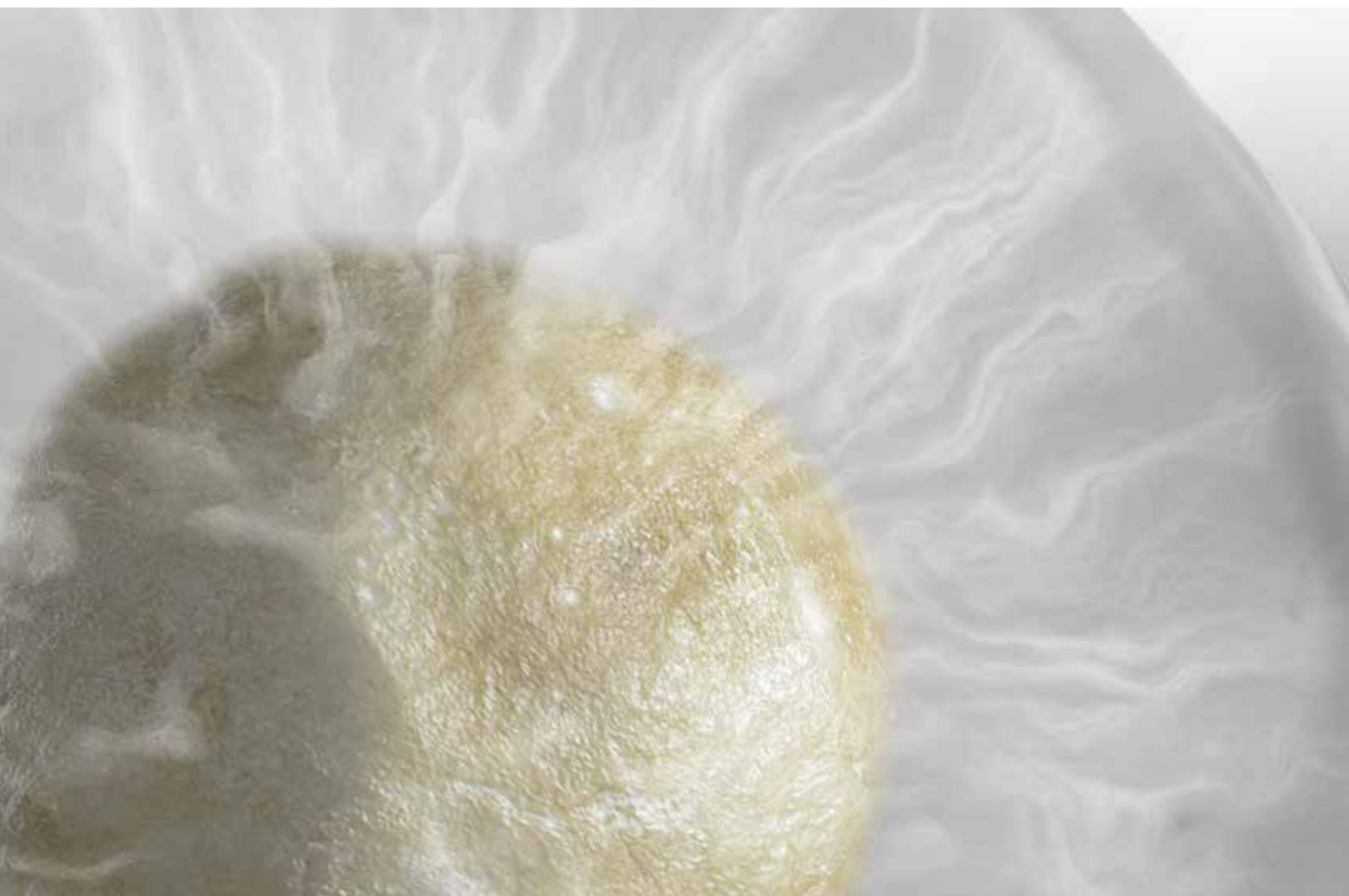

PROPEL SSP™ PROPPANT TRANSPORT TECHNOLOGY
REDUCES COST PER BOE BY INCREASING NATURAL
GAS PRODUCTION MORE THAN 55%



46% Propel SSP Tail-In vs. Slickwater Frac

ESCONDIDO FORMATION, RICH GAS PLAY

INTRODUCTION

An operator working in the Escondido formation in Webb County, Texas, recorded a 60-day initial production increase of more than 55% using Propel SSP compared with the slickwater offset well. The operator also eliminated fluid sweeps, decreased fluid additives, and reduced pumping time, all of which enhanced production success. These results were achieved in a low-permeability sandstone well with Propel SSP tail-in as 46% of the total proppant volume.

Propel SSP technology was coated on 30/50 Northern White sand compared with uncoated 20/40 Northern White sand used in the offset well. The operator also used 100-mesh and 40/70 Northern White sand in both wells. The smaller-mesh, lower-conductivity frac sand coated with Propel SSP outperformed the larger-mesh, higher-conductivity frac sand, based on the production results, by maximizing the fracture surface area.



PERFORMANCE

IMPROVED HYDRAULIC FRAC EFFICIENCY vs. slickwater design

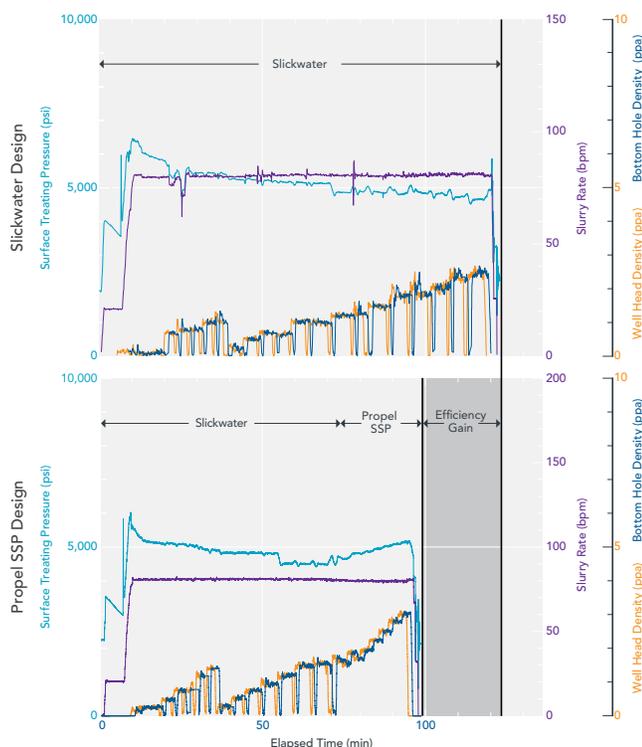
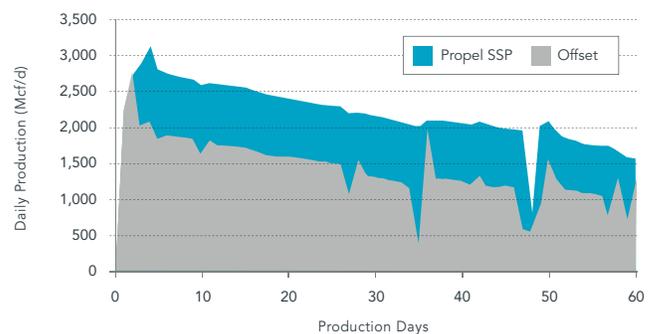


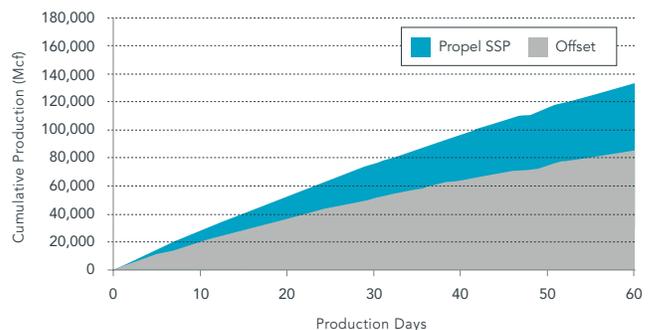
Chart indicates Propel SSP efficiency by reducing pumping time, fluid additives, and water consumption.

Data were normalized to account for the Propel SSP technology well and the offset well differences.

DAILY PRODUCTION (Mcf) Normalized by proppant volume



CUMULATIVE PRODUCTION (Mcf) Normalized by proppant volume



WHAT IS PROPEL SSP PROPPANT TRANSPORT TECHNOLOGY?

The self-suspending proppant technology, which resists settling in a low-viscosity fluid, uniformly distributes proppant throughout the full length of a created hydraulic fracture. Ultimately, this better transport increases stimulated reservoir volume to reduce cost per BOE. The technology requires less pumping time because of the higher capacity to carry proppant compared with slickwater. An operator can eliminate fluid sweeps because of the hydrogel-coated proppant's lower effective specific gravity, in addition to using less fluid additives because less fluid volume is needed.



THE RESULTS

After 60 days, cumulative gas production increased more than 55%. Gas production for the offset well was 85,207 Mcf compared with 132,678 Mcf for the Propel SSP technology well even with the lower-conductivity sand.

60-DAY PRODUCTION GAIN

↑ 55%+

IMPROVED FRAC EFFICIENCY



DECREASED
PUMPING TIME
↓ 25%



LESS CHEMICAL
ADDITIVES
↓ 15%



DECREASED WATER
CONSUMPTION
↓ 10%

Besides this greater production value with Propel SSP technology, the operator reduced stage pumping time by 25%. The operator used 15% less fluid additives, including friction reducer, biocide, clay stabilizer, and surfactant. With the eliminated fluid sweeps and higher sand concentration, water consumption decreased 10%.



CONTACT US

For more information about how to reduce cost per BOE by increasing the stimulated reservoir volume using Propel SSP proppant transport technology, please e-mail: Technology@FairmountSantrol.com or visit: PropelSSP.com.

Fairmount Santrol (NYSE: FMSA) is one of the largest providers of high-performance sand and sand-based products used by oil and gas exploration and production companies to enhance the productivity of their wells. Similarly, we provide high-quality products, strong technical leadership and applications knowledge to end users in the foundry, building products, water filtration, glass, and sports and recreation markets. Our company's global logistics capabilities include a wide-ranging network of distribution terminals and more than 8,500 railcars that allow the company to effectively serve customers wherever they operate. As one of the nation's longest continuously operating mining organizations, Fairmount Santrol has developed a strong commitment to sustainable development, environmental stewardship, and operational safety. Correspondingly, our motto and action orientation is: "Do Good. Do Well."

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