

The Road to Excellence Starts with Safety

| | | | | | | | | | | | |
|---|--------------------|------------------------------------|--------------|---|---------------|-------------------------------------|-------------------------------|----------------------------------|----------------------|----------------------|----------------------------|
| Sold To #: 345242 | | Ship To #: 3923834 | | Quote #: | | Sales Order #: 0906508136 | | | | | |
| Customer: NOBLE ENERGY INC-EBUS | | | | | | Customer Rep: Gary Stapleton | | | | | |
| Well Name: GUTTERSEN STATE | | | | Well #: D35-790 | | API/UWI #: 05-123-48843-00 | | | | | |
| Field: WATTENBERG | | City (SAP): KEENESBURG | | County/Parish: WELD | | State: COLORADO | | | | | |
| Legal Description: SWSE-23-3N-64W-911FSL-1398FEL | | | | | | | | | | | |
| Contractor: H & P DRLG | | | | Rig/Platform Name/Num: H & P 517 | | | | | | | |
| Job BOM: 7523 7523 | | | | | | | | | | | |
| Well Type: HORIZONTAL OIL | | | | | | | | | | | |
| Sales Person: HALAMERICA\HX41066 | | | | Srv Supervisor: Nicholas Roles | | | | | | | |
| Job | | | | | | | | | | | |
| | | | | | | | | | | | |
| Formation Name | | | | | | | | | | | |
| Formation Depth (MD) | | Top | | Bottom | | | | | | | |
| Form Type | | | | BHST | | 220 degF | | | | | |
| Job depth MD | | 17430ft | | Job Depth TVD | | | | | | | |
| 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 | | 9.625 | 8.921 | 36 | | | 0 | 1933 | 0 | 1933 | |
| Casing | | 5.5 | 4.892 | 17 | | | 0 | 17430 | 0 | 6843 | |
| Open Hole Section | | | 8.5 | | | | 1933 | 17447 | 0 | 6843 | |
| | | | | | | | | | | | |
| Tools and Accessories | | | | | | | | | | | |
| Type | Size in | Qty | Make | Depth ft | | Type | Size in | Qty | Make | | |
| Guide Shoe | | | | | | Top Plug | 5.5 | 1 | HES | | |
| Float Shoe | 5.5 | | | 17430 | | Bottom Plug | 5.5 | 2 | HES | | |
| Float Collar | 5.5 | | | 17382.5 | | SSR plug set | | | | | |
| Insert Float | | | | | | Plug Container | | | | | |
| Stage Tool | | | | | | Centralizers | | | | | |
| | | | | | | | | | | | |
| 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 | Tuned Prime Spacer | SBM FDP-C1337-18 CEMENT SPACER SYS | | | 120 | bbl | 11.5 | 3.87 | | 8 | |
| | | | | | | | | | | | |

| 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 | 140 | sack | 13.2 | 1.65 | | 6 | 8.4 |
| 0.35 % | | SCR-100, 1200 LB BAG - (1126328) | | | | | | | |
| 8.40 Gal | | FRESH WATER | | | | | | | |
| | | | | | | | | | |
| 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 | ElastiCem w/ SCBL | ELASTICEM (TM) SYSTEM | 518 | sack | 13.2 | 1.67 | | 9 | 8.05 |
| 0.20 % | | SCR-100, 1200 LB BAG - (1126328) | | | | | | | |
| 8.05 Gal | | FRESH WATER | | | | | | | |
| | | | | | | | | | |
| 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 | NeoCem NT1 | NeoCem TM | 1144 | sack | 13.2 | 2.04 | | 9 | 9.79 |
| 0.08 % | | SCR-100, 1200 LB BAG - (1126328) | | | | | | | |
| 0.08 % | | FE-2, 2000 LB BAG - (1005549) | | | | | | | |
| 9.79 Gal | | FRESH WATER | | | | | | | |
| | | | | | | | | | |
| 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 | Displacement | Displacement | 403 | bbl | 8.33 | | | 10 | |
| | | | | | | | | | |
| Cement Left In Pipe | | Amount | 42 ft | | Reason | | | Shoe Joint | |
| Mix Water: | | pH 07 | Mix Water Chloride: | | 0 ppm | | Mix Water Temperature: | | 65 °F |
| Cement Temperature: | | 65 °F °C | Plug Displaced by: | | 8.33 lb/gal | | Disp. Temperature: | | 65 °F |
| Plug Bumped? | | Yes | Bump Pressure: | | 2760 psi | | Floats Held? | | Yes |
| Cement Returns: | | 0 bbl | Returns Density: | | | | Returns Temperature: | | |
| Comment Got 6bbbls spacer to surface. Started to see trace amount at end of displacement, based on spacer at surface estimated TOCap-2495', TOL-3500', TOT-7275' | | | | | | | | | |

2.0 Real-Time Job Summary

2.1 Job Event Log

| Type | Seq. No. | Activity | Graph Label | Date | Time | Source | Cmb Pump Rate (bbl/min) | Dwnhole Density (ppg) | Cmb Stg Total (bbl) | Pump A Pressure (psi) | Comments |
|-------|----------|--|--|-----------|----------|--------|----------------------------|--------------------------|------------------------|--------------------------|---|
| Event | 1 | Pump Tail Cement | Call Out | 5/19/2020 | 14:30:00 | USER | | | | | Called out by Service Coordinator for O/L at 2100 |
| Event | 2 | Pre-Convoy Safety Meeting | Pre-Convoy Safety Meeting | 5/19/2020 | 17:45:00 | USER | | | | | Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive. |
| Event | 3 | Depart from Service Center or Other Site | Depart from Service Center or Other Site | 5/19/2020 | 18:00:00 | USER | | | | | Journey Management prior to departure |
| Event | 4 | Arrive at Location from Service Center | Arrive at Location from Service Center | 5/19/2020 | 19:00:00 | USER | | | | | Upon arrival met with company man to discuss job details and calculations, performed hazard hunt and site assessment. |
| Event | 5 | Pre-Rig Up Safety Meeting | Pre-Rig Up Safety Meeting | 5/19/2020 | 19:15:00 | USER | | | | | Discussed rigging up hazards and procedure according to HMS. |
| Event | 6 | Rig-Up Date/Time | Rig-Up Date/Time | 5/19/2020 | 19:30:00 | USER | | | | | Started rig up |
| Event | 7 | Rig-Up Completed | Rig-Up Completed | 5/19/2020 | 20:30:00 | USER | | | | | Rig up complete, |
| Event | 8 | Start Circulate or Reverse | Start Circulate or Reverse | 5/19/2020 | 20:45:00 | USER | | | | | Started mixing SCR-100 Retarder in 400bbl upright. |
| Event | 9 | Other | Other | 5/19/2020 | 21:00:00 | USER | | | | | Water test- PH-7, Chlor-0, Temp-65. Cement temp-65. |
| Event | 10 | Stop Circulate or Reverse | Stop Circulate or Reverse | 5/19/2020 | 23:45:00 | USER | 0.00 | 8.41 | 0.00 | -9.43 | Finished mixing SCR-100, shut down 4x4. |

| | | | | | | | | | | | |
|-------|----|------------------------|------------------------|-----------|----------|------|------|-------|--------|--------|--|
| Event | 11 | Pre-Job Safety Meeting | Pre-Job Safety Meeting | 5/20/2020 | 00:00:00 | USER | 0.00 | 8.41 | 0.00 | -7.80 | Held safety meeting with all job associated personnel to discuss job procedure, hazards and stop work authority. |
| Event | 12 | Start Job | Start Job | 5/20/2020 | 00:37:13 | NONE | 1.65 | 4.82 | 0.14 | -9.62 | TD-17447', TP-17429.7' 5.5" 17#, FC-17382.5', Alpha Sleeve- 17289', TVD-6843', SURF-1933' 9.625" 36#, OH- 8.5" MUD-9.8# |
| Event | 13 | Drop Bottom Plug | Drop Bottom Plug | 5/20/2020 | 00:37:30 | NONE | 2.77 | 8.35 | 0.67 | 2.01 | Dropped by HES supervisor, witnessed by company man. |
| Event | 14 | Test Lines | Test Lines | 5/20/2020 | 00:38:49 | NONE | 0.00 | 8.31 | 4.26 | 219.43 | Pumped 5bbls fresh water to fill lines, closed 2" lo torc, performed 500psi k/o function test, followed with 5th gear stall at 1580psi, perform 4500psi test on line. Held pressure, no leaks. Bled off pressure, pumped 1bbl to ensure lines still full and closed valve. Proceeded to bring pressure to 2000psi on Kelly line, pressure stabilized and held with no leaks. |
| Event | 15 | Pump Spacer 1 | Pump Spacer 1 | 5/20/2020 | 00:51:27 | NONE | 0.00 | 8.33 | 0.00 | 38.71 | Pumped 120bbls Tuned Prime 11.5# 3.87y 24.42g/s with 20g D-Air at 8bpm 580psi, with SRC mix water. |
| Event | 16 | Check Weight | Check Weight | 5/20/2020 | 00:52:49 | USER | 3.03 | 12.56 | 3.31 | 230.75 | Weight verified with pressurized mud scales. |
| Event | 17 | Drop Bottom Plug | Drop Bottom Plug | 5/20/2020 | 01:11:21 | NONE | 0.00 | 11.10 | 118.48 | 27.18 | Dropped by HES supervisor, witnessed by company man. |

| | | | | | | | | | | | |
|-------|----|-------------------|-------------------|-----------|----------|------|------|-------|--------|---------|---|
| Event | 18 | Pump Lead Cement | Pump Lead Cement | 5/20/2020 | 01:11:28 | NONE | 0.00 | 11.11 | 0.00 | 26.95 | Pumped 140sk or 41.7bbls Elasticem w/o CBL 13.2# 1.65y 8.4g/s at 6bpm 530psi, with SRC mix water. |
| Event | 19 | Pump Cement | Pump Cement | 5/20/2020 | 01:20:59 | NONE | 6.51 | 13.13 | 0.05 | 523.09 | Pumped 518sk or 154bbls Elasticem w/CBL 13.2# 1.67y 8.05g/s at 9bpm 550psi, with SRC mix water. |
| Event | 20 | Check Weight | Check Weight | 5/20/2020 | 01:22:44 | USER | 6.47 | 13.23 | 11.45 | 553.29 | Weight verified with pressurized mud scales. |
| Event | 21 | Pump Tail Cement | Pump Tail Cement | 5/20/2020 | 01:43:43 | USER | 7.87 | 13.10 | 2.36 | 699.74 | Pumped 1144sk or 416bbls 13.2# 2.04y 9.79g/s Neocem at 9bpm 900psi, with fresh water. |
| Event | 22 | Check Weight | Check Weight | 5/20/2020 | 01:54:45 | USER | 7.91 | 13.16 | 89.37 | 941.90 | Weight verified with pressurized mud scales. |
| Event | 23 | Shutdown | Shutdown | 5/20/2020 | 02:37:40 | NONE | 0.00 | 12.78 | 418.18 | 117.82 | Shutdown, rig blew down iron to pit, swapped valves and washed up pump with 10bbls fresh water until clean. |
| Event | 24 | Drop Top Plug | Drop Top Plug | 5/20/2020 | 02:49:52 | NONE | 0.00 | -0.56 | 435.11 | -9.63 | Dropped by HES supervisor, witnessed by company man. |
| Event | 25 | Pump Displacement | Pump Displacement | 5/20/2020 | 02:49:57 | NONE | 0.00 | -0.56 | 0.00 | -8.96 | Pumped 403bbls production water with 10g MMCR in first 20bbls. |
| Event | 26 | Bump Plug | Bump Plug | 5/20/2020 | 03:34:00 | USER | 0.00 | 8.11 | 396.51 | 2691.89 | Slowed down to 3bpm at 385bbls away, final circulating pressure- 2232psi, Bump pressure- 2760psi. |
| Event | 27 | Other | Other | 5/20/2020 | 03:39:22 | NONE | 0.00 | 8.09 | 396.51 | 2859.35 | Released pressure and got 5bbls fresh water to truck, floats held. |

| | | | | | | | | | | | |
|-------|----|--|--|-----------|----------|------|------|------|-------|--------|--|
| Event | 28 | End Job | End Job | 5/20/2020 | 03:40:18 | NONE | 0.00 | 8.02 | 0.00 | 34.33 | Got 6 bbls spacer to surface estimated TOCap-2495', TOL-3500', TOT-7275' |
| Event | 29 | Pre-Rig Down Safety Meeting | Pre-Rig Down Safety Meeting | 5/20/2020 | 03:45:00 | USER | 0.00 | 8.04 | 0.00 | -14.60 | Discussed rigging down hazards and procedure according to HMS with all HES personnel |
| Event | 30 | Rig-Down Date/Time | Rig-Down Date/Time | 5/20/2020 | 03:55:00 | USER | 4.72 | 0.48 | 49.85 | 3.54 | Begin rig-down. |
| Event | 31 | Rig-Down Completed | Rig-Down Completed | 5/20/2020 | 04:40:00 | USER | | | | | All HES equipment rigged down, left water hoses and airlines rigged up. |
| Event | 32 | Safety Meeting - Departing Location | Safety Meeting - Departing Location | 5/20/2020 | 04:45:00 | USER | | | | | Held meeting with all personnel in convoy to discuss directions and hazards associated with drive, all fit to drive. |
| Event | 33 | Depart Location for Service Center or Other Site | Depart Location for Service Center or Other Site | 5/20/2020 | 05:00:00 | USER | | | | | Pre journey management prior to departure. |

3.0 Attachments

3.1 Gutttersen State D35-790-Custom Results.png

