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**Scaling / Plugging Issues in Husky's Lloydminster Thermal Projects**

**ABSTRACT**

Husky currently produces approximately 20,000 bopd from its 3 Thermal Steam Injection Projects east of Lloydminster, Sask. at Pikes Peak, Bolney / Celtic, and Lashburn. These projects use a combination of CSS, Steam Drive, & SAGD from directional & horizontal wells to maximize recovery of the 12 degree API heavy oil through steam injection/viscosity reduction. During Husky's more than 25 years of operating successful Thermal Projects, a continual issue has been found to be horizontal well plugging of open-hole liners/screens due to downhole pressure & temperature changes affecting the reservoir environment. These changes can cause plugging from scales, asphaltenes, waxes/sludges, and/or fines migration with the predominant plugging mechanism potentially changing over time. This talk describes Husky's experience in remediating this plugging through periodic solvents & acid treatments & how they have evolved over time.

**BIOGRAPHY**

Allan Koch currently works as the Production Engineering Coordinator of Husky's Lloydminster Thermal Projects and is based out of Lloydminster, Saskatchewan. He has 12.5 years of industry experience, 9.5 of which are at Husky. At Husky, Allan spent the first 6 years as a Reservoir Engineer looking after the Rainbow Lake Area, working on the tertiary miscible EOR projects, waterflood projects, and primary development & exploration. From there, he moved to Husky's Corporate Planning & Economics Group, doing economic/financial analysis for 1 year of both Heavy Oil and Retail Projects using Merak PEEP, and also financial analysis of corporate & asset acquisitions. Then he moved to the Heavy Oil & Gas Business Unit as a Development Engineer of Shallow Gas, managing drilling, development, capital expenditure & reserves for 2 years, following which, Allan moved out to Lloydminster in his current role.

Prior to Husky, Allan spent 2.5 years doing pressure transient well test analysis & dynamometer interpretation at Diagnostic Engineering. He also operated for PetroCanada in Wainwright, Alberta for 3 summer terms. Allan graduated with a Geological Engineering Degree from the University of Manitoba in 1994.