

# HALLIBURTON

iCem<sup>®</sup> Service

## **CONOCO/PHILLIPS COMPANY-EBUS**

United States of America, COLORADO

**For: Aron Negusse**

Date: Sunday, November 04, 2018

**Property Reserve 4-65 3-4 2DH**

ARAPAHOE

Job Date: Monday, November 05, 2018

Sincerely,

**Luke Kosakewich and Crew**

## Legal Notice

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## 1.0 Real-Time Job Summary – Surface Casing

|   |                            |                            |                    |  |                                   |                                  |                               |                       |                      |                      |                            |
|---|----------------------------|----------------------------|--------------------|--|-----------------------------------|----------------------------------|-------------------------------|-----------------------|----------------------|----------------------|----------------------------|
| <b>Sold To #:</b> 352431                                |                            | <b>Ship To #:</b> 3898716  |                    | <b>Quote #:</b> 0022508620               |                                   | <b>Sales Order #:</b> 0905252302 |                               |                       |                      |                      |                            |
| <b>Customer:</b> CONOCO/PHILLIPS COMPANY-EBUS           |                            |                            |                    | <b>Customer Rep:</b> Aron Negusse        |                                   |                                  |                               |                       |                      |                      |                            |
| <b>Well Name:</b> PROPERTY RESERVE 4-65 3-4             |                            |                            | <b>Well #:</b> 2DH |  | <b>API/UWI #:</b> 05-005-07377-00 |                                  |                               |                       |                      |                      |                            |
| <b>Field:</b> WILDCAT                                   |                            | <b>City (SAP):</b> WATKINS |                    | <b>County/Parish:</b> ARAPAHOE           |                                   | <b>State:</b> COLORADO           |                               |                       |                      |                      |                            |
| <b>Legal Description:</b> SE NE-3-4S-65W-2308FNL-425FEL |                            |                            |                    |  |                                   |                                  |                               |                       |                      |                      |                            |
| <b>Contractor:</b>                                      |                            |                            |                    | <b>Rig/Platform Name/Num:</b> Nabors B16 |                                   |                                  |                               |                       |                      |                      |                            |
| <b>Job BOM:</b> 7521 7521                               |                            |                            |                    |  |                                   |                                  |                               |                       |                      |                      |                            |
| <b>Well Type:</b> HORIZONTAL OIL                        |                            |                            |                    |  |                                   |                                  |                               |                       |                      |                      |                            |
| <b>Sales Person:</b> HALAMERICA\HB41307                 |                            |                            |                    | <b>Srv Supervisor:</b> Luke Kosakewich   |                                   |                                  |                               |                       |                      |                      |                            |
| <b>Job</b>  |                            |                            |                    |  |                                   |                                  |                               |                       |                      |                      |                            |
|   |                            |                            |                    |  |                                   |                                  |                               |                       |                      |                      |                            |
| <b>Formation Name</b>                                   |                            |                            |                    |  |                                   |                                  |                               |                       |                      |                      |                            |
| <b>Formation Depth (MD)</b>                             |                            | <b>Top</b>                 |                    | <b>Bottom</b>                            |                                   |                                  |                               |                       |                      |                      |                            |
| <b>Form Type</b>  |                            |                            |                    | <b>BHST</b>                              |                                   |                                  |                               |                       |                      |                      |                            |
| <b>Job depth MD</b>                                     |                            | 2211ft                     |                    | <b>Job Depth TVD</b>                     |                                   | 2211ft                           |                               |                       |                      |                      |                            |
| <b>Water Depth</b>                                      |                            |                            |                    | <b>Wk Ht Above Floor</b>                 |                                   |                                  |                               |                       |                      |                      |                            |
| <b>Perforation Depth (MD)</b>                           |                            | <b>From</b>                |                    | <b>To</b>                                |                                   |                                  |                               |                       |                      |                      |                            |
|   |                            |                            |                    |  |                                   |                                  |                               |                       |                      |                      |                            |
| <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  |                            | 16                         | 15.25              |  |                                   |                                  | 0                             | 126                   | 0                    | 126                  |                            |
| Casing  |                            | 9.625                      | 8.921              | 36                                       | STC                               | J-55                             | 0                             | 2202                  | 0                    | 2202                 |                            |
| Open Hole Section                                       |                            |                            | 13.5               |  |                                   |                                  | 126                           | 2211                  | 126                  | 2211                 |                            |
|   |                            |                            |                    |  |                                   |                                  |                               |                       |                      |                      |                            |
| <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>          |                      |                            |
| <b>Guide Shoe</b>                                       |                            |                            |                    |  |                                   | <b>Top Plug</b>                  | 9.625                         | 1                     | HES                  |                      |                            |
| <b>Float Shoe</b>                                       | 9.625                      | 1                          |                    | 2202                                     |                                   | <b>Bottom Plug</b>               | 9.625                         | 1                     | HES                  |                      |                            |
| <b>Float Collar</b>                                     | 9.625                      | 1                          |                    | 2165                                     |                                   | <b>SSR plug set</b>              |                               |                       |                      |                      |                            |
| <b>Insert Float</b>                                     |                            |                            |                    |  |                                   | <b>Plug Container</b>            | 9.625                         | 1                     | HES                  |                      |                            |
| <b>Stage Tool</b>                                       |                            |                            |                    |  |                                   | <b>Centralizers</b>              |                               |                       |                      |                      |                            |
|   |                            |                            |                    |  |                                   |                                  |                               |                       |                      |                      |                            |
| <b>Fluid Data</b>                                       |                            |                            |                    |  |                                   |                                  |                               |                       |                      |                      |                            |
| <b>Stage/Plug #: 1</b>                                  |                            |                            |                    |  |                                   |                                  |                               |                       |                      |                      |                            |
| <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 ft3/sack</b> | <b>Mix Fluid Gal</b> | <b>Rate bbl/min</b>  | <b>Total Mix Fluid Gal</b> |
| 1   | 10 lb/gal Tuned Spacer III | Tuned Spacer III           |                    |  | 50                                | bbl                              | 10                            | 8.96                  |                      | 6                    |                            |

| Fluid #  | Stage Type   | Fluid Name            | Qty                 | Qty UoM | Mixing Density<br>lbm/gal | Yield<br>ft3/sack | Mix Fluid<br>Gal       | Rate<br>bbl/min | Total Mix Fluid<br>Gal |
|--|--------------|-----------------------|---------------------|---------|---------------------------|-------------------|------------------------|-----------------|------------------------|
| 2  | SwiftCem     | SWIFTCCEM (TM) SYSTEM | 490                 | sack    | 12                        | 2.57              |                        | 8               | 15.14                  |
|  |              |                       |                     |         |                           |                   |                        |                 |                        |
| Fluid #  | Stage Type   | Fluid Name            | Qty                 | Qty UoM | Mixing Density<br>lbm/gal | Yield<br>ft3/sack | Mix Fluid<br>Gal       | Rate<br>bbl/min | Total Mix Fluid<br>Gal |
| 3  | SwiftCem     | SWIFTCCEM (TM) SYSTEM | 255                 | sack    | 14.2                      | 1.59              |                        | 8               | 7.9                    |
|  |              |                       |                     |         |                           |                   |                        |                 |                        |
| Fluid #  | Stage Type   | Fluid Name            | Qty                 | Qty UoM | Mixing Density<br>lbm/gal | Yield<br>ft3/sack | Mix Fluid<br>Gal       | Rate<br>bbl/min | Total Mix Fluid<br>Gal |
| 4  | Displacement | Displacement          | 167.4               | bbl     | 8.33                      |                   |                        | 8               |                        |
|  |              |                       |                     |         |                           |                   |                        |                 |                        |
|  |              |                       |                     |         |                           |                   |                        |                 |                        |
| Cement Left In Pipe  |              | Amount                | 37 ft               |         | Reason                    |                   |                        | Shoe Joint      |                        |
| Mix Water:   |              | pH 7                  | Mix Water Chloride: |         | 0 ppm                     |                   | Mix Water Temperature: |                 | 60 °F                  |
| Plug Bumped?   |              | Yes                   | Bump Pressure:      |         | 1,300 psi                 |                   | Floats Held?           |                 | Yes                    |
| <b>Comment</b> There were full returns throughout the job. Bumped the plug 500 psi. over 600 psi. at 2 bpm. Finale pressure was 1,300 psi. Held pressure for 5 minutes. Pressure held. Circulated 50 bbls. of spacer, and 70 bbls. of cement to surface. Pressured up the well to 1,800 psi. for a 30 minute casing test. Bled off pressure to check floats. Floats held. Got 1.5 bbls. of fluid back to the truck. Estimated TOT is 1,687'. |              |                       |                     |         |                           |                   |                        |                 |                        |

## 1.1 Job Event Log

| Type  | Seq. No. | Activity                               | Graph Label                            | Date      | Time     | Source | DS Pump Press<br>(psi) | Comb Pump Rate<br>(bbl/min) | DH Density<br>(ppg) | Pump Stg Tot<br>(bbl) | Comments  |
|-------|----------|--|--|-----------|----------|--------|------------------------|-----------------------------|---------------------|-----------------------|---|
| Event | 1        | Call Out                               | Call Out                               | 11/4/2018 | 07:00:00 | USER   |                        |                             |                     |                       | Crew was called out at 07:00 for an on location time of 14:00.  |
| Event | 2        | Depart Yard Safety Meeting             | Depart Yard Safety Meeting             | 11/4/2018 | 12:30:00 | USER   |                        |                             |                     |                       | Crew held a pre journey safety meeting and JSA.   |
| Event | 3        | Depart Shop for Location               | Depart Shop for Location               | 11/4/2018 | 12:45:00 | USER   |                        |                             |                     |                       | Started journey management with dispatch and left location.   |
| Event | 4        | Arrive at Location from Service Center | Arrive at Location from Service Center | 11/4/2018 | 13:45:00 | USER   |                        |                             |                     |                       | Crew performed a site assessment, safety meeting and hazard hunt on location. Checked in with the customer and discussed the job procedures, rig up and well bore schematics. The rig was running casing. |
| Event | 5        | Other                                  | Other                                  | 11/4/2018 | 13:55:00 | USER   |                        |                             |                     |                       | Wellbore MD: 2,211' , TP: 2,202' of 9.625" 36# CSG , FC: 2,165' , Conductor CSG set at 126' of ID 15.25" , OH 12.25" , Mud# 9.25, Water test: PH: 7, Chlorides: 0, Temp 60 degrees.                       |
| Event | 6        | Pre-Rig Up Safety Meeting              | Pre-Rig Up Safety Meeting              | 11/4/2018 | 14:00:00 | USER   |                        |                             |                     |                       | The crew held a pre rig up safety meeting and JSA.  |
| Event | 7        | Rig-Up Equipment                       | Rig-Up Equipment                       | 11/4/2018 | 19:00:00 | USER   |                        |                             |                     |                       | The crew rigged up all lines, hoses and equipment for the job.  |

|       |    |                  |                  |           |          |      |        |      |       |        |  |
|-------|----|------------------|------------------|-----------|----------|------|--------|------|-------|--------|--|
| Event | 8  | Safety Meeting   | Safety Meeting   | 11/4/2018 | 20:00:00 | USER | 14.00  | 0.00 | 8.43  | 0.00   | Halliburton cement crew held a pre cement job safety meeting and JSA with third party personnel and rig crew.                            |
| Event | 9  | Start Job        | Start Job        | 11/4/2018 | 20:27:41 | COM5 | 8.00   | 0.00 | 8.42  | 0.00   | Pumped 10 bbls. of fresh water at 3 bpm. to fill lines and establish circulation.  |
| Event | 10 | Test Lines       | Test Lines       | 11/4/2018 | 20:31:39 | COM5 | 68.00  | 0.00 | 8.43  | 9.70   | Pressure tested lines to 3,000 psi. with a 500 psi. electronic kick out test.  |
| Event | 11 | Pump Spacer      | Pump Spacer      | 11/4/2018 | 20:37:34 | USER | 38.00  | 1.70 | 8.51  | 10.30  | Pumped 50 bbls. of Tuned Spacer III mixed at 10 ppg. Yield 8.96 ft3/sk, 60.9 gal/sk. Density was verified by pressurized scales.         |
| Event | 12 | Drop Bottom Plug | Drop Bottom Plug | 11/4/2018 | 20:45:00 | COM5 | 31.00  | 0.00 | 9.97  | 30.50  | Halliburton dropped the bottom plug which, was witnessed by the customer.  |
| Event | 13 | Pump Lead Cement | Pump Lead Cement | 11/4/2018 | 20:50:41 | COM5 | 19.00  | 0.00 | 9.91  | 0.00   | Pumped 224 bbls. (490 sks.) of Swiftcem mixed at 12 ppg.,Yield: 2.57 ft3/sks, 15.14 gal/sks. Density was verified by pressurized scales. |
| Event | 14 | Check Weight     | Check Weight     | 11/4/2018 | 21:03:31 | COM5 | 283.00 | 8.00 | 12.02 | 99.50  | Cement weighed up at 12 ppg.   |
| Event | 15 | Pump Tail Cement | Pump Tail Cement | 11/4/2018 | 21:20:58 | COM5 | 281.00 | 8.00 | 12.07 | 234.50 | Pumped 72 bbls. (255 sks.) of Swiftcem mixed at 14.2 ppg. Yield: 1.59 ft3/sk, 7.9 gal/sk. Density was verified by pressurized scales.    |
| Event | 16 | Shutdown         | Shutdown         | 11/4/2018 | 21:31:57 | USER | 156.00 | 0.00 | 14.78 | 77.50  | Washed up on top of the plug.  |



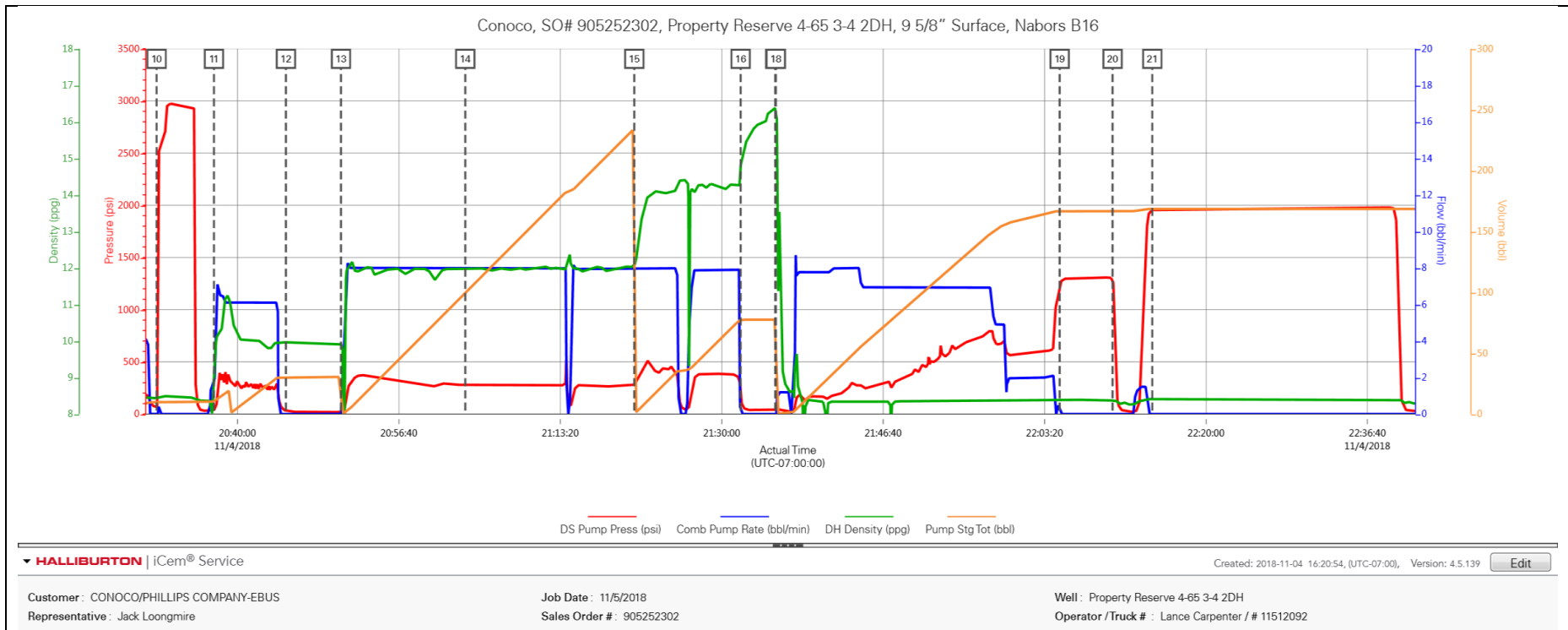
|       |    |                                     |                                     |           |          |      |         |      |       |        |   |
|-------|----|-------------------------------------|-------------------------------------|-----------|----------|------|---------|------|-------|--------|---|
| Event | 17 | Drop Top Plug                       | Drop Top Plug                       | 11/4/2018 | 21:35:31 | COM5 | 34.00   | 0.00 | 16.38 | 77.50  | Halliburton dropped the top plug, which was witnessed by the customer.  |
| Event | 18 | Pump Displacement                   | Pump Displacement                   | 11/4/2018 | 21:35:35 | COM5 | 34.00   | 0.00 | 16.36 | 0.00   | Pumped 167.4 bbls. of fresh water for displacement.   |
| Event | 19 | Bump Plug                           | Bump Plug                           | 11/4/2018 | 22:04:53 | COM5 | 1233.00 | 0.00 | 8.39  | 166.60 | Bumped the plug 700 psi. over 600 psi. at 2 bpm. Final pressure was 1,300 psi. Held for 5 minutes. Pressure held. Circulated 70 bbls. of cement to surface. |
| Event | 20 | Check Floats                        | Check Floats                        | 11/4/2018 | 22:10:21 | USER | 1294.00 | 0.00 | 8.37  | 166.60 | Bled off pressure to check floats. Floats held. Got 1.5 bbls. of fluid back to the truck.   |
| Event | 21 | Shut In Well                        | Shut In Well                        | 11/4/2018 | 22:14:27 | COM5 | 1957.00 | 0.00 | 8.41  | 168.40 | Pressured up the well to 1,800 psi. for a 30 minute casing test.  |
| Event | 22 | Check Floats                        | Check Floats                        | 11/4/2018 | 22:39:38 | USER | 1843.00 | 0.00 | 8.35  | 168.40 | Bled off pressure to check floats. Floats held. Got 1.5 bbls. of fluid back to the truck.   |
| Event | 23 | End Job                             | End Job                             | 11/4/2018 | 22:45:13 | COM5 | 16.00   | 0.00 | 8.33  | 168.40 | Washed and blew down all pumps and lines until clean and dry.   |
| Event | 24 | Pre-Rig Down Safety Meeting         | Pre-Rig Down Safety Meeting         | 11/4/2018 | 22:50:00 | USER | 16.00   | 0.00 | 5.82  | 168.40 | Halliburton cement crew held a pre rig down safety meeting and JSA.   |
| Event | 25 | Rig-Down Equipment                  | Rig-Down Equipment                  | 11/4/2018 | 23:00:00 | USER |         |      |       |        | Rigged down all lines, hoses and equipment.   |
| Event | 26 | Safety Meeting - Departing Location | Safety Meeting - Departing Location | 11/4/2018 | 23:50:00 | USER |         |      |       |        | Held a pre journey safety meeting with the crew.  |

|       |    |  |  |           |          |      |   |
|-------|----|--|--|-----------|----------|------|---|
| Event | 27 | Depart Location for<br>Service Center or Other<br>Site | Depart Location for<br>Service Center or Other<br>Site | 11/5/2018 | 00:00:00 | USER | Started journey<br>management with dispatch<br>and left location. |
|-------|----|--|--|-----------|----------|------|---|

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## 2.0 Attachments – Surface Casing

### 2.1 Property Reserve 4-65 3-4 2DH.png



### 3.0 Cementing Job Summary – Production Casing

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#### 3.1 Executive Summary

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Halliburton appreciates the opportunity to perform the cementing services on the **Property Reserve 4-65 3-4 2DH** 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 27 bbls of spacer 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**

## HALLIBURTON

## Cementing Job Summary

*The Road to Excellence Starts with Safety*

|  |                              |  |                           |               |                        |                             |               |              |                     |               |
|--|------------------------------|--|---------------------------|---------------|------------------------|-----------------------------|---------------|--------------|---------------------|---------------|
| Sold To #: 352431                                | Ship To #: 3898716           | Quote #: 0022508434                              | Sales Order #: 0905313305 |               |                        |                             |               |              |                     |               |
| Customer: CONOCO/PHILLIPS COMPANY-EBUS           |                              | Customer Rep: Erich Ollelette                    |                           |               |                        |                             |               |              |                     |               |
| Well Name: PROPERTY RESERVE 4-65 3-4             | Well #: 2DH                  | API/UWI #: 05-005-07377-00                       |                           |               |                        |                             |               |              |                     |               |
| Field: WILDCAT                                   | City (SAP): WATKINS          | County/Parish: ARAPAHOE                          | State: COLORADO           |               |                        |                             |               |              |                     |               |
| Legal Description: SE NE-3-4S-65W-2308FNL-425FEL |                              |  |                           |               |                        |                             |               |              |                     |               |
| Contractor:                                      |                              | Rig/Platform Name/Num: Nabors B16                |                           |               |                        |                             |               |              |                     |               |
| Job BOM: 7523 7523                               |                              |  |                           |               |                        |                             |               |              |                     |               |
| Well Type: HORIZONTAL OIL                        |                              |  |                           |               |                        |                             |               |              |                     |               |
| Sales Person: HALAMERICA/HB41307                 |                              | Srv Supervisor: Thomas Haas                      |                           |               |                        |                             |               |              |                     |               |
| <b>Job</b>                                       |                              |  |                           |               |                        |                             |               |              |                     |               |
| Formation Name                                   |                              |  |                           |               |                        |                             |               |              |                     |               |
| Formation Depth (MD)                             | Top                          | Bottom   |                           |               |                        |                             |               |              |                     |               |
| Form Type  | BHST                         |  |                           |               |                        |                             |               |              |                     |               |
| Job depth MD                                     | 17830ft                      | Job Depth TVD                                    | 7943                      |               |                        |                             |               |              |                     |               |
| Water Depth                                      | Wk Ht Above Floor 6'         |  |                           |               |                        |                             |               |              |                     |               |
| Perforation Depth (MD)                           | From                         | To   |                           |               |                        |                             |               |              |                     |               |
| <b>Well Data</b>                                 |                              |  |                           |               |                        |                             |               |              |                     |               |
| 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            | STC                    | J-55                        | 0             | 2201         | 0                   | 0             |
| Casing   |                              | 5.5  | 4.67                      | 23            | TXP-BTC                | P-110                       | 0             | 17830        | 0                   | 7943          |
| Open Hole Section                                |                              |  | 8.5                       |               |                        |                             | 2201          | 17855        | 2201                | 7934          |
| <b>Tools and Accessories</b>                     |                              |  |                           |               |                        |                             |               |              |                     |               |
| Type   | Size in                      | Qty  | Make                      | Depth ft      | Type                   | Size in                     | Qty           | Make         |                     |               |
| Guide Shoe                                       |                              |  |                           |               | Top Plug               | 5.5                         | 1             | ANTL         |                     |               |
| Float Shoe                                       | 5.5                          | 1  | ANTL                      | 17830         | Bottom Plug            | 5.5                         | 1             | ANTL         |                     |               |
| Float Collar                                     | 5.5                          | 1  | ANTL                      | 17744         | SSR plug set           |                             |               |              |                     |               |
| Insert Float                                     |                              |  |                           |               | Plug Container         | 5.5                         | 1             | HES          |                     |               |
| Stage Tool                                       |                              |  |                           |               | Centralizers           |                             |               |              |                     |               |
| <b>Fluid Data</b>                                |                              |  |                           |               |                        |                             |               |              |                     |               |
| Stage/Plug #: 1                                  |                              |  |                           |               |                        |                             |               |              |                     |               |
| Fluid #  | Stage Type                   | Fluid Name                                       | Qty                       | Qty UoM       | Mixing Density lbm/gal | Yield ft <sup>3</sup> /sack | Mix Fluid Gal | Rate bbl/min | Total Mix Fluid Gal |               |
| 1  | 10.5 lb/gal Tuned Spacer III | Tuned Spacer III                                 | 60                        | bbl           | 10.5                   | 6.7                         | 42.8          | 5            | 2152                |               |
| 0.70 gal/bbl                                     |                              | MUSOL(R) A, 5 GAL PAIL (100064220)               |                           |               |                        |                             |               |              |                     |               |
| 0.10 gal/bbl                                     |                              | D-AIR 3000L, 5 GAL PAIL (101007444)              |                           |               |                        |                             |               |              |                     |               |
| 37.58 gal/bbl                                    |                              | FRESH WATER                                      |                           |               |                        |                             |               |              |                     |               |
| 83.48 lbm/bbl                                    |                              | BARITE, BULK (100003681)                         |                           |               |                        |                             |               |              |                     |               |
| 0.70 gal/bbl                                     |                              | DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665) |                           |               |                        |                             |               |              |                     |               |

last updated on 12/11/2018 8:36:28 AM

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iCem® Service

(v. 5.0.161.0)

Created: Tuesday, December 11, 2018

## HALLIBURTON

## 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         | ELASTICEM (TM) SYSTEM                                | 835                 | sack    | 13.2                   | 1.57           | 7.54                   | 8            | 6296                |
| 24.50 lbm   |                   | POZMIX A FLYASH (100003690)                          |                     |         |                        |                |                        |              |                     |
| 0.20 %  |                   | HALAD(R)-344, 50 LB (100003670)                      |                     |         |                        |                |                        |              |                     |
| 61.10 lbm   |                   | TYPE I / II CEMENT, BULK (101439798)                 |                     |         |                        |                |                        |              |                     |
| 0.10 %  |                   | SA-1015, 50 LB SACK (102077046)                      |                     |         |                        |                |                        |              |                     |
| 7.54 Gal  |                   | FRESH WATER  |                     |         |                        |                |                        |              |                     |
| 0.40 %  |                   | SCR-100 (100003749)                                  |                     |         |                        |                |                        |              |                     |
| 5 lbm   |                   | WELLIFE 708 - 2000 LB BAG (807637)                   |                     |         |                        |                |                        |              |                     |
| 1 lbm   |                   | SILICALITE, COMPACTED - 2200 LB (870283)             |                     |         |                        |                |                        |              |                     |
|   |                   |  |                     |         |                        |                |                        |              |                     |
| 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   | EconoCem          | ECONOCEM (TM) SYSTEM                                 | 1515                | sack    | 13.5                   | 1.79           | 8.73                   | 8            | 13226               |
| 0.30 %  |                   | HR-5, 50 LB SK (100005050)                           |                     |         |                        |                |                        |              |                     |
| 8.73 Gal  |                   | FRESH WATER  |                     |         |                        |                |                        |              |                     |
| 0.80 %  |                   | HALAD(R)-344, 50 LB (100003670)                      |                     |         |                        |                |                        |              |                     |
| 25 %  |                   | SS-200 - BULK (102240841)                            |                     |         |                        |                |                        |              |                     |
| 24.50 lbm   |                   | POZMIX A FLYASH (100003690)                          |                     |         |                        |                |                        |              |                     |
| 0.10 %  |                   | SA-1015, 50 LB SACK (102077046)                      |                     |         |                        |                |                        |              |                     |
| 61.10 lbm   |                   | TYPE I / II CEMENT, BULK (101439798)                 |                     |         |                        |                |                        |              |                     |
| 0.20 %  |                   | HALAD(R)-413, 50 LB (100003738)                      |                     |         |                        |                |                        |              |                     |
|   |                   |  |                     |         |                        |                |                        |              |                     |
| 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                                    | 20                  | bbl     | 8.34                   |                |                        |              |                     |
| 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  | 354                 | bbl     | 8.33                   |                |                        |              |                     |
|   |                   |  |                     |         |                        |                |                        |              |                     |
| Cement Left In Pipe   |                   | Amount   | 86 ft               |         | Reason WET SHOE        |                |                        | Shoe Joint   |                     |
| Mix Water:  |                   | pH 7   | Mix Water Chloride: |         | <300 ppm               |                | Mix Water Temperature: |              | 59 °F               |
| Cement Temperature:   |                   | N/A  | Plug Displaced by:  |         | 8.33 lb/gal F.W.       |                | Disp. Temperature:     |              | 59 °F               |
| Plug Bumped?  |                   | Yes  | Bump Pressure:      |         | 2720 psi               |                | Floats Held?           |              | Yes                 |
| Cement Returns:   |                   | N/A  | Returns Density:    |         | N/A                    |                | Returns Temperature:   |              | N/A                 |
| Comment PLUG BUMPED AT CALCULATED DISPLACEMENT, FINAL CIRCULATING PRESSURE OF 2720, HELD 5 MIN CASING TEST AT 3650 PSI. FLOATS HELD 4.5 BBL BACK. 27 BBL SPACER TO SURFACE. |                   |  |                     |         |                        |                |                        |              |                     |

## HALLIBURTON

Rockies, Brighton

Lab Results- Lead

## Job Information

|                |                |          |                   |            |                               |
|----------------|----------------|----------|-------------------|------------|-------------------------------|
| Request/Slurry | 2518243/2      | Rig Name | Nabors B16        | Date       | 28/NOV/2018                   |
| Submitted By   | Meghan Jacobs  | Job Type | Production Casing | Bulk Plant | Brighton                      |
| Customer       | ConocoPhillips | Location | Weld              | Well       | PROPERTY RESERVE 4-65 3-4 2DH |

## Well Information

|                   |          |           |          |      |               |
|-------------------|----------|-----------|----------|------|---------------|
| Casing/Liner Size | 5.5 in   | Depth MD  | 18033 ft | BHST | 104°C / 219°F |
| Hole Size         | 8.5 in   | Depth TVD | 7886 ft  | BHCT | 104°C / 219°F |
| Pressure          | 4554 psi |           |          |      |               |

## Cement Information - Lead Design

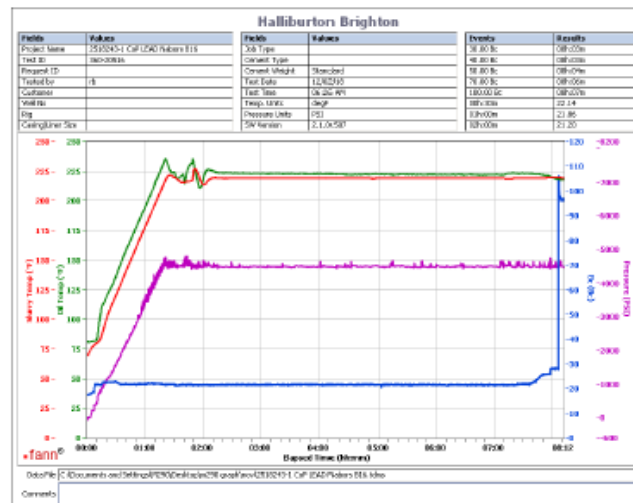
| Conc | UOM      | Cement/Additive        | MP | Sample Type | Sample Date | Lot No.   | Cement Properties |      |          |
|------|----------|------------------------|----|-------------|-------------|-----------|-------------------|------|----------|
| 100  | % BWOC   | Cement Blend           |    |             |             |           | Slurry Density    | 13.2 | lbm/gal  |
| 7.54 | gal/sack | Field (Fresh) Water    |    | Lab         | 09.10.18    | 8/19/2018 | Slurry Yield      | 1.57 | ft3/sack |
| 5    | lb/sk    | WellLife 708 (PB)      | PB | Bulk Blend  | 03.12.18    |           | Water Requirement | 7.54 | gal/sack |
| 0.1  | % BWOC   | SA-1015 (PB)           | PB | Bulk Blend  | 03.12.18    | CoP       | Total Mix Fluid   | 7.54 | gal/sack |
| 0.4  | % BWOC   | SCR-100 (PB)           | PB | Bulk Blend  | 03.12.18    | CoP       |                   |      |          |
| 1    | lb/sk    | Silicalite - Compacted | PB | Bulk Blend  | 03.12.18    |           |                   |      |          |
| 0.2  | % BWOC   | HALAD-344 (PB)         | PB | Bulk Blend  | 03.12.18    | CoP       |                   |      |          |

## Operation Test Results Request ID 2518243/1

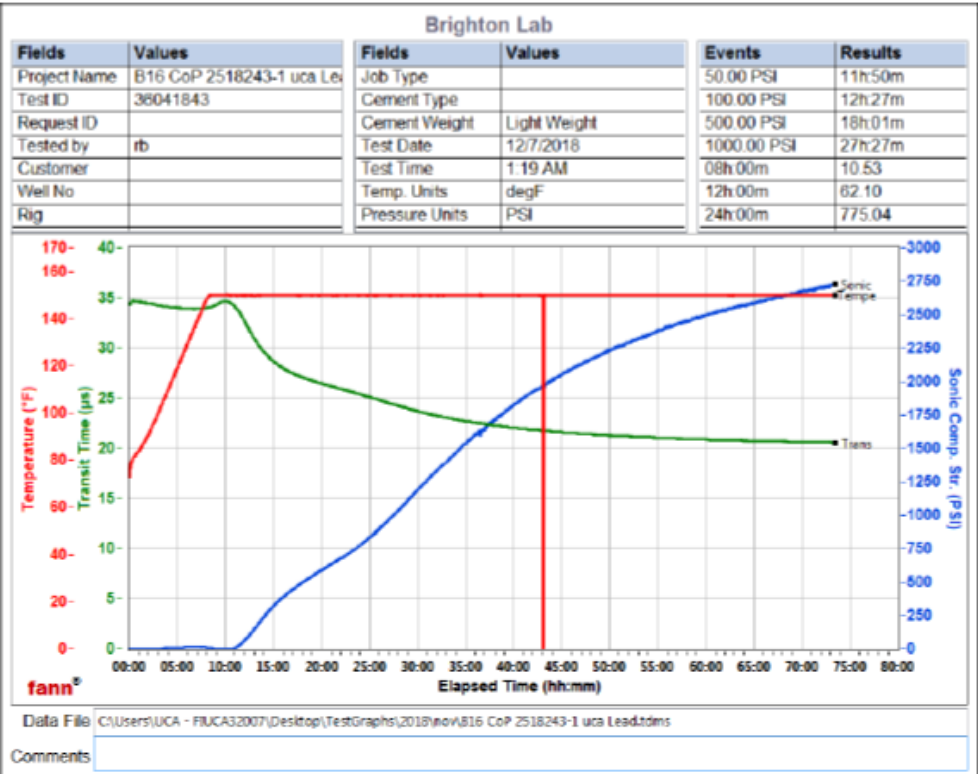
Thickening Time - ON-OFF-ON, Request Test ID:36020516

03/DEC/2018

| Test Temp (degF) | Pressure (psi) | Reached in (min) | 30 Bc (hh:mm) | 50 Bc (hh:mm) | 70 Bc (hh:mm) | 100 Bc (hh:mm) | Start Bc | Stirring before stop (mins) | Static Period (min) |
|------------------|----------------|------------------|---------------|---------------|---------------|----------------|----------|-----------------------------|---------------------|
| 219              | 4554           | 80               | 8:03          | 8:04          | 8:06          | 8:07           | 17       | 99                          | 10                  |



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## HALLIBURTON

Rockies, Brighton

Lab Results- Tail

## Job Information

|                |                |          |                   |            |                               |
|----------------|----------------|----------|-------------------|------------|-------------------------------|
| Request/Slurry | 2518244/3      | Rig Name | Nabors B16        | Date       | 28/NOV/2018                   |
| Submitted By   | Meghan Jacobs  | Job Type | Production Casing | Bulk Plant | Brighton                      |
| Customer       | ConocoPhillips | Location | Weld              | Well       | PROPERTY RESERVE 4-65 3-4 2DH |

## Well Information

|                   |          |           |          |      |               |
|-------------------|----------|-----------|----------|------|---------------|
| Casing/Liner Size | 5.5 in   | Depth MD  | 18033 ft | BHST | 104°C / 219°F |
| Hole Size         | 8.5 in   | Depth TVD | 7886 ft  | BHCT | 104°C / 219°F |
| Pressure          | 4554 psi |           |          |      |               |

## Cement Information - Tail Design

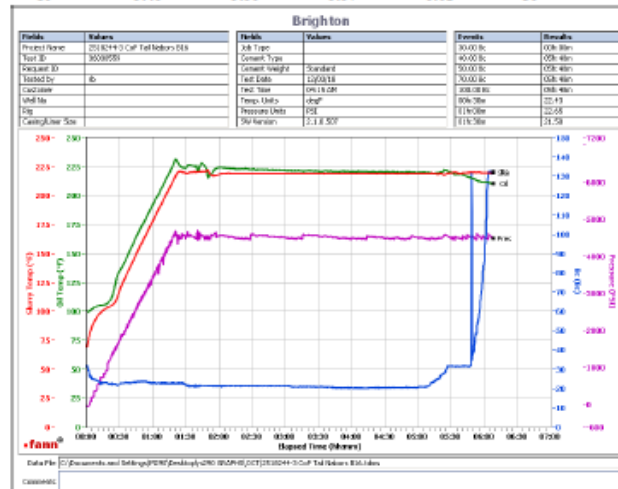
| Conc | UOM      | Cement/Additive     | MP | Sample Type | Sample Date | Lot No.   | Cement Properties |      |          |
|------|----------|---------------------|----|-------------|-------------|-----------|-------------------|------|----------|
| 100  | % BWOC   | Cement Blend        |    |             |             |           | Slurry Density    | 13.5 | lbm/gal  |
| 8.73 | gal/sack | Field (Fresh) Water |    | Lab         | 09.10.18    | 8/19/2018 | Slurry Yield      | 1.79 | ft3/sack |
| 25   | % BWOC   | SS-200 silica flour | PB | Bulk Blend  | 03.12.18    | CoP       | Water Requirement | 8.73 | gal/sack |
| 0.1  | % BWOC   | SA-1015 (PB)        | PB | Bulk Blend  | 03.12.18    | CoP       | Total Mix Fluid   | 8.73 | gal/sack |
| 0.3  | % BWOC   | HR-5 (PB)           | PB | Bulk Blend  | 03.12.18    | CoP       |                   |      |          |
| 0.8  | % BWOC   | HALAD-344 (PB)      | PB | Bulk Blend  | 03.12.18    | CoP       |                   |      |          |
| 0.2  | % BWOC   | HALAD-413 (PB)      | PB | Bulk Blend  | 03.12.18    | CoP       |                   |      |          |

## Operation Test Results Request ID 2518244/3

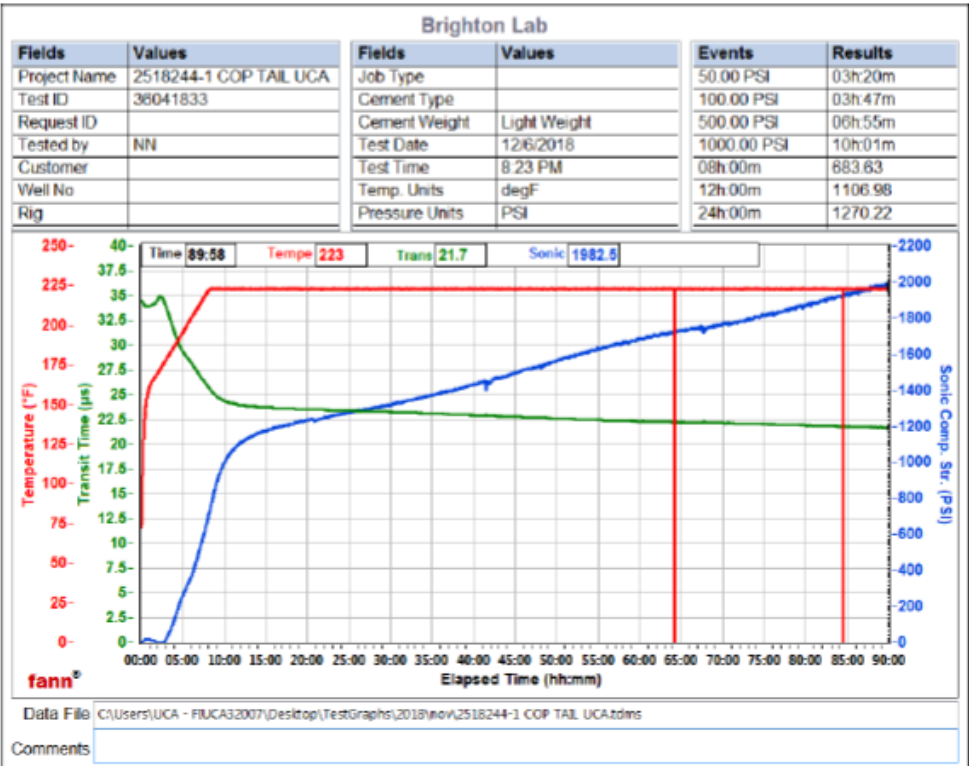
Thickening Time - ON-OFF-ON, Request Test ID:36030558

03/DEC/2018

| Test Temp (degF) | Pressure (psi) | Reached in (min) | 30 Bc (hh:mm) | 50 Bc (hh:mm) | 70 Bc (hh:mm) | 100 Bc (hh:mm) | Start Bc | Stirring before stop (mins) | Static Period (min) |
|------------------|----------------|------------------|---------------|---------------|---------------|----------------|----------|-----------------------------|---------------------|
| 219              | 4554           | 80               | 5:46          | 5:50          | 5:57          | 6:01           | 30       | 99                          | 10                  |



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## 4.0 Real-Time Job Summary – Production Casing

## 4.1 Job Event Log

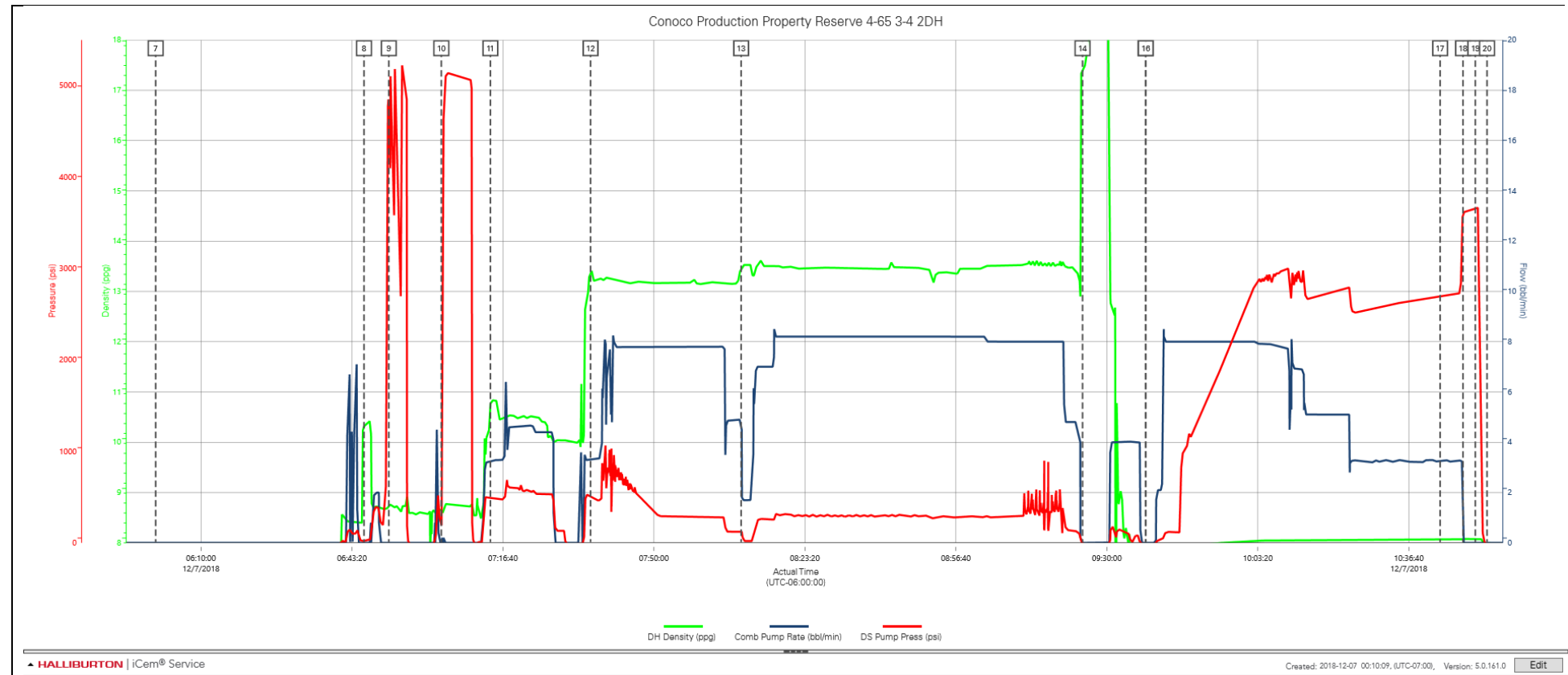
| Type  | Seq. No. | Activity                  | Graph Label               | Date      | Time     | Source | DH Density<br>(ppg) | Comb Pump Rate<br>(bbl/min) | DS Pump Press<br>(psi) | Comments  |
|-------|----------|---------------------------|---------------------------|-----------|----------|--------|---------------------|-----------------------------|------------------------|---|
| Event | 1        | Call Out                  | Call Out                  | 12/6/2018 | 18:00:00 | USER   |                     |                             |                        | CREW CALLED OUT AT 18:00 12/6/2018, REQUESTED ON LOCATION 00:00 12/7/2018. CREW PICKED UP CEMENT, CHEMICALS (40 GAL MUSOL, 40 GAL DUAL SPACER B, 10 GAL D-AIR, 10 GAL MMCR), 100 LBS SUGAR, AND PLUG CONTAINER FROM FORT LUPTON, CO. BULK 660: 11562570/10924982: PUMP ELITE: 11897034/11645460 |
| Event | 2        | Pre-Convoy Safety Meeting | Pre-Convoy Safety Meeting | 12/6/2018 | 21:45:00 | USER   |                     |                             |                        | DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW  |
| Event | 3        | Crew Leave Yard           | Crew Leave Yard           | 12/6/2018 | 22:00:00 | USER   |                     |                             |                        | STARTED JOURNEY MANAGEMENT.   |
| Event | 4        | Arrive At Loc             | Arrive At Loc             | 12/6/2018 | 23:00:00 | USER   |                     |                             |                        | END JOURNEY MANAGEMENT. MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING: 9.625" 36# @ 2201', CASING: 5.5" 23# @ 17830', 86' SHOE JOINT, 8.5" OPEN HOLE, TVD @ 7943', 10.2 PPG WELL FLUID, FRESH WATER DISPLACEMENT.  |
| Event | 5        | Pre-Rig Up Safety Meeting | Pre-Rig Up Safety Meeting | 12/7/2018 | 00:30:00 | USER   |                     |                             |                        | HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP AND WEATHER.   |
| Event | 6        | Rig-Up Equipment          | Rig-Up Equipment          | 12/7/2018 | 00:40:00 | USER   |                     |                             |                        | CREW STAGED EQUIPMENT AND RIGGED UP BULK, IRON, AND WATER HOSES TO PERFORM JOB.   |
| Event | 7        | Pre-Job Safety Meeting    | Pre-Job Safety Meeting    | 12/7/2018 | 06:00:00 | USER   | 0.00                | 0.00                        | -31.00                 | MEETING WITH HALLIBURTON AND RIG PERSONNEL. COMMUNICATED POTENTIAL SAFETY HAZARDS AND JOB DETAILS.  |
| Event | 8        | Start Job                 | Start Job                 | 12/7/2018 | 06:46:00 | COM4   |                     |                             |                        | START JOB DATA RECORDING.   |
| Event | 9        | Other                     | Pressure Test             | 12/7/2018 | 06:51:28 | USER   | 8.78                | 0.00                        | 4768.00                | INITIAL PRESSURE TEST FAILED, 2" ON MANIFOLD WAS LEAKING, A 2" LO-TORQ WAS INSTALLED ON THE BOTTOM OF THE MANIFOLD.   |
| Event | 10       | Test Lines                | Test Lines                | 12/7/2018 | 07:03:04 | COM4   | 8.65                | 0.00                        | 193.00                 | PRESSURE TESTED IRON TO 4950 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 1000 PSI, 5TH GEAR STALL OUT @ 1950 PSI. THE MANIFOLD ON THE FLOOR WAS LEAKING, PUT A 2"   |

LO-TORQ ON MANIFOLD, PRESSURE HELD.

|       |    |                             |                             |           |          |      |       |      |         |   |
|-------|----|-----------------------------|-----------------------------|-----------|----------|------|-------|------|---------|---|
| Event | 11 | Pump Spacer 1               | Pump Spacer 1               | 12/7/2018 | 07:13:53 | COM4 | 10.74 | 3.20 | 487.00  | PUMP 60 BBLs OF TUNED SPACER @ 10.5 LB/GAL, ADDED 40 GAL MUSOL A, 40 GAL DUAL SPACER B, 10 GAL D-AIR, DENSITY VERIFIED BY PRESSURIZED MUD SCALES. |
| Event | 12 | Pump Lead Cement            | Pump Lead Cement            | 12/7/2018 | 07:36:01 | COM4 | 13.39 | 3.30 | 493.00  | PUMP 835 SKS OF ELASTICEM @ 13.2 LB/GAL, 1.57 YIELD, 7.54 GAL/SK, 233.5 BBLs, CALCULATED TOL @ 596', DENSITY VERIFIED BY PRESSURIZED MUD SCALES.  |
| Event | 13 | Pump Tail Cement            | Pump Tail Cement            | 12/7/2018 | 08:09:15 | COM4 | 13.43 | 4.90 | 133.00  | PUMP 1515 SKS OF ECONOICEM @ 13.5 LB/GAL, 1.79 YIELD, 8.73 GAL/SK, 483 BBLs, CALCULATED TOT @ 6039, DENSITY VERIFIED BY PRESSURIZED MUD SCALES.   |
| Event | 14 | Shutdown                    | Shutdown                    | 12/7/2018 | 09:24:37 | COM4 | 17.41 | 0.00 | -12.00  | SHUTDOWN TO WASH PUMPS/LINE AND DROP TOP PLUG.  |
| Event | 15 | Drop Top Plug               | Drop Top Plug               | 12/7/2018 | 09:38:32 | COM4 | -0.52 | 0.00 | -18.00  | PLUG LEFT PLUG CONTAINER, VERIFIED BY COMPANY MAN.  |
| Event | 16 | Pump Displacement           | Pump Displacement           | 12/7/2018 | 09:38:36 | COM4 | -0.52 | 0.00 | -18.00  | BEGIN PUMPING 374 BBL OF FRESH WATER DISPLACEMENT, 10 GAL MCCR IN FIRST 20, PROVIDED ADDITIVES THROUGH OUT THE REST.                              |
| Event | 17 | Spacer Returns to Surface   | Spacer Returns to Surface   | 12/7/2018 | 10:43:34 | USER | 8.06  | 3.30 | 2691.00 | SPACER RETURNED TO SURFACE 340 BBL INTO DISPLACEMENT, 27 BBL SPACER BACK TO SURFACE.  |
| Event | 18 | Bump Plug                   | Bump Plug                   | 12/7/2018 | 10:48:38 | COM4 | 8.08  | 0.00 | 3596.00 | PLUG BUMPED AT CALCULATED DISPLACEMENT, FINAL CIRCULATING PRESSURE OF 2720 PSI, HELD 5 MIN CASING TEST AT 3650 PSI.                               |
| Event | 19 | Check Floats                | Check Floats                | 12/7/2018 | 10:51:21 | USER | 8.07  | 0.00 | 3665.00 | RELEASED PRESSURE BACK TO THE TRUCK, FLOATS HELD, 4.5 BBL BACK.   |
| Event | 20 | End Job                     | End Job                     | 12/7/2018 | 10:53:56 | COM4 | 7.87  | 0.00 | -18.00  |   |
| Event | 21 | Pre-Rig Down Safety Meeting | Pre-Rig Down Safety Meeting | 12/7/2018 | 11:00:00 | USER | 7.95  | 9.20 | 207.00  | DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES.   |
| Event | 22 | Rig-Down Completed          | Rig-Down Completed          | 12/7/2018 | 12:10:00 | USER |       |      |         | ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL.   |
| Event | 23 | Pre-Convoy Safety Meeting   | Pre-Convoy Safety Meeting   | 12/7/2018 | 12:20:00 | USER |       |      |         | DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW.   |
| Event | 24 | Crew Leave Location         | Crew Leave Location         | 12/7/2018 | 12:30:00 | USER |       |      |         | THANK YOU FOR USING HALLIBURTON - THOMAS HAAS AND CREW.   |

## 5.0 Attachments – Production Casing

### 5.1 Property Reserve 4-65 3-4 2DH Production – Job Chart with Events



## 5.2 Property Reserve 4-65 3-4 2DH Production – Job Chart without Events

