CASE STUDY: UTICA SHALE, PENNSYLVANIA, USA

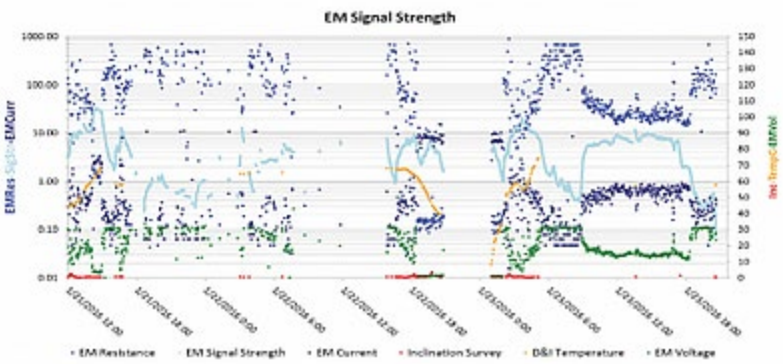
NaviTrak UT exceeds logging expectations, replaces costly rotary steerable system to extend pilot hole 600 ft beyond planned length

CHALLENGES

- Test electromagnetic (EM) logging capacity during air drilling job on exploratory well
- Maintain high-quality, high-speed EM telemetry as drilling plans change to extend pilot hole and switch to brine drilling fluid and oil-based mud
- Modify tool body to add mud-pulse telemetry in extended drilling operation, without adding significant time and cost

SOLUTION

- Baker Hughes deployed its NaviTrak™ UT directional and gamma MWD service to provide:
  - Reliable, high-quality EM signal decoding in the high-shock air-drilling environment
  - Multimode EM and mud pulse on simultaneous independent channels
  - Efficient, in-field swapping of hardware to shift from EM-only telemetry to unified telemetry mode that added mud pulse



NaviTrak™ UT maintained high signal strength (3.55 mV) at planned target depth (10,303 ft) to allow drilling to continue. The tool was still decoding at 1.54 mV at final TD of 11,350 ft.

RESULTS

Drilled farther
to reach 600 ft beyond planned pilot hole

Saved drilling costs
by displacing RSS in the curve

Sustained EM signal
to confidently extend drilling plan well beyond original planned target depth

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