

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS

United States of America, COLORADO

Burroughs North 1

5.5" PRODUCTION

Job Date: Tuesday, February 14, 2017

Sincerely,

Derek Trier

Legal Notice

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **Burroughs North 1** cement **Production** casing job. A pre-job safety meeting was held before the job where details of the job were discussed, potential safety hazards were reviewed, and environmental compliance procedures were outlined.

Approximately, 50bbl of cement returned to surface.

Halliburton maintains a continuous quality improvement process and appreciates any comments or suggestions that you may have. Halliburton again thanks you for the opportunity to perform service work on this well. We hope to be your solutions provider for future projects.

Respectfully,

Halliburton [Ft. Lupton]

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Cementing Job Summary

The Road to Excellence Starts with Safety

| | | | |
|--|--------------------|----------------------------------|---------------------------|
| Sold To #: 369404 | Ship To #: 3617658 | Quote #: | Sales Order #: 0903807705 |
| Customer: EXTRACTION OIL & GAS | | Customer Rep: SHANE HATFORD | |
| Well Name: BURROUGHS NORTH | Well #: 1 | API/UWI #: 05-123-40459-00 | |
| Field: WATTENBERG | City (SAP): AULT | County/Parish: WELD | State: COLORADO |
| Legal Description: NE NE-14-7N-65W-760FNL-355FEL | | | |
| Contractor: H & P DRLG | | Rig/Platform Name/Num: H & P 321 | |
| Job BOM: 7523 | | | |
| Well Type: HORIZONTAL OIL | | | |
| Sales Person: HALAMERICA\HX38199 | | Srv Supervisor: Andrew Brennecke | |
| Job | | | |

| | | | |
|------------------------|---------|--|---------------------|
| Formation Name | | | |
| Formation Depth (MD) | Top | | Bottom |
| Form Type | | | BHST |
| Job depth MD | 17394ft | | Job Depth TVD 7330 |
| Water Depth | | | Wk Ht Above Floor 2 |
| Perforation Depth (MD) | From | | To |

Well Data

| Description | New / Used | Size in | ID in | Weight lbm/ft | Thread | Grade | Top MD ft | Bottom MD ft | Top TVD ft | Bottom TVD ft |
|-------------------|------------|---------|-------|---------------|--------|-------|-----------|--------------|------------|---------------|
| Casing | | 9.625 | 8.921 | 36 | | | 0 | 1594 | 0 | 0 |
| Casing | | 5.5 | 4.778 | 20 | | | 0 | 17394 | 0 | 0 |
| Open Hole Section | | | 8.5 | | | | 1594 | 17400 | 0 | 7330 |

Tools and Accessories

| Type | Size in | Qty | Make | Depth ft | Type | Size in | Qty | Make |
|--------------|---------|-----|------|----------|----------------|---------|-----|------|
| Guide Shoe | | | | | Top Plug | 5.5 | 1 | KLX |
| Float Shoe | 5.5 | 1 | KLX | 17394 | Bottom Plug | | | |
| Float Collar | 5.5 | 1 | KLX | 17341 | SSR plug set | | | |
| Insert Float | | | | | Plug Container | 5.5 | 1 | HES |
| Stage Tool | | | | | Centralizers | | | |

Fluid Data

Stage/Plug #: 1

| Fluid # | Stage Type | Fluid Name | Qty | Qty UoM | Mixing Density lbm/gal | Yield ft ³ /sack | Mix Fluid Gal | Rate bbl/min | Total Mix Fluid Gal |
|---------|------------------------------|--|-----|---------|------------------------|-----------------------------|---------------|--------------|---------------------|
| 1 | 11.5 lb/gal Tuned Spacer III | Tuned Spacer III | 50 | bbl | 11.5 | 3.74 | | 4 | |
| | 0.30 gal/bbl | MUSOL A, 330 GAL TOTE - (790828) | | | | | | | |
| | 149.34 lbm/bbl | BARITE, BULK (100003681) | | | | | | | |
| | 35.40 gal/bbl | FRESH WATER | | | | | | | |
| | 0.30 gal/bbl | DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665) | | | | | | | |

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iCem® Service

(v. 4.3.44)

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Cementing Job Summary

| Fluid # | Stage Type | Fluid Name | Qty | Qty UoM | Mixing Density lbm/gal | Yield ft3/sack | Mix Fluid Gal | Rate bbl/min | Total Mix Fluid Gal |
|---------------------|-------------------|----------------------------|----------------------|---------|---------------------------|-------------------|------------------------|-----------------|---------------------------|
| 2 | ElastiCem W/O CBL | ELASTICEM (TM) SYSTEM | 150 | sack | 13.2 | 1.57 | | 5.5 | 7.48 |
| 7.48 Gal | | FRESH WATER | | | | | | | |
| 0.90 % | | HR-5, 50 LB SK (100005050) | | | | | | | |
| | | | | | | | | | |
| Fluid # | Stage Type | Fluid Name | Qty | Qty UoM | Mixing Density lbm/gal | Yield ft3/sack | Mix Fluid Gal | Rate bbl/min | Total Mix Fluid Gal |
| 3 | ElastiCem Tail | ELASTICEM (TM) SYSTEM | 2050 | sack | 13.2 | 1.57 | | 8 | 7.49 |
| 7.49 Gal | | FRESH WATER | | | | | | | |
| 0.80 % | | HR-5, 50 LB SK (100005050) | | | | | | | |
| | | | | | | | | | |
| Fluid # | Stage Type | Fluid Name | Qty | Qty UoM | Mixing Density lbm/gal | Yield ft3/sack | Mix Fluid Gal | Rate bbl/min | Total Mix Fluid Gal |
| 4 | Displacement | Displacement | 383 | bbl | 8.33 | | | 10 | |
| | | | | | | | | | |
| Cement Left In Pipe | | Amount | 53 ft | | Reason | | | Shoe Joint | |
| Mix Water: | | pH 7 | Mix Water Chlorides: | | >200 ppm | | Mix Water Temperature: | | 68°F |
| Cement Temperature: | | | Plug Displaced by: | | 8.4 lb/gal | | Disp. Temperature: | | |
| Plug Bumped? | | Yes | Bump Pressure: | | 2845 psi MPa | | Floats Held? | | Yes |
| Cement Returns: | | 50 bbl | Returns Density: | | | | Returns Temperature: | | |
| Comment | | | | | | | | | |

2.0 Real-Time Job Summary

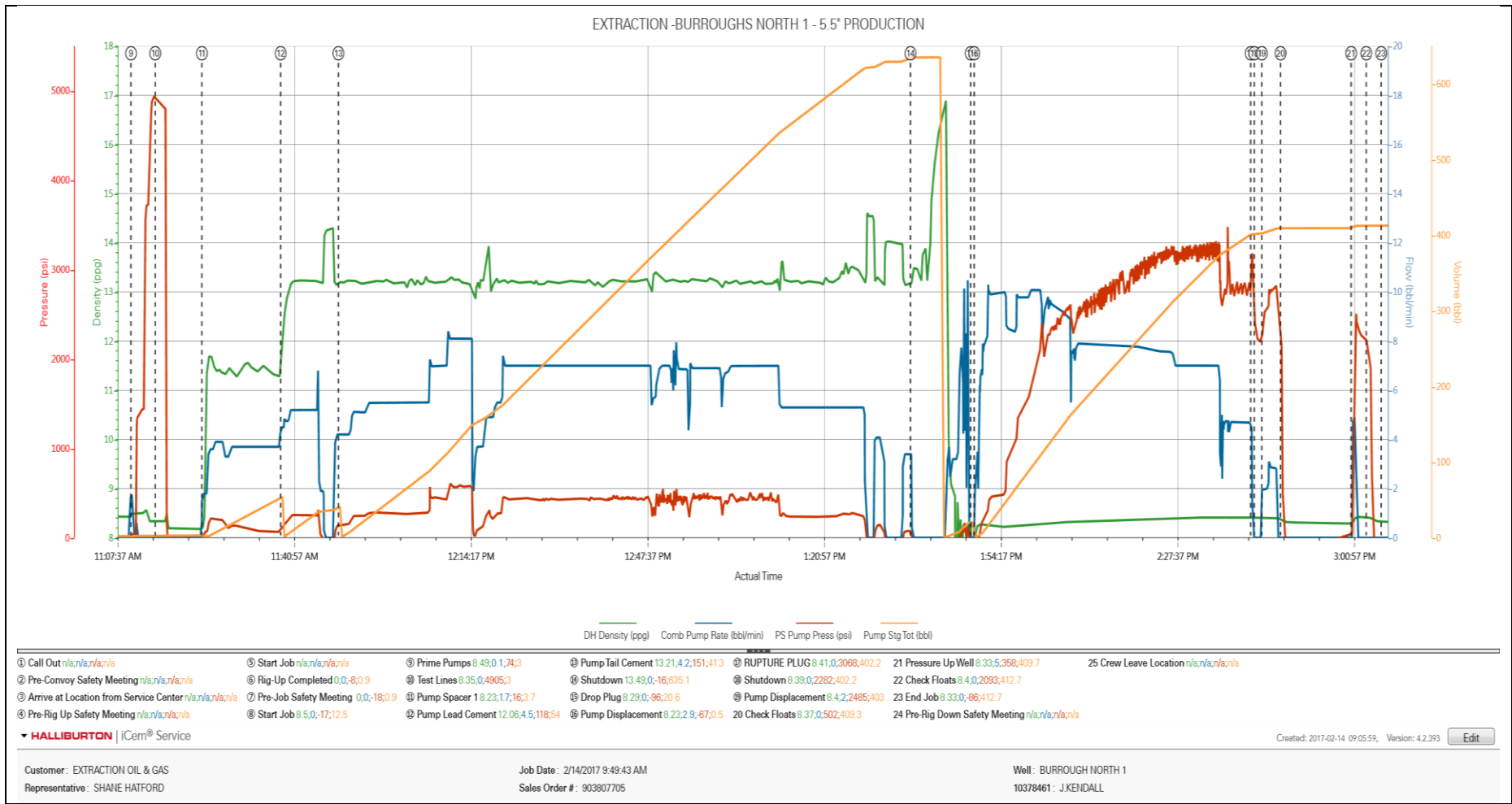
2.1 Job Event Log

| Type | Seq. No. | Activity | Graph Label | Date | Time | Source | DH Density (ppg) | Comb Pump Rate (bbl/min) | PS Pump Press (psi) | Pump Stg Tot (bbl) | Comments |
|-------|----------|--|--|-----------|----------|--------|---------------------|-----------------------------|------------------------|-----------------------|--|
| Event | 1 | Call Out | Call Out | 2/14/2017 | 03:30:00 | USER | | | | | |
| Event | 2 | Pre-Convoy Safety Meeting | Pre-Convoy Safety Meeting | 2/14/2017 | 05:45:00 | USER | | | | | FOUND BULK TRUCK BLEW AIR PLUG IN TRACTOR LATE TO LOCATION |
| Event | 3 | Arrive at Location from Service Center | Arrive at Location from Service Center | 2/14/2017 | 08:30:00 | USER | | | | | RIG FINISHED WITH CASING, ON LOCATION TIME REQUESTED 06:00 AM. |
| Event | 4 | Pre-Rig Up Safety Meeting | Pre-Rig Up Safety Meeting | 2/14/2017 | 08:45:00 | USER | | | | | HES PRESENT, WAITING ON DRIVER TO ARRIVE |
| Event | 6 | Rig-Up Completed | Rig-Up Completed | 2/14/2017 | 10:20:00 | USER | | | | | 1-ELITE, 2-660 BULK TRAILER, 2-FIELD BIN, 1-5.5" QUICK LATCH PLUG CONTAINER, 2" PUMP IRON, 4" SUCTION HOSE |
| Event | 7 | Pre-Job Safety Meeting | Pre-Job Safety Meeting | 2/14/2017 | 10:30:00 | USER | | | | | ALL HES AND RIG CREW PRESENT |
| Event | 8 | Start Job | Start Job | 2/14/2017 | 10:55:48 | COM5 | 8.40 | 0.00 | 7.00 | 0.0 | TD-17400', TP-17394', CSG-5.5" P110 20#, SJ-52.53', OH-7.875", SCG-0-1594', 9.625" 36#, MUD-9.0PPG |
| Event | 9 | Prime Pumps | Prime Pumps | 2/14/2017 | 11:10:27 | USER | 8.49 | 2.00 | 104.00 | 3.0 | FRESH WATER |
| Event | 10 | Test Lines | Test Lines | 2/14/2017 | 11:15:01 | COM5 | 8.35 | 0.00 | 4905.00 | 3.0 | ALL PRESSURE HELD ON LINES |
| Event | 11 | Pump Spacer 1 | Pump Spacer 1 | 2/14/2017 | 11:23:49 | COM5 | 11.50 | 4.0 | 201.00 | 50.0 | TUNED SPACER III, 11.5PPG, 3.74CF/SK, 23.7GAL/SK, 15GAL DUAL SPACER B, 15 GAL MUSAL |
| Event | 12 | Pump Lead Cement | Pump Lead Cement | 2/14/2017 | 11:38:41 | COM5 | 13.50 | 5.50 | 260.00 | 54.0 | ELASTICEM W/O CBL 150 SKS, 13.2PPG, 1.57CF/SK, 7.48GAL/SK |
| Event | 13 | Pump Tail Cement | Pump Tail Cement | 2/14/2017 | 11:49:34 | COM5 | 13.50 | 8.00 | 576.00 | 41.3 | ELASTICEM W/CBL 2050SKS, 13.2PPG, 1.57CF/SK, 7.49GAL/SK |
| Event | 14 | Shutdown | Shutdown | 2/14/2017 | 13:37:30 | USER | | | | | WASHED PUMPS AND LINES TO CATCH |

| TANK | | | | | | | | | | |
|-------|----|-----------------------------|-----------------------------|-----------|----------|------|------|-------|---------|---|
| Event | 15 | Drop Plug | Drop Plug | 2/14/2017 | 13:48:51 | USER | | | | PLUG LOADED INTO CASING BY KLX |
| Event | 16 | Pump Displacement | Pump Displacement | 2/14/2017 | 13:49:31 | COM5 | 8.33 | 10.00 | 3310.00 | 383.2 FRESH WATER |
| Event | 17 | Other | RUPTURE PLUG | 2/14/2017 | 14:41:40 | USER | 8.41 | 3.00 | 3200.00 | 383.5 PLUG RUPTURED 3200PSI |
| Event | 18 | Shutdown | Shutdown | 2/14/2017 | 14:42:22 | USER | 8.39 | 0.00 | 2282.00 | 383.5 |
| Event | 19 | Pump Displacement | Pump Displacement | 2/14/2017 | 14:43:47 | USER | 8.40 | 5.00 | 2804.00 | 392.5 PUMPED 5 BBL WET SHOE 2804PSI |
| Event | 20 | Check Floats | Check Floats | 2/14/2017 | 14:47:19 | USER | 8.37 | 0.00 | 2358.00 | 392.5 UNSURE ON FLOATS, 3BBLS BACK |
| Event | 21 | Pressure Up Well | Pressure Up Well | 2/14/2017 | 15:00:38 | USER | 8.33 | 5.00 | 2645.00 | 397.5 PUMPED 3 BBLS BACK INTO CASING |
| Event | 22 | Check Floats | Check Floats | 2/14/2017 | 15:03:29 | USER | 8.40 | 0.00 | 2093.00 | 397.5 FLOATS HELD 3 BBLS BACK |
| Event | 23 | End Job | End Job | 2/14/2017 | 15:06:18 | COM5 | 8.33 | 0.00 | -86.00 | 397.5 50BBLS CEMENT BACK TO SURFACE |
| Event | 24 | Pre-Rig Down Safety Meeting | Pre-Rig Down Safety Meeting | 2/14/2017 | 15:10:00 | USER | | | | ALL HES PRESENT |
| Event | 25 | Crew Leave Location | Crew Leave Location | 2/14/2017 | 16:45:00 | USER | | | | THANK YOU FOR CHOOSING HALLIBURTON, ANDREW BRENNECKE AND CREW |

3.0 Attachments

3.1 5.5 PRODUCTION.png



3.2 5.5 PRODUCTION-Custom Results.png

