



# Weatherford®

## REAL RESULTS

### High-Performance CTD® Motors Enable Successful Milling, Avoiding Expensive Offshore Sidetrack

#### Objectives

- Mill cement from above the subsurface safety valve (SSSV) to plugback total depth within a monobore completion in an offshore well in the Seturian field in Indonesia.

#### Results

- Weatherford's 2 1/8-in. high-performance CTD positive-displacement motors were used with a 2.72-in. OD mill and MacFlow™ simulation program.
- Milling began above the tubing-retrievable safety valve (TRSV) and passed through five X-nipples to reach total depth. The rate of penetration was excellent throughout the project at 90 ft/hr (30 m/hr). During the milling campaign, cement was found to be solid from top to bottom.
- A total of 7,995 ft (2,437 m) of cement was removed. All five nipples were blasted clean, and plugs were successfully reset and tested.
- The TRSV was successfully milled, and the SSSV was restored to full functionality after jet-blasting cement from the valve.

#### Value to Client

- Not having to sidetrack and redrill the well resulted in significant cost savings for the client.
- Additional savings were realized by avoiding the need to cut the tubing and then run a new TRSV with an overshot assembly.

Weatherford's rugged CTD positive-displacement motor features a fully sealed and pressure-balanced bearing assembly and proprietary high-torque power sections. The power and reliability of this motor enabled fast, single-trip milling on this job.

**Client**  
Chevron

**Location**  
Offshore Balikpapan, Indonesia

**Well Type**  
Gas

**Hole Size and Angle**  
2.992 in., 30°

**Tubing**  
3 1/2-in., 9.2 lb-ft L80

**Maximum Bottomhole Temperature**  
250°F (121°C)

**Depth to Top of Cement**  
275 ft (84 m)

**Depth Milled**  
7,995 ft (2,437 m)

**Flow Rate**  
1.4 bbl/min filtered seawater

**Products/Services**

- Thru-tubing services
- 2 1/8-in. CTD motors
- MacFlow simulation program

