

HALLIBURTON

iCem[®] Service

ENSIGN ENERGY INC

For:

Date: Friday, July 18, 2014

SRC Kiehn C-4NHZ Intermediate

Case 1

Sincerely,

Derek Trier

Table of Contents

| | | |
|-----|--------------------------|----|
| 1.1 | Executive Summary | 3 |
| 1.2 | Cementing Job Summary | 4 |
| 1.4 | Planned Pumping Schedule | 6 |
| 1.5 | Job Overview | 7 |
| 1.6 | Job Event Log | 8 |
| 2.0 | Custom Graphs | 10 |
| 2.1 | Custom Graph | 10 |
| 3.0 | Appendix | 11 |

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the **SRC Kiehn C-4NHZ** cement **Surface** 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.

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 [Brighton]

Job Times

| | Date | Time | Time Zone |
|--------------------------|-------------|-------------|------------------|
| Called Out | 07-17 | 1500 | MT |
| On Location | 07-17 | 1945 | MT |
| Job Started | 07-18 | 0203 | MT |
| Job Completed | 07-18 | 0422 | MT |
| Departed Location | 07-18 | 0600 | MT |

1.2 Cementing Job Summary

| | | | | | | | | | |
|---|--|---------------------------------|-----------------------|----------------------------|--|-----------------------------------|------------------------|--|--|
| Sold To #: 301256 | | Ship To #: 3542584 | | Quote #: | | Sales Order #: 0901506430 | | | |
| Customer: ENSIGN UNITED STATES DRILLING | | | | | Customer Rep: | | | | |
| Well Name: SRC KIEHN | | | Well #: C-4NHZ | | | API/UWI #: 05-123-39715-00 | | | |
| Field: WATTENBERG | | City (SAP): JOHNSTOWN | | County/Parish: WELD | | | State: COLORADO | | |
| Legal Description: SW SE-4-4N-68W-201FSL-1718FEL | | | | | | | | | |
| Contractor: ENSIGN DRLG | | | | | Rig/Platform Name/Num: ENSIGN 131 | | | | |
| Job BOM: 7522 | | | | | | | | | |
| Well Type: HORIZONTAL OIL | | | | | | | | | |
| Sales Person: HALAMERICA\HX38199 | | | | | Srvc Supervisor: | | | | |

Job

Well Data

| | 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 | 556 | 0 | 556 |
| Casing | | 7 | 6.184 | 29 | BTC | | 0 | 7440 | 0 | 7067 |
| Open Hole Section | | | 8.75 | | | | 556 | 7440 | 556 | 7067 |

Tools and Accessories

| Type | Size in | Qty | Make | Depth ft | | Type | Size in | Qty | Make |
|--------------|------------|-----|------|-------------|--|----------------|------------|-----|------|
| Guide Shoe | 7 | 1 | | 7440 | | Top Plug | 7 | 1 | HES |
| Float Shoe | 7 | 1 | | | | Bottom Plug | 7 | 1 | HES |
| Float Collar | 7 | 1 | | | | SSR plug set | 7 | 1 | HES |
| Insert Float | 7 | 1 | | | | Plug Container | 7 | 1 | HES |
| | 7 | 1 | | | | Centralizers | 7 | 1 | HES |

Miscellaneous Materials

| Gelling Agt | Conc | Surfactant | Conc | Acid Type | Qty | | | | |
|---------------|------|------------|------|-----------|-----|--|--|--|--|
| Treatment Fld | Conc | | Conc | Sand Type | | | | | |
| | | | | | | | | | |

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 | CLEANSPACER III | CLEANSPACER III | 40 | bbl | 10.5 | 3.86 | 35.1 | | |
| 35.10 gal/bbl | | | | | | | | | |
| 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 |
| 2 | EconoCem B2 | ECONOCEM (TM) SYSTEM | 480 | sack | 12.5 | 1.91 | 10.32 | 6 | 10.32 |
| 10.32 Gal | | | | | | | | | |
| 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 |
| 3 | FracCem | FRACCEN (TM) SYSTEM | 135 | sack | 13.5 | 1.74 | 8.27 | 6 | 8.27 |
| 8.27 Gal | | | | | | | | | |
| 3 lbm | | D, 50 LB SK (100012223) | | | | | | | |
| 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 |
| 4 | Displacement | Displacement | 273.61 | bbl | 9 | | | | |
| | | | | | | | | | |
| | | Amount | 46 ft | | | | | | |
| Comment NO CEMENT OR SPACER TO SURFACE | | | | | | | | | |
| Formation Name | | | | | | | | | |
| Formation Depth (MD) | | Top | | | Bottom | | | | |
| Form Type | | | | BHST | | | | | |
| Job depth MD | | 7440ft | | Job Depth TVD | | | | | |
| Water Depth | | | | Wk Ht Above Floor | | | | | |
| Perforation Depth (MD) | | | | To | | | | | |

1.4 Planned Pumping Schedule

HALLIBURTON

SYNERGY SRC KIEHN C-4NHZ

SO#901506430

- 1) PRESSURE TEST PUMPS AND LINES**
 - 2) PUMP 10BBL FRESH WATER WITH RED TRACER DYE**
 - 3) MIX 40BBL OF 10.5PPG TUNE SPACER**
 - 4) MIX 163BBL OR 480SKS OF 12.5PPG ECONOCEM**
 - 5) MIX 41.83BBL OR 135SKS OF 13.5PPG FRACCEM**
 - 6) SHUT DOW AND DROP PLUG**
 - 7) PUMP DISPLACE 273.61BBL OF DRILL MUD**
 - 8) SLOW RATE ON LAST 10 TO 3BPM**
 - 9) BUMP PLUG 500PSI OVER FINAL PUMP PRESSURE**
 - 10) CHECK FLOATS**
 - 11) PRESSURE TEST CASING 1000PSI FOR 15MIN**
 - 12) END JOB**
- WATER NEED FOR JOB 250BBLs**

1.5 Job Overview

| | | Units | Description |
|----|--|---------|-------------|
| 1 | Surface temperature at time of job | °F | 65 |
| 2 | Mud type (OBM, WBM, SBM, Water, Brine) | - | WBM |
| 3 | Actual mud density | lb/gal | 10.0 |
| 4 | Time circulated before job | HH:MM | |
| 5 | Mud volume circulated | Bbls | |
| 6 | Rate at which well was circulated | Bpm | |
| 7 | Pipe movement during hole circulation | Y/N | Y |
| 8 | Rig pressure while circulating | Psi | |
| 9 | Time from end mud circulation to start of job | HH:MM | |
| 10 | Pipe movement during cementing | Y/N | N |
| 11 | Calculated displacement | Bbls | 273 |
| 12 | Job displaced by | Rig/HES | HES |
| 13 | Annular before job)? | Y/N | Y |
| 14 | Annular flow after job | Y/N | Y |
| 15 | Length of rat hole | Ft | 15 |
| 16 | Units of gas detected while circulating | Units | |
| 17 | Was lost circulation experienced at any time ? | Y/N | N |

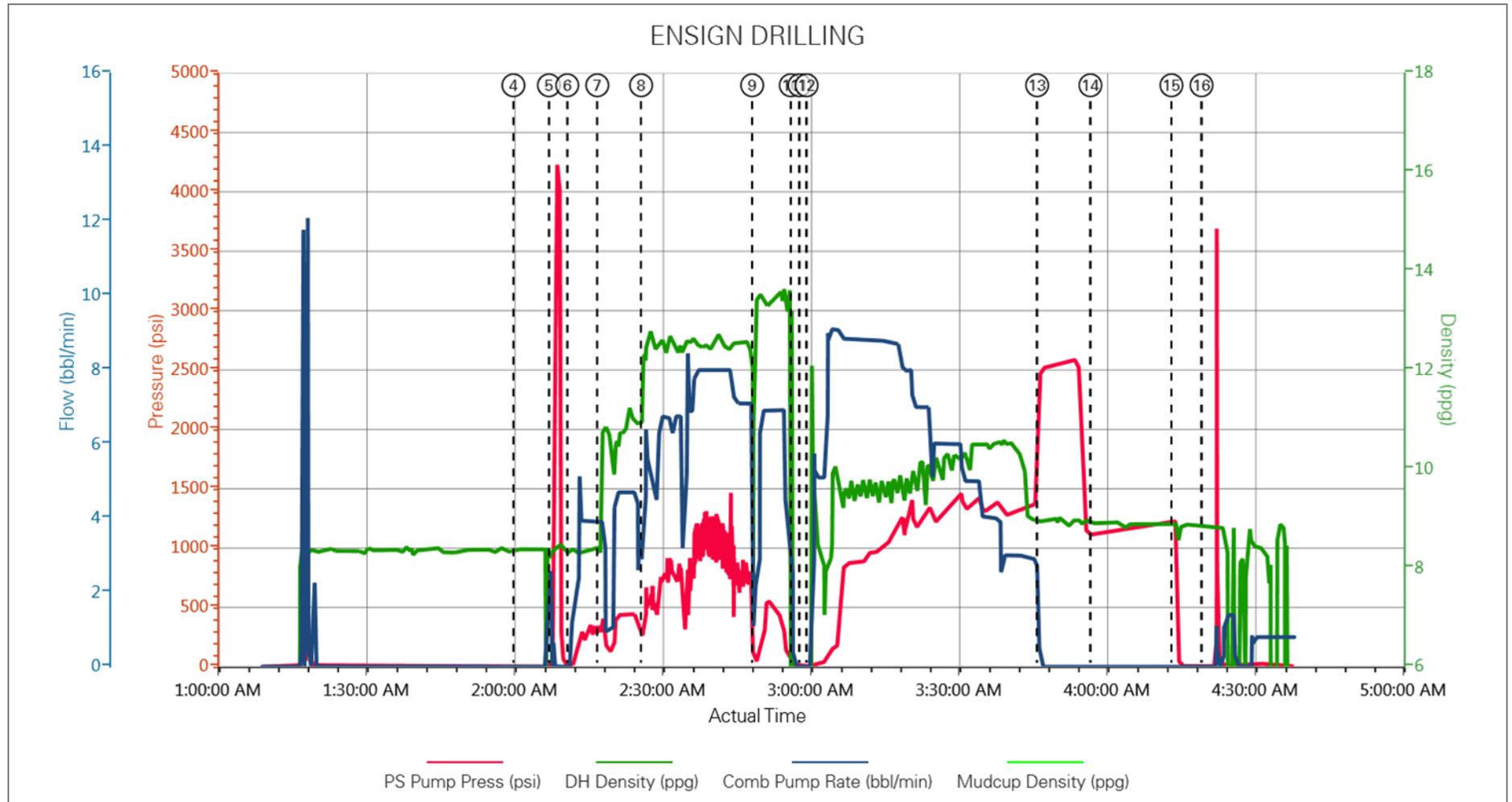
1.6 Job Event Log

| Type | Seq. No. | Activity | Graph Label | Date | Time | Source | PS Pump Press (psi) | DH Density (ppg) | Comb Pump Rate (bbl/min) | Mudcup Density (ppg) | Comment |
|-------|----------|-------------------|-------------------|-----------|----------|--------|---------------------|------------------|--------------------------|----------------------|---|
| Event | 1 | Call Out | Call Out | 7/17/2014 | 15:00:00 | USER | | | | | CALL OUT FROM ARS OFFICE |
| Event | 2 | Arrive At Loc | Arrive At Loc | 7/17/2014 | 19:45:00 | USER | | | | | ARRIVE ON LOCATION MET WITH COMPANY REP TO DISCUSS JOB PROCESS AND CONCERNS ADVISED THAT THEY HAD ABOUT 2000FEET STILL TO RUN AND THAT THEY WERE HAVING TROUBLE GETTING IT DOWN |
| Event | 3 | Casing on Bottom | Casing on Bottom | 7/18/2014 | 00:00:00 | USER | | | | | ADVISED THAT CASING WAS ON BOTTOM AND WAS SAFE TO RIG UP TO FLOOR |
| Event | 4 | Start Job | Start Job | 7/18/2014 | 02:00:26 | COM6 | 0.00 | 8.33 | 0.00 | 0.00 | PRELOADED PLUG INTO CEMENT HEAD WITNESSED BY COMPANY REP. HELD PREJOB SAFTY MEETING TO DISCUSS JOB PROCESS AND HAZARDS |
| Event | 5 | Test Lines | Test Lines | 7/18/2014 | 02:07:37 | COM6 | 57.00 | 8.33 | 0.00 | 0.00 | PRESSURE TEST PUMPS AND LINES FOUND NO LEAKS AND PRESSURE HELD GOOD |
| Event | 6 | Pump Spacer 1 | Pump Spacer 1 | 7/18/2014 | 02:11:20 | COM6 | 1.00 | 8.36 | 0.00 | 0.00 | PUMPED 20BBL OF WATER WITH RED TRACER DYE 4.0BPM 300PSI |
| Event | 7 | Pump Spacer 2 | Pump Spacer 2 | 7/18/2014 | 02:17:25 | COM6 | 283.00 | 8.34 | 3.90 | 0.00 | MIXED 40BBL OF 10.5PPG CLEAN SPACER AT 5BPM 496PSI |
| Event | 8 | Pump Lead Cement | Pump Lead Cement | 7/18/2014 | 02:26:17 | COM6 | 320.00 | 12.29 | 4.00 | 0.00 | MIXED 163BBL OF 12.5PPG ECONOCEM AT 8BPM 650PSI |
| Event | 9 | Pump Tail Cement | Pump Tail Cement | 7/18/2014 | 02:48:46 | COM6 | 32.00 | 13.20 | 2.20 | 0.00 | MIXED 41BBL OF 13.5PPG FRACCEM AT 8BPM 248PSI |
| Event | 10 | Shutdown | Shutdown | 7/18/2014 | 02:56:35 | COM6 | 10.00 | 0.06 | 0.00 | 0.00 | |
| Event | 11 | Drop Top Plug | Drop Top Plug | 7/18/2014 | 02:58:21 | COM6 | 3.00 | -0.22 | 0.00 | 0.00 | RELEASED PLUG WITNESSED BY COMPANY REP |
| Event | 12 | Pump Displacement | Pump Displacement | 7/18/2014 | 02:59:48 | COM6 | 2.00 | -0.27 | 0.00 | 0.00 | PUMPED 273BBL OF DRILL MUD TO DISPLACE CEMENT |
| Event | 13 | Bump Plug | Bump Plug | 7/18/2014 | 03:46:29 | COM6 | 2496.00 | 8.99 | 0.00 | 0.00 | BUMP PLUG 500PSI OVER FINAL PUMP PRESSURE |
| Event | 14 | Pressure Up Well | Pressure Up Well | 7/18/2014 | 03:57:16 | COM6 | 1119.00 | 8.89 | 0.00 | 0.00 | RELEASE PRESSURE TO 1000PSI AND |

| | | | | | | | | | | | |
|-------|----|---------|---------|-----------|----------|------|---------|------|------|------|--|
| | | | | | | | | | | | HOLD FOR 15MIN |
| Event | 15 | Other | Other | 7/18/2014 | 04:13:41 | COM6 | 1229.00 | 8.84 | 0.00 | 0.00 | RELEASED PRESSURE BACK TO PUMP TRUCK TO CHECK FLOATS. FLOATS HELD GOOD |
| Event | 16 | End Job | End Job | 7/18/2014 | 04:19:47 | COM6 | 4.00 | 8.86 | 0.00 | 0.00 | |

2.0 Custom Graphs

2.1 Custom Graph



3.0 Appendix
