

Case study: Gulf of Mexico, United States

TeleCoil service cut intervention time in half, reduced cost 65%

An operator in the Gulf of Mexico was experiencing significant production decline in a deepwater, high-pressure well caused by paraffin buildup and high water cut. Limited by budget, platform size, and by the number of personnel that could be housed and accommodated onsite, the operator needed an efficient solution for completing cleanout and water isolation operations.

The **TeleCoil™ intelligent coiled tubing service** was ideal for the job because it is capable of deploying interchangeable bottomhole assemblies (BHAs) to complete a wide range of intervention operations. The system requires a single small operating crew and provides real-time downhole feedback that makes coiled tubing operations more precise and more efficient.

The Baker Hughes team planned the job using its **CIRCA™ modeling software**, and shared operational data throughout the job in real-time with the operator using **BEACON™ monitoring services**. The team first ran a standard wash nozzle downhole to remove paraffin. At 16,563 ft (5048.4 m), the BHA hit an obstruction and could go no farther.

The wash nozzle was tripped out and replaced with a motor, Venturi junk basket, and a rotary shoe, which

were run in hole and used to identify the obstruction as barium sulfate. A milling BHA was quickly made up to the TeleCoil coiled tubing reel and sent back downhole. In all, it took three runs with different mill sizes to remove all the barium sulfate and reach total depth at 18,972 ft (5782.7 m).

A bridge plug and setting tool were then run in hole. The TeleCoil casing collar locator enabled the team to set the bridge plug directly above the water producing zone, effectively reducing the water cut to 0%.

Throughout the operation, the TeleCoil system improved certainty and efficiency. The ability to quickly swap out BHAs saved hours of operational time, reduced safety risks inherent in switching out reels and wireline equipment, optimized the operational footprint, and reduced the number of people required to complete the job. The Baker Hughes team completed the operation in half the time expected by the operator and reduced total operation costs by 65%. Post-operation data showed that oil production doubled while gas production increased by 240%.

Challenges

- Deepwater, high-pressure well
- Limited space and housing on the platform
- Production decrease due to wellbore obstruction and water influx

Results

- Water cut reduced to 0%
- Oil production doubled and gas production increased 240%
- Operation completed in half the expected time
- Operational costs reduced by 65%