



Weatherford®

REAL RESULTS

Liner-Hanger Systems, SurgeMaster® Tool Safely Reached Total Depth in High-Surge Well, Minimized Losses, Saved 1 Day of Rig Time

Objectives

- Run a 11 3/4-in. liner section in a well in which high surge and circulating pressures are expected in addition to wellbore instability issues. The operator experienced sticking while running 14-in. casing. They re-ran the casing with a 14-in. casing shoe to a shallower depth and requested specialty liner-hanging tools for the 11 3/4-in. section before proceeding with a 9 5/8-in. section.
- Minimize mud losses and fractures.

Our Approach

- Based on collaboration with the operator, the Weatherford liner-hanger team suggested that running the 11 3/4-in. liner to depth without surge reduction tools would be unsafe and could potentially fracture the well.
- The team deployed the following: WPHS hanger, WTSP4R1 liner-top packer, L45WP autofill float collar, MX-200 MudMaster™ filter shoe, and the SurgeMaster II surge-reduction tool.
- The liner system was safely run to 9,120 ft (2,780 m) total depth at a speed of 2 min/stand with minimal losses.
- The L45WP autofill float collar was converted with a flow rate of 5 to 8 bbl/min. A 2 1/4-in. aluminum ball was dropped to land on the mechanical ball seat (MBS), the WPHS hanger was set, and then the “R” hydraulic running tool was released. The MBS disk was sheared with 2,500 psi (17.24 MPa), and a cement job was performed by releasing the subsurface release plugs and darts from the remote-control top-drive cementing head.
- The WTSP4R1 packer was set and successfully tested with 4,000 psi (27.6 MPa) as required by the operator.

Value to Client

- The Weatherford autofill float equipment and the SurgeMaster II tool enabled the operator to run the liner to depth, which would have been impossible without reliable surge reduction tools.
- The low-flow-rate conversion of the autofill collar eliminated the requirement to drop a ball, thus limiting flow rate conversion to 5 to 8 bbl/min, which reduced the circulating pressure on the wellbore to the minimum and avoided losses.
- The SurgeMaster II tool enabled the operator to maintain a clean rig floor with zero mud spills and zero recordable incidents.



Weatherford liner-hanger systems, autofill float equipment, and the SurgeMaster II tool ran 11 3/4-in. liner at a rate of 2 min/stand in well conditions that would cause conventional liner systems to fail.

Location

West Australia

Well Type

Offshore, vertical

Well Depth

12,303 ft (3,750 m)

Liner Setting Depth

9,120 ft (2,780 m)

Parent Casing Size

14 in. 100 lb/ft (45 kg/m)

Liner Size

11 3/4 in., 60 lb/ft (27 kg/m)

Products/Services

- Liner-hanger systems
- WTSP4R1 liner-top packer
- WPHS hanger
- Dual SSR plugs
- MX200 MudMaster filter shoe
- L45WP autofill float collar
- SurgeMaster II tool
- Remote-control top-drive cementing head

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