

SHOWCASING THE POWER OF PRESCRIPTIVE CHEMISTRY



# DRIVING CAPITAL EFFICIENCY

FLOTEK CLIENT PROFILE

## OVERVIEW

The new reality facing the shale industry is now more apparent than ever as operators are seeing diminishing returns on increased proppant loading, fluid loading and lateral length with recent analysis of production data from the past several years. Thus, operators are now defining an upper boundary for these mechanical factors in their completion designs; and the drive for capital efficiency, to extract more barrels of oil equivalent (BOE) for lower cost, is becoming the most critical focus today.

Flotek is partnering with our clients to deliver more value and greater returns through a prescriptive, reservoir-centric chemistry experience. Our advanced chemistries are driving capital efficiency by reducing costs while increasing production.

## FLOTEK: DRIVING CAPITAL EFFICIENCY

### Reducing Costs:

- Tailor & design fluid systems to lower applied costs
- Lower chemistry costs with direct sourcing
- Opportunity to optimize production performance with less proppant loading
- Enabling more effective use of produced waters
- Minimize horsepower requirements through prescribed fluid systems

### Increasing Production:

- Increased performance in wells across many basins
- Higher initial production demonstrated through production decline curves
- History of chemistry payout between 1-3 months
- Trend of improving economics by lowering the gas-to-oil ratio



**GREATER CAPITAL EFFICIENCY CAN BE MAXIMIZED BY ACHIEVING INCREASED PRODUCTION**

## CASE STUDY: Partnering to Reduce Completion Costs & Increase Capital Efficiency

Flotek partnered with a MidCon operator to design and tailor their fluid system for their reservoir. By switching to a more effective fluid system, we were able to reduce overall chemistry spend per well, optimize horsepower efficiency, and reduce fluid-reservoir incompatibility. In total, our client saved \$1.9 million per month, which translates to more than \$20 million in cost benefit per year for their program, while producing better wells. Moreover, our fluid system benefitted our service company partner due to lower required operational horsepower needed to deliver proppant, and less overall wear and tear on their fluid ends.

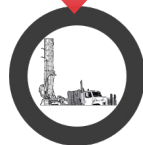


**Five well program per month**



- Designed & tailored fluid system for reservoir in Mid-Con
- Moved from \$8/gal to more effective \$11/gal chemistry, at lower dosages

• **Reduced chemistry spend - \$150,000 for 5 wells/month**



- Significantly reduced operational costs - horsepower (HHP) by \$1.5M



- Reduced fluid-reservoir incompatibility, further impacting operational costs - \$250,000/well within the first year

### TOTAL COST BENEFIT



- **\$380,000/well**
- **\$1.9M/month**
- **\$20M+/year**



# DRIVING CAPITAL EFFICIENCY

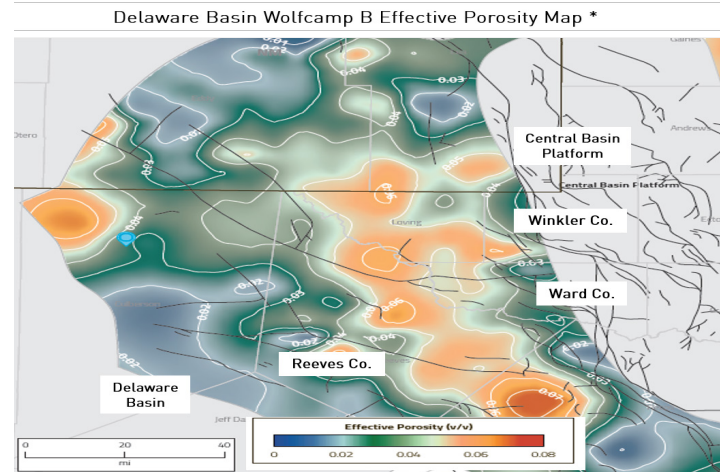
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## CASE STUDY: More Effective Completions in the Delaware Basin - Wolfcamp B

Flotek partnered with a client in the Delaware Basin with acreage in Winkler, Ward and Reeves counties in the Wolfcamp B interval to increase their completion effectiveness and capital efficiency through a reservoir-optimized fluid system to enhance production.

The configuration of the Delaware Basin, along with structure and depositional environments impact reservoir distribution and quality, TOC content, hydrocarbon maturation and the amount of recoverable hydrocarbons. Additionally, the effective porosity in Wolfcamp B can lead to challenges in maximizing liquid production.

To address these specific challenges of the reservoir, Flotek prescribed a Complex nano-Fluid® (CnF®) technology to minimize capillary pressures, increase effective permeability and maximize liquid production. The Flotek technology was used in 33 wells, compared to 393 wells without it.



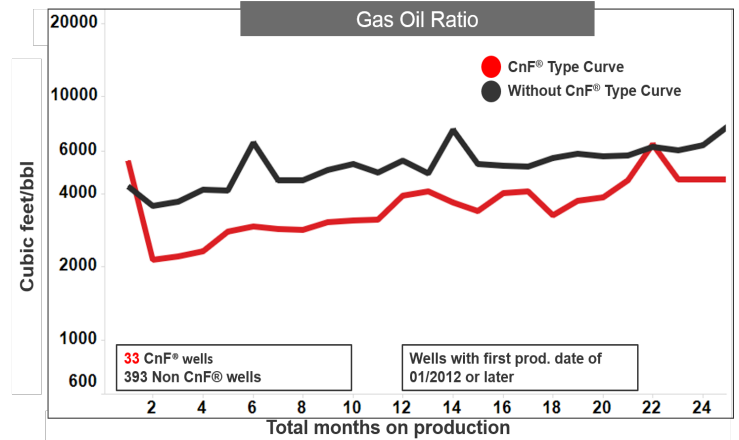
### RESULTS

The Flotek treated wells experienced higher liquids production, lowering the gas-to-oil ratio, and enabling greater rate of return.

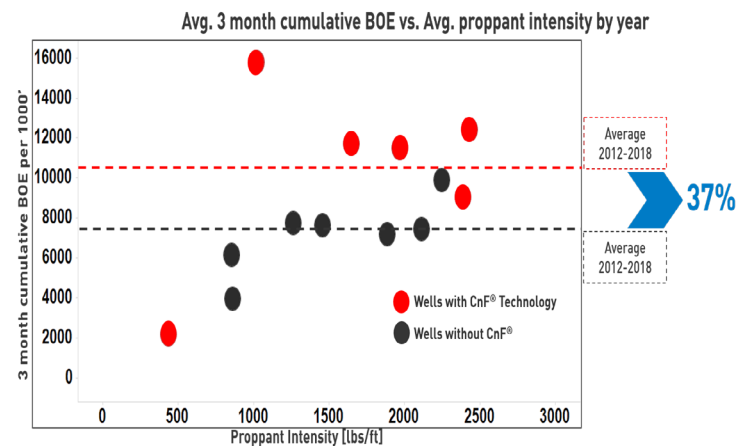
In the population set across these counties, as proppant intensity increased over time in the wells without CnF®, production stayed relatively flat on a per 1000' basis. In this same area and over the same period of time, the Flotek treated wells including CnF® experienced a 37% higher production average.

Through our collaboration and trusted partnership, we are able to help our clients achieve greater capital efficiency through increased production as operators see diminishing returns of higher proppant loading and longer lateral lengths when normalized for lateral feet of production.

Wolfcamp B: More favorable GOR with CnF® \*



Wolfcamp B: Breaking out of the Plateau \*



\* Source: RS Energy Group