



## A new record set with a PV power section!!

**When: June 18, 2015**

**Where: Eagleford Shale, Karnes County, Texas**

- Model: 6 3/4" 4:5 lobe 7.0 Stage Grp 4
- Stator Minor: 3.525
- Fit In: -0.013" loose
- Rubber: HS88
- BHT: 310° F
- Mud Type: Oil Base
- Total Hrs in Hole: 110 hrs.
- D&C Hours: 94.33 hrs.
- Total Drilled: 6,469'
- Avg. ROP: 87.81 ft/hr
- GPM: 425 - 600
- Avg. Differential: 650 psi
- Reason POOH: TD
- Customer Feedback:  
Excellent run!! Set new record for building curve (12 hrs).

| BHA #  |                                       | Mud Motor Report           |                |
|--|---------------------------------------|----------------------------|----------------|
| JOB NO.:   |                                       | FIELD:                     |                |
| Company:   |                                       | Township:                  |                |
| LOCATION:  |                                       | Range:                     |                |
| RIG NAME:  |                                       | Lead DD:                   |                |
| STATE: Texas   |                                       | Co. Man                    |                |
| COUNTY: Karnes   |                                       |                            |                |
| WELL NAME:   |                                       | Motor Failed?: NO          |                |
| Time and Depths (This BHA)   | MOTOR DATA                            | Drilling Parameters        |                |
| Date In: 18/June/2015  | Desc: 6 3/4" 4.5 lobe 7.0 Stage Grp 4 | SO/PU: 200-225             | 255-340        |
| Date Out: 23/June/2015   | MFG:                                  | Rot Wt:                    | 225-245        |
| Hrs in Hole: 110.42  | BHA Circ/All BHA 84.00/83.25          | WOB:                       | 8 - 32         |
| Start Depth: 11,923  | Motor SN:                             | TORQ:                      | 11.1 - 13500   |
| End Depth: 18,392  | Pad OD: 7 1/8                         | SPP:                       | 2850 - 4700    |
| Total Drilled: 6,469   | NB Stab: 0                            | Motor RPM:                 | 213 - 300      |
| Avg. Total ROP: 87.81  | Bit to Bend: 5.54                     | Rotary RPM:                | 40 - 80        |
| Circ Hrs:Tot/Only: 84.00/10.33   | Bent Hsg/Sub: 2 /0                    | Flow Rate:                 | 425 - 600      |
| Percent Slide: 17.38%  | Lobe/Stage: 6/7 8                     | Avg Diff:                  | 650            |
| Percent Hours: 32.69%  | Rev/GAL: 0.5                          | Stall Pres.:               | 2360           |
| Slide Hours: 24.08   | Rotor Jet: 0                          | Off Bot Pres.:             | 203            |
| Total Sliding: 1,124   | Prop BUR: 12                          | <a href="#">Bit Record</a> |                |
| Avg. Slide ROP: 46.67  | Act BUR: 14                           | Run#                       | 3              |
| Percent Rotary: 82.62%   | Stator Clearance:                     | Type Bit:                  | PDC            |
| Percent Hrs: 67.31%  | Lower Stab OD:                        | IADC#:                     | TFA: 2.597     |
| Rot/Total Hrs: 49.58/73.67   | Upper Stab OD:                        | JETS:                      |                |
| Rotary Drilled: 5,345  | Extended Motor? NO                    | Bit Drop:                  | 65 PSI@600 GPM |
| Avg. Rotary ROP: 107.8   | Number of Stalls: 0                   | Cond.:                     | Damaged        |
| Reason POOH: TD  | Stall Duration: 0                     |                            |                |
| Mud Data   |                                       |                            |                |
| Type OBM   | WT: 13.3                              | Vis: 57                    | WL: 6.2        |
| SAND 0   | Chlor:294476                          | GAS 735                    | PV: 33         |
|  |                                       | SOL: 11.5                  | Oil%: 83       |
|  |                                       | YP: 19                     | PH: 0          |
| Formation:   | Flow T: 168                           |                            |                |
| EXPANDED REASON PULLED:  |                                       |                            |                |
| TD@18392'  |                                       |                            |                |
| BHA PERFORMANCE  |                                       |                            |                |
| Average motor yield 12.5%/100'. In lateral, BHA had a tendency to drop 0.5-1.0' and walked left up to 3.60/100' in rotation.                             |                                       |                            |                |
| Avg. ROP Rot: 108'/hr., Sid: 47'/hr.   |                                       |                            |                |
| ADDITIONAL COMMENTS: (Expands to next page if necessary)   |                                       |                            |                |
| Motor drained well and had minimal slack in bearings, bit graded 1-3 & in gauge with damaged cutters (9 broken/chipped & 1 missing) also 2 plugged jets. |                                       |                            |                |
| WinSURV II Mud Motor Report  |                                       |                            |                |