

Record Breaking Rate of Penetration

Wolfcamp, Midland County, Texas - Q1, 2015



ENGINEERED SOLUTIONS

Canadian Operations 1.866.607.4677 • www.phxtech.com • US Operations 1.800.909.9819

Phoenix achieved a record rate of penetration (ROP) for a client while landing a curve in the Midland region; more than doubling the feet per hour and landing the curve in one run. Phoenix achieved this record with our expert field personnel and the use of our Prism Drilling Optimization Services, which we utilize on every well.

Phoenix developed a drilling plan for the well and documented it in our unique directional operations detail (DOD). The DOD was based on data analysis performed by our Prism analysts, and from lessons learned that were documented in the previous well's post operation detail (POD).

Based on the POD and historical data analysis, Phoenix recommended and implemented changes to the motor configuration and drilling parameters; the changes were specifically designed to increase the differential pressure. Our recommendations were presented to the client, and once agreed upon, the directional team on site followed the plan as prescribed in our unique DOD. In addition, the Phoenix Project Manager chose to further engage our Prism Optimization Services, and had the Prism team remotely monitor the drilling of the curve section; analyzing the slides to optimize the steer-ability of the well and drilling performance.

The result was a record setting ROP:

- ▶ Increased differential pressure translated to an ROP increase from 15.4 ft/hr on the previous well, to 33.4 ft/hr on the record well.
- ▶ Motor yield increased from 10.6 to 14.5—allowing Phoenix to land the curve in one run.

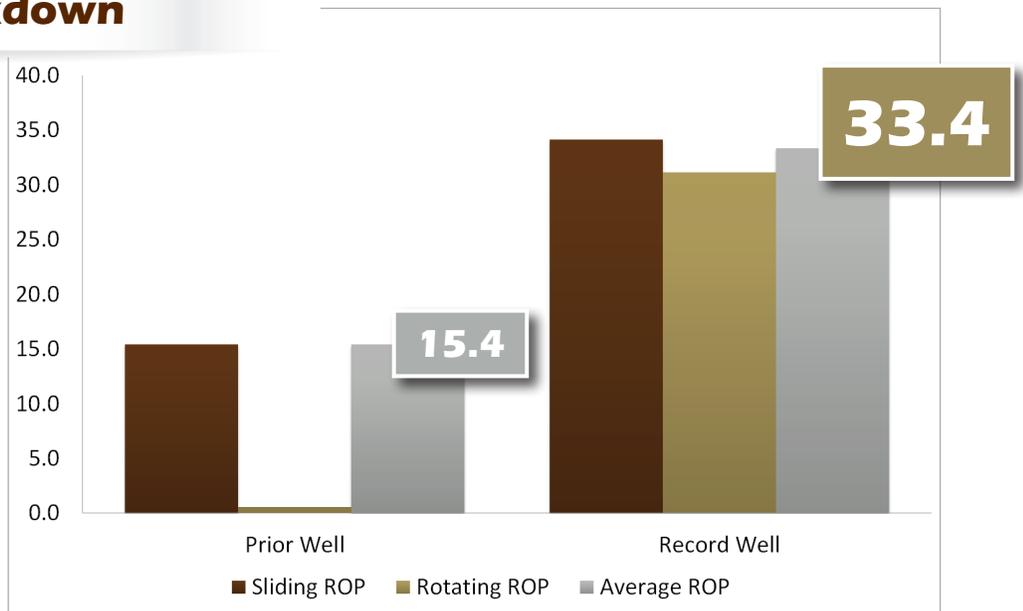
Phoenix is drilling faster wells with conventional tools using superior data and personnel. In today's market, our Prism team's expertise is delivering bottom-line value by reducing overall drilling days, achieving faster ROP, and positioning your asset's potential in the optimum zone. We provide the data, analyze the best approach, and implement success with our team on site.

CURVE KPI DATA

Curve Depth	787'
Curve Drilling Hours	23.5
BHA's Used on Well	1
Increased Depth per Day	432'
Increased Rotation	26.3%
Increased ROP	117%



ROP Breakdown



*Comparison based on the previous well's 700' curve