

Pure Energy Minerals Launches Lithium Mini-Pilot Plant With Tenova Bateman Technologies & Grows Engineering Team

VANCOUVER, BC--(Marketwired - May 11, 2016) - Pure Energy Minerals Limited (TSX VENTURE: PE) (FRANKFURT: A111EG) (OTCQB: HMGLF) (the "Company" or "Pure Energy") is pleased to announce the commencement of its Mini-Pilot Plant work with Tenova Bateman Technologies (TBT) at their research and development centre in Katzrin, Israel and at other off-site locations. The proposed lithium recovery process that will be tested in the Mini-Pilot Plant consists of three distinct phases:

LiP™ – Physical removal of alkaline earth elements (Ca & Mg) using membranes;

LiSX™ - Recovery of lithium into concentrated high-purity lithium sulphate solution utilizing proven solvent extraction process; and,

LiEL™ - conversion of the lithium sulphate solution into a concentrated high-purity lithium hydroxide solution, using electrolysis, and subsequent crystallization into high-purity battery grade lithium hydroxide.

The Mini-Pilot Plant work will expand upon bench-scale work conducted by TBT for Pure Energy in 2015 and will culminate in a report with preliminary estimates of capital (CAPEX) and operating (OPEX) expenditures for a potential commercial processing plant in Clayton Valley, Nevada for the production of high-purity battery grade lithium hydroxide. The work product from the Mini-Pilot Plant will also include: scale up data for the continuous pilot stage and other recommendations to support preliminary process design work.

In addition, Pure Energy has begun bench-scale testing work with SGS Canada Inc. (SGS) on additional pre-treatment options for Clayton Valley South (CVS) lithium brine. The Company sent a representative sample of lithium brine from the CVS Project to SGS' hydrometallurgy laboratory in Lakefield, Ontario. This phase of SGS testing will focus on removal of alkaline earth elements (predominantly Ca and Mg) from the lithium brine by means of direct chemical precipitation. This SGS testing program aims to complement the membrane pre-treatment stage described above, wherein the brine will be polished prior to lithium collection via solvent extraction.

Pure Energy's engineering team will collect, interpret, and model the data from the TBT and SGS process test work. The successful outcome of this testing and modeling will result in key data inputs to the preliminary process design and flowsheet for the potential CVS lithium processing plant. Once optimized by the engineering team and subjected to additional testing as necessary, the data and knowledge gained from the Mini-Pilot and related process test work will be core components of the Preliminary Economic Assessment (PEA) slated for delivery later this year.

Pure Energy continues to build its engineering team through the appointment of two additional team members. Membrane Development Specialists LLC (MDS), based in Escondido, CA, brings world-leading membrane technology expertise to Pure Energy's team. MDS was formed in 2006 and has extensive experience developing and testing nanofiltration systems for the mining industry to remove Ca, Mg and other impurities during brine processing. MDS's knowledge and expertise will be of immediate value to the Project in optimizing the membrane applications in the treatment of CVS lithium brines.

Dr. Ron Molnar has also joined the team. He is a solvent-extraction specialist with over 35 years experience in hydrometallurgical bench and pilot plant testing. He has built and operated more than 60 pilot plant circuits extracting a wide range of metallic elements, and has also designed and built over 20 custom solvent extraction pilot plant circuits for use in specific projects or for general testing. He has authored and co-authored a number of publications and oral presentations, and Dr. Molnar is a life-member and fellow of CIM (Canadian Institute of Mining, Metallurgy and Petroleum). Ron founded MetNetH2O Inc., an independent consultancy based in Ontario, specializing in solvent extraction and ion exchange process testing and development. Ron will play an integral role on Pure Energy's technical team, and will be present at key points throughout the Mini-Pilot test work, both in Israel and at off-site locations.

Patrick Highsmith, Pure Energy Minerals CEO, commented, *"We are excited to launch the Mini-Pilot Plant with Tenova Bateman Technologies. Their 21st century processing technology appears to be an excellent fit for the low-magnesium and excellent chemistry of the lithium brines from our CVS Project. We also believe that our engineering team differentiates us as a leader among lithium resource developers. MDS and Ron Molnar bring new dimensions to the team in key areas -- brine pre-treatment and solvent extraction. We are confident that this team will ensure that we capture the right data from the process test work for a robust processing solution to take the CVS brines to high purity battery-grade lithium hydroxide."*

Qualified Person

Patrick Highsmith, Certified Professional Geologist (AIPG CPG # 11702), is a qualified person as defined by NI 43-101, and has supervised the preparation of the scientific and technical information that forms the basis for this news release. Mr. Highsmith is not independent of the Company as he is an officer and director.

About Pure Energy Minerals Ltd.

Pure Energy is a lithium-brine resource developer that is driven to become the lowest-cost lithium supplier for the burgeoning North American lithium battery industry. Pure Energy is currently focused on the development of our prospective CVS Lithium Brine Project, which has the following key attributes:

- A large land position with excellent existing infrastructure in a first-class mining jurisdiction: Approximately 9,324 acres in three main claim groups in the southern half of Clayton Valley, Esmeralda County, Nevada.

- Adjacent to the only producing lithium operation in the United States (Albemarle's Silver Peak lithium brine mine).
- An inferred mineral resource of 816,000 metric tonnes of Lithium Carbonate Equivalent (LCE), reported in accordance with NI 43-101.
- Metallurgical and process studies underway to better understand the feasibility and economics of using modern environmentally-responsible processing technology to convert the CVS brines into high purity lithium products for new energy storage uses.

On behalf of the Board of Directors,

"Patrick Highsmith"
Chief Executive Officer

Forward Looking Statements: The information in this news release contains forward looking statements that are subject to a number of known and unknown risks, uncertainties and other factors that may cause actual results to differ materially from those anticipated in our forward looking statements. Factors that could cause such differences include: changes in world commodity markets, equity markets, costs and supply of materials relevant to the mining industry, change in government and changes to regulations affecting the mining industry. Forward-looking statements in this release include statements regarding future exploration programs, operation plans, geological interpretations, mineral tenure issues and mineral recovery processes. Although we believe the expectations reflected in our forward looking statements are reasonable, results may vary, and we cannot guarantee future results, levels of activity, performance or achievements.

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