

Geophysical Characterization of the Canol and Bluefish Oil Shales, Central Mackenzie Valley, NWT, Canada

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Abstract

The oil shale play of the Central Mackenzie Valley (CMV) started first as an idea developed by several industry and government geoscientists who realized that the Western Canadian Basin organic rich shale fairway extended into Northwest Territory. Long known as the source rock for the Norman Wells light oil accumulation, the Canol Formation was previously studied as source rock and captured in geological surface and subsurface maps used to explore for additional conventional reservoirs. Based on preliminary geochemical studies of the rock outcrops, cores and cuttings both the Canol Shale and the older Bluefish Shale looked like potential lucrative unconventional plays. The next investigative step for these unconventional plays was to evaluate their thickness, regional distribution and predictability using seismic data.