# **EAGLE FORD** CASE **HISTORY**



**Proppant Type** CRCS Operator A Curable Resin Coated Sand

+200%

Operator B

compared to

Operator A

**UFS** 

Operator B

Uncoated

Frac

Sand

**Completion Data** 

Comparison

+20%

Operator B

production

compared to

Operator A

+10%

Operator B

true vertical

compared to

Operator A

## **Normalized by Proppant Volume** Operator A Operator B **Decline** ≤6 months -24% -43% Comparison ≥ 24 months -89%

**Statistically Significant** 

**Completion Factors** 

Statistically Significant Factors

Proppant Type

Proppant Volume

Proppant Type

Production Interval

**Further Support** 

Fines significantly decrease effective conductivity, evident in long-term production results (SPE 135502).

Can occur with UFS leading to frac width reduction, wellbore deposition, as well as pump and surface equipment damage.

Proppant Flowback

erates 16x more fines than CRCS in wet, hot crush test.

Positive Effect

for Production

**CRCS** 

Larger Proppant Volumes

CRCS

Longer Production

**Cumulative Production** 

## Timeframe for **Wells Completed** '11 '12 '13 '14 MAR

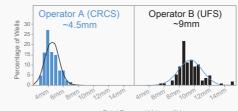
Operator A

AAAAAAAAAAAAAAAAAAAA **AAAAAAAAAAAAAAA AAAAAAAAAAAAAAA** 

### **Proppant Volume** Comparison

Histogram of Average Proppant Volume per Well

(Wells Completed 2011-2014)



Total Proppant Volume (lb)

Wells removed due to less than three months production.

Only change made to data set.

#### Over 340 Wells



Operator B

### **Well Categorization** for Comparison



## **Recommendations to the Operator**



Oil Cumulative Production

Oil Cumulative Production

(Data Set 4)

(Data Set 2)

Double the CRCS proppant volume of Operator A to maximize short-term and maintain long-term production.

ROI of additional proppant is two months based on a 20% production increase.

Additional 16 wells per year drilled to maintain Operator A production rate if design switch to Operator B.

