

# HALLIBURTON

iCem<sup>®</sup> Service

## **SRC ENERGY INC-EBUS**

Date: Tuesday, August 27, 2019

## **Bost Farm 31N-11C-L Production**

Job Date: Sunday, July 28, 2019

Sincerely,  
**Tyler Hill**

## Legal Notice

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### Disclaimer:

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## 1.0 Cementing Job Summary

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### 1.1 Executive Summary

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Halliburton appreciates the opportunity to perform the cementing services on the **Bost Farm 31N-11C-L** 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 7 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 Ft. Lupton**

*The Road to Excellence Starts with Safety*

|  |                   |                                    |                          |   |               |                                   |                               |                                  |                      |                      |                            |
|--|-------------------|------------------------------------|--------------------------|---|---------------|-----------------------------------|-------------------------------|----------------------------------|----------------------|----------------------|----------------------------|
| <b>Sold To #:</b> 359915                                 |                   | <b>Ship To #:</b> 3901368          |                          | <b>Quote #:</b>                             |               | <b>Sales Order #:</b> 0905859532  |                               |                                  |                      |                      |                            |
| <b>Customer:</b> SRC ENERGY INC-EBUS                     |                   |                                    |                          | <b>Customer Rep:</b> Level                  |               |                                   |                               |                                  |                      |                      |                            |
| <b>Well Name:</b> BOST FARM                              |                   |                                    | <b>Well #:</b> 31N-11C-L |   |               | <b>API/UWI #:</b> 05-123-47666-00 |                               |                                  |                      |                      |                            |
| <b>Field:</b> WATTENBERG                                 |                   | <b>City (SAP):</b> WINDSOR         |                          | <b>County/Parish:</b> WELD                  |               |                                   | <b>State:</b> COLORADO        |                                  |                      |                      |                            |
| <b>Legal Description:</b> SW NW-7-5N-66W-1395FNL-1120FWL |                   |                                    |                          |   |               |                                   |                               |                                  |                      |                      |                            |
| <b>Contractor:</b> PRECISION DRLG                        |                   |                                    |                          | <b>Rig/Platform Name/Num:</b> PRECISION 462 |               |                                   |                               |                                  |                      |                      |                            |
| <b>Job BOM:</b> 7523 7523                                |                   |                                    |                          |   |               |                                   |                               |                                  |                      |                      |                            |
| <b>Well Type:</b> HORIZONTAL OIL                         |                   |                                    |                          |   |               |                                   |                               |                                  |                      |                      |                            |
| <b>Sales Person:</b> HALAMERICA\HB41307                  |                   |                                    |                          | <b>Srv Supervisor:</b> Prince Perez         |               |                                   |                               |                                  |                      |                      |                            |
| <b>Job</b>   |                   |                                    |                          |   |               |                                   |                               |                                  |                      |                      |                            |
|  |                   |                                    |                          |   |               |                                   |                               |                                  |                      |                      |                            |
| <b>Formation Depth (MD)</b>                              |                   | <b>Top</b> 0'                      |                          | <b>Bottom</b>                               |               | 17,180                            |                               |                                  |                      |                      |                            |
| <b>Job depth MD</b>                                      |                   | 17166ft                            |                          | <b>Job Depth TVD</b>                        |               | 1797                              |                               |                                  |                      |                      |                            |
| <b>Water Depth</b>                                       |                   |                                    |                          | <b>Wk Ht Above Floor</b>                    |               | 5                                 |                               |                                  |                      |                      |                            |
| <b>Well Data</b>   |                   |                                    |                          |   |               |                                   |                               |                                  |                      |                      |                            |
| <b>Description</b>                                       | <b>New / Used</b> | <b>Size in</b>                     | <b>ID in</b>             | <b>Weight lbm/ft</b>                        | <b>Thread</b> | <b>Grade</b>                      | <b>Top MD ft</b>              | <b>Bottom MD ft</b>              | <b>Top TVD ft</b>    | <b>Bottom TVD ft</b> |                            |
| Casing   |                   | 9.625                              | 8.921                    | 36  | LTC           | J-55                              | 0                             | 1797                             | 0                    | 1797                 |                            |
| Casing   |                   | 5.5                                | 4.778                    | 20  | TXP-BTC       | P110IC                            | 0                             | 17166                            | 0                    | 7016                 |                            |
| Open Hole Section  |                   |                                    | 8.5                      |   |               |                                   | 1797                          | 17180                            | 1797                 | 7016                 |                            |
| <b>Tools and Accessories</b>                             |                   |                                    |                          |   |               |                                   |                               |                                  |                      |                      |                            |
| <b>Type</b>  | <b>Size in</b>    | <b>Qty</b>                         | <b>Make</b>              | <b>Depth ft</b>                             |               | <b>Type</b>                       | <b>Size in</b>                | <b>Qty</b>                       | <b>Make</b>          |                      |                            |
| Guide Shoe   | 5.5               | 1                                  |                          | 17166                                       |               | Top Plug                          | 5.5                           | 1                                |                      |                      |                            |
| Float Shoe   | 5.5               |                                    |                          |   |               | Bottom Plug                       | 5.5                           | 1                                |                      |                      |                            |
| Float Collar   | 5.5               | 1                                  |                          | 17,060                                      |               | SSR plug set                      | 5.5                           |                                  |                      |                      |                            |
| Insert Float   | 5.5               |                                    |                          |   |               | Plug Container                    | 5.5                           | 1                                | HES                  |                      |                            |
| Stage Tool   | 5.5               |                                    |                          |   |               | Centralizers                      | 5.5                           |                                  | 263                  |                      |                            |
| <b>Fluid Data</b>  |                   |                                    |                          |   |               |                                   |                               |                                  |                      |                      |                            |
| <b>Stage/Plug #:</b> 1                                   |                   |                                    |                          |   |               |                                   |                               |                                  |                      |                      |                            |
| <b>Fluid #</b>   | <b>Stage Type</b> | <b>Fluid Name</b>                  |                          |   | <b>Qty</b>    | <b>Qty UoM</b>                    | <b>Mixing Density lbm/gal</b> | <b>Yield ft<sup>3</sup>/sack</b> | <b>Mix Fluid Gal</b> | <b>Rate bbl/min</b>  | <b>Total Mix Fluid Gal</b> |
| 1  | Spacer            | SBM FDP-C1337-18 CEMENT SPACER SYS |                          |   | 80            | bbbl                              | 11.5                          | 3.84                             |                      | 4                    | 23.9                       |

| Fluid #             | Stage Type   | Fluid Name            | Qty  | Qty UoM | Mixing Density<br>lbm/gal | Yield<br>ft <sup>3</sup> /sack | Mix Fluid<br>Gal | Rate<br>bbl/min | Total Mix<br>Fluid<br>Gal |  |
|---------------------|--------------|-----------------------|------|---------|---------------------------|--------------------------------|------------------|-----------------|---------------------------|--|
| 2                   | Lead         | ELASTICEM (TM) SYSTEM | 1165 | sack    | 13.2                      | 1.6                            |                  | 8               | 7.8                       |  |
| 3                   | Tail         | NeoCem TM             | 1062 | sack    | 13.2                      | 2.08                           |                  | 8               | 10.18                     |  |
| 4                   | Displacement | MMCR Displacement     | 20   | bbl     | 8.34                      |                                |                  | 8               |                           |  |
| 5                   | Displacement | Water                 | 288  | bbl     | 8.33                      |                                |                  | 8               |                           |  |
| 6                   | Displacement | MMCR Displacement     | 70   | bbl     | 8.34                      |                                |                  | 8               |                           |  |
|                     |              |                       |      |         |                           |                                |                  |                 |                           |  |
| Cement Left In Pipe |              | Amount                | 0 ft |         | Reason                    |                                |                  | Wet Shoe        |                           |  |

|                     |       |                     |             |                        |       |
|---------------------|-------|---------------------|-------------|------------------------|-------|
| Mix Water:          | pH 7  | Mix Water Chloride: | <300 ppm    | Mix Water Temperature: | 65 °F |
| Cement Temperature: | ## °F | Plug Displaced by:  | 8.33 lb/gal | Disp. Temperature:     | 65 °F |
| Plug Bumped?        | Yes   | Bump Pressure:      | 2924 psi    | Floats Held?           | Yes   |
| Cement Returns:     | 7 bbl | Returns Density:    | ## lb/gal   | Returns Temperature:   | ## °F |

**Comment**

Pumped 80 bbls of Tuned Prime spacer with 40 gallons of Dual B, 40 gallons of Musol A.

Pumped 332 bbls of Elasticem.

Pumped 393 bbls of Neocem.

Pumped 378 bbls of fresh water displacement with 10 gallons of MMCR in the first 20 bbls, 3 lbs of BE3, 20 gallons of Clay web, and 10 gallons of MMCR in the last 70 bbls of displacement.

Pumped a 6 bbl wet shoe.

3.5 bbls back on the floats.

7 bbls of cement back to surface.

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

| Type  | Seq. No. | Activity                                | Graph Label                             | Date      | Time     | Source | DH Density<br><i>(ppg)</i> | Comb Pump Rate<br><i>(bbl/min)</i> | PS Pump Press<br><i>(psi)</i> | Comments   |
|-------|----------|---|---|-----------|----------|--------|----------------------------|------------------------------------|-------------------------------|--|
| Event | 1        | Call Out                                | Call Out                                | 7/27/2019 | 09:00:00 | USER   |                            |                                    |                               | CREW CALLED OUT AT 9:00, REQUESTED ON LOCATION 15:00. CREW PICKED UP CEMENT, CHEMICALS, AND PLUG CONTAINER FROM FT. LUPTON, CO. BULK 660, 11633846, 10991603, AND PUMP 11189145.   |
| Event | 2        | Pre-Convoy Safety Meeting               | Pre-Convoy Safety Meeting               | 7/27/2019 | 12:50:00 | USER   |                            |                                    |                               | CREW DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW.   |
| Event | 3        | Crew Leave Shop                         | Crew Leave Shop                         | 7/27/2019 | 13:00:00 | USER   |                            |                                    |                               | STARTED JOURNEY MANAGEMENT.  |
| Event | 4        | Arrive at Location from Service Center  | Arrive at Location from Service Center  | 7/27/2019 | 14:00:00 | USER   |                            |                                    |                               | END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING- 9/58" 36 LB/FT @ 1,797', 5.5" CASING: 20 LB/FT TOTAL 17,166', 8 1/2" HOLE, TD 17,180', 48' SHOE TRAC, TVD- 7,016'. PUMP FRESH WATER DISPLACEMENT. CASING LANDED @ 18:00 7/27/2019. |
| Event | 5        | Safety Meeting - Assessment of Location | Safety Meeting - Assessment of Location | 7/27/2019 | 14:10:00 | USER   |                            |                                    |                               | HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH  |

|       |    |                        |                        |           |          |      |       |      |         | LOCATION, RIG UP AND WEATHER.  |
|-------|----|------------------------|------------------------|-----------|----------|------|-------|------|---------|--|
| Event | 6  | Rig-Up Equipment       | Rig-Up Equipment       | 7/27/2019 | 14:20:00 | USER |       |      |         | RIG UP BULK AND MIXING EQUIPMENT.  |
| Event | 7  | Rig-Up Completed       | Rig-Up Completed       | 7/27/2019 | 18:35:00 | USER |       |      |         |  |
| Event | 8  | Pre-Job Safety Meeting | Pre-Job Safety Meeting | 7/27/2019 | 18:45:00 | USER |       |      |         | MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.   |
| Event | 9  | Start Job              | Start Job              | 7/27/2019 | 20:13:43 | COM4 | 8.71  | 0.00 | -3.00   | BEGIN RECORDING JOB DATA.  |
| Event | 10 | Test Lines             | Test Lines             | 7/27/2019 | 20:19:08 | COM4 | 8.42  | 0.00 | 6261.00 | PRESSURE TESTED IRON TO 6,500 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1,000 PSI, 5TH GEAR STALL OUT @ 2,100 PSI. 6,500 PRESSURE TEST KICKED OUT @ 6,200 PSI  |
| Event | 11 | Pump Spacer 1          | Pump Spacer 1          | 7/27/2019 | 20:23:27 | COM4 | 8.25  | 0.00 | -1.00   | PUMP 80 BBLS OF TUNED PRIME @ 11.5 LB/GAL, 3.84 CUFT/SK, 23.9 GALL/SK. 40 GALLONS OF DUAL B, 40 GALLONS OF MUSOL A. 80 BBLS CALCULATED TO RETURN TO SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 4 BBLS/MIN @ 320 PSI. |
| Event | 12 | Pump Lead Cement       | Pump Lead Cement       | 7/27/2019 | 20:44:27 | COM4 | 13.13 | 4.10 | 380.00  | PUMPED 1,165 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.6 FT3/SK, 7.8 GAL/SK. 332 BBLS. HOL CALCULATED @ 7,608'.7 BBLS CALCULATED TO SURFACE. DENSITY   |

|       |    |                   |                   |           |          |      |       |      |         | VERIFIED BY PRESSURIZED<br>MUD SCALES. PUMP RATE 8<br>BBLs/MIN @ 700 PSI  |
|-------|----|-------------------|-------------------|-----------|----------|------|-------|------|---------|---|
| Event | 13 | Pump Tail Cement  | Pump Tail Cement  | 7/27/2019 | 21:32:42 | COM4 | 13.18 | 6.40 | 1127.00 | PUMP 1,062 SKS OF<br>NEOCEM @ 13.2 LB/GAL,<br>2.08 FT3/SK, 10.18 GAL/SK,<br>394 BBLs. HOT CALCULATED<br>@ 9,558', TOT CALCULATED<br>@ 7,608'. DENSITY VERIFIED<br>BY PRESSURIZED MUD<br>SCALES. PUMP RATE 8<br>BBLs/MIN @ 1,490 PSI.  |
| Event | 14 | Shutdown          | Shutdown          | 7/27/2019 | 22:28:21 | COM4 | 12.97 | 0.00 | 59.00   | SHUTDOWN TO WASH<br>LINES.  |
| Event | 15 | Drop Top Plug     | Drop Top Plug     | 7/27/2019 | 22:41:00 | COM4 | -0.19 | 0.00 | 10.00   | PLUG LEFT CONTAINER,<br>VERIFIED BY CO. MAN.  |
| Event | 16 | Pump Displacement | Pump Displacement | 7/27/2019 | 22:41:03 | COM4 | -0.19 | 0.00 | 10.00   | BEGIN CALCULATED<br>DISPLACEMENT OF 378<br>BBLs WITH FRESH WATER.<br>10 GALLONS OF MMCR IN<br>THE FIRST 20 BBLs, 3 LBS OF<br>BE3, 10 GALLONS OF MMCR<br>IN THE LAST 70 BBLs, AND<br>20 GALLONS OF CLAYWEB<br>THROUGHOUT. PUMP RATE<br>6 BPM @ 3,060 PSI.<br>CAUGHT CEMENT @ 10<br>BBLs INTO DISPLACEMENT.<br>SPACER TO SURFACE @ 298<br>BBLs INTO DISPLACEMENT.<br>80 BBLs OF TUNED SPACER<br>TO SURFACE. 7 BBLs OF<br>CEMENT TO SURFACE.<br>SLOW RATE TO 4 BPM @<br>360 BBLs INTO<br>DISPLACEMENT. |
| Event | 17 | Bump Plug         | Bump Plug         | 7/27/2019 | 23:42:32 | COM4 | 8.18  | 3.80 | 2924.00 | PLUG BUMPED AT<br>CALCULATED<br>DISPLACEMENT. 2,924 PSI   |

|       |    |  |  |           |          |      |      |      |         |   |
|-------|----|--|--|-----------|----------|------|------|------|---------|---|
|       |    |  |  |           |          |      |      |      |         | PRESSURED 500 PSI OVER BUMP. SHUTDOWN FOR 1 MINUTE.   |
| Event | 18 | Shift Tool - Lower                     | Shift Tool - Lower                     | 7/27/2019 | 23:45:42 | USER | 8.18 | 1.90 | 2886.00 | SHEARED @ 2,886 PSI FOLLOWED BY A 6 BBL WET SHOE.   |
| Event | 19 | Check Floats                           | Check Floats                           | 7/27/2019 | 23:48:44 | USER | 8.17 | 0.00 | 705.00  | RELEASED PRESSURE, FLOATS HELD, 3.5 BBLs BACK.  |
| Event | 20 | End Job                                | End Job                                | 7/27/2019 | 23:49:50 | COM4 | 8.11 | 0.00 | -1.00   | STOP RECORDING JOB DATA.  |
| Event | 21 | Post-Job Safety Meeting (Pre Rig-Down) | Post-Job Safety Meeting (Pre Rig-Down) | 7/28/2019 | 00:30:00 | USER |      |      |         | DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES. |
| Event | 22 | Rig-Down Equipment                     | Rig-Down Equipment                     | 7/28/2019 | 00:40:00 | USER |      |      |         | RIG DOWN BULK AND MIXING EQUIPMENT.   |
| Event | 23 | Rig-Down Completed                     | Rig-Down Completed                     | 7/28/2019 | 01:40:00 | USER |      |      |         |   |
| Event | 24 | Pre-Convoy Safety Meeting              | Pre-Convoy Safety Meeting              | 7/28/2019 | 01:50:00 | USER |      |      |         | DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES. |
| Event | 25 | Crew Leave Location                    | Crew Leave Location                    | 7/28/2019 | 02:00:00 | USER |      |      |         | THANK YOU FOR USING HALLIBURTON – PRINCE PEREZ AND CREW.                                      |

## 3.0 Attachments

### 3.1 SRC Energy Bost Farm 31N-11C-L Production.png

