

The Flathead Valley, southeastern British Columbia: Canada's Railroad Valley?

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Abstract

For more than twenty years, Railroad Valley, Nevada, was the site of some of the most prolific onshore oil wells in the U. S. A., Two neighbouring wells in Railroad Valley produced over 21 million barrels of oil, despite complex and uncertain structural relationships. Reservoirs are Tertiary volcanics and Paleozoic carbonate blocks trapped within and beneath the valley fill on the downthrown side of a major listric normal fault.

Similar structural and stratigraphic conditions occur in the Flathead Valley, extending for more than 150 km. through southeastern British Columbia into northern Montana. The Kishenehn basin, which occupies the half graben formed by the Flathead fault, contains up to 3300 metres of Paleogene fine-grained lacustrine deposits and valley fill. The fill includes reservoir-sized slide blocks of Proterozoic, Paleozoic, and Mesozoic carbonates and clastics, overlying an irregular surface of Paleozoic carbonates and younger rocks This basin has the potential for discoveries comparable to those in Nevada, without the structural complexity that has hampered Railroad Valley exploration. Oil seeps in the Kishenehn basin occur in both British Columbia and Montana.