



**Pumping
Service Report**

9200842

| | | | | |
|--|--|-------------------------|---------------------------------|-----------------------|
| Client Name Whiting Petroleum Corp. | Well Name Razor 33P-3316 | Rig Frontier 26 | Job Date December 10, 2014 | Call Sheet 1051828 |
| Client Representative Kenny Wilkerson | Surface Well Location Sec 33:T1 0N:R58W | Down Hole Well Location | Job Type Intermediate Casing | |

Well Profile

Well Type: Oil

Maximum Treating Pressure (psi): --

Predicted Bottom Hole Static Temperature (°F): -- @ --

Bottom Hole Circulating Temperature (°F): -- @ --

Bottom Hole Logged Temperature (°F): -- @ --

Open Hole

| Size (in) | Excess (%) | TMD From (ft) | TMD To (ft) | TVD From (ft) | TVD To (ft) |
|-----------|------------|---------------|-------------|---------------|-------------|
| 8.750 | 25.000 | 0.000 | 5,972.000 | -- | -- |

Casing

| Size (in) | Weight (lb/ft) | Grade | Collapse Pressure (psi) | Internal Yield Pressure (psi) | Capacity (bbl) | I.D. (in) | O.D. (in) | Depth From (ft) | Depth To (ft) |
|--------------|-------------------|-------|----------------------------|----------------------------------|-------------------|--------------|--------------|--------------------|------------------|
| 7.000 | 29.000 | L-80 | 7,030.0 | 8,160.0 | 221.29 | 6.184 | 7.656 | 0.0 | 5,957.0 |

Products

Stage 1

From Depth (ft): 0

To Depth (ft): 4600

Acids/Blends/Fluids :

Lead 1: 455 Sacks of 1:2:6 Poz G Gel, Density = 12.5 lb/gal, Volume Pumped = 153.2 (bbl)
Water Temperature(°F) = 60 , Bulk Temperature(°F) = 60 , Slurry Temperature(°F) = 60
+ 0.2 % of CFR (Preblend),
+ 0.5 % of CFL-4 (Preblend),
+ 0.15 % of LTR (Preblend),
+ 0.25 lb/sack of Polyflake (Preblend)

Stage 2

From Depth (ft): 4600

To Depth (ft): 5910

Acids/Blends/Fluids :

Tail: 210 Sacks of 1-1-0 G, Density = 13.5 lb/gal, Volume Pumped = 56.8 (bbl)
Water Temperature(°F) = 60 , Bulk Temperature(°F) = 60 , Slurry Temperature(°F) = 60
+ 8 % of SilFume (Preblend),
+ 2 % of Gel (Preblend),
+ 0.1 % of CFR-5 (Preblend),
+ 0.7 % of CFL-3 (Preblend),
+ 0.3 % of LTR (Preblend),
+ 0.25 lb/sack of Polyflake (Preblend)

Fluid & Cement Data

Expected Cement Top: Surface

Wellbore Fluid

| Fluid Type | Viscosity (cP) | Density (lbs/gal) | Yield Point (psi) | Temperature (°F) | Recorded@ |
|-----------------|----------------|-------------------|-------------------|------------------|--------------------|
| Water | -- | 8.400 | -- | -- | Jul 14, 2014 20:27 |
| Water Based Mud | -- | -- | -- | -- | Oct 09, 2014 19:06 |



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Attachment & Tools

Down Hole Tools

| <u>Tool Type</u> | <u>Depth (ft)</u> | <u>Supplier</u> |
|------------------|-------------------|-----------------|
| Guide Shoe | -- | Third Party |
| Float Collar | -- | Third Party |

Tubular Plugs

| <u>Tubular Plug Type</u> | <u>Size (in)</u> | <u>Supplier</u> |
|--------------------------|------------------|-----------------|
| Rubber Top | 7.000 | Sanjel |

Units & Personnel

| Units | | | | | | | |
|-----------------------|------------------|-----------------|-------------------------|------------------|---------------------|-------------------------|--------------------------|
| <u>Truck Unit No.</u> | <u>Main Type</u> | <u>Sub Type</u> | <u>Tractor Unit No.</u> | <u>Main Type</u> | <u>Sub Type</u> | <u>Time On Location</u> | <u>Time Off Location</u> |
| 449095 | TRAILER | Utility Trailer | 201009 | PICKUP | 1 Ton | 12/10/2014 15:00 | 12/11/2014 07:30 |
| 445024 | TRAILER | SCM Twin | 745024 | TRACTOR | Tandem - Tractor | 12/10/2014 15:00 | 12/11/2014 07:30 |
| 201274 | PICKUP | 3/4 Ton | | | | 12/10/2014 15:00 | 12/11/2014 07:30 |
| 446172 | TRAILER | Bulker | 746172 | TRACTOR | Tandem - Tractor | 12/10/2014 15:00 | 12/11/2014 07:30 |

Crew and Bonuses

| <u>Employee</u> | <u>Start Shift</u> | <u>End Shift</u> | <u>Second Start Shift</u> | <u>Second End Shift</u> |
|-------------------------------|--------------------|------------------|---------------------------|-------------------------|
| Maguire, Matthew | 12/10/2014 15:00 | 12/11/2014 07:30 | | |
| Doran, Benjamin | 12/10/2014 15:00 | 12/11/2014 07:30 | | |
| Teegerstrom, Ty | 12/10/2014 15:00 | 12/11/2014 07:30 | | |
| Bark, Eric | 12/10/2014 15:00 | 12/11/2014 07:30 | | |
| Melgarejo Herrera, Eduardo | 12/10/2014 15:00 | 12/11/2014 07:30 | | |
| Martinez, Fernando | 12/10/2014 15:00 | 12/11/2014 07:30 | | |
| Houghton, Guy | 12/10/2014 15:00 | 12/11/2014 07:30 | | |

Treatment Reports & Remarks



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Treatment Report

| Event # | Event Time | Event Description | Fluid Type | Rate (bbl/min) | Tubular Pressure (psi) | Annular Pressure (psi) | Stage Volume (bbl) | Total Volume (bbl) |
|---------|-------------------|--|--------------------|-------------------|---------------------------|---------------------------|-----------------------|-----------------------|
| 1 | Dec 10,2014 15:00 | Arrive On Location | — | — | — | — | — | 0.00 |
| 2 | Dec 10,2014 15:10 | Tailgate Meeting | — | — | — | — | — | 0.00 |
| | | Remarks: Filled out JSA. | | | | | | |
| 3 | Dec 10,2014 15:30 | Rig In | — | — | — | — | — | 0.00 |
| 4 | Dec 10,2014 18:20 | STEACS Briefing | — | — | — | — | — | 0.00 |
| 5 | Dec 10,2014 18:35 | Sign-off on Safety | — | — | — | — | — | 0.00 |
| 6 | Dec 11,2014 03:23 | Start - Fluid | Water | 2.00 | 130.0 | — | 2.00 | 2.00 |
| | | Remarks: Filled lines. | | | | | | |
| 7 | Dec 11,2014 03:25 | Pressure Test Lines | — | — | 3,000.0 | — | — | 2.00 |
| | | Remarks: All liines held pressure. | | | | | | |
| 8 | Dec 11,2014 03:26 | Pump Preflush | Water | 5.00 | 800.0 | — | 10.00 | 12.00 |
| | | Remarks: With dye indicator. | | | | | | |
| 9 | Dec 11,2014 03:30 | Mix Cement | 1:2:6 Poz G Gel | 5.00 | 1,100.0 | — | 153.20 | 165.20 |
| | | Remarks: LEAD: WR=10.14, Y=1.89, D=12.5, Sk Wt=92.1. 109.9 bbls mix water. | | | | | | |
| 10 | Dec 11,2014 04:03 | Mix Cement | 1-1-0 G | 5.00 | 500.0 | — | 56.80 | 222.00 |
| | | Remarks: TAIL: WR=7.12, Y=1.52, D=13.5, Sk Wt=91.9, 35.6 bbls mix water. | | | | | | |
| 11 | Dec 11,2014 04:16 | Stop | --- | — | — | — | — | 222.00 |
| 12 | Dec 11,2014 04:18 | Drop Plug | — | — | — | — | — | 222.00 |
| 13 | Dec 11,2014 04:21 | Displace Fluid | Water Based Mud | 5.00 | 2,200.0 | — | 219.30 | 441.30 |
| 14 | Dec 11,2014 05:18 | Bump Plug | — | — | 2,200.0 | — | — | 441.30 |
| | | Remarks: Bumped @ 500psi over. | | | | | | |
| 15 | Dec 11,2014 05:21 | Check Float | — | — | — | — | — | 441.30 |
| | | Remarks: Float held, 1 bbl back. | | | | | | |
| 16 | Dec 11,2014 05:23 | Pressure Test | — | — | 1,500.0 | — | — | 441.30 |
| | | Remarks: Casing test for 15 minutes, test was successful, 1 bbl back. | | | | | | |
| 17 | Dec 11,2014 05:40 | Stop | --- | — | — | — | — | 441.30 |
| 18 | Dec 11,2014 06:00 | Wash | Water | 1.50 | 100.0 | — | 20.00 | 441.30 |
| 19 | Dec 11,2014 06:30 | Rig Out | — | — | — | — | — | 441.30 |
| | | Remarks: Revisit JSA. | | | | | | |
| 20 | Dec 11,2014 06:50 | Pre-Departure Meeting | — | — | — | — | — | 441.30 |
| 21 | Dec 11,2014 07:00 | Job Complete | — | — | — | — | — | 441.30 |
| 22 | Dec 11,2014 07:15 | Leave Location | — | — | — | — | — | 441.30 |
| | | Remarks: Revisit JSA. | | | | | | |

Did Float Hold: Yes
Fluid Returns : Yes
Type : Cement
Volume (bbl) : 55
Temperature (°F) : 60
FDAS Functioning Correctly : Yes
Was the Program Followed As Per Design? : Yes



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Treatment Reports & Remarks

Material Transfer Sheet Number

Material Transfer Sheet Number

54308

54306

54307

Comments To Service Report

Arrive location, tailgate meeting, JSA, went over numbers with Mr. Kenny Wilkerson, spot trucks, rig-in, STEACS briefing, sign off on safety, fill lines, PT 3000psi, 10 bbls fresh ahead w/ dye indicator, 455 sacks LEAD cement: 153.2 bbls slurry, WR=10.14, Y=1.89, D=12.5, Sk Wt=92.1, 109.9 bbls mix water, 210 sacks TAIL cement: 56.8 bbls slurry, WR=7.12, Y=1.52, D=13.5, Sk Wt=91.9, 219.3 bbls displacement, bump plug @ 2200psi (500psi over), check float, float held, 1 bbl back, 1500psi casing test for 15 minutes, casing test successful, 1 bbl back, stop, wash up, revisit JSA, rig-out, pre departure meeting, revisiit JSA, leave location safely.

When we were 80 bbls away with our lead cement the recirc went out on pump truck 445024, we could not get it working and after consulting with company rep Tim it was decided to have the rig circulate out the slurry, send a bulk truck with lead cement and another pump truck to our location to complete job. This caused an 8 hour delay.



| | | | | | |
|------------|--|------------|---------------------|------------------|-----------------|
| Client | Whiting Petroleum Corp | Client Rep | Kenny Wilkerson | Supervisor | Matthew Maguire |
| Ticket No. | 9200842 | Well Name | Razor 33P-3316 | Unit No. | 445047 |
| Location | Sec 33:T10N:R58W | Job Type | Intermediate Casing | Service District | Fort Lupton |
| Comments | Fill lines, PT 3000psi, 10 bbls fresh ahead w/ dye indicator, 455 sacks LEAD cement: 153.2 bbls slurry, WR=10.14, Y=1.89, D=12.5, Sk Wt=92.1, 109.9 bbls mix water, 210 sacks TAIL cement: 56.8 bbls slurry, WR=7.12, Y=1.52, D=13.5, Sk Wt=91.9, 219.3 bbls displacement, bump plug @ 2200psi (500psi over), check float, 1500psi casing test for 15 minutes, stop. | | | Job Date | 12/11/2014 |

