

HALLIBURTON

iCem® Service

SRC ENERGY INC-EBUS

Sanford 32N-30C-M

Sincerely,

Alexandria Dionigi

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 **Sanford 32N-30C-M 5.5" 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 30 bbls of cement were 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 Fort Lupton

The Road to Excellence Starts with Safety

| | | | |
|--|----------------------------|--|----------------------------------|
| Sold To #: 359915 | Ship To #: 3953473 | Quote #: | Sales Order #: 0905744147 |
| Customer: SRC ENERGY INC-EBUS | | Customer Rep: Tony Pershall | |
| Well Name: SANFORD | Well #: 32N-30B-M | API/UWI #: 05-123-49930-00 | |
| Field: WATTENBERG | City (SAP): GREELEY | County/Parish: WELD | State: COLORADO |
| Legal Description: NE NW-29-5N-66W-871FNL-2392FWL | | | |
| Contractor: PRECISION DRLG | | Rig/Platform Name/Number: PRECISION 462 | |
| Job BOM: 7523 7523 | | | |
| Well Type: HORIZONTAL OIL | | | |
| Sales Person: HALAMERICA\HB41307 | | Service Supervisor: Nicholas Roles | |
| Job | | | |

| | |
|-------------------------------|--------------------------|
| Formation Name | |
| Formation Depth (MD) | Top |
| Form Type | BHST |
| Job depth MD | 15698ft |
| Water Depth | Wk Ht Above Floor |
| Perforation Depth (MD) | From |

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 | LTC | J-55 | 0 | 1850 | | 1850 |
| Casing | | 5.5 | 4.778 | 20 | | P110IC | 0 | 15698 | | 7296 |
| Open Hole Section | | | 8.5 | | | | 1850 | 7903 | 1850 | 7296 |
| Open Hole Section | | | 8.5 | | | | 7903 | 15713 | 0 | 0 |

Tools and Accessories

| Type | Size in | Qty | Make | Depth ft | Type | Size in | Qty | Make |
|--------------|---------|-----|------|----------|----------------|---------|-----|------|
| Guide Shoe | 5.5 | | | 15698 | Top Plug | 5.5 | 1 | |
| Float Shoe | 5.5 | | | | Bottom Plug | 5.5 | 1 | |
| Float Collar | 5.5 | | | 15592 | SSR plug set | 5.5 | | HES |
| Insert Float | 5.5 | | | | Plug Container | 5.5 | 1 | HES |
| Stage Tool | 5.5 | | | | Centralizers | 5.5 | | HES |

Fluid Data

| Stage/Plug #: 1 | | | | | | | | | |
|-----------------|------------------------------|--|-----|---------|---------------------------|-------------------|------------------|-----------------|---------------------------|
| 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 |
| 1 | Tuned Prime Cement Spacer | SBM FDP-C1337-18 CEMENT SPACER SYS | 80 | bbl | 11.5 | 3.84 | | 6 | |
| 146.19 lbm/bbl | | BARITE, BULK (100003681) | | | | | | | |
| 0.50 gal/bbl | | DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665) | | | | | | | |
| 0.25 gal/bbl | | D-AIR 3000L, 5 GAL PAIL (101007444) | | | | | | | |
| 1 lbm/bbl | | FE-2 (100001615) | | | | | | | |

| | | | | | | | | | |
|---|-------------------|--|---------------------|---------|---------------------------|-------------------|------------------------|-----------------|---------------------------|
| 0.50 gal/bbl | | MUSOL(R) A, 5 GAL PAIL (100064220) | | | | | | | |
| | | | | | | | | | |
| 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 | Gasstop B1 | GASSTOP (TM) SYSTEM | 1269 | sack | 13.2 | 1.54 | | 6 | 7.66 |
| 5.26 Gal | | FRESH WATER | | | | | | | |
| 0.25 lbm | | POLY-E-FLAKE (101216940) | | | | | | | |
| 0.50 % | | SCR-100 (100003749) | | | | | | | |
| | | | | | | | | | |
| 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 | NeoCem | NeoCem TM | 870 | sack | 13.2 | 2.05 | | 8 | 9.79 |
| 9.75 Gal | | FRESH WATER | | | | | | | |
| 0.08 % | | SCR-100 (100003749) | | | | | | | |
| | | | | | | | | | |
| 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 | MMCR Displacement | MMCR Displacement | 40 | bbl | 8.34 | | | 10 | |
| 0.50 gal/bbl | | MICRO MATRIX CEMENT RETARDER, 5 GAL PAIL (100003781) | | | | | | | |
| | | | | | | | | | |
| 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 |
| 5 | Water | Water | 236 | bbl | 8.33 | | | 10 | |
| 1 gal/Mgal | | CLA-WEB - BULK (101985043) | | | | | | | |
| | | | | | | | | | |
| 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 |
| 6 | MMCR Displacement | MMCR Displacement | 70 | bbl | 8.34 | | | 10 | |
| 0.50 gal/bbl | | D-AIR 3000L, 5 GAL PAIL (101007444) | | | | | | | |
| | | | | | | | | | |
| Cement Left In Pipe | | Amount | 0 ft | | Reason | | | Wet Shoe | |
| Mix Water: | | pH 7 | Mix Water Chloride: | | 0 ppm | | Mix Water Temperature: | | 60 °F °C |
| Cement Temperature: | | 66 °F °C | Plug Displaced by: | | 8.33 lb/gal | | Disp. Temperature: | | 60 °F °C |
| Plug Bumped? | | Yes | Bump Pressure: | | psi MPa | | Floats Held? | | Yes |
| Cement Returns: | | 30 bbl | Returns Density: | | ## lb/gal kg/m3 | | Returns Temperature: | | ## °F °C |
| Comment Got 30bbls cement to surface. Estimated TOT-7903' | | | | | | | | | |

2.0 Real-Time Job Summary

2.1 Job Event Log

| Type | Seq. No. | Activity | Graph Label | Date | Time | Source | Comb Pump Rate (bbl/min) | DH Density (ppg) | DS Pump Press (psi) | Pump Stg Tot (bbl) | Comments |
|-------|----------|--|--|----------|----------|--------|-----------------------------|---------------------|------------------------|-----------------------|---|
| Event | 1 | Call Out | Call Out | 6/5/2019 | 01:00:00 | USER | | | | | Called out by Service Coordinator for O/L at 0700 |
| Event | 2 | Pre-Convoy Safety Meeting | Pre-Convoy Safety Meeting | 6/5/2019 | 05:15:00 | USER | | | | | Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive. |
| Event | 3 | Depart from Service Center or Other Site | Depart from Service Center or Other Site | 6/5/2019 | 05:30:00 | USER | | | | | Journey Management prior to departure |
| Event | 4 | Arrive at Location from Service Center | Arrive at Location from Service Center | 6/5/2019 | 06:15:00 | USER | | | | | Upon arrival met with company man to discuss job details and calculations, performed hazard hunt and site assessment. |
| Event | 5 | Pre-Rig Up Safety Meeting | Pre-Rig Up Safety Meeting | 6/5/2019 | 06:30:00 | USER | | | | | Discussed rigging up hazards and procedure according to HMS. |
| Event | 6 | Other | Other | 6/5/2019 | 07:30:00 | USER | | | | | Water test- PH-6, Chlor-0, Temp-65. Cement temp-70. |
| Event | 7 | Pre-Job Safety Meeting | Pre-Job Safety Meeting | 6/5/2019 | 10:15:00 | USER | 0.00 | 8.21 | 4.00 | 71.70 | Held safety meeting with all job associated personnel to discuss job procedure, hazards and stop work authority. |
| Event | 8 | Start Job | Start Job | 6/5/2019 | 10:39:44 | COM4 | 0.00 | 7.72 | 3.00 | 0.00 | TD-15713', TP-15698' 5.5" 20#, WS Sub-15592', TVD-7298', OH-8.5", SURF-1850' 9.625" 36#, MUD-10# |
| Event | 9 | Test Lines | Test Lines | 6/5/2019 | 10:41:19 | COM4 | 0.00 | 8.35 | 76.00 | 3.10 | Pumped 5bbls fresh water to fill lines, closed manifold and performed 500psi k/o function test, proceeded to perform 5th gear stall at 1452psi, continued to bring pressure up to |

| | | | | | | | | | | | |
|---|----|-------------------|-------------------|----------|----------|------|------|-------|---------|--------|---|
| 6000psi. Pressure stabilized and held with no leaks | | | | | | | | | | | |
| Event | 10 | Drop Bottom Plug | Drop Bottom Plug | 6/5/2019 | 11:00:32 | COM4 | 0.00 | 8.38 | 11.00 | 4.10 | Dropped by HES supervisor, witnessed by company man. |
| Event | 11 | Pump Spacer | Pump Spacer | 6/5/2019 | 11:01:19 | USER | 3.20 | 9.04 | 238.00 | 5.00 | Pumped 80bbls 11.5# 3.84y 23.9g/s Tuned Prime Spacer with 40g Musol A, 40g Dual Spacer B and 5g D-Air at 6bpm 300psi. |
| Event | 12 | Pump Lead Cement | Pump Lead Cement | 6/5/2019 | 11:15:59 | COM4 | 5.90 | 12.01 | 216.00 | 0.00 | Pumped 1269sks or 348bbls 13.2# 1.54y 7.66g/s Gasstop at 8bpm 450psi. |
| Event | 13 | Check Weight | Check Weight | 6/5/2019 | 11:18:07 | COM4 | 6.00 | 13.23 | 276.00 | 12.80 | Weight verified with pressurized mud scales. |
| Event | 14 | Check Weight | Check Weight | 6/5/2019 | 11:43:44 | COM4 | 8.00 | 13.29 | 545.00 | 155.90 | Weight verified with pressurized mud scales. |
| Event | 15 | Check Weight | Check Weight | 6/5/2019 | 11:51:50 | COM4 | 8.00 | 13.16 | 589.00 | 220.60 | Weight verified with pressurized mud scales. |
| Event | 16 | Check Weight | Check Weight | 6/5/2019 | 11:59:17 | COM4 | 8.00 | 13.28 | 605.00 | 280.10 | Weight verified with pressurized mud scales. |
| Event | 17 | Pump Tail Cement | Pump Tail Cement | 6/5/2019 | 12:14:44 | COM4 | 8.00 | 13.18 | 551.00 | 403.40 | Pumped 870sks or 318bbls 13.2# 2.05y 9.79g/s Neocem at 8bpm 580psi. |
| Event | 18 | Check Weight | Check Weight | 6/5/2019 | 12:38:23 | COM4 | 6.60 | 13.12 | 473.00 | 45.30 | Weight verified with pressurized mud scales. |
| Event | 19 | Shutdown | Shutdown | 6/5/2019 | 13:23:56 | COM4 | 0.00 | 13.22 | 166.00 | 363.90 | Pumped 5bbls fresh water to clean through pumps and lines. |
| Event | 20 | Drop Top Plug | Drop Top Plug | 6/5/2019 | 13:33:45 | COM4 | 0.00 | 8.18 | 7.00 | 387.00 | Dropped by HES supervisor, witnessed by company man. |
| Event | 21 | Pump Displacement | Pump Displacement | 6/5/2019 | 13:33:49 | COM4 | 0.00 | 8.17 | 7.00 | 387.00 | Pumped 346bbls fresh water with 5g MMCR in first 40bbls, 5g MMCR in the last 70bbls, 20g clayweb and 3# biocide throughout. |
| Event | 22 | Bump Plug | Bump Plug | 6/5/2019 | 14:43:26 | COM4 | 0.00 | 8.15 | 2919.00 | 363.40 | Slowed down to 3bpm at 325bbls away, final circulating pressure-2350psi, bump pressure-2900psi. |

| | | | | | | | | | | | |
|-------|----|--|--|----------|----------|------|------|------|---------|--------|--|
| Event | 23 | Pressure Up Well | Pressure Up Well | 6/5/2019 | 14:43:47 | COM4 | 0.30 | 8.15 | 2908.00 | 363.40 | Pumped fresh water to shear at 4900psi, continued to pump 6bbls fresh water at 3bpm 2150psi. |
| Event | 24 | Other | Other | 6/5/2019 | 14:49:52 | COM4 | 0.00 | 8.13 | 2093.00 | 376.00 | Released pressure and got 2.5bbls back to pump. Floats held. |
| Event | 25 | End Job | End Job | 6/5/2019 | 14:51:19 | COM4 | 0.00 | 8.12 | 0.00 | 0.00 | Got 30bbls cement to surface. Estimated TOT-7903' |
| Event | 26 | Pre-Rig Down Safety Meeting | Pre-Rig Down Safety Meeting | 6/5/2019 | 14:55:00 | USER | | | | | Discussed rigging down hazards and procedure according to HMS with all HES personnel |
| Event | 27 | Safety Meeting - Departing Location | Safety Meeting - Departing Location | 6/5/2019 | 16:45:00 | USER | | | | | Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive. |
| Event | 28 | Depart Location for Service Center or Other Site | Depart Location for Service Center or Other Site | 6/5/2019 | 17:00:00 | USER | | | | | Pre journey management prior to departure. |

3.0 Attachments

3.1 Sanford 32N-30B-M-Custom Results (1).png

