**CEMENTING TREATMENT REPORT**

PIONEER NATURAL RESOURCES

| TREATMENT NUMBER | DATE |
|---|---|
| JM2013002 | 4/20/2013 |
| **STAGE** | **JOB TYPE** |
| 1 | Surface |

| WELL NAME AND NO. | LOCATION (LEGAL) | |
|---|---|---|
| Long Veiw Farms | NW/SE 19-16S-53W | |
| **FIELD** | **FORMATION** | |
| Black Fox | Wildcat | |
| **COUNTY** | **STATE** | **API NO.** |
| Lincoln | CO | 05-073-06509 |

**RIG NAME:** Patterson UTI 190 — **CEMENT PUMPER:** 23005

RIG FORMAN: Tom Beardslee

CEMENT SUPER: Frank Gonzales Jose Madrid

SPECIAL INSTRUCTIONS

| WELL DATA | | | BOTTOM | | FT | TOP | | FT |
|---|---|---|---|---|---|---|---|---|
| BIT SIZE | 12 1/4 | CSG/Liner Size | 8 5/8 | | | | | |
| TOTAL DEPTH | 3084 | WEIGHT | 24 | | | | | |
| MUD TYPE | | FOOTAGE | 3080 | | | | | |
| ☐ BHST | | GRADE | K-55 | | | | | |
| ☐ BHCT | | THREAD | ST&C | | | | | |
| MUD DENSITY | | LESS FOOTAGE SHOE JOINT(S) | 168 | | | | | TOTAL: |
| MUD VISC | | Disp. Capacity | 193.6 | | | | | 193.6 |

Include Footage From Ground Level To Head In Disp. Capacity

| | | | | | | |
|---|---|---|---|---|---|---|
| FLOAT | TYPE | | Stage Tool | TYPE | | |
| | DEPTH | | | DEPTH | | |
| SHOE | TYPE | | | TYPE | | |
| | DEPTH | | | DEPTH | | |

| Head & Plugs | SIZE | ☐ TBG ☑ D.P. | SQUEEZE JOB | |
|---|---|---|---|---|
| ☐ Double Box 6 | WEIGHT | | TOOL | TYPE |
| ☐ Single | GRADE | | | DEPTH |
| ☐ Swage | THREADS | | TAIL PIPE: | SIZE DEPTH |
| ☐ Knockout | ☐ New ☐ Used | | TUBING VOLUME | BBLs |
| | DEPTH | | CSG VOL BELOW TOOL | BBLs |
| | | | TOTAL | BBLs |
| CEMENT TEMPERATURE: | | | ANNULAR VOLUME | BBLs |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| LIFT PRESSURE | 850 | psi | | | WATER QUALITY: | 6 | pH 0 | PPG TEMP |
| PRESSURE LIMIT | 1150 | psi | BUMP PLUG TO | 1500 | | | | |
| | | | NO. of Centralizers | 16 | | | | |

| JOB SCHEDULED FOR | ARRIVE ON LOCATION | RIG UP | LEFT LOCATION |
|---|---|---|---|
| TIME: 4:30 DATE: 4/19/2013 | TIME: 4:00 DATE: 4/19/2013 | TIME: 13:45 DATE: 4/20/2013 | TIME: 20:30 DATE: 4/20/2013 |

| TIME 0001 to 2400 | PRESSURE TBG | PRESSURE CSG | VOLUME PUMPED INCR | VOLUME PUMPED CUM | RATE | FLUID TYPE | DENSITY | |
|---|---|---|---|---|---|---|---|---|
| 13:45 | | | | | | | | Arrive on location |
| 13:50 | | | | | | | | Rig up pumps and bulk equipment |
| 15:00 | | | | | | | | Held safety meeting |
| 15:32 | | 2000 | | | | | | Test pumps and lines to 2000 psi. Test good. |
| 15:33 | | 80 | 201 | | 3 | H2o | 8.34 | pumped 201 H2o ahead. Cirrculation at 1 bbls away |
| 16:24 | | 165 | 340 | 541 | 3 | Cmt | 13.5 | Mix and pump 340 bbls ( 1130sk) 13.5 Surface set |
| 18:13 | | 55 | 193.6 | 734.6 | 3 | H2o | 8.34 | Started Displacment |
| 19:14 | | 1150 | | | | | | Call out for displacement 64bbls 330 psi 3 bpm, 130 bbls 750psi 3bpm, 190 bbls 1150 psi 3 bpm |
| 19:23 | | 1500 | | . | | | | Land plug at 1500 psi. Held for 10 min. Checked float. Held |
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| 20:15 | | | | | | | | Rig down and left location |

| System Used | No.of Sacks | Yield ft³/sk | COMPOSITION OF SYSTEM | SLURRY MIXED BBLS | SLURRY MIXED DENSITY |
|---|---|---|---|---|---|
| | | | | | |
| Surface set | 1130 | 1.65 | 35:65 (P:G) +2% P20, .4% P13, 12.5 lb/sx P42, 5lb/sx P154,.25lb/sx P46 @ 13.5lb/gal | 340 | 13.5 |
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|---|---|---|---|---|---|
| CIRCULATION | ☑ Yes ☐ No | WASHED CASING DOWN | ☐ Yes ☑ No | BREAKDOWN | 250 PSI |
| DISPLACEMENT VOL. | 193.6 BBLS | RETURNED TO SURFACE | yes | BEFORE PLUG BUMP PRESSURE | 1150 PSI |
| FINAL | 1500 PSI | RATE | 1 BPM | | |