

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Rinn Valley West 18N-20-14N

Surface Casing

Job Date: Saturday, June 06, 2020

Sincerely,

Nathaniel Moore

Legal Notice

Disclaimer:

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1.0 Cementing Job Summary

1.1 Executive Summary

Halliburton appreciates the opportunity to perform the cementing services on the Rinn Valley West 18N-25-14N surface casing. 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 15 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 #: 369404 | | Ship To #: 3895042 | | Quote #: | | Sales Order #: 0906542226 | | | | |
|---|----------------|-----------------------|--------------------|---------------------|-----------------------------------|-----------------------------|---------------|--------------|---------------------|---------------|
| Customer: EXTRACTION OIL & GAS-EBUS | | | | | Customer Rep: Blaine Dunlavy | | | | | |
| Well Name: RINN VALLEY WEST | | | Well #: 18N-20-14N | | API/UWI #: 05-123-47482-00 | | | | | |
| Field: WATTENBERG | | City (SAP): FIRESTONE | | County/Parish: WELD | | State: COLORADO | | | | |
| Legal Description: SE SE-18-2N-68W-217FSL-1009FEL | | | | | | | | | | |
| Contractor: ENSIGN DRLG | | | | | Rig/Platform Name/Num: ENSIGN 147 | | | | | |
| Job BOM: 7521 7521 | | | | | | | | | | |
| Well Type: HORIZONTAL OIL | | | | | | | | | | |
| Sales Person: HALAMERICA\HX41066 | | | | | Srvc Supervisor: Nathaniel Moore | | | | | |
| Job | | | | | | | | | | |
| Formation Name | | | | | | | | | | |
| Formation Depth (MD) | | Top | | | Bottom | | | | | |
| Form Type | | | | | BHST | | | | | |
| Job depth MD | | 1621ft | | | Job Depth TVD | | 1621 | | | |
| Water Depth | | | | | Wk Ht Above Floor | | | | | |
| Perforation Depth (MD) | | From | | | To | | | | | |
| Well Data | | | | | | | | | | |
| Description | New / Used | Size in | ID in | Weight lbm/ft | Thread | Grade | Top MD ft | Bottom MD ft | Top TVD ft | Bottom TVD ft |
| Open Hole Section | | | 13.5 | | | | 0 | 1621 | 0 | 1621 |
| Casing | 0 | 9.625 | 8.921 | 36 | | | 0 | 1621 | 0 | 1621 |
| Tools and Accessories | | | | | | | | | | |
| Type | Size in | Qty | Make | Depth ft | | Type | Size in | Qty | Make | |
| | | | | | | Top Plug | 9.625 | 1 | HES | |
| Float Shoe | 9.625 | | | 1621 | | | | | | |
| Float Collar | 9.625 | | | 1577 | | | | | | |
| | | | | | | Plug Container | 9.625 | 1 | HES | |
| 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 | Water with dye | Water with dye | 10 | bbl | 8.34 | | | | | |

| 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 | SwiftCem | SWIFTCEM (TM) SYSTEM | 525 | sack | 13.5 | 1.74 | | 8 | 9.17 | |
| 9.17 Gal | | FRESH WATER | | | | | | | | |
| 0.1250 lbm | | POLY-E-FLAKE (101216940) | | | | | | | | |
| 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 | Displacement | Displacement | 122 | bbl | 8.34 | | | | | |
| | | | | | | | | | | |
| Cement Left In Pipe | | Amount | 44 ft | | Reason | | | Shoe Joint | | |
| Mix Water: | | pH 7 | Mix Water Chloride: | | <300 ppm | | Mix Water Temperature: | | | 68 °F |
| Cement Temperature: | | 68 °F | Plug Displaced by: | | Water | | Disp. Temperature: | | | |
| Plug Bumped? | | Yes | Bump Pressure: | | 573 psi | | Floats Held? | | | Yes |
| Cement Returns: | | 15 bbl | Returns Density: | | 13.5 lb/gal | | Returns Temperature: | | | |
| Comment | | | | | | | | | | |

2.0 Real-Time Job Summary

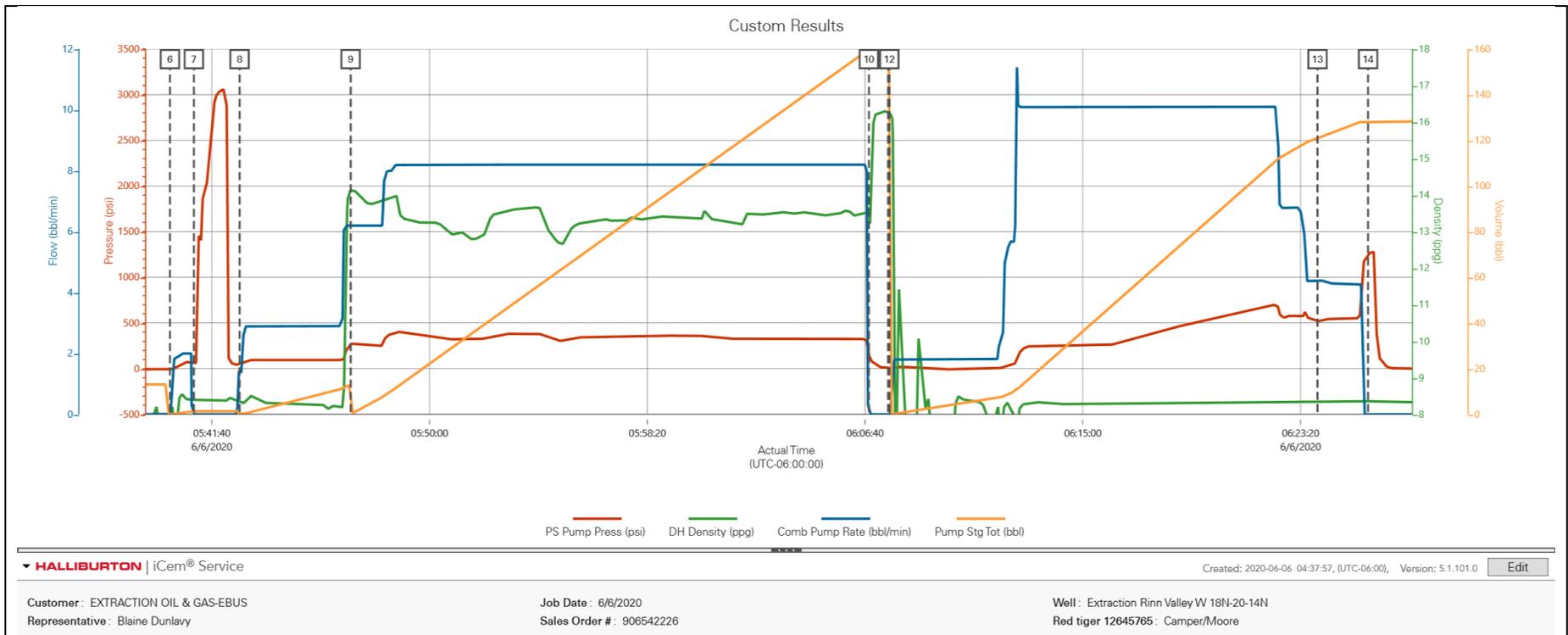
2.1 Job Event Log

| Type | Seq. No. | Activity | Graph Label | Date | Time | Source | PS Pump Press <i>(psi)</i> | DH Density <i>(ppg)</i> | Comb Pump Rate <i>(bbl/min)</i> | Pump Stg Tot <i>(bbl)</i> | Comments |
|-------|----------|---------------------------|---------------------------|----------|----------|--------|-------------------------------|----------------------------|------------------------------------|------------------------------|--|
| Event | 1 | Call Out | Call Out | 6/6/2020 | 00:00:00 | USER | | | | | Ready to pump at 0400 |
| Event | 2 | Arrive At Loc | Arrive At Loc | 6/6/2020 | 03:00:00 | USER | | | | | End journey management. Meet with company representative to discuss job: Surface Casing: 13.5" hole to 1621'. 9 5/8" 36# casing to 1621'. FC at 1577'. 8.5 ppg water based well fluid. |
| Event | 3 | Pre-Rig Up Safety Meeting | Pre-Rig Up Safety Meeting | 6/6/2020 | 05:00:00 | USER | -3.00 | 8.23 | 0.00 | 13.10 | Hazard hunt. Discussed possible hazards associated with location, rig up, job performance, and weather. |
| Event | 4 | Rig-Up Completed | Rig-Up Completed | 6/6/2020 | 05:20:00 | USER | -4.00 | 8.24 | 0.00 | 13.10 | Rigged up complete / Rigged up to a edge of red zone |
| Event | 5 | Pre-Job Safety Meeting | Pre-Job Safety Meeting | 6/6/2020 | 05:30:00 | USER | -4.00 | 8.24 | 0.00 | 13.10 | Meeting with Halliburton and rig personnel. Communicated potential safety hazard and job details. |
| Event | 6 | Start Job | Start Job | 6/6/2020 | 05:40:04 | COM5 | -5.00 | 7.94 | 0.00 | 0.00 | Fill lines 2 bbl water |
| Event | 7 | Test Lines | Test Lines | 6/6/2020 | 05:40:59 | COM5 | 64.00 | 8.42 | 0.00 | 1.40 | 500 psi kickout test and 3000 psi pressure test |
| Event | 8 | Pump Spacer 1 | Pump Spacer 1 | 6/6/2020 | 05:42:44 | COM5 | 52.00 | 8.35 | 1.40 | 1.50 | 10 bbl dyed water |
| Event | 9 | Pump Lead Cement | Pump Lead Cement | 6/6/2020 | 05:46:59 | COM5 | 257.00 | 14.15 | 6.20 | 0.10 | 525 sks/162 bbl SwiftCem 13.5 ppg 1.74 ft ³ /sk 9.17 gal/sk |

| | | | | | | | | | | | |
|-------|----|-----------------------------|-----------------------------|----------|----------|------|---------|-------|------|--------|---|
| Event | 10 | Shutdown | Shutdown | 6/6/2020 | 06:06:49 | COM5 | 146.00 | 13.66 | 0.00 | 159.30 | Washup on top of the plug |
| Event | 11 | Drop Top Plug | Drop Top Plug | 6/6/2020 | 06:07:33 | COM5 | 8.00 | 16.28 | 0.00 | 159.30 | HES top plug witnessed by company rep |
| Event | 12 | Pump Displacement | Pump Displacement | 6/6/2020 | 06:07:36 | COM5 | 7.00 | 16.26 | 0.00 | 0.00 | 122 bbl water displacement. |
| Event | 13 | Other | Other | 6/6/2020 | 06:23:59 | COM5 | 534.00 | 8.33 | 4.40 | 121.00 | Cement to surface 107 bbl into displacement. 15 bbl of cement back. |
| Event | 14 | Bump Plug | Bump Plug | 6/6/2020 | 06:25:55 | COM5 | 1252.00 | 8.36 | 0.00 | 128.30 | 573 psi final pump pressure. Pressured up to 1117 psi. |
| Event | 15 | End Job | End Job | 6/6/2020 | 06:29:06 | COM5 | 104.00 | 8.34 | 6.00 | 129.40 | Check floats. 0.5 bbl back. Floats held. |
| Event | 16 | Pre-Rig Down Safety Meeting | Pre-Rig Down Safety Meeting | 6/6/2020 | 07:00:00 | USER | | | | | Discussed possible hazards associated with weather, location and rigging down iron and hoses. |
| Event | 17 | Rig-Down Completed | Rig-Down Completed | 6/6/2020 | 07:30:00 | USER | | | | | All Halliburton items were secured for travel. |

3.0 Attachments

3.1 Job Chart



3.2 Recorded Data

