#### ENGINEERED RELIABILITY & FFFICIENCY

Case Study: South Texas, United States

# King™ Frac Plug - Small Debris Size During Drill Out Saves Operator from further NPT

## Challenge:

After getting three (3) coil tubing units stuck while drilling out another frac plug provider's 6" plugs, an operator in the Eagleford Shale was looking for a frac plug that would eliminate drill out issues and increase ease in drill out performance.

#### **Solution:**

After previous successful field trials, the customer opted to install 90 King™ Frac Plugs on a four well pad. Advanced design features of the plug allowed for RIH speeds in excess of 500 ft/min while using minimum amounts of pump down fluid. The well was completed without incident, and all King™ plugs were drilled out in a single run, no motor stalls or short trips needed and mill times of under 3-minute average each with all plugs found at setting depth. All plug debris from the plugs were small from start to finish.

EMAIL US: sales@royalcts.com

## Well Specification

- 6"- 24.5 lb/ft Casing
- ~8,000 -10,000 ft Lateral Length
- ~10,500 ft TVD
- ~11,000 psi Max Frac Pressure
- 290°F

### Results:

- Run in Hole speeds between 500-550 ft/min
  - Previous plug provider RIH speed was 450-500 ft/min
- Pump down rate was 14-16 bbls/min
  - Previous plug provider pump down rate was 21 bbls/min
- Able to increase stage count per day compared to previous plug provider
- Zero King™ Frac Plugs slipped or gave way during frac
- All plugs were tagged at the proper depth during drill out with under 3-minute average mill times
  - Previous plug provider had longer drill times, required multiple short trips for debris removal and stuck 3 CT units on multiple wells/pads prior to this job.



Competitor Cast Iron Slip Debris vs King Debris