

WESTERN POTASH CORP. MILESTONE PROJECT: HOW DOES IT COMPARE?

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Abstract

The Western Potash Corp. Milestone Project is a greenfield solution mining project located approximately 35 km southeast of the City of Regina, Saskatchewan.

A Pre-Feasibility Study (PFS) was completed on the Project in 2011. The Milestone plant facilities include a wellfield, a wet processing plant, a dry processing plant, product storage, loadout, and all other necessary site infrastructure. The plant design was detailed to a sufficient level to allow the capital cost estimate to conform to the American Association of Cost Engineers (AACE) "Class 4" standard. Ultimate plant production for the Milestone Project is 2.8 million tonnes per year for the PFS, including production from both primary and secondary solution mining.

The wellfield will produce potash brine from the Patience Lake, Belle Plaine, and Esterhazy Members of the Prairie Evaporite Formation by means of the dual-well solution mining technique. This method utilizes two wells that penetrate the potash bed vertically, roughly 50 to 80 m apart. Caverns are created in three stages: (1) cavern development, (2) primary mining, and (3) secondary mining. Selection of site-specific cavern dimensions is based on depth, in-situ temperature, and rock mechanics considerations.

For the PFS, Capital Expense (CAPEX) and Operating Expense (OPEX) estimates were generated with a target accuracy of ± 20 percent (%). The Milestone Project yielded attractive economic results. The PFS concluded that the Milestone Project is very strong with no known limitations that may prevent a successful and profitable outcome. A Feasibility Study is currently in progress by AMEC Americas Ltd. (AMEC), and is expected to be completed in late 2012. Golder Associates Ltd. (Golder) continues to assist the company in the preparation of an Environmental Impact Statement ("EIS") for the Project, with an anticipated submission date of Q3 2012.

This paper will provide an interesting comparison between the Milestone Project and a hypothetical greenfield conventional mining project of similar production capacity. The comparison will include consideration of key project parameters such as CAPEX, OPEX, project economics and project schedule. Other important considerations include environmental and safety comparisons. Conclusions will be drawn from the comparison.

Key words: Potash, Rock Salt and Potash Mining (Shaft), Solution Mining Surface Facilities, Canada, Saskatchewan.