



Great Western Operating Company, LLC

SURFACE POST JOB REPORT

JOB PURPOSE: PRIMARY

Brant LE 08-319HC 05-001-10346
S:11 T:1S R:67W Adams CO

CallSheet #: 75226
Proposal #: 50413



Attention: Great Western Operating Company LLC,
Great Western Operating Company, LLC
1001 17TH STREET, SUITE 2000 | DENVER, CO 80202

Dear Great Western Operating Company LLC,

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

Sincerely,

Jason Creel

Field Engineer | (307) 256-0306 | Jason.creel@americacementing.com

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

Table of Contents

| | |
|---|---|
| 1 Job Details & Summary | 3 |
| 1.1 Geometry | 3 |
| 1.2 Equipment / People | 3 |
| 1.3 Timing | 3 |
| 1.4 Casing Equipment | 3 |
| • 1.4.1 Casing Equipment - Centralizer Depths | 3 |
| 1.5 General Job Information | 3 |
| 1.6 Job Details | 4 |
| 1.7 Job Details (cont.) | 4 |
| 1.8 Circulation | 4 |
| 1.9 Job Execution Information | 4 |
| 1.10 Job Fluid Details | 4 |
| 2 Job Logs | 5 |
| 3 Water Analysis | 6 |
| 4 Pump Diagrams | 7 |

1 Job Details & Summary

1.1 Geometry

| Type | Function | OD (in) | ID (in) | Weight (lb/ft) | Top (ft) | Bottom (ft) | Excess (%) |
|-----------|----------|---------|---------|----------------|----------|-------------|------------|
| Open Hole | Outer | n/a | 13.5 | n/a | 0 | 2018 | 30 |
| Casing | Inner | 9.625 | 8.921 | 36 | 0 | 2018 | 0 |

1.2 Equipment / People

| Unit Type | Unit |
|--------------------|----------|
| Cement Pump | CPF-074 |
| Light Duty Pickups | LDV-5223 |
| Field Bin | CTF-013 |
| Pneumatic Trailer | FUF-308 |

1.3 Timing

| Event | Date/Time |
|-----------------|------------------|
| Call Out | 10/19/2020 06:00 |
| Depart Facility | 10/19/2020 07:00 |
| On Location | 10/19/2020 09:00 |
| Rig Up Iron | 10/19/2020 09:30 |
| Job Started | 10/19/2020 16:42 |
| Job Completed | 10/19/2020 18:38 |
| Rig Down Iron | 10/19/2020 18:50 |
| Depart Location | 10/19/2020 19:30 |

1.4 Casing Equipment

| Type | Description | Qty | MD | TVD |
|-------------------------|-------------|-----|------|------|
| Bow Spring Centralizers | 9.625" | 19 | | |
| Landing/Float Collar | | | 1974 | 1973 |
| Float Shoe | | | 2018 | 2017 |

- 1.4.1 Casing Equipment - Centralizer Depths

Surface Centralizers, 42.1, 84.23, 126.35, 252.79, 378.66, 505.07, 630.75, 757.19, 883.59, 1009.95, 1136.38, 1262.76, 1389.19, 1515.57, 1641.35, 1765.93, 1890.68, 1932.21, 2001.8

1.5 General Job Information

| Metrics | Value |
|-------------------------|------------------------------|
| Well Fluid Density | 8.4 lb/gal |
| Well Fluid Type | Water |
| Rig Circulation Vol | 428 bbls |
| Rig Circulation Time | 12/30/1899 12:45:00 AM hours |
| Calculated Displacement | 152.6 bbls |
| Actual Displacement | 152.6 bbls |
| Total Spacer to Surface | 20 bbls |
| Total CMT to Surface | 32 bbls |
| Well Topped Out | No |
| Top Out Volume | 0 bbls |

1.6 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 |

1.7 Job Details (cont.)

| Metrics | Value |
|---------------------|--------|
| BHCT | 86 °F |
| BHST | 110 °F |
| Ambient Temperature | 50 °F |

1.8 Circulation

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

1.9 Job Execution Information

| Job | Fluid | Product | Function | Density (lb/gal) | Yield (ft ³ /sk) | Water Rq. (gal/sk) | Water Rq. (gal/bbl) | Volume (sk) | Volume (bbl) | Volume (cu.ft) | Top (ft) |
|-----|-------|----------------|--------------------|------------------|-----------------------------|--------------------|---------------------|-------------|--------------|----------------|----------|
| 1 | 1 | Fresh Water | Spacer | 8.34 | | | 42.00 | | 20.00 | | 0 |
| 1 | 2 | ACem S100.3.XC | Primary | 14.50 | 1.39 | 6.81 | | 930.00 | 230.29 | 1292.70 | 0 |
| 1 | 3 | Fresh Water | Displacement Final | 8.34 | | | 42.00 | | 152.00 | | 0 |

1.10 Job Fluid Details

| Job | Fluid | Type | Fluid | Product | Function | Conc. | Uom |
|-----|-------|---------|----------------|---------------|----------|--------|-----|
| 1 | 2 | Primary | ACem S100.3.XC | ASTM TYPE III | Cement | 100.00 | % |

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 | Callout | 10/19/2020 | 06:00 | | | | | Crew called out, requested on location at 11:00 |
| 2 | Safety Meeting | 10/19/2020 | 06:45 | | | | | Talked with the American Cementing Crew about the hazards of driving to location. |
| 3 | Depart For Location | 10/19/2020 | 07:00 | | | | | Crew departed for location |
| 4 | Arrive On Location | 10/19/2020 | 09:00 | | | | | Crew arrived on location and talked about the hazards of spotting in equipment. |
| 5 | Safety Meeting | 10/19/2020 | 09:15 | | | | | Talked with crew about the hazards of rigging up water bulk and iron lines. |
| 6 | Rig Up Iron | 10/19/2020 | 09:30 | | | | | Crew rigged up |
| 7 | Waiting | 10/19/2020 | 10:00 | | | | | Waited for rig to finish Running casing and to circulating the well. |
| 8 | Safety Meeting | 10/19/2020 | 16:20 | | | | | Talked with American Cementing Crew and rig Crews about the hazards of pumping the job. |
| 9 | Fill Lines | 10/19/2020 | 16:42 | 8.33 | 5.2 | 5 | 150 | Pump 5 bbls water ahead to fill lines for the pressure test. |
| 10 | Shutdown | 10/19/2020 | 16:43 | 8.33 | | | | Shutdown to line out valves for pressure test |
| 11 | Pressure Test Lines | 10/19/2020 | 16:44 | 8.33 | | | 3114 | Pressure Test AC lines to 2500 PSI. |
| 12 | Pump Spacer | 10/19/2020 | 16:46 | 8.33 | 5.7 | 20 | 166 | Pump 20 bbls water spacer with blue dye |
| 13 | Pump Cement | 10/19/2020 | 16:48 | 14.5 | 5.7 | 0 | 162 | Mix and Pump 930 sacks of ACem Cement at 14.5 lb/gal, 1.39 cuft/sk and 6.81 gals/sk from Pods 1, 2 and 3 on CTF-013. Slow to 4.2 bpm for the first 10 bbls to bring tub up to weight. Then pump at 5.7 bpm. |
| 14 | Pump Cement | 10/19/2020 | 17:05 | 14.5 | 5.7 | 70 | 166 | Switch to pod 2 on CTF-013 with 77 bbls away. |
| 15 | Pump Cement | 10/19/2020 | 17:18 | 14.5 | 5.7 | 135 | 165 | Switch to pod 3 on CTF-013 with 150 bbls away. |
| 16 | Shutdown | 10/19/2020 | 17:37 | 14.5 | 0 | 230 | 0 | Shutdown to drop top plug and line out valves for displacement. |
| 17 | Pump Displacement | 10/19/2020 | 17:40 | 8.33 | 6.7 | 0 | 84 | Pump 152.4 bbls water displacement with Biocide and O2 scavenger. |
| 18 | Pump Displacement | 10/19/2020 | 17:47 | 8.33 | 6.7 | 50 | 212 | 50bbls away. |
| 19 | Pump Displacement | 10/19/2020 | 17:54 | 8.33 | 6.7 | 88 | 392 | Blue dye to surface |
| 20 | Pump Displacement | 10/19/2020 | 17:57 | 8.33 | 6.7 | 114 | 579 | Cement to Surface |
| 21 | Slow Pump Rate | 10/19/2020 | 17:59 | 8.33 | 2.8 | 132 | 608 | Slow rate to land the plug. |
| 22 | Land Plug | 10/19/2020 | 18:06 | 8.33 | 0 | 152.6 | 1518 | Land plug, bring pressure up to 1518 psi for 30 min casing test. FCP was 706 psi |
| 23 | Test Casing | 10/19/2020 | 18:16 | 8.33 | 0 | 152.6 | 1528 | 10 min into casing test. |
| 24 | Test Casing | 10/19/2020 | 18:26 | 8.33 | 0 | 152.6 | 1525 | 20 min into casing test. |
| 25 | Test Casing | 10/19/2020 | 18:36 | 8.33 | 0 | 152.6 | 1514 | 30 min into casing test. |
| 26 | Check Floats | 10/19/2020 | 18:38 | | | | | Floats held with 1 bbl back |
| 27 | Safety Meeting | 10/19/2020 | 18:45 | | | | | Talked with AC Crew about the hazards of rigging down. |
| 28 | Rig Down Iron | 10/19/2020 | 18:50 | | | | | Rig Down |
| 29 | Safety Meeting | 10/19/2020 | 19:00 | | | | | Talked with AC Crew about the hazards of driving back to the yard. |
| 30 | Depart Location | 10/19/2020 | 19:30 | | | | | Crew Departed Location. |

3 Water Analysis

| Metrics | Value | Recommended |
|------------------|-----------|-------------|
| Water Source | None | |
| Temperature | 54 °F | 50-80 °F |
| pH Level | 7 | 5.5-8.5 |
| Chlorides | 0 mg/L | 0-3000 mg/L |
| Total Alkalinity | 120 | 0-1000 |
| Total Hardness | 50 mg/L | 0-500 mg/L |
| Carbonates | 0 mg/L | 0-100 mg/L |
| Sulfates | <200 mg/L | 0-1500 mg/L |
| Potassium | 0 mg/L | 0-3000 mg/L |
| Iron | 0 mg/L | 0-300 mg/L |

4 Pump Diagrams

Well Name: Brant LE 08-319HC

