

The Road to Excellence Starts with Safety

| | | | |
|--|------------------------|----------------------------------|---------------------------|
| Sold To #: 345242 | Ship To #: 3922508 | Quote #: | Sales Order #: 0906273507 |
| Customer: NOBLE ENERGY INC-EBUS | | Customer Rep: CHRIS | |
| Well Name: PIONEER | Well #: D31-775 | API/UWI #: 05-123-48786-00 | |
| Field: WATTENBERG | City (SAP): KEENESBURG | County/Parish: WELD | State: COLORADO |
| Legal Description: NE NW-7-2N-64W-680FNL-1946FWL | | | |
| Contractor: H & P DRLG | | Rig/Platform Name/Num: H & P 517 | |
| Job BOM: 7523 7523 | | | |
| Well Type: HORIZONTAL OIL | | | |
| Sales Person: HALAMERICA/HB31357 | | Srvc Supervisor: Lance Carpenter | |

Job

| | | | |
|------------------------|-------|-------------------|----------|
| Formation Name | | | |
| Formation Depth (MD) | Top | | Bottom |
| Form Type | | BHST | 230 degF |
| Job depth MD | 17602 | Job Depth TVD | 7290 |
| Water Depth | | Wk Ht Above Floor | 4 |
| 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 | 17602 | 0 | 7290 |
| Open Hole Section | | | 8.5 | | | | 1933 | 17618 | | 7290 |

Tools and Accessories

| Type | Size in | Qty | Make | Depth ft | Type | Size in | Qty | Make |
|--------------|---------|-----|------|----------|----------------|---------|-----|------|
| Guide Shoe | 5.5 | | | 17602 | Top Plug | 5.5 | 1 | HES |
| Float Shoe | 5.5 | | | | Bottom Plug | 5.5 | 2 | HES |
| Float Collar | 5.5 | | | 17553 | SSR plug set | 5.5 | | HES |
| Insert Float | 5.5 | | | | Plug Container | 5.5 | | HES |
| Stage Tool | 5.5 | | | | Centralizers | 5.5 | | HES |

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 | | | |
| 0.10 gal/bbl | | D-AIR 3000L, 5 GAL PAIL (101007444) | | | | | | | |
| 1 lbm/bbl | | FE-2, 2000 LB BAG - (1005549) | | | | | | | |

| | |
|------------------|--|
| 3.50 lbm/bbl | SEM-94P, 35 LB SACK - (1023987) |
| 3.50 lbm/bbl | SEM-93P, 35 LB SACK - (1023977) |
| 145.2420 lbm/bbl | BARITE, BULK (100003681) |

| 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 | | | 8.39 |

| | |
|----------|---|
| 0.63 % | SCR-100, 1200 LB BAG - (1126328) |
| 8.63 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 | 514 | sack | 13.2 | 1.67 | | | 8.04 |

| | |
|----------|---|
| 0.35 % | SCR-100, 1200 LB BAG - (1126328) |
| 8.28 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 | 1173 | sack | 13.2 | 2.04 | | | 9.79 |

| | |
|-----------|---|
| 0.10 % | SCR-100, 1200 LB BAG - (1126328) |
| 0.10 % | FE-2, 2000 LB BAG - (1005549) |
| 10.13 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 | 408 | bbl | 8.33 | | | | |

| | | | | | |
|----------------------------|---------------|---------------------|------------------|------------------------|----------|
| Cement Left In Pipe | Amount | 48 ft | Reason | Shoe Joint | |
| Mix Water: | pH 7 | Mix Water Chloride: | 500 ppm | Mix Water Temperature: | 74 °F |
| Cement Temperature: | ## °F °C | Plug Displaced by: | 8.4 lb/gal Water | Disp. Temperature: | ## °F °C |
| Plug Bumped? | Yes | Bump Pressure: | 2278 psi | Floats Held? | Yes |
| Cement Returns: | ## bbl m3 | Returns Density: | ## lb/gal kg/m3 | Returns Temperature: | ## °F °C |

Comment

JOB PERFORMED AS DESIGNED. NO ACCIDENT, INJURY OR SPILL. BOTTOM PLUG DROPPED BEFORE SPACER AND SECOND BOTTOM PLUG DROPPED AFTER SPACER. SLURRY VOLUME VERIFIED WITH MIX WATER GALLONS AND DENSITY VERIFIED WITH PRESSURIZED MUD BALANCE. DROPPED TOP PLUG BEFORE DISPLACEMENT. BUMPED PLUG 3 BPM AT 2278 PSI. TOOK TO 2989 PSI AND HELD FOR 5 MINUTE CASING TEST. FLOATS HELD WITH 5 BBL BACK. 6 BBL SPACER TO SURFACE

TOP OF TAIL – 7186'

TOP OF LEAD – 3461'

TOP OF CAP – 2457'

TOP OF SPACER – SURFACE WITH 6 BBL BACK

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 | Check Floats | Call Out | 1/30/2020 | 20:30:00 | USER | | | | | CREW CALLED OUT. ON LOCATION TIME 0200 |
| Event | 2 | Depart Shop for Location | Depart Shop for Location | 1/31/2020 | 00:15:00 | USER | | | | | CREW HAS VERIFIED MATERIALS AND CONFIRMED EQUIPMENT READY FOR THE JOB. CREW HAS JOURNEY MANAGEMENT SAFETY MEETING DISCUSSING ROUTE, CONVOY ORDER, FOLLOWING DISTANCE, COMMUNICATION AND DEPART FOR LOCATION |
| Event | 3 | Arrive At Loc | Arrive At Loc | 1/31/2020 | 01:15:00 | USER | | | | | ARRIVE ON LOCATION. RIG RIH CASING 12000'. CREW ASSESSES LOCATION FOR HAZARDS AND DISCUSS RIG OPERATIONS, RED ZONES, MUSTER AREAS, SIGN IN, PPE AND EQUIPMENT LAYOUT. CREW CAN'T SPOT IN UNTIL LANDING JOINT PICKED UP BECAUSE OF AREA ON LOCATION |
| Event | 4 | Casing on Bottom | Casing on Bottom | 1/31/2020 | 07:30:00 | USER | | | | | CASING ON BOTTOM. RIG HAD TO CIRCULATE AND ROTATE THE LAST BIT DOWN. SOME GAS TO SURFACE. RIG BEGINS BOTTOMS UP TO ENSURE CLEAN HOLE |

| | | | | | | | | | | | |
|-------|----|------------------------|------------------------|-----------|----------|------|--------|-------|------|--------|--|
| Event | 5 | Pre-Job Safety Meeting | Pre-Job Safety Meeting | 1/31/2020 | 09:15:00 | USER | -6.00 | 0.00 | 0.00 | 0.00 | CREW, RIG CREW AND CUSTOMER REP HAVE PRE JOB SAFETY MEETING DISCUSSING MUSTER AREAS, EMERGENCY PROCEEDURES, RED ZONES, COMMUNICATION, STOP WORK AUTHORITY, MIND ON TASK, HAZARDS, TUGGER OPERATIONS, 3 POINTS OF CONTACT, LINE OF FIRE, PINCH POINTS, SLIPS TRIPS FALLS AND THE JOB PROCEEDURE |
| Event | 6 | Start Job | Start Job | 1/31/2020 | 09:45:05 | COM4 | -7.00 | 8.91 | 0.00 | 13.60 | START JOB |
| Event | 7 | Test Lines | Test Lines | 1/31/2020 | 09:49:07 | COM4 | 167.00 | 8.82 | 0.00 | 16.90 | FILL LINES WITH 3 BBL WATER. PRESSURE TEST HES LINES TO 4500 PSI. HELD FOR A FEW MINUTES, TEST GOOD |
| Event | 8 | Other | Other | 1/31/2020 | 09:56:43 | COM4 | 94.00 | 8.66 | 0.00 | 16.90 | PRESSURE TEST RIG IBOP TO 2000 PSI. TEST GOOD |
| Event | 9 | Drop Bottom Plug | Drop Bottom Plug | 1/31/2020 | 10:00:01 | USER | 35.00 | 8.74 | 0.00 | 17.60 | DROP BOTTOM PLUG |
| Event | 10 | Pump Spacer 1 | Pump Spacer 1 | 1/31/2020 | 10:01:47 | COM4 | 18.00 | 8.64 | 1.60 | 0.00 | PUMP 120 BBL TUNED PRIME SPACER 11.5# 3.87 YIELD 24.42 GAL WITH DRY SURFACTANTS |
| Event | 11 | Drop Bottom Plug | Drop Bottom Plug | 1/31/2020 | 10:24:37 | COM4 | 84.00 | 11.00 | 0.00 | 142.80 | DROP BOTTOM PLUG |
| Event | 12 | Pump Lead Cement | Pump Lead Cement | 1/31/2020 | 10:24:41 | COM4 | 79.00 | 11.16 | 0.00 | 0.00 | PUMP 41 BBL ELASTICEM CAP 13.2# 1.65 YIELD 8.39 GAL 140 SACKS |
| Event | 13 | Pump Cement | Pump Cement | 1/31/2020 | 10:34:26 | COM4 | 401.00 | 13.24 | 7.00 | 0.10 | PUMP 153 BBL ELASTICEM LEAD 13.2# 1.67 YIELD 8.04 GAL 514 SACKS |

| | | | | | | | | | | | |
|-------|----|----------------------|----------------------|-----------|----------|------|---------|-------|-------|--------|---|
| Event | 14 | Pump Tail Cement | Pump Tail Cement | 1/31/2020 | 10:57:53 | COM4 | 375.00 | 13.07 | 7.10 | 0.10 | PUMP 427 BBL NEOCEM TAIL 13.2# 2.04 YIELD 9.79 GAL 1173 SACKS |
| Event | 15 | Shutdown | Shutdown | 1/31/2020 | 11:52:38 | USER | 289.00 | 12.92 | 4.80 | 443.50 | SHUTDOWN. BLOW DOWN LINES TO THE PIT. WASH PUMPS TO THE PIT |
| Event | 16 | Drop Top Plug | Drop Top Plug | 1/31/2020 | 12:03:01 | COM4 | 57.00 | 7.96 | 4.10 | 458.80 | DROP TOP PLUG |
| Event | 17 | Pump Displacement | Pump Displacement | 1/31/2020 | 12:05:43 | COM4 | 5.00 | 7.93 | 0.00 | 464.80 | PUMP 408 BBL WATER DISPLACEMENT WITH FIRST 20 BBL MMCR AND BIOCIDES THROUGHOUT |
| Event | 18 | Displ Reached Cement | Displ Reached Cement | 1/31/2020 | 12:09:46 | COM4 | 739.00 | 7.96 | 10.00 | 36.60 | DISPLACEMENT CAUGHT CEMENT |
| Event | 19 | Bump Plug | Bump Plug | 1/31/2020 | 12:55:04 | COM4 | 2943.00 | 7.99 | 0.00 | 423.10 | BUMP PLUG AT 3 BPM AT 2278 PSI. TOOK TO 2989 PSI AND HELD FOR 5 MINUTE CASING TEST |
| Event | 20 | Check Floats | Check Floats | 1/31/2020 | 13:00:15 | USER | 2832.00 | 7.95 | 0.00 | 423.10 | FLOATS HELD WITH 5 BBL BACK |
| Event | 21 | Safety Meeting | Safety Meeting | 1/31/2020 | 13:05:00 | USER | 15.00 | 7.94 | 0.00 | 423.10 | CREW HAS PRE RIG DOWN SAFETY MEETING DISCUSSING LINE OF FIRE, RIG OPERATIONS, RED ZONES, COMMUNICATION, PINCH POINTS, SLIPS TRIPS FALLS, TEAM LIFTING AND CLEANUP |
| Event | 22 | Depart Location | Depart Location | 1/31/2020 | 15:00:00 | USER | | | | | CREW IS RIGGED DOWN AND READY TO DEPART FROM LOCATION. CREW HAS JOURNEY MANAGEMENT SAFETY MEETING DISCUSSING ROUTE, CONVOY ORDER, FOLLOWING DISTANCE, WALK AROUNDS, FIT FOR DUTY, COMMUNICATION |

AND DEPART FROM
LOCATION

3.0 Attachments

3.1 Job Chart

