

CASE HISTORY

REAL-TIME LWD RESISTIVITY FOR ACCURATE CORING POINT SELECTION

APPLICATION

Reservoir Evaluation
Log Correlation
Geostopping

TECHNOLOGY

Logging While Drilling (LWD)
 + Probe-based Resistivity Tool (PRT)
 Measurement While Drilling (MWD)
 + Falcon MP MWD

LOCATION

Continental Europe

CLIENT CHALLENGE

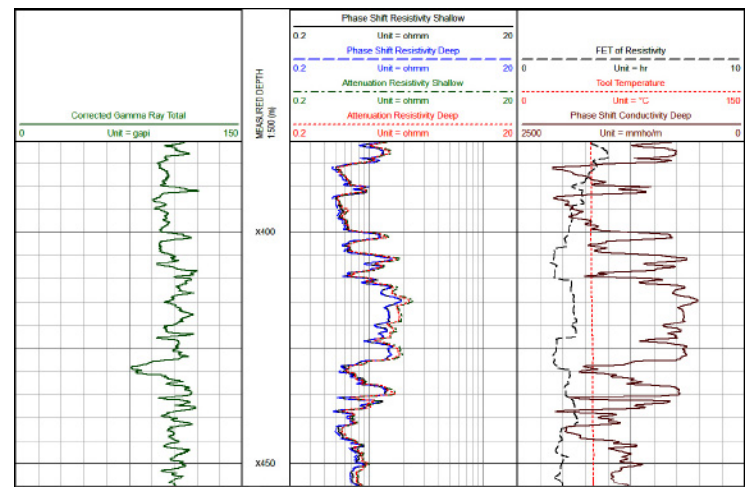
After drilling a successful exploration well, an operator was looking to optimize the recovery factor in the field by drilling two additional development wells for further geological studies.

The operator's goal for these two wells was to obtain rock cores from the hydrocarbon-bearing reservoirs. A proper coring point depth was a critical part of the reservoir evaluation program and required precise selection of identifying key formation tops using LWD resistivity and gamma ray logs. Confident correlation of real-time LWD data with offset wireline data would help identify when to stop drilling and pick up the coring bottom-hole assembly.

SCIENTIFIC SOLUTION

Scientific Drilling International (SDI) recommended pairing its Falcon MP high-speed MWD system with the Probe-based Resistivity Tool (PRT) to provide a suite of Gamma Ray and Resistivity logging with real-time transmission of the critical formation evaluation data.

The PRT's LWD resistivity data would provide the operator's geology team with reliable downhole measurements for log correlation purposes while drilling. The well's 8.5" production hole could utilize the LWD data across the entire section to determine the appropriate depth to stop drilling and switch the bottom-hole assembly to core the desired interval.



LWD Gamma and Resistivity Log showing varying formation log responses above the target reservoir.

CLIENT VALUE

Equipped with accurate LWD logs in the development wells' drilling and evaluation program, the operator was able to make confident and accurate decisions while drilling to avoid going past their desired borehole depth and maximize the coring interval in their target reservoir. The cores obtained in the wells provided key insight into the possible compartmentalization of the reservoir due to extensive faulting in the structure.