elements apart.

Since acquiring the Rose project in August 2009, the company has relentlessly developed the resource and in three short years has delivered a resource and a Preliminary Economic Assessment. Now the company is negotiating with potential off-take partners and investors who wish to invest in the company on a non-dilutive basis in exchange for secured participation in lithium carbonate and tantalum supply.

And the company's recent addition of Ron Macdonald in the capacity of Executive Chairman is a clear step in that direction.

Macdonald was the Minister of International Trade under Canadian Prime Minister Jean Chretien, and is a member of the EICC committee developing guidelines for their global tantalum smelter verification program. Mr. MacDonald has also been a contributor to the EU Commission Framework 7 policy paper on "Scarcity of Strategic Minerals" and a presenter at conferences in USA, Canada and Asia on critical, strategic and rare earth markets.

So in developing off-take relationships for both lithium and tantalum products, the company is well prepared.

## **Preliminary Economic Assessment is Positive**

A preliminary economic assessment filed on SEDAR by the



company at the end of Q4 2011 determined that the Rose project would support a 4,600 tonne per day milling operation and lithium carbonate plant profitably, and recommended the company proceed to feasibility.

#### According to the report by GENIVAR:

"The parameters used in this Preliminary Economic Assessment include developing a 1,500,000 tpy open-pit mine using diesel hydraulic equipment, construction of a concentrator at the mine site (crushing, grinding, flotation circuits) with a nominal capacity of 4,600 tpd of ore at 90% availability and construction of a lithium carbonate plant at the mine site.

GENIVAR examined the technical and economic aspects of the Rose Project within the level of precision of a Preliminary Economic Assessment and computed a cash flow analysis. The latter was based on metal prices projections made for lithium carbonate but a spot price and a market study were used for tantalum concentrate. As it stands, the Rose Project contains an economic Mineral Resource.

Consequently, GENIVAR concludes that the Rose Project is technically feasible as well as economically viable. The authors of this Technical Report consider the Rose Tantalum-Lithium Project to be sufficiently robust to warrant moving it to the pre-feasibility level.

Management of CRE understand that there is a window of opportunity to get the company's lithium project into production and develop a customer network of buyers for its lithium carbonate and tantalum products.

So rather than wait for the market to carry its share price high enough where a significant financing would not be unacceptably dilutive, the company has elected to seek non-dilutive commodity associated financing.

#### Industry Consolidation

When Rockwood Holdings Inc. (ROC), the world's largest producer of lithium products, agreed to acquire Talison Lithium Ltd. for about C\$724 million (\$728 million) to diversify its supply of the metal used in rechargeable batteries, investors in the lithium space cheered. After years of sluggish growth, and amid continuing global financial weakness, the industry sprang to

life.

The reason isn't difficult to understand. The availability and variety of electric vehicles that use lithium ion batteries as their primary electrical storage technology are increasing exponentially. From solely electric automobiles such as those produced by Tesla, to more widely available petroleum-electric hybrid vehicles offered by Nissan, Porsche, BMW, GM, Ford, Mercedes Benz, Lexus, and every other major automobile manufacturer, demand for lithium is growing rapidly.

Talison and three South American producers dominate global supply, controlling 94 percent of the market, according to the company. Demand for lithium may double by 2020 to 300,000 tons a year largely because of increasing use in hybrid-electric vehicles and consumer electronics, Dahlman Rose & Co. analysts Anthony Young and Anthony Rizzuto said in a May 16 note.

"The Talison Lithium takeover announced on August 23, 2012, shows once again that we are seeing a major industrial revolution, with the adoption of a technology that is increasingly powerful at lower and lower prices. More than ever, the major players in the battery industry are looking to secure long-term supply. With its Rose lithium-tantalum project, Critical Elements Corporation is well positioned to become a major producer of battery-grade lithium carbonate and tantalum. Furthermore, on August 5, 2012, Galaxy Lithium published an increase in the lithium carbonate price in China, which now stands at \$7,000 per tonne for battery-grade lithium carbonate, \$1,000 higher than the price used in the financial model in the Company's preliminary economic assessment dated November 21, 2011," said Jean-Sebastien

|  | Canada Lithium Corp             | Nemaska Eploration   | Critical Elements Corp                              |  |  |  |  |  |  |  |
|--|---------------------------------|--|---|--|--|--|--|--|--|--|
|  | (TSX : CLQ)                     | (TSX-V:NMX)  | (TSX-V : CRE)                                       |  |  |  |  |  |  |  |
| ROJECT SUMMARY   |                                 |  |   |  |  |  |  |  |  |  |
| Actual Pre tax NPVs (CAD \$)                           | 227 MM                          | 130 MM   | 488 MM  |  |  |  |  |  |  |  |
| Actual stage   | Construction                    | PEA (hydroxide plant)  | Feasability   |  |  |  |  |  |  |  |
| Market capitalization (CAD \$)                         | 91 MM                           | 38 MM  | 26 MM   |  |  |  |  |  |  |  |
| MC% of NPV value                                       | 40,1%                           | 29,2%  | 5,3%  |  |  |  |  |  |  |  |
| IRR (pre-tax)  | 22,00%                          | 26,60%   | 33,00%  |  |  |  |  |  |  |  |
| Initial CAPEX (CAD \$)                                 | 202 MM                          | 86 MM  | 268 MM  |  |  |  |  |  |  |  |
| Initial mine Life                                      | 15                              | 15   | 17  |  |  |  |  |  |  |  |
| Payback (years)  | 4                               | 3,3  | 4,1   |  |  |  |  |  |  |  |
| ESOURCES (million tonnes)                              |                                 |  |   |  |  |  |  |  |  |  |
| Measured   | 6,9                             | 11,3   |   |  |  |  |  |  |  |  |
| Indicated  | 26,3                            | 13,8   | 26,5  |  |  |  |  |  |  |  |
| Total M+I (including P+P)                              | 33,2 at 1.19% Li2O              | 25,1 at 1.54% Li2O   | 26,5 0.98% Li2O + 163 ppm Ta2O                      |  |  |  |  |  |  |  |
| ······································                 |                                 |  | (1.30% Li2O eq)                                     |  |  |  |  |  |  |  |
| Infered  | 13,8                            | 4,4  | 10,7  |  |  |  |  |  |  |  |
| Total Resources  | 13,8 at 1.15% li20              | 4,4 at 1,51% Li2O  | 10,7 @ 0,86% Li2O + 145 ppm Ta2O<br>(1.15% Li2O eq) |  |  |  |  |  |  |  |
| OPERATION  |                                 |  |   |  |  |  |  |  |  |  |
| Output #1  | Li <sub>2</sub> CO <sub>3</sub> | LiAI(SiO3)2, (Spodumene)   | Li <sub>2</sub> CO <sub>3</sub>                     |  |  |  |  |  |  |  |
|  | 20 000                          |  |   |  |  |  |  |  |  |  |
| Planned annual prod (tonnes)                           | 20 000                          | 202,000 (at 6% li2O)<br>29 972,0                                       | 26 606  |  |  |  |  |  |  |  |
| Equivalent in LiC2O3                                   | 20 000                          | 29 972,0   | 20 000  |  |  |  |  |  |  |  |
| Total output produced-LOM (tonnes)                     | 300 000                         | 3 094 355  | 452 302   |  |  |  |  |  |  |  |
| Equivalent in LiC2O3                                   | 300 000                         | 449 580  | 452 302   |  |  |  |  |  |  |  |
| Output #2  | n/a                             | n/a  | Ta <sub>2</sub> O <sub>5</sub>                      |  |  |  |  |  |  |  |
| Planned annual prod                                    | n/a                             | n/a  | 206 670 lbs/y                                       |  |  |  |  |  |  |  |
| Total output produced-LOM                              | n/a                             | n/a  | 3,500,000 lbs                                       |  |  |  |  |  |  |  |
| Total Tonnes Mined -LOM                                | 132 975 000                     | 57 463 763   | 193 286 952   |  |  |  |  |  |  |  |
| Total Tonnes Milled-LOM                                | 20 336 000                      | 15 000 000   | 24 199 881  |  |  |  |  |  |  |  |
| METALURGY  |                                 |  |   |  |  |  |  |  |  |  |
| Quality of output (Li2CO3) reached in the<br>metalurgy | 99,5%                           | 99.9% (theorical)<br>output grade will be known in the<br>upcoming PEA | 99,9%   |  |  |  |  |  |  |  |
| Recovery output #1                                     |                                 | assumption   |   |  |  |  |  |  |  |  |
| Recovery in flotation concentrate                      | 80,0%                           | 80,0%  | 94,0%   |  |  |  |  |  |  |  |
| Recovery in Li 2 CO3 precipitation                     | 84,0%                           | 80,0%  | 94,0%   |  |  |  |  |  |  |  |
| Overall recovery                                       | 67,2%                           | 67,2%  | 85,3%   |  |  |  |  |  |  |  |
| Recovery output #2                                     | n/a                             | n/a  | 60,0%   |  |  |  |  |  |  |  |
|  |                                 |  |   |  |  |  |  |  |  |  |
| ASH FLOWS<br>OPEX: avg per output unit produced net of |                                 |  |   |  |  |  |  |  |  |  |
| byproducts credits                                     | 3 357 \$                        | 135 \$   | 2 738 \$  |  |  |  |  |  |  |  |
| ** Output prices assumption                            | 6 046 \$                        | 280 \$   | 6 000 \$  |  |  |  |  |  |  |  |
| ** Total revenues from operations                      | 1 927 575 308 \$                | 849 091 000 \$   | 3 029 697 430 \$                                    |  |  |  |  |  |  |  |
| Total net back   | 920 551 468 \$                  | 431 130 711 \$   | 1 376 684 206 \$                                    |  |  |  |  |  |  |  |
| Net back per year (avg)                                | 61 370 098 \$                   | 28 742 047 Ş   | 80 981 424 Ş  |  |  |  |  |  |  |  |
| Note : My computer uese comas instead of dots          |                                 |  |   |  |  |  |  |  |  |  |

Comparable Canadian companies at a similar stage of the evolutionary curve demonstrate Criticial Elements' very compelling economics, on a preliminary basis. The company plans to access innovative financing options that will be non-dilutive to the company to continue developing the company towards a production decision.

Lavallee, Critical Elements Corporation's CEO.

#### **China Lithium Ion Battery Growth**

The Chinese lithium-ion battery market will nearly double to \$9.2 billion in 2016, as volumes grow 129 percent to 44.3 GWh, according to a report from Lux Research.

The impressive growth will occur despite demand for emerging electric vehicles still trailing the government's ambitious projections.

The compound annual growth rate for battery volumes will be 18.2 percent while revenues – pegged at \$5.0 billion in 2011 – grow at a slower rate of 12.8 percent as average selling price dips 20 percent to \$207 per kilowatt-hour (kWh) in 2016.

Lux Research analysts made the following findings:

• Some 57 percent of the 32 million electric bikes produced in China in 2016 will use lithium-ion batteries, compared with a mere 3 percent in 2011.

• The 714,000 telecom base stations in China, aggregated across three massive telecom entities, have been tasked to replace all lead acid, creating a \$14 billion opportunity.

• Foreign venture-capital-backed start-ups have a chance to become Chinese companies' acquisition targets. Boston Power, Enerl, and Altair Nanotechnologies have already cut deals with Chinese partners.



#### 1 Million Electric Cars in 6 – 8 Years

While demand for lithium batteries continues to ramp up strongly for consumer electronics, public transportation and bicycles, it's the growing popularity and demand for electric cars that will drive the market in the years ahead.

Elon Musk, Tesla Motors (NASDAQ: TSLA) chairman and CEO, said there is strong demand for Tesla's automobiles and the he expects there will be one million electric cars on U.S. roads in 6-8 years.



According to a recent Tesla Motor's press release;

This fall, Tesla Motors is opening 10 new locations across North America. The first store will open at Roosevelt Field Mall in Garden City, New York on Friday, September 21st. Tesla's unique retail concept demonstrates the benefits of driving electric with enticing visuals, interactive displays,

> and design studios where customers can design their own Tesla Model S on a large touch-screen and then view it on an 85-inch video wall. More than 12,200 reservations have been made worldwide for Model S through July 2012.

> In the first four months of 2012, GM sold 5,377 Chevrolet Volts, while Nissan sold 2,103 of its Leaf electric cars. Both vehicles were launched in late 2010.

4

Ford expects hybrids, plug-in

hybrids and electric cars will represent up to 25 percent of its sales by 2020, with hybrids accounting for the majority. Ford started shipping its Focus EV to dealerships in California, New York and New Jersey in May this year.

#### **Build it and They Will Come**

One of the key barriers to the widespread growth in demand for electric automobiles stems from the perception that they are not easily charged up.

iMunicipalities around the world are now beginning to address that through the deployment of public charging stations that can recharge lithium ion batteries in 5 minutes.

The City of Vancouver is taking an 'if you build it, they will come' approach to electric vehicles, announcing an \$800,000 pilot project to expand the number of charging stations in the city. The project aims to see 67 more charging stations in public places throughout Vancouver by the end of next year, up from the 20 it already has. This is in addition to stations that will be built in new developments, as required under



changes to the building code made in 2009, according to Mayor Gregor Robertson.

City staff were unable to provide an exact number, but said those stations will likely number in the hundreds. Public charging stations will be located in parking lots at community centres, parks, offices and commercial sites, Robertson said. The cost of charging a vehicle — which is \$1 an hour at the two stations at Coal Harbour Community Centre, used as

|   |                      | 2010 |              |   |    |    | 2011           |    |    |                | 2012 |    |    | 2013 |    |    |       | 2014 |    |    |    |    | 2015 |    |    |  |
|---|----------------------|------|--------------|---|----|----|----------------|----|----|----------------|------|----|----|------|----|----|-------|------|----|----|----|----|------|----|----|--|
| Main Activities   | Budget \$<br>(Spent) |      |              |   |    |    | since start up |    |    |                | J    |    |    |      |    |    |       |      |    |    |    |    |      |    |    |  |
|   |                      | 3    | 6            | 9 | 12 | 15 | 18             | 21 | 24 | 27             | 30   | 33 | 36 | 39   | 42 | 45 | 48    | 51   | 54 | 57 | 60 | 63 | 66   | 69 | 72 |  |
| 1 <sup>st</sup> Phase Exploration                                     | 2,000,000            |      |              |   |    |    |                | -  |    |                | -    |    |    |      | 1  |    | -     |      |    |    |    |    |      |    |    |  |
| 1 <sup>st</sup> Resources Definition                                  | 75,000               |      |              |   |    |    |                | -  |    |                |      |    |    |      | 1  |    | 1     |      |    |    | -  |    | -    | -  |    |  |
| 2 <sup>nd</sup> Phase Exploration                                     | 1,000,000            |      |              | - |    |    |                |    | -  |                |      |    |    |      | -  |    |       |      | -  | -  |    |    |      | -  |    |  |
| 2 <sup>nd</sup> Resources Definition                                  | 30,000               |      |              | - | -  |    |                |    |    |                | -    |    |    |      |    |    |       |      | 1  |    |    |    | -    | 1  |    |  |
| Metallurgical Testing   | 150,000              |      |              | 1 |    |    |                |    |    |                |      |    |    |      | 1  |    | 1     | Γ    | 1  | -  | -  | Γ  | 1    | 1  |    |  |
| Preliminary Economic<br>Assessment Study                              | 500,000              |      |              |   |    |    |                |    |    |                |      |    |    |      |    |    |       |      |    |    |    |    |      |    |    |  |
| Environmental Impact Study  | 450,000              |      |              |   |    |    |                |    |    |                |      |    |    |      |    |    |       |      |    |    |    |    |      |    |    |  |
| Negotiations with potential<br>partners                               | 150,000              |      |              |   |    |    |                |    |    |                |      |    |    |      |    |    |       |      |    |    |    |    |      |    |    |  |
| Feasibility Study   | 5,000,000            |      |              | - |    |    |                |    |    |                |      |    | 1  |      | 1  | -  | 1     |      |    |    | -  |    | i.   | -  |    |  |
| Permitting, Cree relations  | 250,000              |      |              | - |    |    |                |    |    |                |      |    |    |      |    |    |       |      |    |    |    |    |      |    |    |  |
| Building mining team  | 1,000,000            |      |              | - | -  |    |                |    | -  |                |      |    |    |      |    |    |       |      |    |    |    |    |      |    |    |  |
| Project financing (mine)  |                      |      |              |   | -  |    | -              | -  |    |                |      |    |    |      |    |    | -     |      | 1  |    |    |    |      |    |    |  |
| Construction  |                      |      |              | 1 |    |    | -              | 1  |    |                | -    |    |    |      |    |    | F     |      |    |    |    |    |      |    |    |  |
| Production  |                      |      |              |   | -  |    |                | -  |    |                | -    |    |    |      | -  |    | -     | 1    |    |    |    |    | -    |    |    |  |
| Current date<br>Cost of discovery = \$(<br>(from rock showings to 1st |                      |      | Construction |   |    |    |                |    |    | Production Sta |      |    |    |      |    |    | Start | -up  |    |    |    |    |      |    |    |  |

a backdrop for the announcement — will vary depending on the location.

More than thirty 240-V Electric Circuit plug-in stations supplied with clean, renewable energy are already installed and available to charge EVs in parking lots of RONA and Metro stores and Rôtisseries St-Hubert restaurants in the greater Montréal and Québec areas.

And Ontario last year announced a an \$80 million fund to spur the development and investment in electric car-charging stations.

And throughout the U.S., the availability of charging stations is on the rise too.

NRG Energy Inc. plans to install a total of 70 Freedom Station sites in the Dallas/Fort Worth area and 50 in the Houston area, with 11 already in place in Houston and six installed in Dallas/Fort Worth. As the stations are installed, the company monitors their usage and gathers information to strategically place the remaining stations to sustain and grow the network.

# Critical Elements Corporation is on the Fast Track

Critical Elements Corp's fast track plans envision attracting non-dilutive financing partners and off-take partners all before the end of 2012. If the company is successful, it is likely that the company will either shepherd the Rose Lithium Tantalum project into production itself, or become the target of larger established lithium companies, or companies wanting to enter the lithium space. Either way, the current valuation of CA\$26 million, risk-tolerant investors could do very well betting on Critical Elements Corp.

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James West is a shareholder of Critical Elements Corporation and as such must be considered biased. Always consult a registered securities professional in your jurisdication before making any investment decision.

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BMW/s got one of the sexiest looking offerings.



The Fisker Karma is one of the top-rated gas-hybrid offerings anticipated.



The Tesla Roadster 2.5 is sure to win fans.