



MGX Minerals Extracts Lithium from Oil Wastewater

VANCOUVER, BRITISH COLUMBIA / January 3, 2017 / **MGX Minerals Inc.** ("MGX" or the "Company") (CSE: XMG / FKT: 1MG / OTC: MGXME) is pleased to report the Company has successfully extracted lithium from heavy oil wastewater. Results are part of the ongoing optimization for completion and deployment of a pilot plant in support of its 487,000 hectare [Alberta lithium project](#).

The Company owns a patent pending process (United States Provisional Patent #62/419,011) for the extraction of lithium and other valuable minerals from oil brine. This technology is the first of its kind, reducing production time of lithium from brine by 99% compared with conventional lithium brine production times that use solar evaporation. Process time is reduced from approximately 18 months to 1 day using MGX's process.

Heavy oil evaporator blowdown wastewater ("EBD") is one of the byproducts of steam assisted gravity drainage ("SAGD") during production of heavy oil. EBD was specifically targeted as the wastewater contains mid-level concentrations of lithium and has the potential to generate high environmental revenue based on current disposal costs. MGX and PurLucid Treatment Solutions ("PurLucid") are working to integrate their respective technologies and develop a pilot plant suitable for commercial use that will treat EBD to provide oil sand producers with additional environmentally-friendly disposal options as well as recover valuable minerals such as lithium.

As reported by Dr. Preston McEachern of PurLucid:

- Starting EBD with Li concentration of 87 mg/L.
- Final recovery of Li was 34.8 mg/L or 40%.
- Li was lost in the initial softening of the EBD (18%) when approximately 20% of the fluid mass is lost due to removal of silica and other solids,
- 1% of the Li was lost in the NaCl removal step.
- 16% of the Li was lost in the magnesium removal step.
- 4% of Li was lost in the CaCl₂ removal step.
- 21% of the total Li remained in the final brine. This portion of lithium has a high probability of recovery by further reaction or during a second pass.
- Li was crystallized as lithium carbonate.
- Other primary recoveries of minerals in total were 83% sodium and 100% calcium.
- The final brine still contained high concentrations of sodium, potassium, and boron indicating where optimization will focus on.
- Additional applicable data was collected for the potential extraction of boron, bromine, magnesium and potassium.



- The treatment process removed all suspended solids, 99.97% of the hydrocarbons and reduced scale forming ions such as silica to levels suitable for reuse in steam generating processes.

PurLucid Investment Agreement

MGX and PurLucid have agreed to extend their investment schedule by 30 days pending receipt of a grant application decision. A final decision on the application may be imminent and both parties have agreed to delay crystallizing the acquisition valuation for 30 days. MGX will continue to fund development under its engineering and integration agreement with PurLucid whereby PurLucid has been engaged by MGX to optimize and construct a pilot plant for its lithium extraction process and integrate this system with PurLucid's patented filtration systems for the removal of residual oil from production wastewater. The front-end water treatment portion of the pilot plant is complete and, upon completion of optimization testing, the mineral extraction system will be integrated and deployed. Under the terms of the Investment Agreement, MGX has the right to acquire up to 100% of PurLucid.

Qualified Persons

The technical portions of this press release were prepared by Dr. Preston McEachern, CEO of PurLucid Treatment Solutions Inc., and have been reviewed by Andris Kikauka (P. Geo.), Vice President of Exploration for MGX Minerals. Mr. Kikauka is a non-independent Qualified Person within the meaning of National Instrument (N.I.) 43-101 Standards.

Cautionary Statement

MGX Minerals is actively working on advancing its Alberta Lithium Portfolio into production. However, readers are cautioned that the Company has not completed a pre-feasibility or feasibility study which establishes mineral reserves with demonstrated economic and technical viability. Further, the Company cautions readers that any potential production may not be economically feasible and historically projects taken to production without establishing reserves through a feasibility study have a much higher risk of economic or technical failure.

About MGX Minerals

MGX Minerals (CSE: XMG) is a diversified Canadian mining company engaged in the development of large-scale industrial mineral portfolios in western Canada. The Company operates lithium, magnesium and silicon projects throughout British Columbia and Alberta. MGX recently [released a maiden N.I. 43-101 compliant mineral resource estimate for its Driftwood Creek magnesium project](#), which outlined 8 million tonnes grading 43.31% magnesium oxide. In January the Company [received a 20-year Mining Lease for Driftwood Creek](#). Additionally, the Company is the [largest lithium brine land holder in Canada](#), controlling nearly 487,000 hectares of land representing over one million barrels of brine production per day. For further information, please visit the Company's website at www.mgxminerals.com.



Contact Information

Jared Lazerson

Chief Executive Officer

Telephone: 1.604.681.7735

Email: jared@mgxminerals.com

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Forward-Looking Statements

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