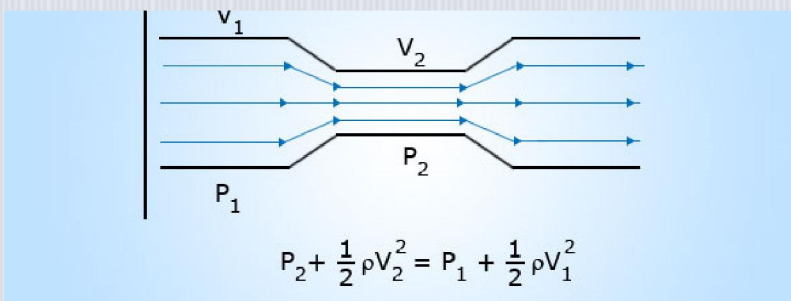




ExP BHA

ExP has been able to implement fluid conditioning and manipulation properties to successfully manufacture technologies that can help assist in the recovery of both Oil and Gas during work-over (cleanout) operations.



Case History

Sand and dehydrated 10.5 lb Drilling Mud and debris in wellbore

Objective: Utilize 1.25" CT with the 1.33" ExP BHA to remove sand, mud and debris from inside the tubing and wellbore, utilizing produced water and N2 (when needed). Spot 10% inhibited and nitrified acid across the perforations to help with stimulation of the formation.

Tubing: 2 3/8"

Casing: 5.5"

Well TD: 9650'

CT Size: 1.25"

CT Speed: 50-100 ft/min

Circulation PSI: 1,900-6000

Fluid Flow Rate: .25 bbls – .75 bbls/min

N2 Flow: 300-400 CFM

Acid: 2000 Gallons

Situation

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Location: Cotton Valley, East Texas

Problem: Dehydrated 10.5 lb drilling mud and sand bridges in wellbore with some scale

Procedure: The ExP tool was deployed via 1.25" third party coiled tubing. An initial pump rate of .25 bbls/min with 300 CFM N2 was pumped with circulating pressures of 2,000psi. When the first sand bridge was encountered at 6,183 the CT was picked up by 50ft and the fluid rate was increased to .5 bbls/min with 200lbs WOB, which removed the debris bridge. At 8,621 a second bridge was encountered. Within 10 minutes the coil pushed through more blockages. The ExP continued to remove the obstructions in a timely manner to TD. Upon complete removal of all debris, 10% mud acid was spotted across the perforations to help stimulate the near wellbore region of the well.

Total Time from RIH to TD: 5 hours 22 minutes

Result: Removed all mud, sand and debris

Pre-ExP Intervention:
60-80 MCF (Gross)

Post ExP intervention:
360-440 MCF (Gross)