



# Weatherford®

## REAL RESULTS

### Hostile-Environment LWD System Allows Operator to Safely Drill Short-Radius, Severe-Dogleg Well

#### Objectives

- Perform the first short-radius drilling application using Weatherford's HEL™ (hostile-environment logging) LWD (logging-while-drilling) system. LWD technology would also be needed to geosteer the well.

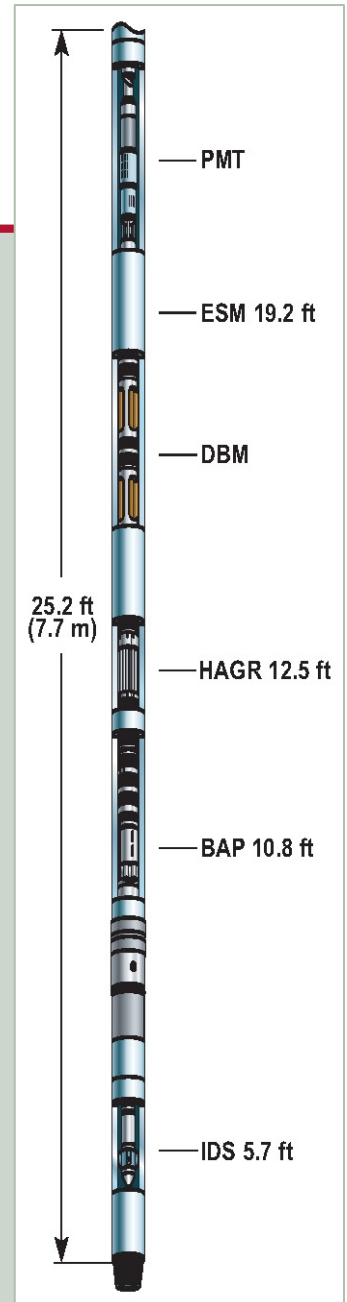
#### Results

- The curve was drilled with a dogleg severity of 51°/100 ft (30.5 m)—an angle greater than other LWD tools could achieve in this application.
- The lateral section was then drilled using the HEL system with triple-combo LWD. At the beginning of the run, the HEL tool arrangement was used to slide the bottomhole assembly into the curved section. During this run, a soft landing and hold on the section was performed.
- On subsequent applications, HEL triple-combo technology was used to drill even more severe dogleg curves of 61.2°/100 ft (30.5 m).

#### Value to Client

- The success of this procedure gave the operator an additional resource for short-radius, hostile-environment LWD projects, while extending the range of projects that could be successfully undertaken.
- The ability to drill short-radius applications in workover wells enabled the operator to save money by avoiding two-phase casing.

Weatherford's HEL LWD system is part of a comprehensive suite of well-placement services that helps operators reach drilling targets and evaluate formations in a variety of hostile operating environments and well conditions. It is rated to an operating temperature of 356°F (180°C), a survival temperature of 392°F (200°C), and a survival pressure of 30,000 psi (207 MPa).



#### Location

Saudi Arabia

#### Maximum Dogleg Severity

61.2°/100 ft (30.5 m)

#### Products/Services

HEL LWD triple-combo logging service and system