

CASE HISTORY

SCI-QUEST™ RESISTIVITY REDUCES SIDETRACKS FROM 60% TO 0%

APPLICATION

Geosteering

LOCATION

Bakken Formation, North Dakota, USA

TECHNOLOGY

Logging While Drilling (LWD)

- Sci-Quest™ Resistivity
- Sci-Gamma™ API Natural Gamma Ray

Measurement While Drilling (MWD)

CUSTOMER CHALLENGE

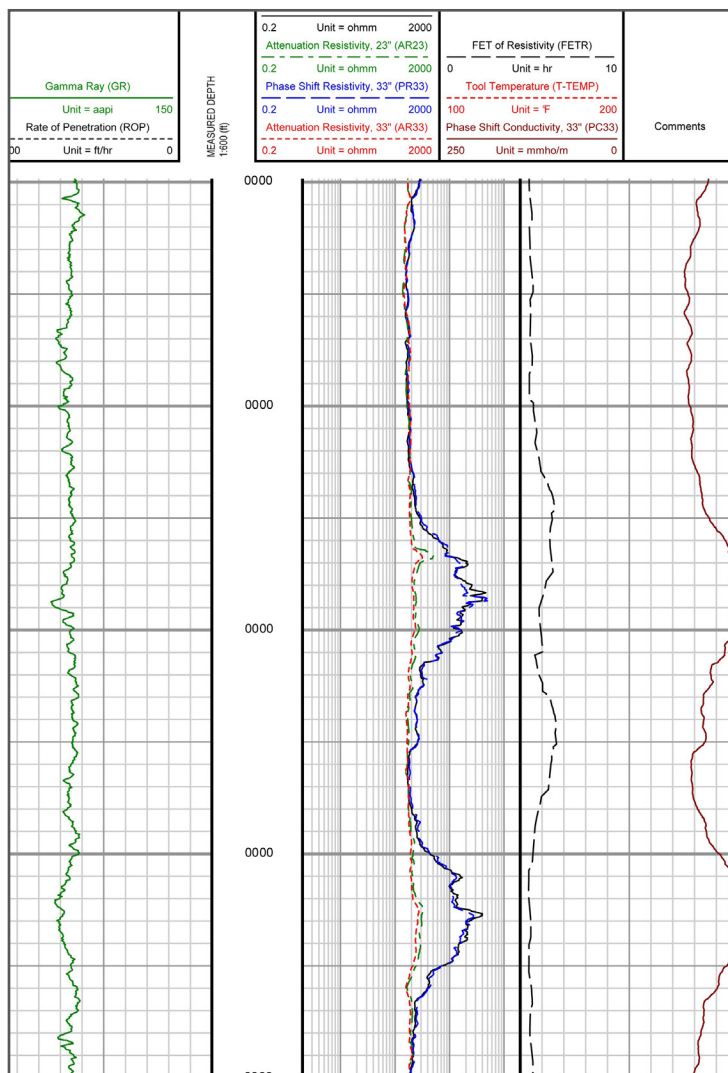
An independent operating company specializing in drilling unconventional horizontal wells wanted to stay within the Middle Bakken formation in North Dakota. Previous laterals had been drilled using only SDI's Sci-Gamma. However, they inadvertently drilled out of the zone several times, which caused them to drill a sidetrack, increasing the complexity of the completion, and thus reducing the producible reserves. Scientific Drilling's challenge was to keep the bit in the Middle Bakken throughout the lateral.

SCIENTIFIC SOLUTION

Scientific Drilling's Sci-Quest Resistivity Tool and Sci-Gamma were used to geosteer the well once in the horizontal section. The deeper depth of investigation of the resistivity tool allowed the client to "see" boundaries sooner, making the geosteering process proactive rather than reactive. This BHA combination allowed the client to consistently stay entirely in the zone for many of the drilled laterals.

CUSTOMER VALUE

By using Scientific Drillings' Sci-Quest resistivity for geosteering, the client reduced the number of sidetracks in the lateral section **from 60% to 0%**. Eliminating the need to sidetrack, the client was able to substantially increase the overall footage in payzone while **saving an estimated \$343,125 (5 drilling days)**.



GAMMA RAY/RESISTIVITY LOG

Gamma in middle Bakken shows no contrast while resistivity shows very good contrast, making resistivity useful for geosteering.