

## RockOn™ MX 833-5 Increases Revenue \$99,932 in 15 days Gas Production Up 456%. Oil Production Up 107%.

### BACKGROUND

A variety of chemical additives are used in frac jobs to maximize oil and gas production. Multi-Chem's Stimulation Research Group develops these additives based on first hand field experience and a fundamental understanding of how they work. One key additive is the wetting agent used to help the hydraulic fluid penetrate the formation, contact pore spaces containing oil and gas, and release the hydrocarbons into production.

### ISSUES

A Multi-Chem customer needed better wetting agents to recover more oil from fracturing their shale in Montague Co., Texas, north of Ft. Worth. They had seen that the choice of wetting surfactant had made a big difference in their production in the past. They asked us evaluate all available chemistries.

### ANALYSIS

Multi-Chem assembled a research team to work closely with the operator. After evaluating over 200 specially selected surfactants in advanced laboratory tests and comparing those results with actual performance in test fractures in the field, the features and properties needed to maximize the release and recovery of hydrocarbons from the shale were identified. This discovery, patent pending, was used to create the RockOn™ technology.

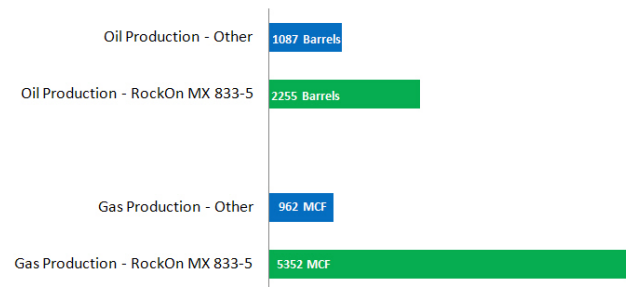
### RESOLUTION

RockOn MX 833-5 was compared side by side with the previous field standard, MC MX 664-5, with many years of use as the best performing surfactant known for this type of shale. Many others had been tried and failed in the past. The producer was skeptical. To conduct a proper assesment, the producer performed twin frac jobs in the same pay zone on adjacent vertical wells, Twin-A and Twin-B. Twin-A was completed with 1 gallon per thousand gallons (gpt) MC MX 664-5 and Twin-B was completed with 1 gpt RockOn MX 833-5. The jobs were pumped, and flowback commenced on the same day.

### DELIVERED VALUE

The results were recorded over the first 15 days of flowback. Twin-A, using MX 664-5 produced 962 Mcf of gas and 1087 bbls of oil. Twin-B, using RockOn MX 833-5, produced 5352 Mcf gas and 2255 bbls oil. The RockOn job recovered 5.6 times more gas and over twice as much oil. Over the 15 day period, at \$4/Mcf, Twin-B provided \$17,460 more gas revenue than Twin-A and, at \$70.60/bbl oil, \$82,472 more oil revenue. Oil and gas combined, RockOn produced \$99,932 more revenue in only the first 15 days!

### RockOn™ MX 833-5 Increases Revenue \$99,932 in First 15 Days of Head-to-Head Trial



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