

# **REAL RESULTS**

### Weatherford's Drilling with Liner (DwL<sup>™</sup>) System Enables Spinnaker to Secure Well with Steel FilterCake<sup>™</sup>

### **Objectives**

- Priority: Case off a pressured shale and severely depleted sand lobe, using a 12-ppg water-based mud.
- Qualify the Defyer<sup>™</sup> DT cutting structure as the only means for getting liner to bottom in the 38° hole.
- Attempt to exceed 6 1/2-in. conventional drilling depth limits.

#### Results

- The 480 ft, 5-1/2 in., 23 lb/ft liner reamed and drilled 113 ft and isolated the problematic zone.
- The *DwL* system was confirmed to be a sound technology and solution to the problem.
- No mud losses occurred during drilling operations.

## Value to Client

- *DwL* technology successfully cased off the severe depletion zone in Spinnaker Exploration's first liner drilling project in the Gulf of Mexico.
- *DwL* technology enabled a 17-ppge shale and 2-ppge sand interval to be drilled with a 12-ppg mud, placing the liner shoe in a competent shale formation.
- No mud losses occurred during drilling of the 5 1/2-in. casing through the severely depleted zone, and a satisfactory 18.3-ppge FIT was obtained.
- The *DwL* system enabled the client to put carbon-steel liner across a depleted zone.
- The 3 1/2-in. production tubing was the minimum acceptable string size for completing the well, necessitating a 4 1/2-in. hole to TD after drilling out the 5 1/2-in. liner. To preserve this requirement, the operator considered running an expandable liner, but this option was cost prohibitive, with little chance of success if set in the 2-ppge zone.



Weatherford's drilling-with-liner (DwL) system using 480 ft of 5-1/2 in., 23 lb/ft liner reamed and drilled 113 ft, and isolated the problematic zone.

Location High Island 202 A-2 ST1 Gulf of Mexico

Formation Depleted sand and shale sequence

Water Depth 40 ft (12 m)

Run Length 113 ft (34 m)

Well Type Development

#### **Products/Services**

- DwL technologies
- Defyer DT
- BLTT drill-down running tool (BLRS setting sleeve)
- Gemoco® double-valve float collar

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