

HALLIBURTON

iCem[®] Service

EXTRACTION OIL & GAS-EBUS

Date: Friday, September 20, 2019

Interchange A S22-30-3N Surface

Job Date: Friday, September 20, 2019

Sincerely,
Bryce Hinsch

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 **Interchange A S22-30-3N** 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.

Approximately 13 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 #: 3901323 | | | Quote #: | | | Sales Order #: 0905986437 | | | |
| Customer: EXTRACTION OIL & GAS - | | | | | Customer Rep: Hans/ Justin | | | | | | |
| Well Name: INTERCHANGE A | | | | Well #: S22-30-3N | | | API/UWI #: 05-014-20767-00 | | | | |
| Field: WATTENBERG | | City (SAP): BROOMFIELD | | County/Parish: BROOMFIELD | | | State: COLORADO | | | | |
| Legal Description: SW NW-10-1S-68W-2156FNL-895FWL | | | | | | | | | | | |
| Contractor: ENSIGN DRLG | | | | | Rig/Platform Name/Num: ENSIGN 147 | | | | | | |
| Job BOM: 7521 7521 | | | | | | | | | | | |
| Well Type: HORIZONTAL OIL | | | | | | | | | | | |
| Sales Person: HALAMERICA\HX38199 | | | | | Srvc Supervisor: Nikolaus Kornafel | | | | | | |
| Job | | | | | | | | | | | |
| Formation Name | | | | | | | | | | | |
| Formation Depth (MD) | | Top | | | Bottom | | | | | | |
| Form Type | | | | | BHST | | | | | | |
| Job depth MD | | 1631ft | | | Job Depth TVD | | | 1631 | | | |
| 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 | |
| Casing | 0 | 9.625 | 8.921 | 36 | | | 0 | 1631 | 0 | 1631 | |
| OH | | 13.5 | | | | | 0 | 1636 | 0 | 1636 | |
| Tools and Accessories | | | | | | | | | | | |
| Type | Size in | Qty | Make | Depth ft | | Type | Size in | Qty | Make | | |
| Guide Shoe | 9.625 | 1 | | 1631 | | Top Plug | 9.625 | 1 | HES | | |
| Float Collar | 9.625 | 1 | | 1588 | | Plug Container | 9.625 | 1 | HES | | |
| | | | | | | Centralizers | 9.625 | | | | |
| Fluid Data | | | | | | | | | | | |
| Stage/Plug #: 1 | | | | | | | | | | | |
| Fluid # | Stage Type | Fluid Name | | | Qty | Qty UoM | Mixing Density lbm/gal | Yield ft3/sack | Mix Fluid Gal | Rate bbl/min | Total Mix Fluid Gal |
| 1 | Spacer | Red Dye Spacer | | | 10 | bbl | 8.33 | | | 5 | |

| 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 | Cement | SWIFTCEM (TM) SYSTEM | 550 | sack | 13.5 | 1.74 | 9.17 | 5 | 5,043 |

| 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 | Fresh Water | Fresh Water | 123 | bbl | 8.33 | | | 8 | |

| Cement Left In Pipe | Amount | Reason | Shoe Joint |
|---------------------|--------|--------------------------------|------------------------------|
| Mix Water: | pH 7 | Mix Water Chloride: 0 ppm | Mix Water Temperature: 62 °F |
| Cement Temperature: | N/A | Plug Displaced by: 8.33 lb/gal | Disp. Temperature: 62 °F |
| Plug Bumped? | Yes | Bump Pressure: 474 psi | Floats Held? Yes |
| Cement Returns: | 13 bbl | Returns Density: N/A | Returns Temperature: N/A |

Comment: Once the rig was done circulating they handed it over to Halliburton. We pumped a 10 BBL water spacer with red dye in it. Followed by 170 BBLs of our swiftcem cement at 13.5 Lb/Gal . We shut down after cement was pumped to drop the top plug, followed by 123 BBLs of fresh water displacement. Bumped plug at calculated displacement. Checked floats 1 BBL back to the truck. Floats held.

2.0 Real-Time Job Summary

2.1 Job Event Log

| Type | Seq. No. | Activity | Graph Label | Date | Time | Source | DS 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 | Pre-Convoy Safety Meeting | Pre-Convoy Safety Meeting | 9/20/2019 | 01:30:00 | USER | | | | | CREW DISCUSSED ROUTES, HAZARDS, AND COMMUNICATION WITH CREW. |
| Event | 2 | Crew Leave Yard | Crew Leave Yard | 9/20/2019 | 02:00:00 | USER | | | | | STARTED JOURNEY MANAGEMENT. |
| Event | 3 | Call Out | Call Out | 9/20/2019 | 06:00:00 | USER | | | | | CREW CALLED OUT AT 06:00, REQUESTED ON LOCATION 07:00. CREW PICKED UP CEMENT, CHEMICALS, AND PLUG CONTAINER FROM FT. LUPTON, CO. BULK 660 10025030, BULK 660 10867415, AND PUMP 11826999. |
| Event | 4 | Arrive at Location from Service Center | Arrive at Location from Service Center | 9/20/2019 | 06:30:00 | USER | | | | | MEET WITH CO. MAN TO DISCUSS JOB; SURFACE CASING- 9.625" 36 LB/FT @ 1,631', 13.5" OPEN HOLE 1,636', SHOE TRAC- 41', MUD WEIGHT 8.4 LB/GAL PUMP FRESH WATER DISPLACEMENT 123 BBLS. CASING LANDED @ 08:30 9/20/2019. RIG CIRCULATED BOTTOMS UP At 390 GPM at 108 PSI. |

| | | | | | | | | | | | |
|-------|----|---------------------------|---------------------------|-----------|----------|-------|-------|------|------|-------|---|
| Event | 5 | Pre-Rig Up Safety Meeting | Pre-Rig Up Safety Meeting | 9/20/2019 | 06:45:00 | USER | | | | | HAZARD HUNT. DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH LOCATION, RIG UP, AND WEATHER. |
| Event | 6 | Rig-Up Equipment | Rig-Up Equipment | 9/20/2019 | 07:00:00 | USER | | | | | CREW STAGED EQUIPMENT, RIGGED UP BULK, IRON, AND WATER HOSES TO PERFORM JOB. |
| Event | 7 | Pre-Job Safety Meeting | Pre-Job Safety Meeting | 9/20/2019 | 09:00:00 | USER | 4.00 | 8.36 | 0.00 | 12.80 | SAFETY MEETING WITH HALLIBURTON, AND RIG PERSONNEL. CREW COMMUNICATED POTENTIAL SAFETY HAZARDS, AND JOB DETAILS. |
| Event | 8 | Start Job | Start Job | 9/20/2019 | 09:20:42 | COM11 | 5.00 | 8.35 | 0.00 | 0.00 | BEGIN RECORDING JOB DATA. |
| Event | 9 | Test Lines | Test Lines | 9/20/2019 | 09:22:53 | COM11 | 83.00 | 8.28 | 0.00 | 2.40 | PRESSURE TESTED IRON TO 2,500 PSI. KICKOUTS SET @ 500 PSI, KICKED OUT @ 781 PSI, 5TH GEAR STALL OUT @ 1,270 PSI. THEN BROUGHT IT UP AND KICKED OUT @ 2836 PSI. |
| Event | 10 | Pump Spacer 1 | Pump Spacer 1 | 9/20/2019 | 09:32:21 | COM11 | 12.00 | 0.09 | 0.00 | 0.00 | PUMP 10 BBLS OF RED DYE SPACER AT PUMP RATE 3.5 BBLS/MIN @ 121 PSI. |
| Event | 11 | Pump Lead Cement | Pump Lead Cement | 9/20/2019 | 09:36:25 | COM11 | 69.00 | 8.29 | 0.00 | 10.20 | PUMPED 550 SKS OF SWIFTCM LEAD CEMENT @ 13.5 LB/GAL, 1.74 FT3/SK, 9.17 GAL/SK. 170 BBLS, TOP OF CEMENT @ SURFACE. DENSITY VERIFIED BY PRESSURIZED MUD SCALES. PUMP RATE 8 BBLS/MIN @ 440 PSI. |

| | | | | | | | | | | | |
|-------|----|-----------------------------|-------------------------------------|-----------|----------|-------|---------|-------|------|--------|---|
| Event | 12 | Check Weight | Check Weight | 9/20/2019 | 09:40:15 | COM11 | 420.00 | 13.62 | 8.10 | 18.00 | DENSITY VERIFIED BY PRESSURIZED MUD SCALES. |
| Event | 13 | Check Weight | Check Weight | 9/20/2019 | 09:52:21 | COM11 | 395.00 | 13.56 | 8.00 | 114.60 | DENSITY VERIFIED BY PRESSURIZED MUD SCALES. |
| Event | 14 | Drop Top Plug | Drop Top Plug | 9/20/2019 | 10:05:35 | COM11 | 23.00 | 8.34 | 2.50 | 186.80 | PLUG LEFT CONTAINER, VERIFIED BY CO. MAN. |
| Event | 15 | Pump Displacement | Pump Displacement | 9/20/2019 | 10:05:38 | COM11 | 28.00 | 8.33 | 2.50 | 187.00 | BEGIN CALCULATED DISPLACEMENT OF 123 BBLs WITH FRESH WATER. |
| Event | 16 | Bump Plug | Bump Plug | 9/20/2019 | 10:22:09 | COM11 | 1045.00 | 8.29 | 0.00 | 124.90 | PLUG BUMPED AT CALCULATED DISPLACEMENT. 464 PSI PRESSURED UP 500 PSI OVER FINAL CIRCULATING PRESSURE TO 1,000 PSI |
| Event | 17 | Other | Other | 9/20/2019 | 10:23:27 | COM11 | 6.00 | 8.27 | 0.00 | 124.90 | RELEASED PRESSURE, FLOATS HELD, 1 BBL BACK. |
| Event | 18 | End Job | End Job | 9/20/2019 | 10:23:36 | COM11 | 5.00 | 8.27 | 0.00 | 0.00 | STOP RECORDING JOB DATA. |
| Event | 19 | Pre-Rig Down Safety Meeting | Pre-Rig Down Safety Meeting | 9/20/2019 | 10:25:00 | USER | 7.00 | 8.27 | 0.00 | 0.00 | DISCUSSED POSSIBLE HAZARDS ASSOCIATED WITH WEATHER, LOCATION AND RIGGING DOWN IRON AND HOSES. |
| Event | 20 | Rig-Down Completed | Rig-Down Completed | 9/20/2019 | 11:45:00 | USER | | | | | ALL HALLIBURTON ITEMS WERE STOWED FOR TRAVEL, AND LOCATION WAS CLEAN. |
| Event | 21 | Crew Leave Location | Safety Meeting - Departing Location | 9/20/2019 | 11:50:00 | USER | | | | | CREW DISCUSSED ROUTES HAZARDS AND COMMUNICATION WITH CREW. |
| Event | 22 | Crew Leave Location | Crew Leave Location | 9/20/2019 | 11:55:00 | USER | | | | | THANK YOU FOR USING HALLIBURTON – NICK KORNAFEL AND CREW. |

3.0 Attachments

3.1 EXTRACTION INTERCHANGE A S22-30-3N -Custom Results.png

