



Blue Force Motor Saves Client \$280K by Drilling a Record 4.96 Day Well in One Run in the Eagle Ford

An operator, working in the Eagle Ford formation in LaSalle County Texas, wanted to outperform previously drilled wells and reduce non-productive time (NPT). The formation is notorious for large directional influence—in some cases walking 3 degrees per rotation resulting in increased tortuosity and increased sliding time. Previously, wells drilled in the area averaged 9 days to drill and experienced build rates falling off while drilling the curve which resulted in pulling out of hole for a bigger bend motor.

Working together with the operator, Ryan Directional Services designed a custom high-torque 7-in. Blue Force™ motor with a bent housing set at 2.0 degrees. Maximum dogleg severity in the section was 10.7/100 ft. The Blue Force motor was able to drill 11,953 ft through the Eagle Ford formation with an average ROP of 175.78 ft/hr—a record drillout run for the area.

Eagle Ford Blue Force Well	
When	December 2014
Where	LaSalle, Tx
Fottage drilled	11,953 ft.
Duration	4.96 days
Benefits of drilling one run wells	
Trip time saved	13 hours
Time savings by high performance	4.02 days
Total time savings	4.02 days

The Blue Force motor was able to drill the vertical, curve and lateral in one run, eliminating the need to trip out of hole at the kickoff point. This trip typically requires an average of 13 hours. As a result, Ryan was able to save its customer more than \$280k while delivering high-quality wellbore.

Challenge

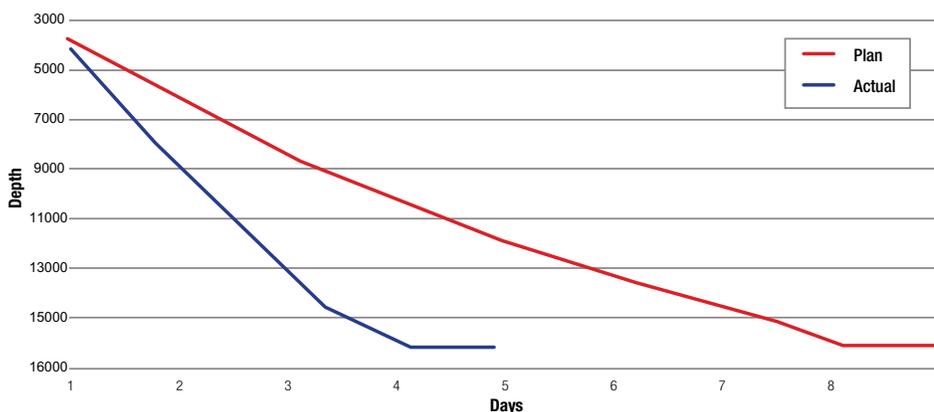
- Goal— Drill 8½ in. hole section in Eagle Ford Austin Chalk in one run at increased ROP
- Optimize ROP
- Reduce the number of trips

Solution

- Used Blue Force steerable motor incorporating a short bit to bend designed to achieve high build rates

Results

- Drilled entire 11,953 ft. section in a single run with zero NPT
- Reached TD 4.02 days ahead of plan
- Saved 13 hours of tripping time
- Saved the customer \$280k
- Increased ROP more than 20%



Time/depth plot shows drilling the lateral section in one run