

# Leading Edge Materials' Woxna Graphite Targets Premium Applications With Confirmation Of Purification Route

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## [LEADING EDGE MATERIALS'](#) WOXNA GRAPHITE TARGETS PREMIUM APPLICATIONS WITH CONFIRMATION OF PURIFICATION ROUTE

- Flotation testwork produced a high-grade concentrate with 94% carbon purity retaining more than half of all particles as large flakes - a strong result for premium graphite applications and an important indicator of commercial potential.
- A simple, industrially practical two-stage alkaline process (without an energy-intensive pre-heating step) achieved 99.96% LOI (loss on ignition) - making it the preferred route for commercial scale-up to meet high-end industrial specifications.
- Testwork was conducted on historical stockpiled material that showed signs of oxidation, which is known to reduce flotation performance. Fresh ore is expected to perform better.

Vancouver, June 9, 2026 - [Leading Edge Materials Corp.](#) ("Leading Edge Materials" or the "Company") (TSXV: LEM) (Nasdaq First North: LEMSE) (OTCQB: LEMIF) provides an update on testwork completed on ore sourced from the Company's 100% owned Woxna Graphite Mine ("Woxna"). The programme was designed to evaluate new processing techniques aimed at producing large-flake, high-purity flake graphite concentrate suitable for premium industrial and battery applications.

Kurt Budge, Chief Executive Officer, writes:

"These results are an important step forward for Woxna. Achieving 99.96% purity through a straightforward two-stage alkaline process - without energy-intensive pre-heating - demonstrates that Woxna can produce battery and high-end industrial grade graphite through an industrially practical and cost-effective route.

Equally encouraging is the large-flake retention from flotation, which is a key value driver for premium applications. It is also worth noting that this testwork was conducted on historical stockpiled ore showing signs of oxidation - conditions that are known to reduce flotation efficiency - so we have good reason to expect even stronger performance from freshly mined material. Taken together, these results meaningfully reinforce our confidence in Woxna's commercial potential.

With global demand for natural flake graphite forecast by Benchmark Mineral Intelligence to more than double by 2035, and a supply deficit in battery-grade material already beginning to emerge, the timing for advancing Woxna toward production could not be more compelling. Europe needs a domestic, responsibly sourced graphite supply chain, and Woxna is one of very few assets on the continent capable of delivering it."

### Milling and Flotation Testwork

Woxna ore was processed using VeRoLiberator® ("VeRo") milling equipment across a range of settings to assess whether the method could liberate graphite while preserving intact large flakes. Specialist contractor ProGraphite then conducted a testing programme evaluating VeRo performance, followed by limited flotation and purification trials.

Milling tests were conducted using VeRo technology, which achieves high levels of graphite liberation in a

single pass, using significantly less energy than conventional methods and operating dry. Six tests were performed across a range of settings to identify conditions that retain large flake size while achieving sufficient liberation.

The milled products were sent to ProGraphite for analysis and characterization. Clear differences were observed between VeRo settings, with samples varying significantly in particle size distribution - including flake size - and degree of liberation. Further optimisation work is planned to establish the ideal settings for commercial-scale production. In addition to particle size analysis, samples were examined using optical microscopy, SEM and MLA. The MLA results were particularly informative regarding liberation, though mineral composition varied slightly between samples; the principal components were consistent across all.

ProGraphite then conducted flotation testing, beginning with a flash flotation approach that produced a concentrate with an LOI of 94%. Performance was below expectations based on historical data, with a notable proportion of graphite reporting to the scavenging stage after rougher flotation. This is attributed to two factors: the ore not being freshly mined, and the VeRo settings having been configured to prioritize flake size retention over maximum liberation.

Nonetheless, the flotation test demonstrated that a relatively coarse, large-flake concentrate can be produced from the ore, achieving a flake content of over 50% at an LOI of 94%. Higher purity is attainable, though likely at the cost of some reduction in particle size.

#### Purification Testwork

ProGraphite conducted a series of purification trials on the flotation concentrate to evaluate the effectiveness of different purification methods and process conditions. Methods tested included alkaline purification - using either HCl or H<sub>2</sub>SO<sub>4</sub> as the acid component - and hydrofluoric acid (HF) purification, with additional investigation into the influence of pre-heating and process temperature.

The initial alkaline purification campaign established that HCl alone, Test 1A, yields only moderate purity in a single stage, achieving LOI values of 97.65% and necessitating a second purification step to exceed 99%.

Pre-heating the concentrate to 300-400 °C prior to purification significantly reduced sulphur levels, though it produced an anticipated increase in iron content. The best overall results were achieved through a two-stage process combining a sodium hydroxide bake with subsequent HCl leaching - the highest LOI value of the entire test series at 99.99%, Test 2B. Without the energy-intensive preheating step, an LOI of 99.96% with similar impurity profiles, was achieved making Test 1B interesting for an industrial process.

While the findings are preliminary and further optimization work is planned, they support the technical viability of a Woxna restart and provide a solid foundation for ongoing engineering and process development studies. The Company intends to assess whether an updated PEA is warranted as this work progresses.

Image 1.

Table above: Results of Alkaline Purification I - Trials 1A/1B (NaOH/HCl, unheated), and 2A/2B (NaOH/HCl, heated); impurity levels in ppm

#### Natural Flake Graphite - Outlook

According to Benchmark Mineral Intelligence, global demand for natural flake graphite is forecast to more than double within a decade - rising from approximately 1.2 million tonnes in 2025 to nearly 3 million tonnes by 2035 - driven by the rapid expansion of electric vehicle production and battery energy storage.

Benchmark projects a persistent supply shortfall in the -100 mesh, 94-95% carbon segment, the preferred feedstock for battery applications, with the deficit beginning now and growing to almost 1 million tonnes by 2040.

Against this backdrop, the geographic concentration of production - with China accounting for the vast majority of global natural flake graphite supply and controlling almost all anode refining capacity - has prompted downstream battery manufacturers and automakers to accelerate diversification of their supply chains.

Woxna, as one of Europe's few fully permitted and production-ready natural flake graphite operations, is strategically positioned to meet growing regional demand for responsibly sourced, low-carbon graphite - offering European battery and industrial customers a credible, sovereign alternative to Chinese supply.

#### Qualified Person Statement

The technical information related to the Woxna Graphite project in this announcement has been reviewed and verified by Mr. Christopher Stinton of Zenito Limited, BSc (Hons), CEng MIMMM, an independent Qualified Person as defined by NI 43-101 - Standards of Disclosure for Mineral Projects. Mr. Stinton is an employee of Zenito Limited which provides technical consulting services in relation to the Company's Woxna Graphite project.

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

Kurt Budge, CEO

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#### About Leading Edge Materials

Leading Edge Materials is a Canadian public company focused on developing a portfolio of critical raw material projects located in the European Union. Critical raw materials are determined as such by the European Union based on their economic importance and supply risk. They are directly linked to high growth technologies such as lithium-ion batteries and permanent magnets for electric motors, wind turbines and defence applications. The Company's portfolio of projects includes the 100% owned Woxna Graphite mine (Sweden), 100% owned Norra Kärr Heavy Rare Earth Elements project (Sweden), and the 90% owned Bihor Sud Nickel Cobalt exploration alliance (Romania).

#### Additional Information

The information was submitted for publication through the agency of the contact person set out above, on June 9, 2026, at 11:30 PM Vancouver time.

Leading Edge Materials is listed on the TSXV under the symbol "LEM", OTCQB under the symbol "LEMIF" and Nasdaq First North Stockholm under the symbol "LEMSE". Svensk Kapitalmarknadsgranskning ("SKMG") is the Company's Certified Adviser for the Nasdaq First North Growth Market (Stockholm) and may be contacted via email ca@skmg.se or by phone +46 (0)8 913 008.

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#### Attachments

- 20260609 LEM - Press Release - Woxna Graphite Update FINAL
- Image 1

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