

Predictive applications of bitumen geochemistry at Devon's Jackfish in-situ project

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Jackfish geoscience has adopted the use of bitumen geochemistry as a fundamental tool when it comes to predicting steam baffles and/or barriers at Devon's 100,000 BOPD Jackfish in-situ project near Conklin, Alberta.

Devon has taken an innovative approach to reservoir characterization by integrating a significant inventory of bitumen geochemistry data with observational field data. Devon has established a strong link between discontinuities in a geochemical depth profiles and reservoir surveillance data. Devon will show how geoscientists have leveraged the information from GCMS as a predictive tool, calibrated by Jackfish field data.

These established correlations from brownfield areas have been used to optimize areas of future development at Jackfish, including changes to the number of future pads, their location, and orientation. Future work aims to further enhance our GCMS inventory and quantitative analysis of baffles and/or barriers – *layers of resistance* – to steam.