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**K+S LEGACY POTASH PROJECT,  
THE FIRST NEW POTASH SOLUTION MINE IN SASKATCHEWAN  
WITH AN INVESTIGATIVE APPROACH FOR A SUSTAINABLE  
FUTURE PERFORMANCE OPTIMIZATION**

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**Abstract**

K+S Potash Canada, part of the K+S Group, has initiated construction on the Legacy Project potash mine and production facility near Moose Jaw, SK. It will be the first new potash mine built in Saskatchewan in nearly forty years. Production is planned to start in late 2015.

The local geology within the Project Area has been defined by exploration drill holes and extensive 2D and 3D seismic surveys. The deposit contains potash mineralization within the Patience Lake, Belle Plaine, and Esterhazy Members of the Middle Devonian Prairie Evaporite Formation. Mineral reserves and resources have been estimated for these mineralized intervals and presented in a Canadian National Instrument 43-101 compliant Technical Report firstly submitted in 2009 and updated in 2010 (Hardy et al. 2009, 2010).

The Patience Lake, Belle Plaine, and Esterhazy Members are deemed suitable beds for the recovery of sylvite (potash) by solution-mining methods pioneered in Saskatchewan at Mosaic's Belle Plaine potash solution mine.

K+S Potash Canada has completed a Feasibility Report Review for the Project and has recently completed drilling of the first cavern wells and a disposal well.

An extensive investigation program comprising geophysical wireline drill hole logs, rock mechanical testing, assaying and dissolution testing of cores cut through the Prairie Evaporite Formation, long-term drill hole temperature surveying, sonar surveying, and data assessments during future production will provide an unique opportunity to evaluate potash solution mining standards from the first cavern to long term production.

**Key words:** Canada, Cavern Design, Cavern Development, Cavern Dissolution Experiments, Cavern Dissolution Modeling, Cavern Hydraulics, Cavern Mapping, Cavern Operation, Cavern Testing, Computer Modeling, Corrosion, Disposal Wells, Drilling, Geology, Instrumentation and Monitoring, Rock Mechanics, Saskatchewan, Seismic