



MGX Minerals Advances Western US Geothermal Lithium Brine Extraction Strategy; Renews Contract with Senator Polanco (Ret.)

VANCOUVER, BRITISH COLUMBIA / December 10, 2018 / **MGX Minerals Inc.** ("MGX" or the "Company") ([CSE: XMG](#) / [FKT: 1MG](#) / [OTCQB: MGXMF](#)) is pleased to announce receipt of the independent, 3rd party scale up and technology engineering review of the Company's rapid lithium extraction technology for geothermal implementation in the Western United States. The report provides recommendations to implement large-scale application of the technology, including:

- a. Comprehensive review of rapid lithium extraction technology including flow systematics, processes in the scaling of technology and extraction process review; and
- b. High level project engineering scope and timeline schedule for buildout.

The Company has targeted geothermal lithium exploration in California and other Western States for potential partnerships and acquisition targets to secure lithium brine feedstock and operating sites for its lithium extraction and water treatment systems. Engineering partner PurLucid Treatment Solutions Inc. ("PurLucid") has developed high temperature filtration for the purification of geothermal brines.

It is well known that geothermal brines contain concentrated amounts of metals and dissolved salts. The presence of these impurities, combined with the necessity to reduce brine temperature in order for traditional filtration to occur, is a large industry barrier known as scaling that severely reduces flow and heat transfer of geothermal heat exchangers. This in turn negatively impacts the long-term operating performance and, in many cases, eliminates the economic viability of these systems. Geothermal brines are known to contain lithium, magnesium and other minerals and metals including gold.

PurLucid has developed a proprietary, low energy design process that removes these scale-forming ions and dissolved salts while not requiring a reduction in brine temperatures for filtration to occur. This process utilizes PurLucid's existing patented and licensed replaceable membrane skin layers (RSL) filtration system, originally developed by David Bromley Engineering, which creates highly charged pore spaces to force dissolved ions into colloidal particles, simultaneously filtered down to 0.01 microns. The RSL is designed specifically to foul and is removed and replaced in situ, resulting in 100% flux rate recovery. The matrix is composed of materials capable of operating at up to 700 degrees Celsius. Geothermal temperatures rarely exceed 250 degrees.

Similar to MGX and PurLucid's existing wastewater treatment and rapid petrolithium recovery systems, the Company and PurLucid are engineering fabrication of treatment systems capable



of being integrated into existing geothermal infrastructure for both the pre or post power plant phase. The importance of high temperature operation in the post power plant phase allows return water temperature to remain high which is a primary environmental permit requirement so as not to unnecessarily cool the geothermal resource. MGX owns the global rights to the minerals extraction technology jointly developed. The intellectual property is patent pending with core water treatment technology covered under a variety of patents and licenses. MGX is the majority shareholder of PurLucid.

Contract Renewed with Senator Richard Polanco (Ret.)

MGX has renewed its contract with former California Senate Majority Leader Richard Polanco as an advisor and consultant to the Company. Senator Polanco continues to lead negotiations with the State of California and local municipalities regarding targeted exploration locations and sites identified by MGX as potential partnerships and acquisition targets to secure geothermal feedstock and operating sites. Senator Polanco will also continue to advise MGX on local environmental solutions and support ongoing community and stakeholder relations.

Senator Polanco is a former California State Assembly Member and Senator, having been first elected in 1986. He served in the State Assembly for eight years and in 1994 was elected to the State Senate where he served as Senate Majority Leader from 1998 until his retirement in 2002.

Rapid Lithium Brine Extraction Technology

MGX has developed a rapid lithium extraction technology eliminating or greatly reducing the physical footprint and investment in large, multi-phase, lake sized, lined evaporation ponds, as well as enhancing the quality of extraction and recovery across a complex range of brines as compared with traditional solar evaporation.

About MGX Minerals Inc.

MGX Minerals is a diversified Canadian resource and technology company with interests in global advanced material, energy and water assets.

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