

Rock-Eval Pyrolysis and Lithofacies Characterization of the Kee Scarp/Canol Contact in Core (Norman Wells P32X, Devonian, Northwest Territories)

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Abstract

The Norman Wells oil field, discovered in 1920 by Imperial Oil LTD, is located in the Mackenzie Plain of the Northwest Territories. The reservoir rock (Kee Scarp Formation) is a Middle Devonian reef where conventional oil production has currently stopped (R.H. Kempthorne and J.P.R Irish). One of the source rocks was established to be the Canol Formation, which occurs below and above the Kee Scarp reef. The bituminous shales of the Canol Formation cores were characterized using the Rock-Eval pyrolysis technique to identify the hydrocarbon potential of the rock. Currently the shales in the Mackenzie Plain are thoroughly studied to find good source rock for production of unconventional hydrocarbons.

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