

**Case History**

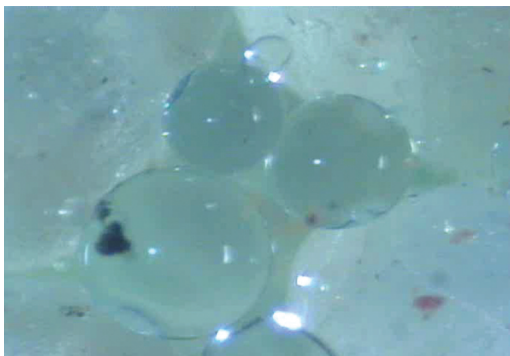
Fracturing

**New AquaStim® Water Frac Service with GasPerm 1000™ Technology Helps Major Independent Operator Boost Gas Production**

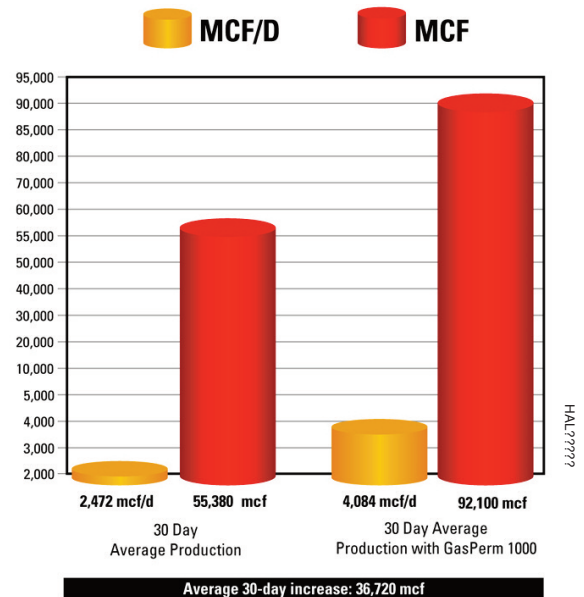
Location: Texas Panhandle

**OPERATOR'S CHALLENGE** – Recently, Halliburton introduced its specially formulated SandWedge® enhancer and OptiKleen-WF™ agent to the Operator's normal four-stage water frac completions in the Granite Wash play in the Texas Panhandle. The results were a major uplift in efficiency and total well productivity, with less sand production, improved fluid recovery and fewer post-stimulation completion issues. To build on this success, the company asked Halliburton for new ideas to further enhance the economics of the company's prospects in the area.

**HALLIBURTON'S SOLUTION** – After a review of existing conditions, Halliburton recommended the new AquaStim water frac service which includes the breakthrough GasPerm 1000 technology. GasPerm 1000 service helps control fracture face



*In ultra-tight formations, water imbibition and phase trapping can greatly reduce gas production. GasPerm 1000 surfactant helps reduce this damage.*



damage and boost production from unconventional gas wells, including tight gas, shale and coalbed methane.

**ECONOMIC VALUE CREATED** – The average initial production of gas had been 2,472 mcf/d, with the total for the first 30 days averaging 55,380 mcf. The introduction of AquaStim service with GasPerm 1000 technology resulted in initial production of 4,084 mcf/d and a 30 day average total of 92,100 mcf. The average 30-day increase was 36,720 mcf, creating an economic value of approximately \$782,000. Based on these results, Halliburton's AquaStim service has been integrated into the Operator's completion process for use on other unconventional gas wells.

*For more information about how AquaStim water frac service can help make unconventional gas assets more profitable, e-mail [stimulation@halliburton.com](mailto:stimulation@halliburton.com).*