

HALLIBURTON

iCem[®] Service

NOBLE ENERGY INC-EBUS

Guttersen D10-715

Production Casing

Job Date: Wednesday, February 09, 2022

Sincerely,

Brandon L Parker

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 Guttersen D10-715 production 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.

Job was pumped per design with an average cement density of 13.17 ppg at 7.61 bbl/min. Cement was displaced with 20 bbl. of treated water with retarder and 386 bbl. of treated freshwater displacement. Plug was landed at 2,589 psi and bumped to 3,398 psi. Pressure was bled off and 6 bbl. of fluid was returned to the truck. Approximately 42 bbl. of spacer was returned to surface indicating a top of cement around 1,668'.

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 #: 345242 | | Ship To #: 3925430 | | Quote #: | | Sales Order #: 0907666181 | | | | |
|---|------------|---------------------------|------------------------|----------------------------|---|-----------------------------------|------------------------|--------------------|------------------|------------------|
| Customer: NOBLE ENERGY INC-EBUS | | | | | Customer Rep: Charles Collver | | | | | |
| Well Name: GUTTERSEN | | | Well #: D10-715 | | | API/UWI #: 05-123-48917-00 | | | | |
| Field: WATTENBERG | | City (SAP): KERSEY | | County/Parish: WELD | | | State: COLORADO | | | |
| Legal Description: SWSE-34-4N-64W-465FSL-1625FEL | | | | | | | | | | |
| Contractor: H & P DRLG | | | | | Rig/Platform Name/Num: H & P 517 | | | | | |
| Job BOM: 7523 | | | | | | | | | | |
| Well Type: HORIZONTAL OIL | | | | | | | | | | |
| Sales Person: HALAMERICA\HX41066 | | | | | Srv Supervisor: Brandon Parker | | | | | |
| Job | | | | | | | | | | |
| | | | | | | | | | | |
| Job depth MD | | 17524ft | | | Job Depth TVD | | 6730ft | | | |
| | | | | | | | | | | |
| 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 | 1949 | 0 | 1949 |
| Casing | | 5.5 | 4.892 | 17 | | | 0 | 17524 | 0 | 6730 |
| Open Hole Section | | | 8.5 | | | | 1949 | 17534 | 1949 | 6730 |
| | | | | | | | | | | |
| Tools and Accessories | | | | | | | | | | |
| Type | Size in | Qty | Make | Depth ft | | Type | Size in | Qty | Make | |
| Float Shoe | 5.5 | 1 | HES | 17524 | | Top Plug | 5.5 | 1 | HES | |
| Float Collar | 5.5 | 1 | HES | 17481 | | Bottom Plug | 5.5 | 2 | HES | |
| | | | | | | Centralizers | 5.5 | 210 | Summit | |

| Fluid Data | | | | | | | | | |
|---------------------|--------------|---------------------------|---------------------|---------|---------------------------|-------------------|------------------------|-----------------|------------------------|
| Stage #: 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 | Tuned Prime Cement Spacer | 120 | bbl | 11.5 | 3.92 | 24.67 | 7.5 | 4237 |
| 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 | Cap Cement | ElastiCem™ | 140 | sack | 13.2 | 1.6 | 7.63 | 8 | 1068 |
| 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 | Lead Cement | ElastiCem™ | 724 | sack | 13.2 | 1.67 | 8.03 | 8 | 5814 |
| 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 | Tail Cement | NeoCem™ | 1173 | sack | 13.2 | 2.04 | 9.79 | 8 | 11484 |
| 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 | Treated Fresh Water | 406 | bbl | 8.33 | | | 8.5 | 17017 |
| | | | | | | | | | |
| | | | | | | | | | |
| Cement Left In Pipe | | Amount | 44 ft | | Reason | | | Shoe Joint | |
| Mix Water: | | pH 6 | Mix Water Chloride: | | 0 ppm | | Mix Water Temperature: | | 65 °F |
| Plug Bumped? | | Yes | Plug Displaced by: | | 8.33 lb/gal Treated Water | | Disp. Temperature: | | 65 °F |
| Cement Returns: | | 0 bbl. | Bump Pressure: | | 2589 psi | | Floats Held? | | Yes |

2.0 Real-Time Job Summary

2.1 Job Event Log

| Seq. No. | Activity | Date | Time | Comments |
|----------|--|----------|----------|---|
| 1 | Call Out | 2/9/2022 | 01:30:00 | HES crew called out to Chevron 5.5" production. On location time 07:30. pu 12992453, pu 12992454, elite 12644849-11368474, 1 660 11273333-11398319 |
| 2 | Pre-Convoy Safety Meeting | 2/9/2022 | 06:15:00 | meeting with all HES personnel to discuss route of travel and safety/hazards associated with traveling to location. also discussed cmt volumes on bulk trks, confirmed silo packet volumes. |
| 3 | Depart from Service Center or Other Site | 2/9/2022 | 06:20:00 | |
| 4 | Arrive at Location from Service Center | 2/9/2022 | 07:15:00 | arrived location. met with Mr.Charles and went over job numbers, water sources and iron placement. Rig was reaming and washing when hes arrived |
| 5 | Assessment Of Location Safety Meeting | 2/9/2022 | 07:20:00 | checked silos for required cmt volumes, checked air compressor skid for fuel, started unit for job, checked water upright volumes and tested water in all three uprights. chlo 0, water temp 65 deg, ph 6. TD 17534, TP 17524.4, SP 1949, SJ 43.79FT, FC 17480.61, kop 6196, eob 7278, 5.5" 17# P-110 Casing, MW 10.1 OBM, OH 8.5", CNT used 210, (17481ft to 1257ft) HES plugs (2bottom and 1 top plug), HES float equipment. summit centralizers |
| 6 | Safety Meeting - Pre Rig-Up | 2/9/2022 | 07:25:00 | meeting with HES personnel to discuss safety/hazards associated with rigging up HES equipment |
| 7 | Rig-Up Equipment | 2/9/2022 | 07:30:00 | HES rigged up bulk and water hoses. could not spot pumping unit until casing was pre loaded 100 percent on racks by catwalk |
| 8 | Standby Other | 2/9/2022 | 08:00:00 | HES went into standby mode while rig finished reaming and running casing. parked out of the way to allow loader to run casing to pipe wrangler |
| 9 | End Standby Not Due to HES | 2/9/2022 | 09:30:00 | HES spotted in pumping unit to begin rigging up |

| | | | | |
|----|---------------------------|----------|----------|---|
| 10 | Rig-up Lines | 2/9/2022 | 09:34:00 | spot in HES equipment, rig up HES iron to red zone |
| 11 | Rig-Up Equipment | 2/9/2022 | 10:40:00 | finish rigging HES iron to stand pipe, send iron to rig floor |
| 12 | Casing on Bottom | 2/9/2022 | 10:44:00 | rig landed casing. |
| 13 | Circulate Well | 2/9/2022 | 10:45:00 | rig began circulating well at 10bpm and average psi 900 |
| 14 | Pre-Job Safety Meeting | 2/9/2022 | 11:50:00 | meeting with all personnel on location to discuss safety/hazards associated with job. also covered job procedures, all personnel signed jsa |
| 15 | Stop Circulation/KO Pumps | 2/9/2022 | 12:00:00 | ko rig mud pumps |
| 16 | Start Job | 2/9/2022 | 12:14:00 | start recording real time data |
| 17 | Drop Bottom Plug | 2/9/2022 | 12:15:00 | loaded bottom plug into the 5.5casing prior to filling lines with fw |
| 18 | Fill Lines FW | 2/9/2022 | 12:17:29 | pumped 3bbls of fw at 3bpm and top psi was 134. |
| 19 | Test Lines | 2/9/2022 | 12:20:09 | test eko on both pumps, 5th gear stall and tested lines to 4905, psi lined out to 1psi/12sec |
| 20 | Test IBOP | 2/9/2022 | 12:28:08 | driller closed ibop, HES tested ibop to 2300, psi held solid |
| 21 | Pump Spacer | 2/9/2022 | 12:30:57 | pumped 120bbls of tuned prime 11.5ppg, 3.92 yield and 24.67 gal/sk. pumped at 7.5bpm and average psi was 500. calculated all 71.6 bbls of spacer to surface. weight confirmed using pressurized mud scales. |
| 22 | Shutdown | 2/9/2022 | 12:49:00 | HES shutdown to drop HES bottom plug |
| 23 | Drop Bottom Plug | 2/9/2022 | 12:53:48 | dropped (preloaded before coming back online) bottom plug witnessed by HES supervisor and Mr. Charles with Chevron |
| 24 | Pump Cap Cement | 2/9/2022 | 12:55:29 | pumped cap cmt, 140sks, 40bbls, 13.2ppg, 1.6 yield, 7.63gal/sk pumped at 6bpm and average psi was 525. weight confirmed using pressurized mud scales, weight confirmed by HES operator. wet sample left on location. calculated top of cap cmt at 1009.55ft |

| | | | | |
|----|---------------------------|----------|----------|---|
| 25 | Pump Lead Cement | 2/9/2022 | 13:02:22 | pumped 215.3bbls of lead cmt, 724sks, 13.3ppg, 1.67 yield, 8.03 gal/sk, pumped at 8.5bpm and average psi was 800. weight confirmed using pressurized scales. calculated top of lead cmt at 1844.62ft |
| 26 | Slow Rate | 2/9/2022 | 13:26:45 | slowed rate before swapping to tail cmt, blew lead silo down |
| 27 | Pump Tail Cement | 2/9/2022 | 13:30:33 | pumped 426.2bbls of tail cmt, 1173sks, 13.2ppg, 2.04 yield, 9.79 gal/sk pumped at 8.5bpm and average psi was 1200. weight confirmed using pressurized mud scales, weight confirmed by HES operator. calculated top of tail cmt 7102.83ft on a gauged hole |
| 28 | Slow Rate | 2/9/2022 | 13:45:00 | slowed rate before swapping to last silo of tail, blew tail silo down |
| 29 | Shutdown | 2/9/2022 | 14:25:00 | done pumping cmt |
| 30 | Clean Lines | 2/9/2022 | 14:30:00 | clean lines and pump to 4sided tank at bottom of the slide on driller side, pumped 19bbls |
| 31 | Shutdown | 2/9/2022 | 14:35:00 | pump and lines clean |
| 32 | Drop Top Plug | 2/9/2022 | 14:35:34 | dropped top plug witnessed by HES supervisor and Mr. Charles with Chevron |
| 33 | Pump Displacement | 2/9/2022 | 14:36:34 | pumped 405.6bbls of fw treated with 10gal of MMCR in the first 20bbls of displacement, 5 gallons of D-Air and 10 gallons MC MX 820-6 and 15 gallons of Bellacide 300w. fc set at 17480.61ft X .0232= 405.6bbls |
| 34 | Displ Reached Cement | 2/9/2022 | 14:38:00 | displacement caught cmt at 16bbls away |
| 35 | Slow Rate | 2/9/2022 | 15:25:00 | slow rate at 385bbls, psi at 7bpm 2950 and psi at 4bpm was 2600 |
| 36 | Bump Plug | 2/9/2022 | 15:29:00 | bumped plug at calculated volume 406.5bbls, final circulation psi was 2650 ko pumps at 3200. psi climbed to 3350 and held solid |
| 37 | Check Floats | 2/9/2022 | 15:34:00 | HES floats held, 6bbls back to the pumping unit |
| 38 | End Job | 2/9/2022 | 15:36:15 | job complete, no SQ or HSE issues |
| 39 | Spacer Returns to Surface | 2/9/2022 | 15:38:45 | rig took back 41.6bbls of tuned prime spacer |

| | | | | |
|----|--|----------|----------|---|
| 40 | Pre-Rig Down Safety Meeting | 2/9/2022 | 15:40:00 | meeting with all HES personnel to discuss safety/hazards associated with rigging down HES equipment |
| 41 | Rig-Down Equipment | 2/9/2022 | 15:45:00 | |
| 42 | Pre-Convoy Safety Meeting | 2/9/2022 | 17:15:00 | meeting with all HES personnel to discuss safety/hazards associated with traveling to call center |
| 43 | Depart Location for Service Center or Other Site | 2/9/2022 | 17:30:00 | |
| 44 | Other | 2/9/2022 | 17:31:00 | Thank You for Choosing Halliburton Cement. Parker and Crew. (970)397-4969 |

3.0 Attachments

3.1 Job Chart

