

Garden Banks 386, Llano LL1

Location OSC-G 10350, No. 3, ST-4

Challenge

Repair a leak approximately 1,800 ft above the desired completion zone in a high-pressure well located in 2,600 ft of water. The leak was discovered during the completion phase when the production casing failed a mechanical integrity test.

Objective

Regain pressure integrity of the 7-3/4 in. production liner for stacked FracPac™ completion operations using Solid Expandable Tubular (SET™) technology.

Results

After adequate hole cleaning, a 6 x 7-3/4 in. , 46.1 lb/ft Cased-Hole Liner (CHL™), approximately 2,300 ft in length, was successfully expanded at 23,400 ft. Nine sealing anchors were installed to remediate the leak and to meet the engineering requirements for long-term completion reliability. The CHL system was pressure tested to 4,000 psi for 10 minutes. The operator completed the well to meet the original design objective of a stacked FracPac.

Value Added

The use of SET technology allowed the operator to

- Complete a larger multi-zone instead of a smaller and less reliable single zone.
- Attain a production rate of over 13,000 bbls/day, exceeding the expected 12,000 bbls/day.
- Increase the production liner size 25% compared to conventional casing.
- Use the original completion equipment and FracPac design with the exception of packer ODs.

The estimated business value of the application was in excess of \$25 million. Contributing factors include

- Circumventing sidetrack operations, including the associated rig move.
- Avoiding smaller completion equipment.
- Eliminating deferment of production.

