



LEADING EDGE MATERIALS CORP.

14th Floor, 1040 West Georgia Street, Vancouver, BC, V6E 4H1
info@leadingedgematerials.com | www.leadingedgematerials.com
TSX.V: LEM | Nasdaq First North: LEMSE | OTCQB: LEMIF | FRA: 7FL

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LEADING EDGE MATERIALS CEO'S REPORT TO THE SHAREHOLDERS

The past year has not been short of geopolitical turbulence and macro-economic challenges. As the pandemic crisis has subsided, the war in Ukraine, rising inflation and recent bank failures have added to the tension. And of course, the impacts of climate change remain a high priority on political agendas. Our vision, materials for change, is right in the middle of these societal challenges. A change in the energy system towards renewables and energy storage, electrified mobility solutions and resilient and sustainable supply-chains will need new materials and new sources for those materials. This is where the projects we have and the work we do on them becomes critically important.

Governments in the western world are launching initiatives to support the development of domestic sources of critical raw materials to reduce reliance on China, the European Union being no exception, with the recently proposed EU Critical Raw Materials Act.ⁱ

In brief, the proposed legislation is an enormous effort to support current and stimulate future sustainable supply chains of these deemed critical raw materials from within the union. The impact on us and our activities cannot be overstated: we are in Europe, it applies specifically to all the materials we are exposed to, streamlined and predictable permitting procedures for strategic projects, improved access to finance, etc. Cautiously factoring in beneficial additional order effects and improving public realisation of importance of sustainable access to these materials, we have to conclude that it is about twenty years since we felt such optimism for extractive industries.

Woxna - Graphite

Graphite is a key material to enable the energy transition, where most lithium-ion battery chemistries use graphite for the anode. As demand for lithium-ion batteries grows exponentially, demand for graphite is expected to grow by a factor of three by 2030ⁱⁱ. Currently production of graphite for batteries is dominated by China.

Our Woxna graphite mine in central Sweden is one of few already built and permitted graphite mines in the western world. The Company's strategy is to establish a vertically integrated mine to anode material production unit which could offer a secure and sustainable supply of anode materials for European battery producers at the same time demand is expected to grow significantly. During last year, we announced plans to consider re-starting the mine. However, a change in the Company's executive management during the second half of the year delayed a decision on this process.

A PEAⁱⁱⁱ issued in 2021 indicated the potential viability of a Swedish operation producing battery grade graphite anode material utilising the existing graphite mine and concentrator with the addition of a value-add processing facility offsite. The proposed process route in the PEA uses a thermal purification process which, combined with access to low-cost hydropower offers a low carbon footprint for the operation. The PEA utilised only one of four deposits currently owned by Woxna under granted exploitation concessions, where two of the other deposits also have indicated and inferred mineral resource estimates offering potential upside for further expansion in future development or studies. Based on this, the PEA reports a Post-tax Net Present Value (NPV) of \$248m using an 8% discount rate and IRR of 37.4%.

Norra Kärr - Heavy Rare Earth Elements

Rare earth elements are needed to produce the high strength permanent magnets that are critical for the motors for electric vehicles and generators for wind turbines. As these technologies are set to grow significantly, the market for magnet rare earth oxides is forecast to increase five times by 2030^{iv}. Again, China is the dominant supplier of rare earth oxides and permanent magnets.

Our Norra Kärr (NK) rare earth project is one of the world's most significant deposits for heavy rare earth elements such as dysprosium and terbium, and the only deposit of its kind in the European Union. It is identified as a critical project by the European Parliament (ERECON study). Bringing the project into production could be a key enabler for a European mine-to-magnet value-chain.

Highlights of the Preliminary Economic Assessment^v (PEA) completed on NK reported potential to recover the industrial mineral Nepheline Syenite (NS), zirconium oxide (Zr) and niobium oxide (Nb) in addition to the rare earth oxide (REO) products, resulting in more than 50% of total mined material planned to be sold as products. The PEA, in comparison to previous studies, substantially reduced land area usage of the Project by approximately 80% and results in no chemical process tailing dams being required at Norra Kärr. These changes considerably reduce the environmental risk profile of the Project at Norra Kärr, including potentially reducing additional water requirements by almost 100% and the elimination of discharge requirements to local water bodies compared to if mine dewatering is used solely for water supply. Financial highlights of the PEA are a post-tax Net Present Value of \$762M (using a 10% discount rate) and an Internal Rate of Return of 26.3%.

We are currently in the process of undertaking the Natura2000 environmental study for the project which is expected to highlight the much-reduced environmental footprint of the project as defined in the PEA. Current Swedish legislation requires a Natura 2000 permit prior to the evaluation of a mining lease. In addition to the Natura2000, the Company is planning on commencing the Pre-feasibility Study for NK in the second half of 2023.

Bihor Sud, Cobalt-Nickel Exploration Project

The Bihor Sud exploration license perimeter covers a 25 square kilometre area in the Northern Apuseni Mountains in Romania. Located approximately 90 km south-east from Oradea, which is the administrative capital of Bihor County, the Project lies within the Upper Cretaceous and Neogene Carpathian magmatic arcs which extend from Turkey to Hungary and are host to several well-known mines and mineral deposits such as the Timok-Bor-Majdanpek copper-gold zone, Skouries and Chelopech. The Northern Apuseni Mountains have documented high grade skarn and carbonate replacement mineral deposits and historic production of Cu, Mo, Ag, Au, Zn, U and Pb. Within the License area, there is a significant amount of historical mine works including a substantial former underground uranium and polymetallic mine which stopped production in the 1990s.

After receiving the exploration license for Bihor Sud in May 2022, the Company has commenced field work on the property which it holds through its 51% (potentially to be increased to 90%) owned Romanian subsidiary, LEM Romania SRL ("LEMR"). Initial work focused on field mapping to investigate petrographic, structural, alteration, and mineralisation data with the latter especially located in a carbonate lithology.

Over the last couple of months, LEMR's team of geologists have performed geological mapping work from the established exploration camp in the Leucii Zone in the south-western area of the license perimeter. Entrance to this area is facilitated by an existing forestry road and grants the exploration team and consultants a base for accessing gallery openings G7 and G4 in the Leucii Zone, and G Dibarz in the Dibarz Zone. This area was prioritized based on results from previous work done and sampling of historical mined material during the prospecting permit, with samples assaying up to 28% nickel, 6.8% cobalt and 17.75 ppm gold.

During this mapping work the carbonate level has been identified precisely in several new locations extending previous knowledge of the extent of the carbonate lithology. Alteration and mineralization zones associated with major fault zones have also been outlined. Additional findings have been several previously unknown historical mining galleries, believed to be from exploration work performed by Soviet geologists in the 1950-

60s. These newly identified mining works are two hidden gallery mouths, eight prospecting trenches as well as a number of drilling locations, including discarded drill cores on the ground. These discoveries will aid to better understand the extent of historical exploration work done on the project.

Since having received permission to enter the underground galleries in January, we have continued advancing rapidly. Results have not disappointed: in the first target gallery G7 we have encountered visual Co-Ni mineralisation over 135 m. Additionally, further extensive Co-Ni mineralisation has been identified in G4, 50 m above and in the cross-cut and raise connecting these two galleries. This indicates that we are potentially encountering sizeable systems with good potential. Immediate focus is on finishing the five exploration trenches, mapping and sampling the mineralised zones inside the galleries. A drill program is planned for the second half of this year.

We are grateful for the support of all our shareholders. In the recently closed first fiscal quarter of 2023 we saw continuing support from insiders through the exercise of warrants for proceeds of C\$1.3m. Looking forward, we are committed to develop our assets and thereby realising shareholder value.

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

Eric Krafft, Interim CEO

For further information, please contact the Company at:

info@leadingedgematerials.com

www.leadingedgematerials.com

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Qualified Person

Martin S. Oczlon, PhD Geo, CEng MIMMM, a consultant to Leading Edge Materials and Qualified Person as defined in NI 43-101, has read and approved all technical and scientific information related to the Company' projects contained in this news release.

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 batteries for electromobility and energy storage and permanent magnets for electric motors and wind power that underpin the clean energy transition towards climate neutrality. The portfolio of projects includes the 100% owned Woxna Graphite mine (Sweden), Norra Karr HREE project (Sweden) and the 51% owned Bihor Sud Nickel Cobalt exploration alliance (Romania).

Reader Advisory

Certain information in this news release may constitute forward-looking statements or forward-looking information within the meaning of applicable Canadian securities laws (collectively, "Forward-Looking Statements"). All statements, other than statements of historical fact, addressing activities, events or developments that the Company believes, expects or anticipates will or may occur in the future are Forward-Looking Statements. Forward-Looking Statements are often, but not always, identified by the use of words such as "seek," "anticipate," "believe," "plan," "estimate," "expect," and "intend" and statements that an event or result "may," "will," "can," "should," "could," or "might" occur or be achieved and other similar expressions. Forward-Looking Statements are based upon the opinions and expectations of the Company based on information currently available to the Company. Forward-Looking Statements are subject to a number of factors, risks and uncertainties that may cause the actual results of the Company to differ materially from those discussed in the Forward-Looking Statements including, among other things, the Company has yet to generate a profit from its activities; there can be no guarantee that the estimates of quantities or qualities of minerals disclosed in the Company's public record will be economically recoverable; uncertainties relating to the availability and costs of financing needed in the future; competition with other companies within the mining industry; the success of the Company is largely dependent upon the performance of its directors and officers and the Company's ability to attract and train key personnel; changes in world metal markets and equity markets beyond the Company's control; the possibility of write-downs and impairments; the risks associated with uninsurable risks arising during the course of exploration; development and production; the risks associated with changes in the mining regulatory regime governing the Company; the risks associated with tenure to the Norra Karr property; the risks associated with the various environmental regulations the Company is subject to; rehabilitation and restitution costs; the Woxna project has never defined a mineral reserve or a feasibility study and the associated increased risk of technical and economic failure in case of restarting production; risks relating to the preliminary and non-binding nature of the MOU with Sicona. On June 9, 2021, Leading Edge announced the results of an independent preliminary economic assessment for the development of Woxna (the "2021 Woxna PEA"), the full details of which are included in a technical report entitled "NI 43-101 Technical Report – Woxna Graphite" prepared for Woxna Graphite AB with effective date June 9, 2021 and issue date July 23, 2021, available on Leading Edge's website www.leadingedgematerials.com and under its SEDAR profile www.sedar.ca. The 2021 Woxna PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the 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. Mineral resources that are not mineral reserves do not have demonstrated economic viability. On July 22, 2021, Leading Edge announced the results of an independent preliminary economic assessment for the development of Norra Karr (the "2021 Norra Karr PEA"), the full details of which are included in a technical report titled "PRELIMINARY ECONOMIC ASSESSMENT OF NORRA KARR RARE EARTH DEPOSIT AND POTENTIAL BY-PRODUCTS, SWEDEN" prepared for Leading Edge Materials Corp. with effective date August 18, 2021 and issue date August 19, 2021, available on Leading Edge's website www.leadingedgematerials.com and under its SEDAR profile www.sedar.ca. The 2021 Norra Karr PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the 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. Mineral resources that are not mineral reserves do not have demonstrated economic viability. On March 11, 2020, the World Health Organization ("WHO") declared the novel coronavirus outbreak identified as "COVID-19", as a global pandemic. In order to combat the spread of COVID-19 governments worldwide have enacted emergency measures including travel bans, legally enforced or self-imposed quarantine periods, social distancing and business and organization closures. These measures have caused material disruptions to businesses, governments and other organizations resulting in an economic slowdown and increased volatility in national and global equity and commodity markets. The Company has implemented safety and physical distancing procedures, including working from home where possible and ceased all travel, as recommended by the various governments. The Company will continue to monitor the impact of the COVID-19 outbreak, the duration and impact which is unknown at this time, as is the efficacy of any intervention. It is not possible to reliably estimate the length and severity of these developments and the impact on the financial results and condition of the Company and its operations in future periods.

ⁱ https://ec.europa.eu/commission/presscorner/detail/en/ip_23_1661

ⁱⁱ <https://www.spglobal.com/commodity-insights/en/market-insights/latest-news/energy-transition/021622-feature-graphite-supply-a-concern-in-meeting-growing-battery-demand>

ⁱⁱⁱ See National Instrument 43-101 report entitled “NI 43-101 Technical Report – Woxna Graphite” prepared for Woxna Graphite AB with effective date June 9, 2021 and issue date July 23, 2021. See Leading Edge Materials Corp.’s SEDAR profile on www.sedar.ca or www.leadingedgematerials.com for report and more information. The PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized.

^{iv} <https://www.mining.com/magnet-rare-earth-oxides-market-to-increase-fivefold-by-2030-report/>

^v See National Instrument 43-101 report titled “PRELIMINARY ECONOMIC ASSESSMENT OF NORRA KÄRR RARE EARTH DEPOSIT AND POTENTIAL BY-PRODUCTS, SWEDEN” prepared for Leading Edge Materials Corp. with effective date August 18, 2021 and issue date August 19, 2021. See Leading Edge Materials Corp.’s SEDAR profile on www.sedar.ca or www.leadingedgematerials.com for report and more information. The PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized.