

REAL RESULTS

Chevron Saves US\$3 Million in Drillpipe Change-Out Costs and Reduces Drilling Crew Risk Exposure

Client: Chevron North Sea Limited
Location: U.K., North Sea
Well types: Offshore development
Number of wells: 6
Formation: Highly abrasive unconsolidated sands
Hole size: 12-1/4 in.
Angle: 90° maximum
Casing: 9 5/8-in. NEW VAM® L80
Footage: 27,771 ft (8,465 m)
Rotational hours: 461.30
Rig name: Captain WPP "A"

Objectives

- Reduce the number and frequency of drillstring change-outs and the associated costs and safety risk.

The unconsolidated sands of the Captain field are of varying grain sizes and are highly abrasive. The combination of the sands and the extensive use of rotary-steerable systems was causing excessive and premature wear and failures of the tool joint hard banding, resulting in the need for frequent drillstring change-outs (an average of every three months in the operator's 2004 drilling campaign). Frequent change-outs increased the risk exposure of drill crews while creating costly delays in drilling and other well operations.

"The success in the application of this new technology is an example of how teamwork can solve even the most difficult of operational problems." Frank Close, Chevron Engineering Team Leader

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Alan Leiper, Drilling and Subsea Manager, Chevron North Sea Limited (left) and John Seymour, U.K. Sales and Business Development Manager, Weatherford.

Results

- Working in conjunction with Chevron Drilling Engineering Group, Weatherford developed a new set of application parameters and quality control requirements for the application of the newly introduced Amco 300XT hard banding for Chevron's 2005 Captain drilling campaign. Weatherford supplied a drillstring with Amco's advanced 300XT hard banding applied to all tool joints. This string ran successfully from January to August without replacement.
- Post-job inspection revealed that out of the 124 joints of drillpipe, only 7 joints required a partial buildup of hard banding and only 1 joint needed reapplication of the hard banding.

Value to Client

- The significant reduction in manual handling of drillpipe greatly enhanced crew safety.
- During the 2005 drilling campaign, it was estimated that the Amco 300XT hard banding saved at least US\$3 million worth of drillpipe replacement time and related costs.
- This Weatherford-Amco-Chevron solution yielded a safer, more efficient and cost-effective operation.