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# **Petroshare Corporation**

## **SURFACE POST JOB REPORT**

Shook 3-10-4NBH 05-001-09976  
S:3 T:1S R:67W Adams CO

CallSheet #: 735  
Proposal #: 13167



**SURFACE Post Job Report**

**Attention:** Mr. Bill Lloyd | (303) 500-1160 | blloyd@petroshare.com  
Petroshare Corporation  
9635 Maroon Circle, Ste 400 | Englewood, CO 80112

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Dear Mr. Lloyd,

Thank you for the opportunity to provide cementing services on this well. BJ Services strives to achieve complete customer satisfaction. If you have any questions regarding the services or data provided, please contact BJ Services at any time.

Sincerely,

**Nick Stille**

Technical Specialist - I | (307) 286-0815 | nick.stille@bjservices.com

**Field Office**      1716 East Allison Rd., Cheyenne WY, 82007  
Phone: (307) 638-5585

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Phone: (303) 296-1158



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## 1 Job Details & Summary

### 1.1 Geometry

| Type      | Function | OD (in) | ID (in) | Weight (lb/ft) | Thread | Top (ft) | Bottom (ft) | Excess (%) |
|-----------|----------|---------|---------|----------------|--------|----------|-------------|------------|
| Casing    | Inner    | 9.625   | 8.921   | 36             | LTC    | 0        | 1811        | 0          |
| Casing    | Outer    | 16      | 15.25   | 65             | n/a    | 0        | 40          | 0          |
| Open Hole | Outer    | n/a     | 13.5    | n/a            | n/a    | 40       | 1812        | 15         |

### 1.2 Equipment / People

| Unit Type          | Unit     | Employee #1      | Mileage |
|--------------------|----------|------------------|---------|
| Bulk Trailer       | E467     | Mellon, Zacahria | 176     |
| Bulk Trailer       | E421     |                  | 176     |
| Cement Pump        | PPC11250 | Scott, Matthew   | 176     |
| Light Duty Pickups | 3        | Dewit, Eric      | 176     |

### 1.3 Timing

| Event           | Date/Time       |
|-----------------|-----------------|
| Call Out        | 4/19/2017 12:00 |
| Depart Facility | 4/19/2017 12:00 |
| On Location     | 4/19/2017 14:30 |
| Rig Up Iron     | 4/19/2017 16:25 |
| Job Started     | 4/19/2017 17:04 |
| Job Completed   | 4/19/2017 18:35 |
| Rig Down Iron   | 4/19/2017 18:55 |
| Depart Location | 4/19/2017 20:00 |

### 1.4 General Job Information

| Metrics                 | Value      |
|-------------------------|------------|
| Well Fluid Density      | 8.4 lb/gal |
| Well Fluid Type         | Water      |
| Rig Circulation Vol     | 150 bbls   |
| Rig Circulation Time    | 0.5 hours  |
| Calculated Displacement | 136.8 bbls |
| Actual Displacement     | 136.8 bbls |
| Total Spacer to Surface | 20 bbls    |
| Total CMT to Surface    | 21 bbls    |
| Well Topped Out         | No         |

### 1.5 Job Details

| Metrics                        | Value      |
|--------------------------------|------------|
| Flare Prior to Job             | No         |
| Flare During Job               | No         |
| Flare at End of Job            | No         |
| Well Full Prior to Job         | Yes        |
| Well Fluid Density Into Well   | 8.4 lb/gal |
| Well Fluid Density Out of Well | 8.4 lb/gal |

### 1.6 Job Details (cont.)

| Metrics | Value  |
|---------|--------|
| BHCT    | 95 °F  |
| BHST    | 120 °F |

### 1.7 Circulation

|                              |
|------------------------------|
| Lost Circulation Experienced |
| No                           |



### 1.8 Job Execution Information

| Job | Fluid | Product           | Function          | Density<br>(lb/gal) | Yield<br>(ft <sup>3</sup> /sk) | Water<br>Rq.<br>(gal/sk) | Water<br>Rq.<br>(gal/bbl) | Volume<br>(sks) | Volume<br>(bbl) | Top<br>(ft) |
|-----|-------|-------------------|-------------------|---------------------|--------------------------------|--------------------------|---------------------------|-----------------|-----------------|-------------|
| 1   | 1     | Water             | Flush             | 8.33                |                                |                          | 42.00                     |                 | 20.00           | 0           |
| 1   | 2     | ALTCem<br>S100-12 | Lead              | 12.00               | 2.53                           | 14.85                    |                           | 293.00          | 131.84          | 0           |
| 1   | 3     | ALTCem<br>S100-12 | Tail              | 12.50               | 2.22                           | 12.58                    |                           | 135.00          | 53.46           | 1300        |
| 1   | 4     | Water             | DisplacementFinal | 8.33                |                                |                          | 42.00                     |                 | 136.00          | 0           |

### 1.9 Job Fluid Details

| Job | Fluid | Type | Fluid          | Product | Function        | Conc.  | Uom   |
|-----|-------|------|----------------|---------|-----------------|--------|-------|
| 1   | 2     | Lead | ALTCem S100-12 | AC3-10  | Cement          | 100.00 | %     |
| 1   | 2     | Lead | ALTCem S100-12 | ACL-10  | Accelerator     | 2.00   | lb/sk |
| 1   | 2     | Lead | ALTCem S100-12 | ACL-20  | Accelerator     | 5.00   | %BWOB |
| 1   | 2     | Lead | ALTCem S100-12 | ADF-11  | Defoamer        | 0.30   | %BWOB |
| 1   | 2     | Lead | ALTCem S100-12 | ALC-10  | LostCirculation | 0.13   | lb/sk |
| 1   | 2     | Lead | ALTCem S100-12 | AXE-30  | Extender        | 2.00   | lb/sk |
| 1   | 3     | Tail | ALTCem S100-12 | AC3-10  | Cement          | 100.00 | %     |
| 1   | 3     | Tail | ALTCem S100-12 | ACL-10  | Accelerator     | 2.00   | lb/sk |
| 1   | 3     | Tail | ALTCem S100-12 | ACL-20  | Accelerator     | 5.00   | %BWOB |
| 1   | 3     | Tail | ALTCem S100-12 | ADF-11  | Defoamer        | 0.30   | %BWOB |
| 1   | 3     | Tail | ALTCem S100-12 | ALC-10  | LostCirculation | 0.13   | lb/sk |
| 1   | 3     | Tail | ALTCem S100-12 | AXE-30  | Extender        | 2.00   | lb/sk |

## 2 Job Logs

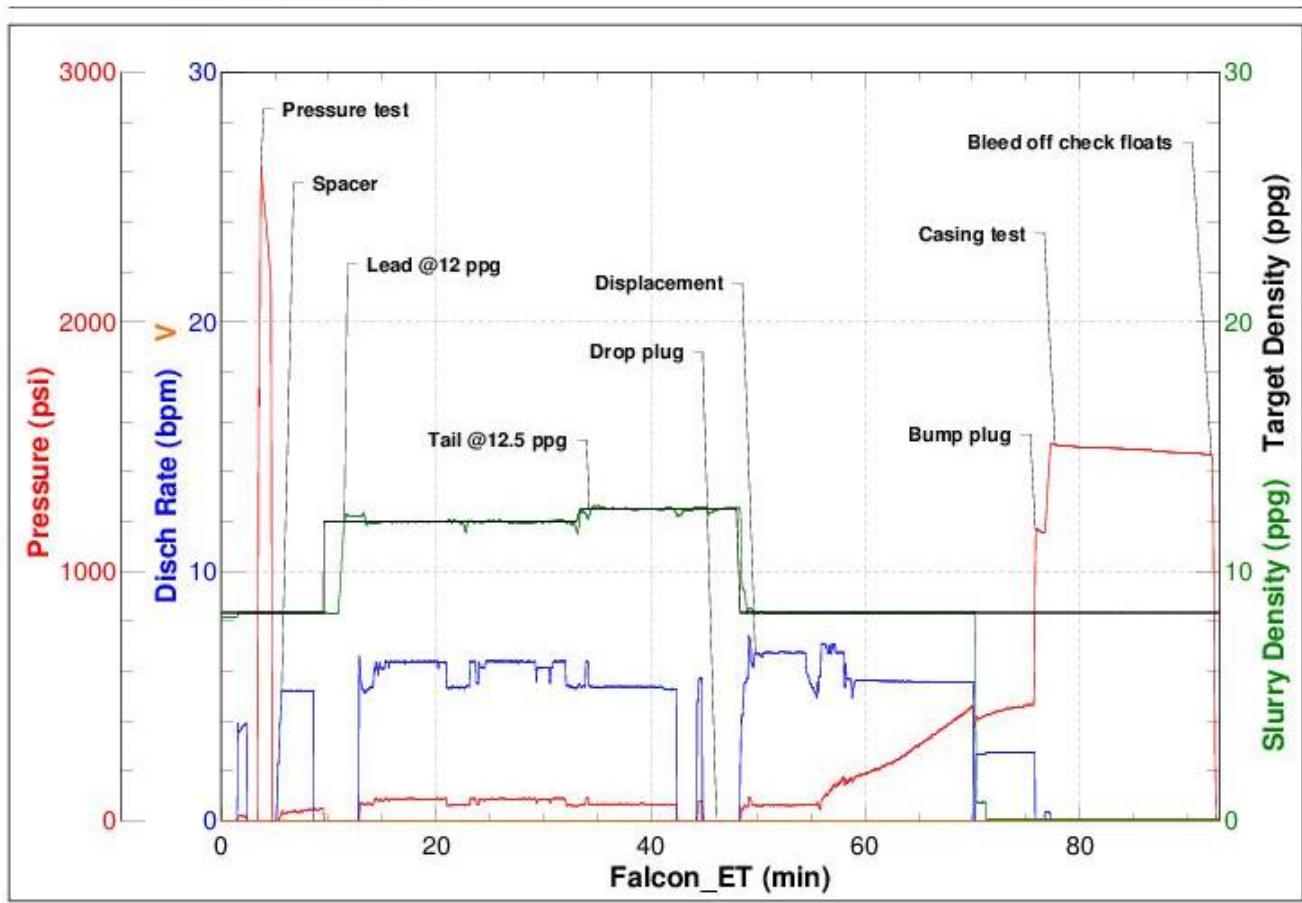
| Line | Event              | Date (MM/DD/YY) | Time (HH:MM) | Density (lb/gal) | Pump Rate (bpm) | Pump Volume (bbls) | Pipe Pressure (psi) | Comment   |
|------|--------------------|-----------------|--------------|------------------|-----------------|--------------------|---------------------|---|
| 1    | Customer call out  | 4/19/2017       | 12:00        |                  |                 |                    |                     | Customer calls with an RTS of 16:00                                       |
| 2    | Leave yard         | 4/19/2017       | 12:00        |                  |                 |                    |                     | Leave yard  |
| 3    | Arrive on location | 4/19/2017       | 14:30        |                  |                 |                    |                     | Arrive on location  |
| 4    | Spot trucks        | 4/19/2017       | 16:20        |                  |                 |                    |                     | Spot trucks   |
| 5    | Safety meeting     | 4/19/2017       | 16:25        |                  |                 |                    |                     | Pre-rig up safety meeting   |
| 6    | Rig up             | 4/19/2017       | 16:30        |                  |                 |                    |                     | Rig up bulk, water, and high pressure line                                |
| 7    | Safety meeting     | 4/19/2017       | 16:45        |                  |                 |                    |                     | Pre-job safety meeting with company man, and rig crew                     |
| 8    | Rig up             | 4/19/2017       | 16:50        |                  |                 |                    |                     | Rig up cement head  |
| 9    | Load lines         | 4/19/2017       | 17:04        | 8.34             | 3.6             | 3                  | 20                  | Load pumps and lines, send bottom plug                                    |
| 10   | Pressure test      | 4/19/2017       | 17:05        | 8.34             | 0               | 0                  | 2600                | Pressure test pumps and lines   |
| 11   | Pump spacer        | 4/19/2017       | 17:08        | 8.34             | 5.2             | 20                 | 40                  | Pump fresh water + dye spacer   |
| 12   | lead cement        | 4/19/2017       | 17:13        | 12               | 6.3             | 131                | 83                  | Pump 293 sacks of lead cement @12 ppg (Yield - 2.53, Mix water - 14.58)   |
| 13   | Tail cement        | 4/19/2017       | 17:36        | 12.5             | 5.4             | 53                 | 68                  | Pump 135 sacks of tail cement @12.5 ppg (Yield - 2.22, Mix water - 12.58) |
| 14   | Drop top plug      | 4/19/2017       | 17:47        |                  |                 |                    |                     | Shut down, release top plug   |
| 15   | Displacement       | 4/19/2017       | 17:51        | 8.34             | 6.7             | 0                  | 63                  | Send plug start fresh water displacement                                  |
| 16   | Displacement       | 4/19/2017       | 17:58        | 8.34             | 7               | 50                 | 138                 | Fresh water displacement  |
| 17   | Spacer to surface  | 4/19/2017       | 18:06        | 8.34             | 5.5             | 90                 | 300                 | Start getting dye to surface  |
| 18   | Cement to surface  | 4/19/2017       | 18:11        | 8.34             | 5.5             | 115                | 439                 | Drop pump rate  |
| 19   | Drop rate          | 4/19/2017       | 18:12        | 8.34             | 2.7             | 120                | 407                 | start getting good cement to surface                                      |
| 20   | Land plug          | 4/19/2017       | 18:18        | 8.34             | 2.7             | 136                | 1169                | Land plug @468 psi, Bumped up to 1511 psi                                 |
| 21   | Casing test        | 4/19/2017       | 18:19        | 8.34             | 0               | 0                  | 1511                | Start casing test   |
| 22   | Check floats       | 4/19/2017       | 18:35        | 8.34             | 0               | 0                  | 0                   | Bleed off check floats (floats held) 1 bbl back                           |
| 23   | Safety meeting     | 4/19/2017       | 18:55        |                  |                 |                    |                     | Pre-rig down safety meeting   |
| 24   | Rig down           | 4/19/2017       | 19:00        |                  |                 |                    |                     | Rig everything down   |

### 3 Water Analysis

| Metrics          | Value     | Recommended |
|------------------|-----------|-------------|
| Water Source     | Rig Tank  |             |
| Temperature      | 55 °F     | 50-80 °F    |
| pH Level         | 7         | 5.5-8.5     |
| Chlorides        | 0 mg/L    | 0-3000 mg/L |
| Total Alkalinity | 400       | 0-1000      |
| Total Hardness   | <250 mg/L | 0-500 mg/L  |
| Carbonates       | 0 mg/L    | 0-100 mg/L  |
| Sulfates         | <500 mg/L | 0-1500 mg/L |
| Potassium        | 200 mg/L  | 0-3000 mg/L |
| Iron             | 0 mg/L    | 0-300 mg/L  |

### 4 Pump Diagrams

Job Number: 735  
Customer: Petro Share  
Well Name: Shook 3-10-4NBH



Job Start: Wednesday, April 19, 2017