



## Pumping Service Report

**9201426**

API: 05-123-39258-00

|  |  |                            |                               |  |
|--|--|----------------------------|-------------------------------|--|
| Client Name<br>Whiting Petroleum Corp. | Well Name<br>Razor 33M-2804                    | Rig<br>Pioneer Drilling 54 | Job Date<br>December 21, 2014 | Call Sheet<br>1052406                    |
| Client Representative<br>Mr.           | Surface Well Location<br>SWSW Sec 33:T10N:R58W | Down Hole Well Location    | Job Type<br>Surface Casing    | Lead Supervisor<br>Laeger, Kacey (25046) |

### 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) |
|-----------|-----------|------------|---------------|-------------|---------------|-------------|
|           | 13.500    | 25.000     | 0.000         | 1,567.300   | --            | --          |

| 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) |
|--------|-----------|----------------|-------|-------------------------|-------------------------------|----------------|-----------|-----------|-----------------|---------------|
|        | 9.625     | 36.000         | J-55  | 2,020.0                 | 3,520.0                       | 121.17         | 8.921     | 10.625    | 0.0             | 1,567.3       |

### Products

#### Stage 1

From Depth (ft): 0  
To Depth (ft): 949

##### Acids/Blends/Fluids :

Lead 1: 275 Sacks of Control Set C, Density = 12 lb/gal, Volume Pumped = 120.5 (bbl)  
Water Temperature(°F) = 70 , Bulk Temperature(°F) = 40 , Slurry Temperature(°F) = 60  
+ 0.25 lb/sack of Polyflake (Preblend)

#### Stage 2

From Depth (ft): 949  
To Depth (ft): 1567.3

##### Acids/Blends/Fluids :

Tail: 220 Sacks of 0:1:0 Type III, Density = 14.2 lb/gal, Volume Pumped = 57 (bbl)  
Water Temperature(°F) = 70 , Bulk Temperature(°F) = 40 , Slurry Temperature(°F) = 60  
+ 2 % of CaCl<sub>2</sub> (Preblend),  
+ 0.25 lb/sack of Polyflake (Preblend)

#### Stage 3

From Depth (ft):  
To Depth (ft):

##### Acids/Blends/Fluids :

### 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       | 1,567.300         | Third Party     |
| Float Collar     | 1,524.700         | Third Party     |

#### Tubular Plugs

| <u>Tubular Plug Type</u> | <u>Size (in)</u> | <u>Supplier</u> |
|--------------------------|------------------|-----------------|
| Rubber Top               | 9.625            | 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> |
|-----------------------|------------------|-----------------|-------------------------|------------------|------------------|-------------------------|--------------------------|
| 201191                | PICKUP           | 1 Ton           |                         |                  |                  | 12/21/2014 04:00        | 12/21/2014 12:00         |
| 445047                | TRAILER          | SCM Twin        | 745047                  | TRACTOR          | Tandem - Tractor | 12/21/2014 04:00        | 12/21/2014 12:00         |
| 446153                | TRAILER          | Bulker          | 746153                  | TRACTOR          | Tandem - Tractor | 12/21/2014 04:00        | 12/21/2014 12:00         |
| 746502                | BODY JOB         | Baby Bulker     |                         |                  |                  | 12/21/2014 04:00        | 12/21/2014 12:00         |

#### Crew and Bonuses

| <u>Employee</u>          | <u>Start Shift</u> | <u>End Shift</u> | <u>Second Start Shift</u> | <u>Second End Shift</u> |
|--------------------------|--------------------|------------------|---------------------------|-------------------------|
| Laeger, Kacey (25046)    | 12/21/2014 00:01   | 12/21/2014 12:00 |                           |                         |
| Morris, Theodore (26527) | 12/21/2014 00:01   | 12/21/2014 12:00 |                           |                         |
| Vitera, John (29843)     | 12/21/2014 00:01   | 12/21/2014 12:00 |                           |                         |
| Lindsay, Kevin (27589)   | 12/21/2014 00:01   | 12/21/2014 12:00 |                           |                         |

### Treatment Reports & Remarks





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### Treatment Reports & Remarks

#### Treatment Report

| Event # | Event Time         | Event Description                                      | Fluid Type      | Rate<br>(bbl/min) | Tubular Pressure<br>(psi) | Annular Pressure<br>(psi) | Stage Volume<br>(bbl) | Total Volume<br>(bbl) |
|---------|--------------------|--|-----------------|-------------------|---------------------------|---------------------------|-----------------------|-----------------------|
| 1       | Dec 21, 2014 04:00 | Arrive On Location                                     |                 | --                | --                        | --                        | --                    | 0.00                  |
|         |                    | Remarks: 1.5 hours early                               |                 |                   |                           |                           |                       |                       |
| 2       | Dec 21, 2014 06:00 | Crew Briefing (Rig in)                                 |                 | --                | --                        | --                        | --                    | 0.00                  |
| 3       | Dec 21, 2014 06:30 | STEACS Briefing  |                 | --                | --                        | --                        | --                    | 0.00                  |
| 4       | Dec 21, 2014 07:00 | Rig in Complete  |                 | --                | --                        | --                        | --                    | 0.00                  |
| 5       | Dec 21, 2014 07:30 | Crew Briefing (Pre Job)                                |                 | --                | --                        | --                        | --                    | 0.00                  |
| 6       | Dec 21, 2014 08:16 | Pressure Test Start                                    | ---             | --                | --                        | --                        | --                    | 0.00                  |
|         |                    | Remarks: Filled lines                                  |                 |                   |                           |                           |                       |                       |
| 7       | Dec 21, 2014 08:18 | Pressure Test Complete                                 | Water           | --                | 3,000.0                   | --                        | --                    | 0.00                  |
|         |                    | Remarks: 3000psi lines held good                       |                 |                   |                           |                           |                       |                       |
| 8       | Dec 21, 2014 08:20 | Pump Spacer  | Water           | 4.00              | 100.0                     | --                        | 5.00                  | 5.00                  |
|         |                    | Remarks: Fresh water                                   |                 |                   |                           |                           |                       |                       |
| 9       | Dec 21, 2014 08:23 | Pump Spacer  | Water           | 3.50              | 100.0                     | --                        | 10.00                 | 15.00                 |
|         |                    | Remarks: 10bbls Red Dye                                |                 |                   |                           |                           |                       |                       |
| 10      | Dec 21, 2014 08:28 | Pump Spacer  | Water           | 4.00              | 100.0                     | --                        | 5.00                  | 20.00                 |
|         |                    | Remarks: Fresh water spacer                            |                 |                   |                           |                           |                       |                       |
| 11      | Dec 21, 2014 08:32 | Mix Cement   | Control Set C   | 4.50              | 150.0                     | --                        | 120.50                | 140.50                |
|         |                    | Remarks: 275sks of control set c at 12 lb/gal          |                 |                   |                           |                           |                       |                       |
| 12      | Dec 21, 2014 09:00 | Mix Cement   | 0:1:0 Type III  | 4.50              | 200.0                     | --                        | 57.00                 | 57.00                 |
|         |                    | Remarks: 220sks of typelll at 14.2 lb/gal              |                 |                   |                           |                           |                       |                       |
| 13      | Dec 21, 2014 09:12 | Stop   |                 | --                | --                        | --                        | --                    | 57.00                 |
| 14      | Dec 21, 2014 09:15 | Drop Plug  |                 | --                | --                        | --                        | --                    | 57.00                 |
| 15      | Dec 21, 2014 09:15 | Displace Fluid   | Water Based Mud | 4.00              | 40.0                      | --                        | --                    | 57.00                 |
| 16      | Dec 21, 2014 09:48 | Finish Displacement                                    | Water Based Mud | 2.00              | 1,000.0                   | --                        | 119.50                | 176.50                |
|         |                    | Remarks: Bumped plug 500 psi over circulating pressure |                 |                   |                           |                           |                       |                       |
| 17      | Dec 21, 2014 09:50 | Check Float  |                 | --                | --                        | --                        | --                    | 176.50                |
|         |                    | Remarks: 1/4 of a bbl back floats held                 |                 |                   |                           |                           |                       |                       |
| 18      | Dec 21, 2014 09:53 | Pressure Test  | Water           | 1.00              | 1,500.0                   | --                        | 1.00                  | 177.50                |
|         |                    | Remarks: 1500psi casing test 30 min                    |                 |                   |                           |                           |                       |                       |
| 19      | Dec 21, 2014 10:23 | Wash   |                 | --                | --                        | --                        | 25.00                 | 177.50                |
|         |                    | Remarks: Wash pump unit                                |                 |                   |                           |                           |                       |                       |
| 20      | Dec 21, 2014 11:00 | Tailgate Meeting                                       |                 | --                | --                        | --                        | --                    | 177.50                |
| 21      | Dec 21, 2014 11:10 | Rig Out  |                 | --                | --                        | --                        | --                    | 177.50                |
|         |                    | Remarks: Revisit JSA                                   |                 |                   |                           |                           |                       |                       |
| 22      | Dec 21, 2014 11:40 | Job Complete   |                 | --                | --                        | --                        | --                    | 140.50                |
| 23      | Dec 21, 2014 11:50 | Pre-Departure Meeting                                  |                 | --                | --                        | --                        | --                    | 177.50                |
| 24      | Dec 21, 2014 12:00 | Leave Location   |                 | --                | --                        | --                        | --                    | 140.50                |





**Treatment Reports & Remarks**

Did Float Hold: Yes  
Fluid Returns : Yes  
Type : Cement  
Volume (bbl) : 41.5  
Temperature (°F) : 60  
FDAS Functioning Correctly : Yes  
Was the Program Followed As Per Design? : Yes

**Material Transfer Sheet Number**

Material Transfer Sheet Number

55313

55314





|            |                           |            |                |                  |              |
|------------|---------------------------|------------|----------------|------------------|--------------|
| Client     | Whiting Petroleum Corp    | Client Rep | MR             | Supervisor       | Kacey Laeger |
| Ticket No. | 9201426                   | Well Name  | Razor 33M-2804 | Unit No.         | 445047       |
| Location   | Sec 33:T10N:R58W          | Job Type   | Surface Casing | Service District | Fort Lupton  |
| Comments   | See data logs for details |            |                |                  |              |
|            |                           |            |                | Job Date         | 12/21/2014   |

