**Geostatistical Steam Assisted Gravity Drainage (SAGD) Reservoir Characterization for the Athabasca Oil Sands, Alberta, Canada**

The application of Steam Assisted Gravity Drainage (SAGD) will become increasingly important because of the vast resources/reserves accessible with this production mechanism. The Athabasca Oils Sands located in Northern Alberta contain 900 billion barrels of bitumen-in-place or one-quarter of Canada's total oil reserves; however, only 10% is economically recoverable by the surface mining techniques currently used. Industry has turned to SAGD and other thermal extraction technologies as alternatives for producing unmineable oil sands reserves. Quantitative reservoir characterization of McMurray formation facies and petrophysical properties is required for uncertainty assessment, well placement and production performance prediction. Geological variations are captured using geostatistical simulation techniques and transferred to production performance prediction and uncertainty characterization.