



Weatherford®

REAL RESULTS

Hydraulic Jet Pump Achieves Target Production Rate of 5,000 bopd within a Five-Day Test

Objectives

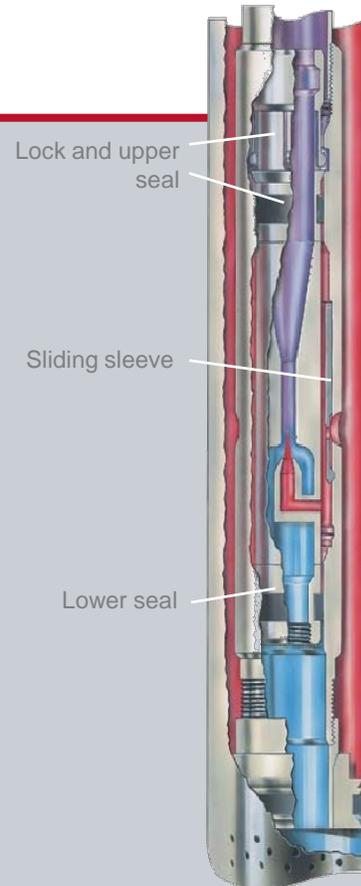
- Assess the economics and efficiency of using a jet pump as a lift method to achieve a production rate of up to 5,000 bopd.
- Use the flow and buildup data obtained with a single rate test to better characterize the inflow behavior as well as the reservoir structure and properties (fracture permeability, matrix permeability, boundaries).
- Obtain a full productivity profile, using a multi-rate test.

Results

- Weatherford installed a 3.81-in (96.774-m) reverse-circulation, sliding-sleeve-door (SSD) type (with X-lock), 13 E combination jet pump to run for a five-day test period. The installation depth of the jet pump was 1,597 ft (487 m). Fresh water was used for the power fluid during the multi-rate test; formation fluid was used for the power fluid in a closed-loop operation.

Value to Client

- Installation of the jet pump provided the client significant cost savings and incurred no downtime. The overall cost of the jet pump was much lower than alternative forms of lift. The pump was installed and tested without pulling the existing completion.
- Use of Weatherford's jet pump provided the client with the following return measurements at the end of the five-day test period.
 - Total return rate: 6,500 bopd
 - Production rate (return rate – injection rate): 5,000 bopd
 - Basic sediment and water (BS&W): 85%
 - API = 20
 - H₂S = 700 ppm



Weatherford's jet pump has no moving parts. Its pumping action is achieved through energy transfer between two moving streams of fluid, greatly reducing the risk of failure sometimes associated with other forms of lift.

Location

Kurdistan, Iraq

Well Type

Oil

Formation Depth

2,180 ft (664 m)

Surface Injection Pressure

750 psi (52 bar)

Surface Injection Rate

1,450 bopd (with one surface unit)

Products/Services

- Hydraulic-lift services
- Jet pump

Weatherford
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