



Weatherford®

REAL RESULTS

TruForm™ Expandable Liner Hanger System Proves to be Economical, Reliable in First Application in Colombia

Objectives

- Run a 7-in. liner in a 8 1/2-in. open hole at optimal speed and perform an effective cement job through the Monserrate sandstone formation.
- Eliminate loss circulation risk caused by hydraulic shock. Fluid losses occurred while drilling the 8-1/2 in. hole at 3,580 ft. (1091 m).

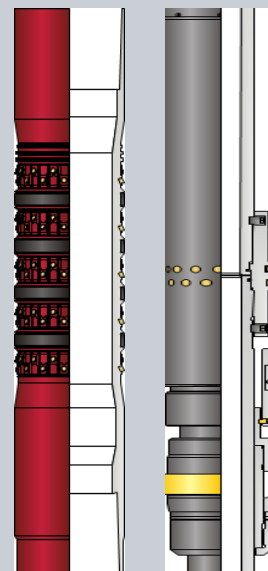
Results

- Weatherford deployed a *TruForm* expandable liner hanger system to measured depth (MD) of 4,190 ft (1277 m) with rotation and reciprocation. The operator overcame several obstacles because of the liner getting stuck at 4,307 ft (1313 m) and 4,330 ft (1319 m).
- Cement slurry was then pumped and the 1,140-ft (347-m) liner lap was effectively cemented to support the 9 5/8-in. casing.
- Key objectives and performance benchmarks for the overall system were successfully achieved and recorded with no reportable incidents or operational problems.

Value to Client

- Using Weatherford's *TruForm* expandable liner hanger system enabled the operator to improve cementing job results in the field by using innovative technology while eliminating nonproductive time.
- The successful cement job with isolation from the liner top to the shoe enabled the production zone to be drilled and completed without costly squeeze jobs.
- The planning and collaboration between Weatherford and the operator ensured that new technology could be introduced safely and effectively, without compromising the well.

The *TruForm* body is expanded with a one-piece, self-adjusting, compliant expansion cone activated by hydraulic pressure. The cone transitions down the body in one, continuous motion, anchoring the inserts and expanding the elements.



TruForm
Expandable
Liner Hanger

TruForm
Expansion
Cone

Location

Tesalia, Huila, Colombia

Well Type

Onshore, oil

Formation

Monserrate

Hole Size

8-1/2 in.

Casing

9-5/8 in., 47 lb/ft

Liner Size and Length

7 in., 1,140 ft (347 m)

Well Depth and Angle

4,597 ft (1401 m) MD, 48° deviation

Liner Depth and Angle (Top)

3,023 ft (921 m) MD, 45° deviation

Products/Services

- Tubular running services
- *TruForm* expandable liner hanger system
- SpiraGlider™ centralizer system

Weatherford
Jose Barreneche
Well Construction Systems
jose.barreneche@la.weatherford.com