Successful Independent Verification of the MGX Lithium Extraction Technology

Today, MGX Minerals Inc. reported third party verification results of its patent-pending method of rapidly extracting lithium from oilfield brines. This announcement has been eagerly awaited not only by existing and potential new shareholders, but also by potential strategic partners such as major oil and gas producers as well as lithium end-users. This process eliminates the conventional 18 months solar evaporation phase, a landmark achievement in lithium extraction.

MGX continues to advance its oilfield lithium extraction technology with yet another milestone today, adding to the reported new development of passive nanofiltration technology last month. The independent verification of the active evaporation and crystallization process now provides for 2 core technologies, both active and passive for the extraction of lithium, with final plant design expected to be a combination of both. The successful concentration/upgrading of brine in the filtration and pre-treatment phase, as reported in March, using passive nanofiltration to produce a 1,600 mg/L lithium concentrate, now sets the stage for a final crystallization and evaporation system based on today’s announcement that may produce one of the lowest cost alternatives on a per tonne of lithium carbonate basis for rapid lithium extraction. Having a pre-concentrated brine at 1,600 mg/L lithium means the evaporative system, confirmed by SRC, will be much smaller, and lower cost on a per tonne basis, than a system designed to process a 71 mg/L lithium concentrate (the original lithium content from MGX’s flagship Sturgeon Lake oilfield).

The Saskatchewan Research Council (SRC) independently conducted multi-stage evaporation tests at its laboratories and reported that MGX’s proprietary process design was successful in recovering up to 83.7% of lithium from brine sampled at the Sturgeon Lake oilfield near Fox Creek in Alberta, Canada. The SRC is one of Canada’s leading providers of applied research, development and demonstration (RD&D) and technology commercialization. With more than 380 employees, $70 million in annual revenue and over 69 years of RD&D experience, SRC provides products and services to its 1,500 clients in 20 countries around the world.

Image from the website of the Saskatchewan Research Council. MGX may decide to advance its petrolithium projects into production without first establishing mineral resources supported by an independent technical report or completing a feasibility study. A production decision without the benefit of a technical report independently establishing mineral resources or reserves and any feasibility study demonstrating economic and technical viability creates increased uncertainty and heights economic and technical risks of failure. Historically, such projects have a much higher risk of economic or technical failure.
esteemed SRC also verified that the process effectively removed high contaminants, which are typical for oilfield brines and the reason why these “resources” had been considered uneconomic for long time. Consequently, oil and gas producers face high disposal costs with such contaminative wastewaters. Here’s where MGX also comes into play as the company aims to utilize 2 primary steps:

(1) A revenue generating water treatment step to reduce the cost of brine management within a producer’s facilities. During the tested multi-stage process, SRC estimated the overall water evaporation at 72% of the total feed brine mass. More than 99.99% of magnesium (historically a troublemaker in brine processing) were precipitated from the brine, as well as 99% of natrium, 45% of potassium and 25% of calcium.

(2) A mineral concentration and extraction step to recover metal salts such as lithium chloride. SRC reported that the overall recovery was 83.7% for lithium and 77.2% of strontium. MGX’s President and CEO, Jared Lazerson, commented today:

“The results of laboratory testing by SRC provide third-party validation of our proprietary design process and its ability to rapidly separate lithium and other valuable minerals from wastewater brine. We have made many advancements since this original process design, but this validation is important and we will continue to rely on SRC for independent testing and improvements of both active and newly developed filtration technologies.”

In March, when MGX announced the production of a clean lithium chloride brine free from magnesium, boron and potassium, Dr. Preston McEachern (CEO of PurLucid) noted:

“[A] small amount of calcium carried through to the brine, but this can be addressed in future optimization... The biggest challenge in lithium recovery is creating a clean brine. Once other ions are removed it is much easier to recover lithium as a pure carbonate or chloride.”

In total, MGX now holds permits throughout Alberta totaling over 600,000 hectares. The company also has exploration level agreements in place with major oil and gas companies throughout Alberta to conduct well sampling.

While joint ventures with large oil and gas producers should be the natural course of action going forward (especially with the assistance of Marc Bruner and Dr. Larry Marks), additional partnerships or certain agreements with lithium end-users wouldn’t surprise, especially when considering that the lithium extraction method has now been verified independently. Not only Tesla Motors but other battery manufacturers, especially from Asia, have shown in the past to prefer signing offtake agreements with potential future lithium producers at relatively early project levels.

Having the exclusive rights to the patented and patent-pending technologies for the extraction of lithium and other minerals from oilfield brines, MGX would be in a favourable position in case commercial deployment can achieve economic results. MGX aims to start commercial test deployment as early as mid-2017.

In total conviction that its technologies will work as expected, MGX continues to aggressively acquire mineral rights in Canada and the US. On March 23, MGX announced to drill the world’s first petrolithium well in Utah, near Tesla’s Gigafactory. Together with the landmark announcement of the appointment of unconventional oil industry legend Marc Bruner in January, MGX is now positioned as North America’s oilfield lithium industry leader.

North American Brine to O&G Ratios (Units, Millions)

“Old energy participates in the new energy economy.”
(Jared Lazerson, President & CEO of MGX Minerals Inc.)
Excerpts from the SRC Summary Report - Metallurgical Tests and Executive Summary - are outlined verbatim below. Note that certain portions of the report have been redacted to protect proprietary information and data. SRC independently carried multi-stage evaporation tests following the patent-pending design process as provided by MGX. As reported by SRC in the executive summary:

1. It was not feasible to remove 90% of the water in the primary evaporation of the Formation brine because the formation of the jel-like material made the filtration impossible. The maximum water evaporation was 66% of the feed brine mass before the jel formation. Approximately 97% of Na, 26% of K, 35% of Ca and 29% of Mg were precipitated. The recovery of Li and Sr was 75.6% and 68.8%, respectively.

2. The modified processes including magnesium precipitation by lime followed by the primary evaporation to precipitate NaCl and the secondary evaporation to precipitate CaCl2 and concentrate lithium.

3. The Mg removal was very effective and more than 99.99% of Mg was removed. The residue Mg in the brine was less than 0.1 ppm. The lithium recovery was 84.1% and the Sr recovery was 80.1%.

4. In the primary evaporation process, 67% of the feed brine mass was evaporated as water and more than 96% of Na was removed as NaCl. There were almost no Li or Sr loss in this process. Li was concentrated from 60 ppm to 321 ppm.

5. In the secondary evaporation process, 26% of the feed brine mass was evaporated as water and 12% of Ca was removed as CaCl2. The lithium recovery was 94.1% and the Sr recovery was 94.6%. The sample turned to a jel-like material after further evaporation to remove 40% of the brine mass as water.

6. In the whole process, the estimated water evaporated was 72% of the total feed brine mass. More than 99.99% of Mg, 99% of Na, 45% of K and 25% of Ca were precipitated from the brine. The overall recovery was 83.7% for Li and 77.2% for Sr. Lithium was concentrated to 461 ppm from 71 ppm. However, the impurity level, especially Ca, was still very high and further removal of Ca through evaporation is not feasible.

SRC has provided the Company with several recommendations to remove Ca impurity levels. The full report will be filed on SEDAR within 45 days.

| Table 1. Assay Results of the as Received Brine Sample |
|----------|--------|--------|--------|--------|--------|--------|--------|--------|
| Element  | K      | Mg     | Na     | Cl     | Ca     | SiO2   | Sr     | Br     | Li     |
| Assay (ppm) | 4212 | 2903 | 60747 | 116632 | 24753 | 186 | 1080 | 334 | 71 |
Disclaimer and Information on Forward Looking Statements

Cautionary Statement: MGX Minerals Inc. ("MGX") is actively working on bringing its lithium projects 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, MGX 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. All statements in this report, other than statements of historical fact should be considered forward-looking statements. Much of this report is comprised of statements of projection. In addition, certain of the historical fact information contained in this report have been printed as provided by MGX or persons associated with MGX, and have not been independently verified. Statements in this report that we have not verified include that the MGX process can separate lithium from oil well wastewater; that Marc Bruner is a leading expert in unconventional oil and gas development; and that PurLucid's patented water purification technology removes particulate and dissolved material including oil, colloids, heavy metals as well as other contaminants; that substantive mass of magnesium has been recovered and is potentially saleable; that this has been achieved with a low energy, low CAPEX and low OPEX process; that MGX is now positioned as North America's oilfield lithium industry leader; that joint ventures with large oil and gas producers would be the natural course of action going forward; that additional partnerships with lithium-endusers would not surprise or would happen in future; that Tesla and others have shown in past to prefer signing off-takes at early project levels; that MGX envisions to interloop the old and new energy industries with the help of a potentially cutting-edge invention. Readers should not rely on these statements without independent verification.

Statements in this report that are forward looking include that the management personnel listed in reports will become management of MGX's subsidiary; that MGX's lithium extraction process potentially reduces recovery times of lithium and other valuable minerals from 18 months to 1 day; that this new method could become one of the most important developments in the energy industry; that MGX and PurLucid are now, or soon, preparing for deployment of the pilot plant and that commercial scale deployment is expected during 2017. These forward-looking statements are subject to a variety of risks and uncertainties and other factors that could cause actual events or results to differ materially from those projected in the forward-looking information. Risks that could change or prevent these statements from coming to fruition include that aspects or all of the process development may not be successful, the process may not be cost effective, MGX may not raise sufficient funds to carry out its plans, changing costs for processing; increased capital costs; interpretations based on current data that may change with more detailed information; potential process methods and mineral recoveries assumption based on limited test work and by comparison to what are considered analogous deposits may prove with further test work not to be comparable; the availability of labour, equipment and markets for the products produced; and despite the current expected viability of the project, that the minerals cannot be economically processed, or that the required permits to build and operate the envisaged plant cannot be obtained. The writer assumes no responsibility to update or revise such information to reflect new events or circumstances, except as required by law.

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Stephan Bogner studied at the International School of Management (Dortmund, Germany), the European Business School (London, UK) and the University of Queensland (Brisbane, Australia). Under supervision of Prof. Dr. Hans J. Bockler, Stephan completed his diploma thesis ("Gold In A Macroeconomic Context With Special Consideration Of The Price Formation Process") in 2002. A year later, he marketed and translated into German Ferdinand Lips’ bestseller ("Gold Wars"). After working in Dubai for 5 years, he now lives in Switzerland and is the CEO of Elementum International AG, specialized in duty-free storage of gold and silver bullion in a high-security vaulting facility within the St. Gotthard Mountain Massif in central Switzerland.

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