

NEWS RELEASE

October 22, 2018

# Leading Edge Materials Reports Optimized Spheronising Test Results from Woxna Graphite Project, Sweden

**Vancouver, October 22, 2018 – Leading Edge Materials Corp.** ("**Leading Edge Materials**" or the **"Company**") (**TSXV: LEM**) (**Nasdaq First North: LEMSE**) (**OTCQB: LEMIF**) is pleased to provide results from additional spheronisation test work undertaken on graphite from the Woxna graphite mine in Sweden. Woxna is a fully constructed mine, with all processing, waste management and infrastructure in place. During 2017, Woxna was granted an extension of its operating license until 2041.

As previously disclosed (<u>5<sup>th</sup> July 2018</u>), Leading Edge Materials is undertaking research and development activities to support the design and installation of a Battery Graphite Demonstration Plant at the Woxna mine site. The Demonstration Plant will have the capacity to supply meaningful (100's of kgs) quantities of lithium ion battery anode material to prospective industrial customers.

To facilitate process, trade off and equipment selection decisions, the Company is presently undertaking comparative spheronising work programs. Latest results are very promising, having demonstrated process repeatability, while providing further insight into product yield and costs. The average yield to anode material achieved in the test program was 57.7%, significantly higher than prior assumptions with further yield gains possible in a future commercial operation.

More than 10 kgs of spheronised material was produced, which will be purified to battery grade and used in lithium ion battery cell testing. As Leading Edge Materials is a member of the EU Battery Alliance, the Company has access to a comprehensive customer network, which is being used to deliver European sourced natural graphite anode material for testing by the emerging European battery industry.

Scanning Electron Microscope imagery of the spheronised product (Figure 1) shows grain morphology to be well rounded, smooth and without particle agglomeration, in line with current commercial natural graphite anode products.

In addition, new markets are being sought for the fine by-product material from the spheronising process, including as feed to graphene production under the recently announced ( $3^{rd}$  October, 2018) collaboration with Graphmatech AB.

Leading Edge Materials' market research amongst lithium ion battery manufacturers has shown that product specifications vary substantially in purity, particle size distribution and price expectations. As a result, a high degree of process flexibility will be required to meet customer demands both now and as the European lithium ion battery industry matures. Presently, all natural graphite anode used for lithium ion batteries is sourced from Chinese mines, and supply from the Woxna mine in Sweden will provide European customers with the highest degree of product flexibility, transparency and sustainability.

Blair Way, President and CEO, stated "*This spheronising optimization research using commercial equipment* has produced excellent graphite grain morphology, in line with similar products that are consumed by the lithium ion battery industry today. This work is providing the bank of data required for design of the Woxna Battery Graphite Demonstration Plant which will allow customer qualification of both our anode manufacturing process and the anode product".

Test programs are continuing, and further spheronizing and purification results are expected next month.

# **Qualified Person**

The technical content of this release has been reviewed and approved by Mr. Blair Way, B.Sc. (Geology) M.B.A., a Fellow of the Australasian Institute of Mining and Metallurgy, the Company's President and CEO and a Qualified Person as defined by National Instrument 43-101.

## On behalf of the Board of Directors, Leading Edge Materials Corp.

Mr. Blair Way, President and CEO

## For further information, please contact the Company at:

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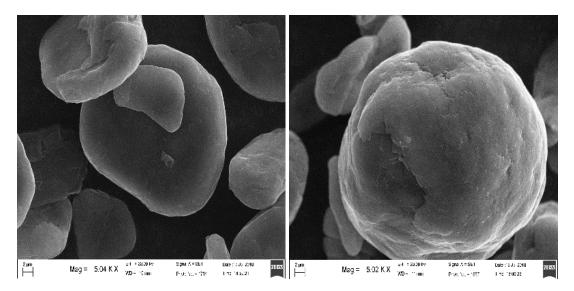


Figure 1 - SEM image of spheronised graphite particles

# **About Leading Edge Materials**

Leading Edge Materials is a Canadian public company focused on production of high value critical raw materials for the European market, with an operating base in the Nordic region, a region well recognized for its promotion and investment in innovation. LEM's flagship asset is the Woxna Graphite production facility located in central Sweden targeting the supply of specialty materials for lithium ion battery production. LEM's assets and research focus are towards the raw materials for Li-ion batteries (graphite, lithium, cobalt); materials for high thermal efficiency building products (graphite, silica, nepheline); and materials that improve the efficiency of energy generation (dysprosium, neodymium, hafnium). Investments are linked to the global shift to low-carbon energy generation and energy storage. Leading Edge Materials currently operate in four divisions, Graphite, Lithium, Rare Earth and Cobalt. Mangold Fondkommission AB is the Company's Certified Adviser ("**CA**") as part of the listing requirements for Nasdaq First North.

#### **Additional Information**

Leading Edge Materials is listed on the TSXV under the symbol "LEM" and Nasdaq First North Stockholm under the symbol " LEMSE". Mangold Fondkommission AB is the Company's CA on Nasdaq First North and may be contacted at +46 (0) 8 5030 1550.

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