CASE STUDY

PACESETTER
YOUR PARTNERS IN DRILLING PERFORMANCE

LWD Resistivity Service Enables Oil/Water Contact Characterization in Viking Oil Play in Alberta

Operator drills Ellerslie wells using Resistivity while drilling service to improve performance of horizontal development wells

CHALLENGE

Place production wells in target layer of Ellerslie member in Redwater, AB and acquire resistivity data required to optimize overall field development and maximize oil production.

SOLUTION

Use robust LWD services for formation evaluation while drilling to provide real-time data for geosteering and evaluation.

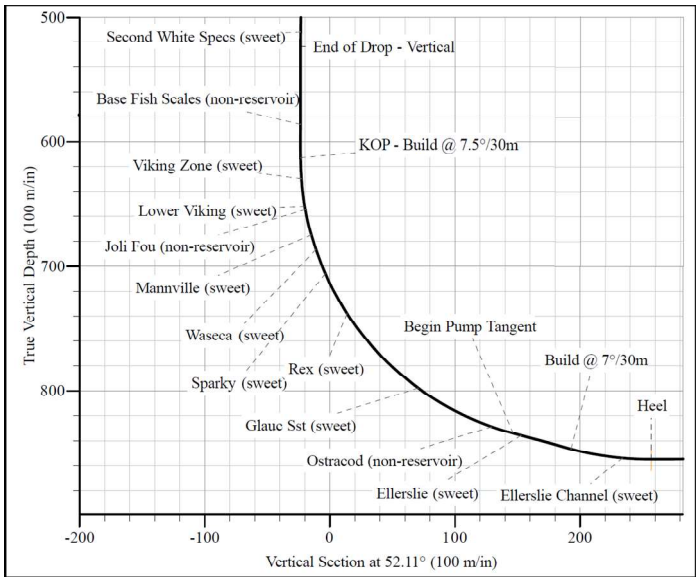
RESULTS

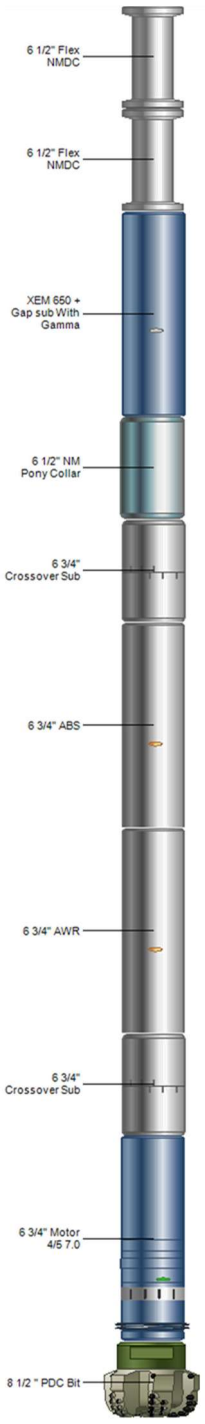
- Each well drilled shoe to shoe with one BHA per section accumulating 203 pumping hours without NPT.
- Acquired resistivity measurements required to place wells within target reservoir layer, maximize oil production, and optimize overall development plan.
- Achieved an average on-bottom ROP of 64 m/hr while delivered good hole quality.

Acquire high-quality LWD measurements for geosteering in production wells

Operator targeted the Ellerslie member in a field in the Viking basin drilling five horizontal production wells. Placement of the horizontal wells near the base of the target formation above the oil/water contact would be challenging using standard gamma measurements with gas readings. In order to overcome this challenge, adequate geological data had to be obtained to aid in geosteering these wells and optimize overall development plan and maximize oil production set forth in the objectives of the operator. Pacesetter Directional Drilling utilized Array Wave Resistivity service to provide Phase and Attenuation Resistivity, gamma ray, and dynamic inclination measurements in real-time at various depth of investigation for interpretation and steering. Pacesetter's robust XEM EM System was also ran to transmit the measurements without hindering expected ROP through the build and lateral sections.

The integrated BHA maximized drilling performance and minimized risk drilling the five wells successfully while steering to the trajectory required by the proposal plan. As a result, the operator achieved their well objectives and field development plans.





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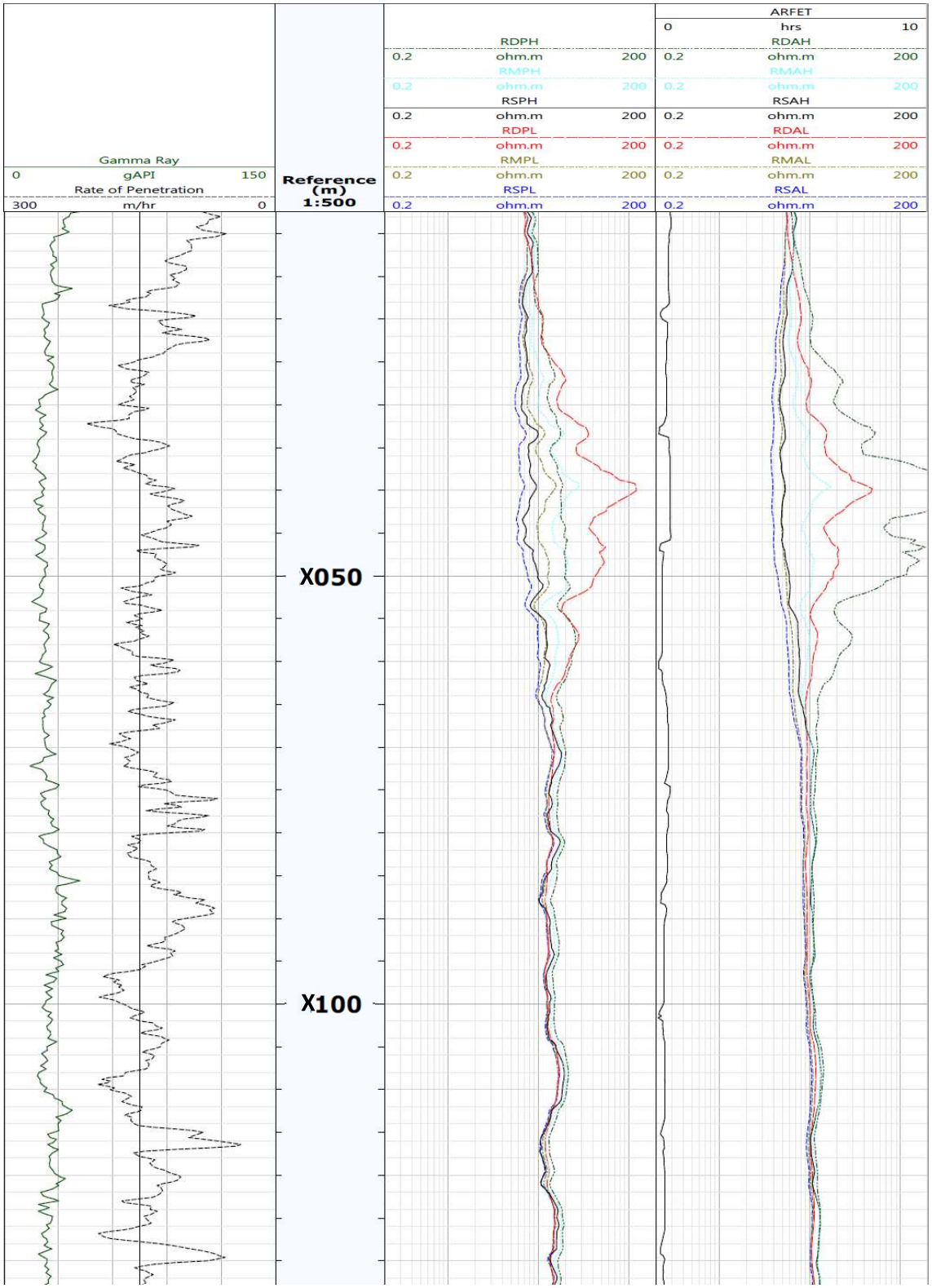

Hydrocarbon bearing formations in the reservoir can be identified with Resistivity tools, when Gamma readings are inadequate.