



Weatherford®

REAL RESULTS

Two-Pod Milling System with MillSmart™ Technology Saves Four Days Rig Time, Increases ROP in Mexico

Objectives

- Mill a 31 ft (9.5 m) joint of drillpipe containing coiled tubing and e-line and two 164 ft (50 m) cement plugs located above and below the fish where previous attempts using different mills showed no improvement.
- Improve rate of penetration (ROP) and reduce rig and equipment rental costs.

Results

- Weatherford's two-pod milling system was selected and completed the job in 10 hr 45 min milling time in a single trip.
- The use of Weatherford's *MillSmart* technology enabled the client to achieve a greater ROP than previous milling systems.
- The mill passed through 164 ft (50 m) of cement, the fish, and 50 ft (15 m) of the cement plug below it. Milling was stopped without passing completely through the cement plug to prevent cuttings from accumulating on the liner.
- The entire operation was completed with just 1/16-in. of wear on the two-pod mill.

Value to Client

- Using the two-pod milling system with *MillSmart* technology saved the client four days rig time at a rate of US\$30,000 per day.
- The durability of the system saved the client the rental costs of four additional mills and well cleaning tools.
- The cuttings generated by the mill required fewer high-viscosity sweeps to circulate to surface and were easily removed from the well, improving operational efficiency and reducing rig time.



Weatherford's new two-pod mill is designed and ruggedly constructed to mill wellbore tubulars that are internally and externally cemented. With its enhanced geometry, this mill has exceeded the rate-of-penetration (ROP) performance of standard crushed-carbide and/or insert-dressed mills. This improved performance extends mill life by up to 500 percent over that of standard mills, minimizing the number of trips required for the milling operation and for mill change-out and thereby saving valuable rig time.

Client

Pemex Cardenas

Location

Mexico

Well Name

Jujo-9

Well Type

Onshore workover intervention

Casing Size

9 5/8-in., 53.5 lb, P-110

Depth (top of fish)

1,788 ft (545 m)

Products/Services

- Two-pod milling system
- *MillSmart* technology

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