

Cementing Treatment



| | | | |
|---------------------|---|-----------------------|---------------------------|
| Start Date | 5/29/18 | Project ID | PRJ1007073 |
| End Date | 5/29/18 | Field Ticket# | FT-07061-X1L3Q40202-77915 |
| Client | BAYSWATER EXPLORATION & PRODUCTION, LLC | Well | G & D HANKS X-27-28HN |
| Service Sup. | C. Johnson | API# | 05-123-46030 |
| District | Cheyenne, WY | County | WELD |
| Type of Job | Long String | State/Province | CO |
| Execution ID | EXC-07061-X1L3Q402 | Rig | True Rig 38 |

WELL GEOMETRY

| Type | ID (in) | OD (in) | Wt. (lb/ft) | MD (ft) | TVD (ft) | Excess(%) |
|-----------------|---------|---------|-------------|-----------|----------|-----------|
| Previous Casing | 8.92 | 9.63 | 36.00 | 1,552.00 | 1,552.00 | |
| Open Hole | 8.50 | | | 18,352.00 | 7,291.00 | 10.00 |
| Casing | 4.78 | 5.50 | 20.00 | 18,330.00 | 7,291.00 | |

Shoe Length (ft): 23

HARDWARE

| | | | |
|------------------------------|-----------|---|-------------------|
| Bottom Plug Used? | No | Landing Collar Depth (ft) | 18,307 |
| Top Plug Used? | Yes | Max Casing Pressure - Rated (psi) | 12640 |
| Top Plug Provided By | Bayswater | Max Casing Pressure - Operated (psi) | 4000 |
| Top Plug Size | 5.5 | Pipe Movement | No |
| Centralizers Used | Yes | Job Pumped Through | Head and manifold |
| Centralizers Quantity | 225 | Top Connection Thread | Butt |
| Centralizers Type | solid | Top Connection Size | 5.5" |

CIRCULATION PRIOR TO JOB

| | | | |
|---|------|---|----|
| Well Circulated By | Rig | Solids Present at End of Circulation | No |
| Circulation Prior to Job | Yes | 10 sec SGS | 8 |
| Circulation Time (min) | 2hrs | 10 min SGS | 13 |
| Lost Circulation Prior to Cement Job | No | 30 min SGS | 16 |
| Mud Density In (ppg) | 10.1 | Flare Prior to/during the Cement Job | No |
| PV Mud In | 26 | Gas Present | No |
| PV Mud Out | 26 | | |
| YP Mud In | 10 | | |
| YP Mud Out | 10 | | |

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TEMPERATURE

| | | | |
|----------------------------|----|----------------------------|-----|
| Ambient Temperature (°F) | 71 | Flow Line Temperature (°F) | 130 |
| Mix Water Temperature (°F) | 68 | | |

BJ FLUID DETAILS

| Fluid Type | Fluid Name | Density (ppg) | Yield (Cu Ft/sk) | H2O Req. (gals/sk) | Planned Top of Fluid (Ft) | Length (Ft) | Vol (sk) | Vol (Cu Ft) | Vol (bbls) |
|----------------------------|---|---------------|------------------|--------------------|---------------------------|-------------|----------|-------------|------------|
| Spacer / Pre Flush / Flush | IntegraGuard EZ Spacer | 11.5000 | | | 0.00 | | | | 80.0000 |
| Lead Slurry | BJCem P100.3.01C | 13.2000 | 1.8254 | 9.88 | 0.00 | 7,000.00 | 1075 | 1,957.0000 | 348.4000 |
| Tail Slurry | BJCem P50.6.02C | 13.5000 | 1.4777 | 7.45 | 7,000.00 | 11,320.00 | 1,850 | 2,728.0000 | 484.3000 |
| Displacement 1 | GW-86 Pill | 8.3300 | | | 17,828.00 | | | | 10.0000 |
| Displacement 2 | Retarded Water w/ Clay Protection & Biocide | 8.3331 | | | | | | | 20.0000 |
| Displacement Final | Water w/ Clay Protection & Biocide | 8.3331 | | | 0.00 | | | | 375.9000 |

| Fluid Type | Fluid Name | Component | Concentration | UOM |
|----------------------------|------------------------|-----------------------------------|---------------|------|
| Spacer / Pre Flush / Flush | IntegraGuard EZ Spacer | SPACER SURFACTANT, SS-247 | 0.7000 | GPB |
| Spacer / Pre Flush / Flush | IntegraGuard EZ Spacer | SAND, S-8, Silica Flour, 200 Mesh | 215.0000 | PPB |
| Spacer / Pre Flush / Flush | IntegraGuard EZ Spacer | GELLANT WATER, GW-86 | 0.9000 | PPB |
| Spacer / Pre Flush / Flush | IntegraGuard EZ Spacer | SPACER SURFACTANT, SS-267 | 0.7000 | GPB |
| Lead Slurry | BJCem P100.3.01C | CEMENT, ASTM TYPE III | 100.0000 | PCT |
| Lead Slurry | BJCem P100.3.01C | FOAM PREVENTER, FP-25 | 0.3000 | BWOB |
| Lead Slurry | BJCem P100.3.01C | GELLANT WATER, GW-86 | 0.0500 | BWOB |
| Lead Slurry | BJCem P100.3.01C | BONDING AGENT, EC-2 | 3.0000 | BWOB |
| Lead Slurry | BJCem P100.3.01C | RETARDER, R-31 | 0.1700 | BWOB |
| Lead Slurry | BJCem P100.3.01C | FLUID LOSS, FL-66 | 0.5000 | BWOB |
| Tail Slurry | BJCem P50.6.02C | EXTENDER, BENTONITE | 2.0000 | BWOB |
| Tail Slurry | BJCem P50.6.02C | GELLANT WATER, GW-86 | 0.1000 | BWOB |
| Tail Slurry | BJCem P50.6.02C | CEMENT, CLASS G | 50.0000 | PCT |
| Tail Slurry | BJCem P50.6.02C | Flyash (Rockies) | 50.0000 | PCT |
| Tail Slurry | BJCem P50.6.02C | FLUID LOSS, FL-66 | 0.2000 | BWOB |

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| Fluid Type | Fluid Name | Component | Concentration | UOM |
|--------------------|---|----------------------------|---------------|------|
| Tail Slurry | BJCem P50.6.02C | FOAM PREVENTER, FP-25 | 0.3000 | BWOB |
| Tail Slurry | BJCem P50.6.02C | RETARDER, SR-20 | 0.1500 | BWOB |
| Displacement 1 | GW-86 Pill | RETARDER, R-8L | 0.5000 | GPB |
| Displacement 1 | GW-86 Pill | GELLANT WATER, GW-86 | 2.5000 | PPB |
| Displacement 2 | Retarded Water w/ Clay Protection & Biocide | RETARDER, R-8L | 0.5000 | GPB |
| Displacement 2 | Retarded Water w/ Clay Protection & Biocide | CLAY STABILIZER ResCare CS | 0.0800 | GPB |
| Displacement 2 | Retarded Water w/ Clay Protection & Biocide | BIOCIDE, BIOC11139W | 0.0100 | GPB |
| Displacement Final | Water w/ Clay Protection & Biocide | BIOCIDE, BIOC11139W | 0.0100 | GPB |
| Displacement Final | Water w/ Clay Protection & Biocide | CLAY STABILIZER ResCare CS | 0.0800 | GPB |

TREATMENT SUMMARY

| Fluid | Rate (bpm) | Fluid Vol. (bbls) | Pipe Pressure (psi) |
|---|------------|----------------------|------------------------|
| IntegraGuard EZ Spacer | 5.00 | 80.00 | 420 |
| BJCem P100.3.01C | 6.00 | 348.40 | 581 |
| BJCem P50.6.02C | 6.00 | 484.30 | 400 |
| GW-86 Pill | 6.00 | 10.00 | 1000 |
| Retarded Water w/ Clay Protection & Biocide | 8.00 | 20.00 | 1000 |
| Water w/ Clay Protection & Biocide | 8.00 | 375.90 | 1000 |

DISPLACEMENT AND END OF JOB SUMMARY

| | | | |
|---------------------------------------|-----|---------------------------------------|--------|
| Displaced By | BJ | Amount of Cement Returned/Reversed | 70 |
| Calculated Displacement Volume (bbls) | 406 | Method Used to Verify Returns | Visual |
| Actual Displacement Volume (bbls) | 416 | Amount of Spacer to Surface | 80 |
| Did Float Hold? | Yes | Pressure Left on Casing (psi) | 0 |
| Bump Plug | No | Amount Bled Back After Job | 3.5 |
| Were Returns Planned at Surface | Yes | Total Volume Pumped (bbls) | 1318 |
| Cement returns During Job | Yes | Top Out Cement Spotted | No |
| | | Lost Circulation During Cement Job | No |

Customer Name Bayswater
 Well Name G&D hanks X-27-28HN
 Job Type Long String

District Cheyenne
 Supervisor Travis Tolman



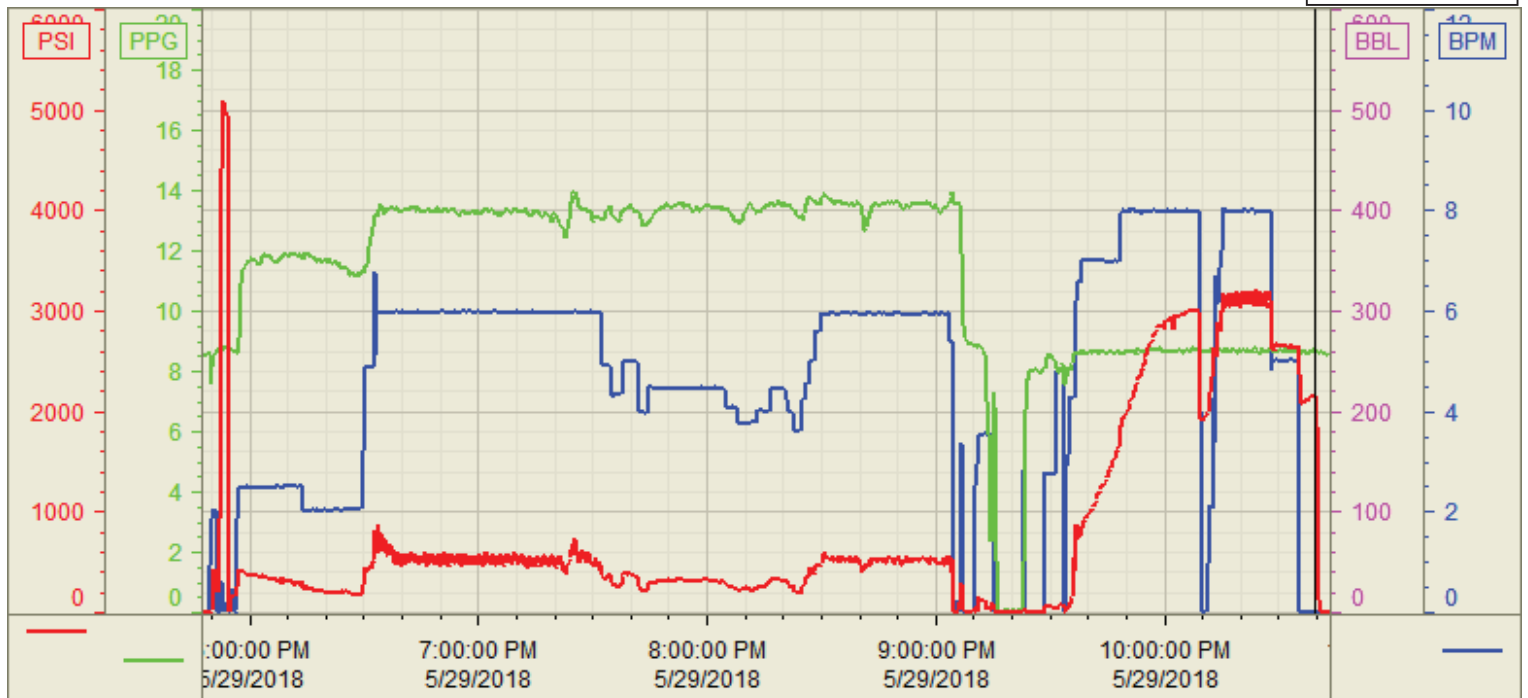
| Start Date/Time | Category | Event | Event ID | Density (lb/gal) | Pump Rate (bpm) | Pump Vol (bbls) | Pipe Pressure (psi) | Comments |
|-----------------|--------------|------------------------|----------|------------------|-----------------|-----------------|---------------------|--|
| 5/29/18 0900 | Mobilization | Callout | 1 | | | | | Crew called out for RTS of 1500, pre-trip trucks ready for job. |
| 5/29/18 1323 | Mobilization | Leave Location | 74 | | | | | Crew left yard heading to location |
| 5/29/18 1450 | Mobilization | Arrive on Location | 48 | | | | | Crew arrived on location, rig circulating, casing done. Met with company man to get numbers discuss job and safety issues. |
| 5/29/18 1457 | Operational | Spot Units | 49 | | | | | Spotted trucks |
| 5/29/18 1500 | Operational | Safety Meeting | 53 | | | | | Held safety meeting with crew to discuss rig up tasks and safety |
| 5/29/18 1515 | Operational | Rig Up | 50 | | | | | Rigged up from trucks to rig floor |
| 5/29/18 1720 | Operational | Safety Meeting | 53 | | | | | Held safety meeting with company man, rig crew and crew to discuss job and safety issues. |
| 5/29/18 1749 | Operational | Start Pumping | 55 | 8.3 | 2 | 3 | 230 | Loaded pump and lines for pressure test |
| 5/29/18 1751 | Operational | Pressure Test | 54 | | | | 5200 | Pressure test pump and lines |
| 5/29/18 1756 | Operational | Pump Spacer | 56 | 11.5 | 2 | 80 | 420 | Pump 11.5# spacer with adds |
| 5/29/18 1830 | Operational | Pump Lead Cement | 58 | 13.2 | 6 | 348 | 581 | Pump 1075sks/348.4bbls of 13.2#-1.82Y-9.88gps. |
| 5/29/18 1930 | Operational | Pump Tail Cement | 60 | 13.5 | 6 | 484 | 400 | Pump 1850 sks/484 bbls of 13.5#-1.48Y-7.45gps. |
| 5/29/18 2119 | Operational | Other (See comments) | 76 | | | | | Shutdown |
| 5/29/18 2120 | Operational | Clean Pumps and Lines | 62 | | | | | Wash pumps and lines |
| 5/29/18 2137 | Operational | Drop Top Plug | 63 | | | | | Drop third party plug |
| 5/29/18 2140 | Operational | Pump Displacement | 64 | 8.34 | 8 | 380 | 1000 | Pump 406 bbls water displacement w/ additives |
| 5/29/18 2224 | Operational | Spacer Back to Surface | 65 | | | | | Spacer back to surface at 266 bbls away, 80 bbls spacer to surface |
| 5/29/18 2238 | Operational | Cement Back to Surface | 66 | | | | | Cement back to surface at 346 bbls away, 70 bbls cement to surface |
| 5/29/18 2250 | Operational | Other (See comments) | 76 | 8.34 | 5 | 36 | 2800 | Slow pump rate to 5 bpm at 380 bbls away |
| 5/29/18 2253 | Operational | Other (See comments) | 76 | | | | | Plug did not land pumped a total of 416 bbls displacement, calculated displacement was 406 bbls |
| 5/29/18 2310 | Operational | Check Floats | 68 | | | | | Check floats, floats holding, 3.5 bbls back |
| 5/29/18 2325 | Operational | Safety Meeting | 53 | | | | | Safety meeting |
| 5/29/18 2340 | Operational | Rig Down | 73 | | | | | Rigged down all equipment |
| 5/30/18 0100 | Mobilization | Leave Location | 74 | | | | | Crew departed location |

Customer: Bayswater
Well Number: 27-28HN
Lease Info: G&DHanks X



Print Date/Time

5/29/2018 11:07:26 PM



| | Name | Y value | X value/time stamp | Tag name Y |
|---|--------------------|---------|--------------------------|----------------------------------|
| 1 | DS - Press (PSI) | 2163.0 | 5/29/2018 10:39:17 PM | Cementer\DS_DISCHARGE_PRESS_DIAL |
| 2 | DH - Density (PPG) | 8.68 i. | 5/29/2018 10:39:11 PM i. | Cementer\DENSITY2_ACTUAL_RATE |
| 3 | Combined Rate | 0.00 i. | 5/29/2018 10:39:11 PM i. | Cementer\Flow_Combined |
| 4 | | | | |
| 5 | | | | |

Source: Control1 11:07:21 PM