

Exploration and New Technologies Application in the Wild River Basin; A Mannville Tight Gas Case Study

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Abstract

The Wild River Deep Basin Cretaceous play in 1997 was simply a Viking gas pool centered in 58-22 W5M and a Bluesky gas pool at Wild River centered in 56-24 W5M. There was some spotty and sporadic Gething and Cadomin sweet gas production; along with minor deep well control provided by a few successful overpressured Leduc limestone pinnacle sweet gas producers. However, the area had provided only limited or heterogeneous reservoir horizons; non-economic due to both thin pay thicknesses and fractional sections of areal extent. Industry had recognized that there was a 'deliverability issue' and various operators had attempted horizontal wells in the Cadomin, Bluesky, Notikewin and a few years later, the Cardium. The Cadomin, Bluesky and Notikewin horizontal rates were determined to be non-economic (fracture technology came later) and the Cardium horizontal success was repeatable, but only marginally so. There was also a significant disjoint between the reserves assignable from very positive looking logs of the different reservoir horizons and the decline curve once on stream. Logs were either over optimistic, Sw was higher than predicted, clays were blocking pores, or reservoirs were significantly smaller than mapping would suggest. Regardless, the late 90's saw most majors in exit mode; with junior/intermediates moving in, hoping to find the key steps required to tighten the gap between costs and results.