

# WPHR Liner-Hanger System Enables Flawless Liner Installation and Wellbore Conditioning, Saves 16 Hours of Rig Time

## Objectives

- Install a 7-in. liner-hanger system in a highly deviated (88.4°), 8 1/2-in. openhole well.
- Condition the open hole with acid in sting-in and sting-out positions during liner running.

## Our Approach

- Following a pre-job analysis, a Weatherford liner-hanger team recommended installation of the Weatherford premium hydraulic-rotating (WPHR) liner hanger because of its compatibility with the well type and ease of running in deviated wells.
- Before running the system, the team modified the stinger by adding ports 3.3 ft (1 m) above the bottom of the stinger. This customization enabled acid pumping in the sting-out position without the risk of the stinger tagging against the drillable packoff bushing.
- The team ran the liner system downhole in 20 hours without any sticking or nonproductive time. While running, the operation conditioned the openhole section with acid to facilitate higher production rates. The large ID of the liner system eliminated the need to rig down the 4 1/2-in. inner-string tubing and rig up smaller-diameter 3 1/2-in. production tubing.
- The team pressure tested the installed system.
- The operation incurred no safety incidents, no additional nonproductive time, and no near misses.

## Value to Client

- The Weatherford WPHR liner-hanger system resulted in a flawless installation in the openhole well.
- The large internal clearance of the liner system enabled running the 4 1/2-in. inner-string tubing already on site rather than using the planned 3 1/2-in. tubing. This saved the operator 16 hours of rig time.
- The modified stinger enabled the operator to proceed with the acid job without performing a complete sting out, which averted losing the ability to sting back in and reduced operational time.

From top to bottom, the premium WPHR liner-hanger system includes a polished-bore receptacle; a liner-top packer with an HNG tool and RSM profiles; a premium hydraulic, rotating liner hanger; crossover subs; slotted liners; a stinger packoff; and a dual-valve float shoe.

**LOCATION**  
Oman

**WELL TYPE**  
Onshore, oil and gas

**WELL DEPTH AND DEVIATION**  
5,095 ft (1,553 m), 88.4°

**CASING SIZE AND TYPE**  
9 5/8-in., 40-lb/ft L-80 BTC

**OPENHOLE SIZE**  
8-1/2 in.

**LINER SIZE**  
7-in., 23-lb/ft K55

### PRODUCTS/SERVICES

- WPBR TSP4 polished-bore receptacle
- WCTSP4R packer
- WPHR liner hanger
- HLC landing collar
- Float shoe
- Dropping ball

