



## PROPERTY FILE

# Leader Mining International Inc.

(Calgary, Alberta, Canada)

**NEWS RELEASE**

**TSX.V: Trade Symbol: LMN**

**December 23, 2002**

**[www.leadermining.com](http://www.leadermining.com)**

## **Cogburn Magnesium Project Project Progress Report**

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Leader Mining International Inc. (TSX.V: LMN) management is pleased to report the results to date of the ongoing Cogburn Magnesium Project Production Feasibility Study. Refer to Company news release of February 13, 2002 for original Feasibility Study work assignments.

**Magnesium Deposit Definition:** Completed, see October 10<sup>th</sup> Progress Report.

**Plant Site Selection:** Completed, see October 10<sup>th</sup> Progress Report.

**Quarry Mining & Ore Transportation:** Completed, see October 10<sup>th</sup> Progress Report.

**Environmental & Permitting:** Environmental studies completed (see October 10<sup>th</sup> Progress Report). The Project's final Environmental Application will be submitted to the BC government in January 2003, under the proposed new Environmental Assessment Act (to be proclaimed December 30, 2002). The new Act is intended to simplify and streamline the Assessment and Permitting process for major projects in British Columbia.

**Geotechnical:** Completed, see October 10<sup>th</sup> Progress Report.

**Power Line & Sub-Station:** A decision has been made to site the substation on the magnesium reduction plant site, and utilize power from BC Hydro's 500kV power lines that traverse the plant site. The substation will require 500kV to 25kV power transformation for the plant's magnesium electrolysis requirements. Ian Hayward International Ltd. is preparing engineering design as well as capital and operating cost estimates for inclusion in the Feasibility Study

**Ore Processing & Metal Production:** Bench scale metallurgical characterization and optimization testing as well as pilot testing have been completed on composite samples from Emory Zone drill core (Process Research Ortech Inc. and Hatch Associates Ltd.) and a report with positive results has been received. Carnallite crystallization has also been successfully attained from leach solutions in pilot scale testing completed at Messo Chemietechnik in Germany. The final test report is pending. In addition, magnesium reduction plant process flow drawings with material balances and plant layout drawings have been received (Hatch Associates Ltd.) and are being reviewed (Dr. David Dreisinger and Merit Consultants International Inc.). The process flow drawings and related material balances have been derived from a Metsim process model by using the leach and crystallization test results as well as the STI/VAMI process information.

**Residue Management Facilities:** Completed, see October 10<sup>th</sup> Progress Report.

**Socio-Economic Impacts:** Completed, see October 10<sup>th</sup> Progress Report.

**Marketing & Off-Take Contracts:** A marketing study is in progress (Butterfield Mineral Consultants). A window of marketing opportunity has been identified, and preliminary discussions have been conducted with auto manufacturers regarding magnesium off-take contracts. However, these potential buyers require certainty on long-term power pricing, the single largest magnesium reduction plant operating cost component.

**Electrical Power & Natural Gas Contracts:** Discussions are still underway regarding these contracts. To date B.C. Hydro has confirmed an appropriate industrial tariff that would be applied to the Cogburn Project and the company is seeking a minimum of five-year power price protection, which is being examined by the provincial government. The new Energy Plan released by the Honourable Richard Neufeld Minister of Energy and Mines on November 25, 2002 is positive in tone and Leader's management is confident that it will translate into a power contract that will facilitate the development of the Cogburn Magnesium Project.

Discussions on natural gas supply are in progress with both Duke Energy Gas Transmission regarding pipeline capacity, and with Duke Energy Marketing regarding supply. Westcoast Energy's natural gas transmission line runs adjacent to the plant site; consequently, the cost of gas line connection is limited to a pressure reduction station.

**Economic Valuation:** The valuation awaits inputs on capital and operating costs as well marketing. The Scoping Study of October 2001 (Hatch Associates Ltd.) indicated capital cost estimate of US\$1.02 billion yielding annual sales revenue of US\$410 million, annual operating costs of US\$166 million and annual taxes of US\$55 million, at a production rate of 120,000 mtpy magnesium metal and using the ten year average magnesium price of US\$1.55 per pound.

**Production Feasibility Study Schedule:** Completion is now scheduled for early March 2003.

The Production feasibility study has advanced on schedule and on budget under the exceptional management skills provided by Mr. John Chapman, P. Eng., the Cogburn Advisory Group, Hatch Associates Ltd. and a team of well-qualified consultants and sub-contractors

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The Canadian Venture Exchange has neither approved nor disapproved of the information contained herein.

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