



Weatherford®

REAL RESULTS

FracShield™ Composite Plug Accelerates Plug-and-Perf Operation with Average Mill-Out Time of 16.5 Minutes

Objectives

- Decrease time on location during the mill-out phase of a plug-and-perf operation.

Our Approach

- Weatherford deployed FracShield composite plugs in 23 zones.
- The coiled tubing (CT) and butterfly mill drilled the plugs out at an average time of 16.5 minutes per plug.

Value to Client

- The short length and low metallic content of the FracShield composite plug helped to reduce mill-out and on-location time, which enabled the operator to begin producing the well faster.
- The reduction in on-location time and associated costs improved overall well economics.

Plug #	Drill-Out Time	Plug #	Drill-Out Time	Plug #	Drill-Out Time
1	17 minutes	9	8 minutes	17	12 minutes
2	42 minutes	10	5 minutes	18	3 minutes
3	26 minutes	11	7 minutes	19	14 minutes
4	13 minutes	12	11 minutes	20	25 minutes
5	8 minutes	13	14 minutes	21	17 minutes
6	15 minutes	14	34 minutes	22	16 minutes
7	7 minutes	15	17 minutes	23	37 minutes
8	23 minutes	16	9 minutes	AVG	16.52 minutes



The FracShield plug is made with a proprietary blend of premium composite material, which enables higher run-in speeds, more efficient milling, and superior sealing and anchoring.

Location

Permian Shale

Well Type

Onshore, horizontal, oil

Production Casing

4-1/2 in., 13.5 lb/ft
(114.3 mm, 20.1 kg/m)

Total Measured Depth

16,435 ft (5,009 m)

Lateral Length

6,435 ft (1,961 m)

Bottomhole Temperature

150°F (65°C)

Circulating Pressure

5,800 psi (39.9 MPa)

Wellhead Pressure

2,800 psi (19.3 MPa)

Products/Services

- FracShield 4 1/2-in. 12K 350°F top ball composite plug

Bottomhole Assembly

- 3 3/4-in. butterfly mill
- 2 7/8-in. mud motor
- Agitator
- Jar
- 2-in. high-pressure CT unit

Weatherford
Matthew Crump
Global Product Line Manager
Composites
matthew.crump@weatherford.com