

AKSHABULAK OIL FIELD
KAZAKHSTAN, KYZYLORDA REGION

Lithology	Clastic
Resistivity contrast	Low
Well type	Horizontal
Reservoir profile	Thin layers

Background

JV Kazgermunai, LLP planned to drill a horizontal section to access a thin reservoir. However, there was uncertainty as to the exact position of the reservoir layers within the formation and their lateral continuity. Consequently, the company needed to ascertain better positioning of the target reservoirs, confirm the lateral extent of these intervals, and place the maximum length of the lateral inside the reservoir layer(s) while minimizing the risk of exiting the reservoir bottom.

Technology

- PeriScope HD* multilayer bed boundary detection service
- PowerDrive X6* rotary steerable system

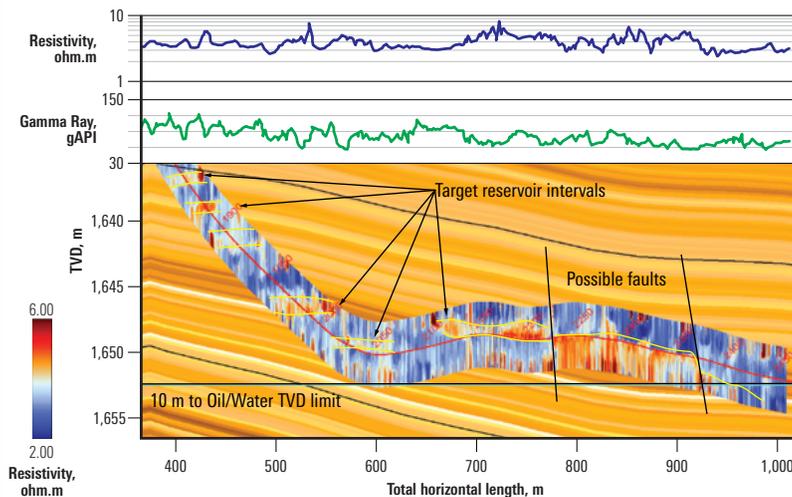
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Single Run with PowerDrive 6 RSS and PeriScope HD Service Places Lateral in Thin Kazakhstan Reservoir

Bed boundary and RSS geosteering services thread treacherous interval measuring as thin as 0.5 m, onshore



PeriScope HD service identified the layer thicknesses, ranging from about 0.5 m to 1.7 m, while also determining their lateral extent and helping to understand structural behavior. Despite the low resistivity contrast between layers and the surrounding formation, two possible faults were uncovered. Combined with the push-the-bit steering capability of the PowerDrive X6 RSS, the data enabled the operator to sustain navigation within the target interval.

“PowerDrive X6 RSS drilled with continuous rotation, ensuring a good quality wellbore, drilling the horizontal section in one run, and reduced drilling time.”

Milat Yermekov, Director of Drilling and Workover. JV Kazgermunai, LLP