Today, MGX Minerals Inc. announced lithium extraction process optimization results as disclosed by its engineering partner PurLucid Treatment Solutions in a report entitled “Phase-2 Lithium Extraction Technology Development Report”. MGX said to file a technical report on SEDAR within 45 days.

PurLucid’s patent-pending filtration technology has “successfully upgraded” 2 brine samples from its Sturgeon Lake PetroLithium Project in Fox Creek, Alberta, Canada.

Research and development at bench top laboratory testing has resulted in an upgrading of brine from 67 to 1,600 mg/L lithium in the filtration and pre-treatment phase of the lithium extraction process. That’s a 20-fold increase in lithium concentration in both the first and second trials.

However most importantly, high contaminants (typical for oil field brines and one of the reasons why these “resources” have been considered uneconomic for long time) have been removed effectively from the lithium concentrated brine. This was achieved with a low energy process. It was reported that magnesium (oftentimes a troublemaker in brine processing) has not only been removed effectively but that “substantive mass of magnesium” has been recovered, i.e. potentially saleable.

The next phase of development hopes to validate these initially promising results in order for MGX and PurLucid to advance to commercial test deployment in case an agreement with a major oil company can be accomplished and the extraction of saleable lithium products succeeds at competitive prices.
Results
(as reported in the “Phase-2 Lithium Extraction Technology Development Report: Summary of Laboratory Lithium Extraction Optimization Trials” (February 21, 2017; proprietary information redacted)

<table>
<thead>
<tr>
<th></th>
<th>Units</th>
<th>Feed</th>
<th>Pre Treatment</th>
<th>Concentrate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Boron (B)</td>
<td>mg/L</td>
<td>110</td>
<td>59</td>
<td>4</td>
</tr>
<tr>
<td>Total Calcium (Ca)</td>
<td>mg/L</td>
<td>23,000</td>
<td>11,000</td>
<td>370</td>
</tr>
<tr>
<td>Total Lithium (Li)</td>
<td>mg/L</td>
<td>67</td>
<td>41</td>
<td>1,600</td>
</tr>
<tr>
<td>Total Magnesium (Mg)</td>
<td>mg/L</td>
<td>2,800</td>
<td>&lt;10</td>
<td>13</td>
</tr>
<tr>
<td>Total Potassium (K)</td>
<td>mg/L</td>
<td>4,500</td>
<td>2,800</td>
<td>12</td>
</tr>
<tr>
<td>Total Sodium (Na)</td>
<td>mg/L</td>
<td>57,000</td>
<td>43,000</td>
<td>68</td>
</tr>
<tr>
<td>Total Sulphur (S)</td>
<td>mg/L</td>
<td>96</td>
<td>56</td>
<td>7</td>
</tr>
</tbody>
</table>

“In the first attempt [using the Purlucid process], a clean lithium chloride brine containing 1600 mg/L [Li] was created free from magnesium, boron and potassium.

In the second trial, run two weeks later on stored brine the results were duplicated with a clean lithium chloride brine again containing 1600 mg/L [Li].

In both cases a small amount of calcium carried through to the brine but this can be addressed in future optimization”

Dr. Preston McEachern, who directed PurLucid’s laboratory work as its CEO, further noted:

“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.”

Dr. Preston is a respected leader in water management in the oil and gas industry with 23 years experience in solving water treatment challenges. He is actively engaged by clients in advisory roles, holds 3 faculty positions with Canadian Universities, and was the Vice President of Research and Development at one of the largest North American Oil & Gas Service companies (Tervita Corp.) prior to forming PurLucid Treatment Solutions.

According to today’s press-release from MGX Minerals:

“Implementation of core MGX lithium recovery technology continues to advance and progress on brine cleanup has been achieved using a newly developed process that concentrates lithium by more than 20-fold while removing contaminants in a low energy process. The next phase of development will validate these initially promising results.”

“MGX and PurLucid are now in the bulk sample and pilot plant design optimization phase of development in preparation for deployment. The goal of creating a clean concentrated lithium brine using filtration prior to the mineral extraction phase is to optimize the pilot plant design by reducing size and cost of mineral extraction components.”

Core Business Model

MGX’s and PurLucid’s integrated oil field brine lithium extraction process 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.
2. A mineral concentration and extraction step to recover metal salts such as lithium chloride.

Both technologies are not only proprietary but patented and patent-pending, and MGX owns exclusive rights to these as well as the exclusive right to acquire 100% of PurLucid.

Picture to the right: Lithium carbonate produced from Sturgeon Lake Oilfield production water using MGX’s patent pending recovery process and PurLucid’s patented oilfield wastewater filtration technologies. (Source)
North America’s Largest Petrolithium Brine Player

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.

In total conviction that its technologies will work as expected, MGX continues to aggressively acquire mineral rights in Canada and the US.

Following last month’s landmark announcement of the appointment of unconventional oil industry legend Marc Bruner and last week’s significant land acquisitions in Canada and in the US, MGX is now positioned as North America’s oilfield lithium industry leader.

In total, MGX now holds permits throughout Alberta totaling over 600,000 hectares. According to last week’s news, the company also has exploration level agreements in place with major oil and gas companies throughout the province 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.

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, sometimes at relatively early project levels.

MGX aims to start commercial test deployment as early as mid-2017, if warranted by positive results from its ongoing pilot plant optimization phase.

Having a potential low energy, low CAPEX and low OPEX solution in hand to clean oilfield brines along with production wastewaters and to extract metal salts from the cleaned and concentrated brines, MGX envisions to interloop the old and the new energy industries with the help of a potentially cutting-edge invention which was recently nominated for the prestigious Katerva Award.
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 offtakes 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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