



Weatherford®

REAL RESULTS

Low-Volume PL-III Pump Doubles Liquid Production, Increases Gas Production from Between 15 and 20 mcf/d to More Than 200 mcf/d

Objectives

- Identify an alternative to using a plunger-lift system to unload a well in Oklahoma where the excess liquids were creating a backpressure on the reservoir.
- Increase gas production from the low rate of 15 to 20 mcf/d (424.8 to 566.4 m³/d).

Results

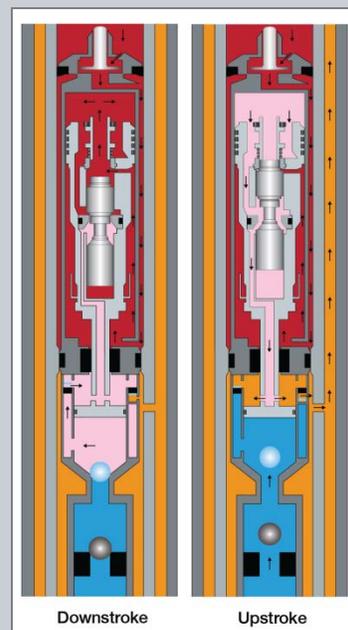
- Weatherford installed its low-volume PowerLift™ III (PL-III) pump in the well. The pump was set at 6,800 ft (1829 m) true vertical depth (TVD) at a 41° inclination.
- The installation of the PL-III pump included a gas anchor to prevent gas from entering the pump in order to avoid the negative effects gas would have on the pump's volumetric efficiency, which would have resulted in a higher operating energy requirement.
- The low-volume pump used just 5 hp for operating, but a 25 hp triplex pump was installed so that higher injection rates could be used for retrieving the pump.
- Two tubing strings were included in the installation. One was for installing/retrieving the PL-III pump and for transmitting the power fluid to the pump. The other string was for returning the spent power fluid to the surface, along with the produced fluids.

Value to Client

- By using Weatherford's PL-III pump, the production of liquids from the well increased from 15 to 20 bpd up to 40 to 50 bpd (2.39 to 3.18 m³/d up to 6.36 to 7.95 m³/d), while the gas production increased from 15 to 20 mcf/d up to more than 200 mcf/d (424.8 to 566.4 m³/d up to more than 5664 m³/d).



Weatherford installed its low low-volume PL-III pump at 6,800 ft (1829 m) with a 41° inclination.



Weatherford's low-volume PL-III pump reduced the backpressure on the reservoir from excess liquid by increasing the liquid production, resulting in a significant increase in the well's gas production.

Location
Oklahoma

Well Type
Onshore horizontal gas

Pump Depths
6,800 ft (1829 m) TVD, at a 41° inclination

Products/Services

- PL-III pump
- Hydraulic-lift services

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