

# On-site monitoring helps enhance landowner value — Eagle Ford

STRATAGEN goes outside the box with stimulation/completion recommendations to maximize and preserve royalty payments.

## Eagle Ford, South Texas

### The challenge

It was an atypical request: To maximize the present and revenues from the more than 100-year-old South Texas ranch. The client wanted an impartial evaluation of the operator's stimulation programs to ensure wells were being pumped as designed. Owing to its extensive experience in maximizing production in the Eagle Ford, STRATAGEN® fracture supervision & advisory services was retained to monitor the stimulation and completion program in the gas-condensate window and make any objective recommendations to help reduce the lease operating costs (LOC) and enhance reservoir drainage.

### The solution

Functioning strictly as a “second eye,” the STRATAGEN on-site advisor carefully observed the stimulation and completion strategy, including chemical loading and fracture placement, with the aim to seek out opportunities to reduce costs and sustain production. In this case, the consultant observed a deviation from the planned pumping schedule with 40/70-mesh proppant pumped, rather than the programmed 100-mesh proppant to control fluid loss and reduce perforation entry friction. Owing to extensive experience in the Eagle Ford, the STRATAGEN advisor recommended that the operator and landowner:

- Maintain the existing design rate, but modify the perforation scheme. Specifically, the recommendation called for three to four additional stages, with a decrease to six perforation cluster at 45-50-ft apart with the same 90 bpm pumping rate. Based on experience in the Eagle Ford and elsewhere, this had demonstrated increase in overall well productivity.
- Pump higher-conductivity proppant at the programmed volume of 67,000 lb/cluster.
- Pump acid into one stage rather than two stages.
- Hold pump rate at 20 bpm after pumping acid in order to allow the frac ball to properly seat before increasing the injection rate and the bpm/perforation ratio. This was based on observing close calls earlier with premature frac ball seating at the higher pump rate.
- Modify the treatment schedule and flush the well to avoid a screen out after observing that not all of the perforations were accepting fluid.

### Well Data

**Location:** Eagle Ford, Webb County, South Texas

**Client:** Petty Energy L.P.

**Operator:** Chesapeake Energy Corp

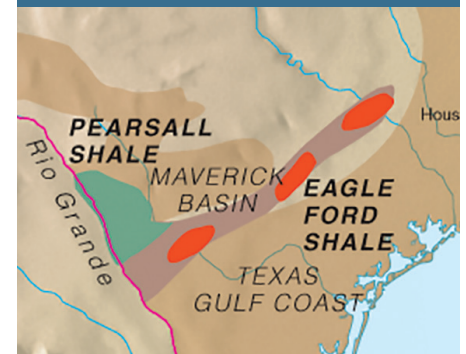
**Well type:** Gas/condensate

**Number of wells/stages:** 15 wells/300 stages pumped

**Completion design:** Plug & perf/avg. 20 stages per well

**Avg. depth:** 8,100 ft TVD/15,400 ft MD

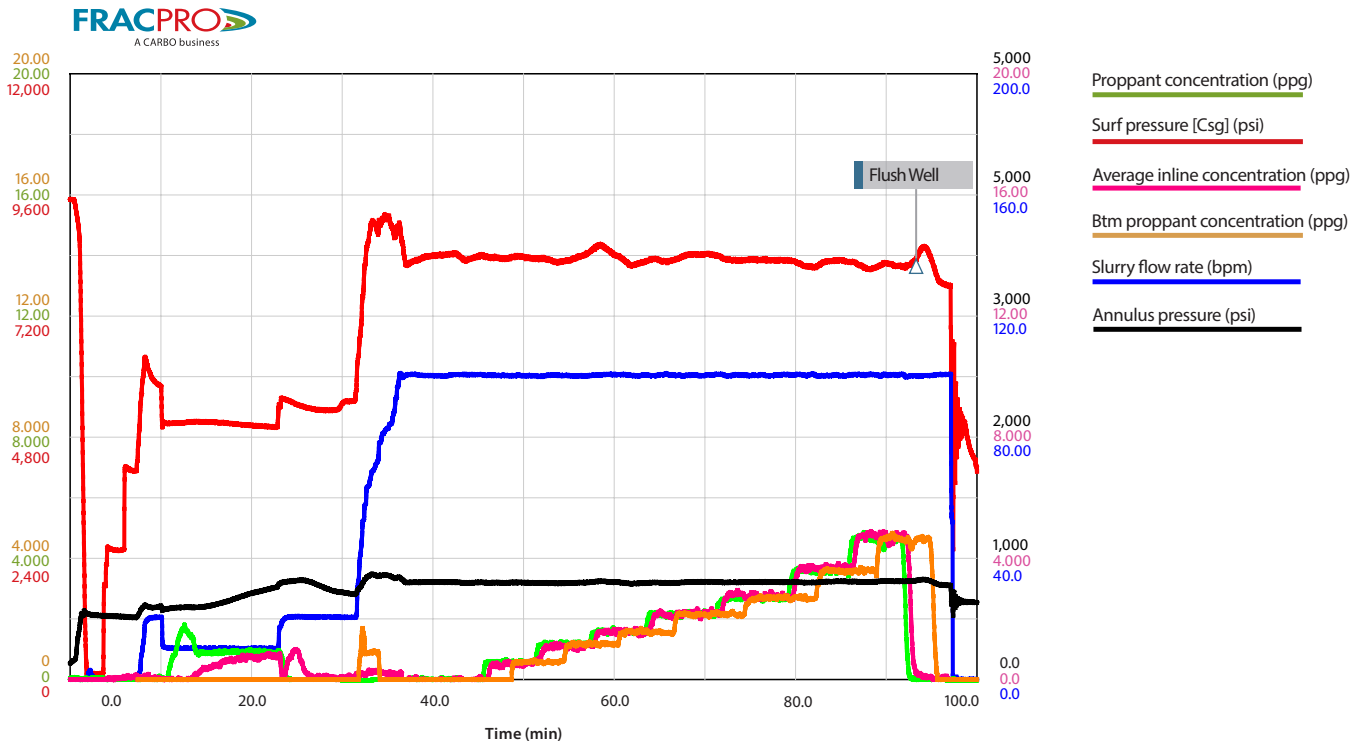
**Diagnostics:** FRACPRO fracture design & analysis software



STRATAGEN reinforces its commitment to think outside the box to help maximize and preserve client's asset value

### The results

During the course of a year, a total of 300 stages were pumped on 15 wells with a zero rate of costly screen-outs, far below the 2% industry average. By monitoring the ongoing stimulation and completion program and presenting recommendations for improvement, STRATAGEN reinforced its commitment to think outside the box to help all pertinent stakeholders maximize and preserve their asset value. The operator adopted several of the STRATAGEN consultant’s recommendations, which will be employed on future wells.



Using data from the FRACPRO fracture design/ analysis software, STRATAGEN step-down analysis recommended re-perforating the Eagle Ford gas-condensate wells and include, among other changes, higher conductivity proppant.

For more information on this case history contact:

[info@stratagen-engineering.com](mailto:info@stratagen-engineering.com)

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[stratagenconsulting.com](http://stratagenconsulting.com)

