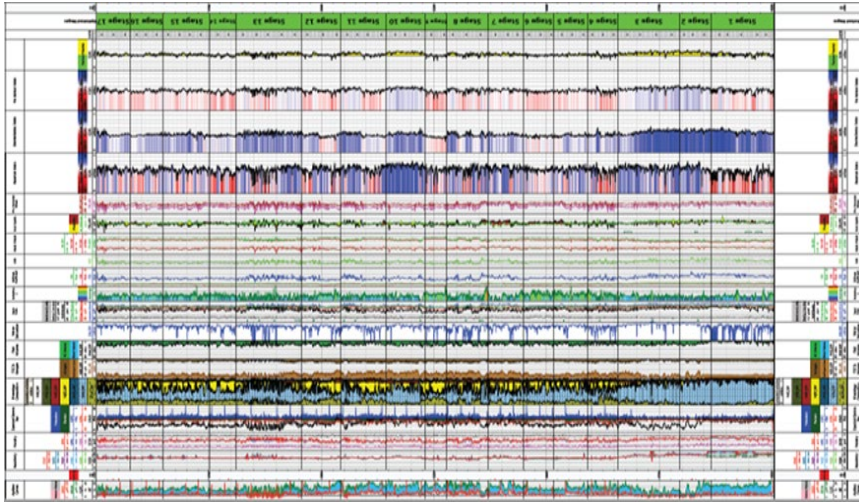


Multidisciplinary Solutions Enable Operator to Complete Unconventional Well 20% Faster and Exceed Production Expectations by 60%



Weatherford logging and coiled tubing crews acquired a full suite of logs, which were incorporated into FracAdvisor® analysis to design a plug-and-perf completion program with 17-stages (green track at top).

Objectives

- Overcome a tortuous trajectory and a long horizontal section to acquire logging data needed to design an optimal completion program.
- Use a geo-engineered approach to plan and design a multistage fracturing and completion program for an unconventional well.
- Coordinate logistics for formation evaluation, coiled-tubing services, hydraulic fracturing pumping equipment, fluids, and sand.

Our Approach

- Weatherford Integrated Services and Projects (ISP) assembled a team of specialists from multiple disciplines, including well logging, coiled tubing (CT), interpretation and evaluation, completion design, and pressure pumping.
- At the wellsite, Weatherford crews deployed logging tools on 2-in. CT and navigated a tortuous 4,920-ft (1,500-m) horizontal section to acquire a full suite of logs, including triple-combo and dipole sonic logs.
- Weatherford Interpretation and Evaluation Services (IES) petrophysicists evaluated the logging data and perform advanced reservoir and geomechanical analyses. The team integrated these results into the FracAdvisor solution to design a geo-engineered multistage completion, which they reviewed with the operator.

LOCATION

Tamaulipas, Mexico

WELL TYPE

Onshore, horizontal, exploratory

FORMATION

Upper Jurassic Pimienta mudstone

HOLE SIZE AND ANGLE

6-1/8 in., 90.6°

CASING SIZE AND TYPE

4 1/2-in., 15.9-lb/ft P-110

TEMPERATURE

244°F (118°C)

DEPTH

13,195 ft (4,022 m)

PRODUCTS/SERVICES

- Integrated services and projects
- Wireline logging services
 - Compact™ memory tools
- Coiled-tubing services
 - Downhole conveyance
- Pressure pumping services
 - SureSlick® slickwater fluid systems
- Completion tools
 - Composite plugs
 - Pumpdown perforations
- Interpretation and evaluation services
 - FracAdvisor solution



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Our Approach *(continued)*

- Weatherford completion crews set FracGuard composite plugs across the pay zone as they carried out plug-and-perf operations. After completing the 17-stage fracturing sequence, the operator ran a mill on CT to quickly drill out the plugs. Lightweight cuttings from the composite plugs lifted easily to surface, enabling the operator to complete the well faster than anticipated in the authorization for expenditure (AFE).

Value to Customer

- The Weatherford ISP team capitalized on CT conveyance to conduct logging and multistage plug-and-perf programs within a long, tortuous horizontal wellbore. The flawless execution by this multidisciplinary team resulted in 20% faster completion operations and 60% more oil production than the customer originally expected.
- The team coordinated logistics for formation evaluation, coiled-tubing services, hydraulic fracturing pumping equipment, fluids, and sand in an environmentally safe manner.
- Production results validated the viability of this exploration play to certify reserves for funding additional wells.

