Weatherford®

REAL RESULTS

Freestyle Jet Pumps Recover Frac Fluid Five Times Faster, Saving up to $200,000 per Well

Weatherford's freestyle jet pump provides a cost-efficient means for speeding fluid recovery. The jet pump is easily moved from well to well and can pump at rates of less than 50 bpd to up to 2,000 bpd with a simple change of nozzle and/or throat.

Objectives

- Accelerate frac fluid recovery to reduce associated costs and put wells on production faster. The operator's standard procedure in the past was to let wells flow naturally and then fracture-stimulate them when flow rates were no longer acceptable. Frac fluid recovery would be completed by swabbing or, on rare occasions, by using nitrogen foam. In the case of these four wells, the operator sought a solution for faster recovery of the frac fluids to maximize the benefits of fracturing and reduce fluid recovery costs.

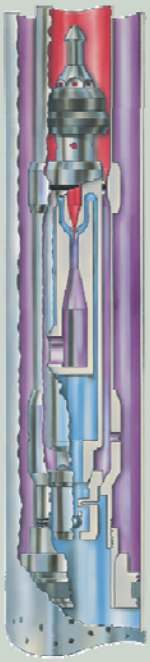
Results

- Weatherford's freestyle jet pumps were used on all four wells. The pump and portable surface power unit were quickly relocated, from well to well, to repeat the recovery process.
- Frac fluids were recovered in one to three days for small-volume fracs (less than 15,000 bpd) and in one to three weeks for large-volume fracs (more than 15,000 bpd).
- During the frac fluid recovery process, well data were obtained that would allow the operator to accurately size the artificial-lift equipment needed for producing each well.

Value to Client

- Recovering the frac fluids and putting the wells on production was five times faster than possible with swabbing. Nitrogen foam, which is cost prohibitive at US$50,000 to $200,000 per day, was used only on rare occasions. Sales began immediately when Weatherford's jet pump was used.
- Once each well was producing, the pump was easily removed to provide an optimal oil and gas flow path to the surface with the full tubing ID, in addition to the tubing-casing annulus.
- Success with Weatherford's jet pump gave the client a viable option for more cost-effective frac fluid recovery.

Reversing the power fluid flow direction allows removal of the jet pump to provide an optimal oil and gas flow to the surface.



Location
Oklahoma, USA

Well Type
Oil and gas

Hole Angle
Vertical/deviated

Casing and Tubing
- 5 1/2-in., 17-lb/ft casing
- 2 7/8-in. tubing

Formations
Viola, Bromide, Woodford Shale, Hunton

Bottomhole Assembly
Freestyle pump

Products/Services
- Hydraulic-lift services
- Freestyle jet pump
- Portable surface power unit

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