

# Operator in the Fayetteville Increases Asset Value by \$2.6 Million

## ACTIVATE<sup>SM</sup> REFRACTURING SERVICE HELPS RECOVER BYPASSED RESERVES AND LOWERS COST PER BOE

FAYETTEVILLE SHALE PLAY

### CHALLENGE

- » Treat understimulated well and add value to the existing asset
- » Arrest rapid decline in well's production rate

### SOLUTION

- » ACTIVATE<sup>SM</sup> service to help operator overcome economic losses from well
- » AccessFrac service to generate new fractures from old perforations that were not stimulated in well's first life

### RESULT

- » \$2.6 million of additional value gained on the well
- » 180% EUR increase after refracture treatment
- » 2% decline curve rate after refracturing the well, compared to 35% decline curve rate before the refracturing treatment

### OVERVIEW

An operator in the Fayetteville shale play was experiencing uneconomic production results from an understimulated well. Utilizing ACTIVATE<sup>SM</sup> service to design a customized refracture treatment for that well, the operator was able to recover bypassed reserves and increase the well's value by \$2.6 million.

### CHALLENGE

The operator's challenge was to increase production from an understimulated well that was experiencing rapid decline rates, approaching the limit where the well would no longer be economically viable for production. A refracturing solution was needed to treat the well and arrest its rapid decline rate.

### SOLUTION

Halliburton collaborated with the operator to understand how much of the reservoir needed to be stimulated in its second life. In the design phase, AccessFrac<sup>®</sup> stimulation service was used to tailor the design to focus on the target zones to deliver the new proppant, and to maximize lateral coverage and total stimulated reservoir area. In the execution phase, AccessFrac service was deployed to refracture the well. The first set of diversion cycles reconnected the wellbore to propped fractures where conductivity was previously lost. The next set of diversion

### DID YOU KNOW

The ACTIVATE<sup>SM</sup> service involves four steps:

01  
SCREEN

**SCREEN** the best candidate wells based on reservoir and completion quality

02  
DESIGN

**DESIGN** the optimal refrac treatment to connect existing fractures and place new fractures with the FracInsight<sup>®</sup> service and proprietary Pressure Sink Mitigation process

03  
EXECUTE

**EXECUTE** the refrac treatment for full lateral coverage with AccessFrac<sup>®</sup> stimulation service

04  
DIAGNOSE

**DIAGNOSE** refrac efficacy and optimize refrac design for future pads with the Integrated Sensor Diagnostics service and FiberCoil<sup>™</sup> tubing

Predictable refrac wells can enable operators to build a balanced portfolio of new wells, infills, and refracs, and to reduce the cost per BOE break-even point of their specific acreage. Refracs also allow operators to book incremental reserves.

In basins where we have delivered the ACTIVATE service, operators have seen up to:

- **80% increase in estimated ultimate recovery (EUR)** per well
- **25% increase in oil recovery factor** with balanced portfolio
- **66% reduced cost per BOE** compared to new drills

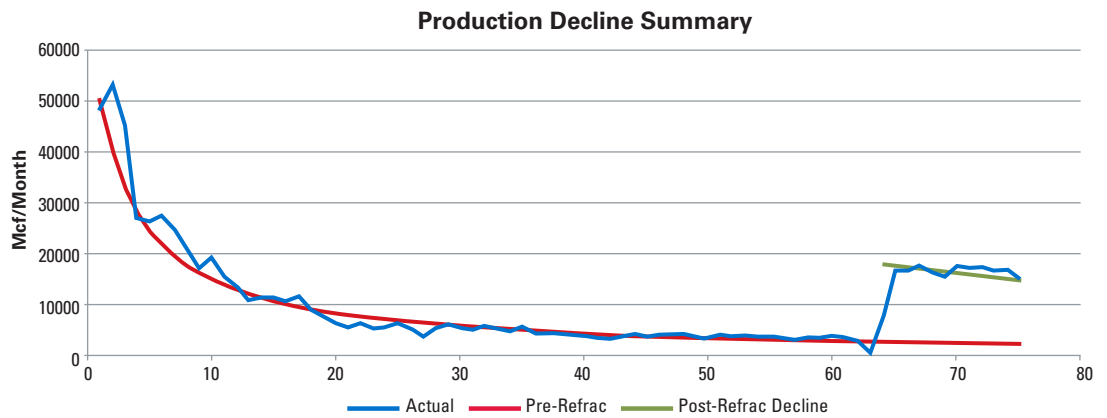
cycles generated new fractures from old perforations that were not stimulated in the first life of the well. The combination of newly connected and newly created fractures resulted in additional incremental stimulated reservoir volume and increased estimated ultimate recovery (EUR).

**RESULTS**

Figure 1 shows that the refracture treatment arrested the well's decline curve. Prior to the refracture treatment, the well was projected to produce 0.6 bcf with a 35% decline rate. After the refracturing treatment, the well was projected to produce 1.68 bcf at a 2% decline rate.

ACTIVATE service helped the operator add 180% incremental reserves in the second life of the well. As a result, the operator significantly increased profitability and gained \$2.6 million of additional value for the well, resulting in lower costs per BOE.

**\$2.6**  
**MILLION**  
**ADDED VALUE**



*Figure 1. The blue line shows the well's actual production, and the red line represents a production decline rate of 35% during the well's first life. At 62 months, the well was refractured, thus experiencing an increase in production. The green line shows an arrest in the decline curve, changing the decline rate to 2%.*

Contact Halliburton to see how the ACTIVATE service can help you build a balanced portfolio and recover bypassed reserves predictively and repeatedly.

[www.halliburton.com/ACTIVATE](http://www.halliburton.com/ACTIVATE)

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