Back to the Future - A Wabamun Drilling Prospect from the 1950's

Ft St John, British Columbia.
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An exploration prospect has been identified in the Wabamun Formation near Fort St John, BC. The prospect was initially defined in 03-29-83-18W6, a 1954 Pacific Petroleum well. Evidence for hydrothermal dolomite in core and drill cuttings, indications of permeability from eLogs, combined with post perforation gas rates of 2.0MMcf/d first brought attention to the potential of this prospect. The 03-29 well was drilled to the basement, took over 13 months to drill and was tested in several zones, but ultimately was completed in the Belloy formation. The Belloy went on to produce over 12 Bcf. With ongoing Belloy production, and numerous ownership changes, the Wabamun was left behind, and the deep rights reverted back to the Crown.

Aduro Resources Ltd has now purchased the rights to the Wabamun and further defined the prospect to the drilling stage. In addition to the existing well data, Aduro has purchased and reprocessed 3D seismic over the lands and integrated high resolution aeromagnetic data to define a "trap door" like closure adjacent to the old well, which is located in the Fort St John Graben. Offsetting faults and an adjacent graben provide conduits for the hydrothermal dolomitizing fluids. Seismic character and attribute work in relation to the existing 03-29 wellbore was also undertaken.
The 03-29 well was drilled prior to the discovery of the Parkland Field in 1956. This prospect is located approximately 35 km northwest of the Parkland field, just outside the town of Ft. St. John, and approximately 39 km northwest of recent Wabamun discoveries in 2009 announced by Cinch Exploration, in the Dawson area of Northeast BC.

The talk will describe the current state of Aduro’s drilling prospect at 13-21-83-18/W6, with particular attention paid to the existing well log information from 03-29, seismic waveform mapping, and conformation with analog wells from the 225 Bcf Parkland field, as well as a full exploration risk evaluation.

Reservoir Model

- Dolomitization and silicification are the controlling factors in Wabamun reservoir development
- Both diagenetic phenomena cross-cut all original depositional facies
- Dolomitization is a product of hydrothermal brines ascending fractures and small displacement faults during U Dev to E Miss extension
- Silicification was also a hydrothermal process, resulting in replacement of limestone and dolomitic limestone by microporous quartz.
  - This diagenetic facies results in the high deliverability and sustained production history at Parkland which is a reservoir analog to the Fort St. John prospect
Summary

We believe the current development of this opportunity demonstrates a unique combination of old well data, more recent geological concepts, and modern geophysical interpretation into a currently viable drilling opportunity. Should this interpretation prove commercial, it extends the Wabamun play concept in British Columbia to the northwestern flanks of the Ft St John graben, ultimately providing new opportunities for drilling investment and reserves additions. We feel this talk crosscuts the disciplines represented at the conference and will be interesting to the conference attendees. We thank you in advance for your consideration.