



## Cementing Job Summary

*The Road to Excellence Starts with Safety*

| Sold To #: 345242                               |                              | Ship To #: 3697168                               |       | Quote #:                         |                        | Sales Order #: 0903246118   |               |              |                     |               |  |
|---|------------------------------|--|-------|----------------------------------|------------------------|-----------------------------|---------------|--------------|---------------------|---------------|--|
| Customer: NOBLE ENERGY INC - EBUS               |                              |  |       | Customer Rep:                    |                        |                             |               |              |                     |               |  |
| Well Name: WELLS RANCH                          |                              |  |       | Well #: AA22-612                 |                        | API/UWI #: 05-123-42264-00  |               |              |                     |               |  |
| Field: WATTENBERG                               |                              | City (SAP): GILL                                 |       | County/Parish: WELD              |                        | State: COLORADO             |               |              |                     |               |  |
| Legal Description: SW SW-22-6N-63W-933FSL-77FWL |                              |  |       |                                  |                        |                             |               |              |                     |               |  |
| Contractor: H & P DRLG                          |                              |  |       | Rig/Platform Name/Num: H & P 321 |                        |                             |               |              |                     |               |  |
| Job BOM: 392189                                 |                              |  |       |                                  |                        |                             |               |              |                     |               |  |
| Well Type: HORIZONTAL OIL                       |                              |  |       |                                  |                        |                             |               |              |                     |               |  |
| Sales Person: HALAMERICA\HB61755                |                              |  |       | Srcv Supervisor: Joseph Fantasia |                        |                             |               |              |                     |               |  |
| Job   |                              |  |       |                                  |                        |                             |               |              |                     |               |  |
| Formation Name                                  |                              |  |       |                                  |                        |                             |               |              |                     |               |  |
| Formation Depth (MD)                            |                              | Top  |       | Bottom                           |                        |                             |               |              |                     |               |  |
| Form Type                                       |                              | BHST   |       | 230 degF                         |                        |                             |               |              |                     |               |  |
| Job depth MD                                    |                              | 6763ft   |       | Job Depth TVD                    |                        |                             |               |              |                     |               |  |
| 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             | 1907         | 0                   | 1907          |  |
| Casing  | 0                            | 5.5  | 4.778 | 20                               |                        |                             | 0             | 11800        |                     |               |  |
| Open Hole Section                               |                              |  | 8.5   |                                  |                        |                             | 1907          | 11828        |                     |               |  |
| Tools and Accessories                           |                              |  |       |                                  |                        |                             |               |              |                     |               |  |
| Fluid Data                                      |                              |  |       |                                  |                        |                             |               |              |                     |               |  |
| Stage/Plug #: 1                                 |                              |  |       |                                  |                        |                             |               |              |                     |               |  |
| Fluid #   | Stage Type                   | Fluid Name                                       | Qty   | Qty UoM                          | Mixing Density lbm/gal | Yield ft <sup>3</sup> /sack | Mix Fluid Gal | Rate bbl/min | Total Mix Fluid Gal |               |  |
| 1   | 12.5 lb/gal Tuned Spacer III | Tuned Spacer III                                 | 40    | bbl                              | 12.5                   | 2.75                        |               | 5            |                     |               |  |
| 0.40 gal/bbl                                    |                              | MUSOL A, 330 GAL TOTE - (790828)                 |       |                                  |                        |                             |               |              |                     |               |  |
| 0.40 gal/bbl                                    |                              | DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665) |       |                                  |                        |                             |               |              |                     |               |  |
| 203.65 lbm/bbl                                  |                              | BARITE, BULK (100003681)                         |       |                                  |                        |                             |               |              |                     |               |  |
| 34.60 gal/bbl                                   |                              | FRESH WATER                                      |       |                                  |                        |                             |               |              |                     |               |  |
| Fluid #   | Stage Type                   | Fluid Name                                       | Qty   | Qty UoM                          | Mixing Density lbm/gal | Yield ft <sup>3</sup> /sack | Mix Fluid Gal | Rate bbl/min | Total Mix Fluid Gal |               |  |
| 2   | 12.5 lb/gal Tuned Spacer III | Tuned Spacer III                                 | 40    | bbl                              | 12.5                   | 2.79                        |               | 5            |                     |               |  |
| 34.60 gal/bbl                                   |                              | FRESH WATER                                      |       |                                  |                        |                             |               |              |                     |               |  |
| 201.20 lbm/bbl                                  |                              | BARITE, BULK (100003681)                         |       |                                  |                        |                             |               |              |                     |               |  |

last updated on 4/18/2016 11:28:06 AM

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**HALLIBURTON**

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| Fluid #   | Stage Type   | Fluid Name                 | Qty | Qty UoM | Mixing Density<br>lbm/gal | Yield<br>ft3/sack | Mix Fluid<br>Gal | Rate<br>bbl/min | Total Mix<br>Fluid<br>Gal |
|---|--------------|----------------------------|-----|---------|---------------------------|-------------------|------------------|-----------------|---------------------------|
| 3   | ElastiCem B1 | ELASTICEM (TM) SYSTEM      | 596 | sack    | 13.6                      | 1.88              |                  | 8               | 8.57                      |
|   |              | 0.45 %                     |     |         |                           |                   |                  |                 |                           |
|   |              | HR-5, 50 LB SK (100005050) |     |         |                           |                   |                  |                 |                           |
|   |              | 8.57 Gal                   |     |         |                           |                   |                  |                 |                           |
|   |              | FRESH WATER                |     |         |                           |                   |                  |                 |                           |
| Fluid #   | Stage Type   | Fluid Name                 | Qty | Qty UoM | Mixing Density<br>lbm/gal | Yield<br>ft3/sack | Mix Fluid<br>Gal | Rate<br>bbl/min | Total Mix<br>Fluid<br>Gal |
| 4   | Displacement | Water                      | 148 | bbl     | 8.33                      |                   |                  | 9               |                           |
| <b>Fluid Data</b>                                     |              |                            |     |         |                           |                   |                  |                 |                           |
| Cement Left in Pipe                                   | Amount       | 42 ft                      |     |         | Reason                    | Shoe Joint        |                  |                 |                           |
| <b>Comment</b> APPROX 5 BBLS TUNED SPACER TO SURFACE. |              |                            |     |         |                           |                   |                  |                 |                           |

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

| Type  | Seq. No. | Activity                               | Graph Label                            | Date      | Time     | Source | Combined Pump Rate<br>(bbl/min) | Downhole Density<br>(ppg) | Pass-Side Pump Pressure<br>(psi) | Comments  |
|-------|----------|--|--|-----------|----------|--------|---------------------------------|---------------------------|----------------------------------|---|
| Event | 1        | Arrive at Location from Service Center | Arrive at Location from Service Center | 4/18/2016 | 07:00:00 | USER   |                                 |                           |                                  | CALL OUT AT 0200. REQUESTED ON LOCATION AT 0800. ARRIVE AT LOCATION 0700. HELD SITE ASSESSMENT AND PRE RIG UP SAFETY MEETING PRIOR TO RIGGING UP EQUIPMENT. RIG ON BOTTOM.          |
| Event | 2        | Other                                  | Other                                  | 4/18/2016 | 08:42:03 | USER   |                                 |                           |                                  | WATER TEST - PH 7... CHLORIDES 0 ... TEMP 55...   |
| Event | 3        | Other                                  | Other                                  | 4/18/2016 | 08:42:47 | USER   |                                 |                           |                                  | 8.5" OH DRILLED DEPTH 11828. 5.5" 20# CASING DEPTH 11800 ... 9.625" 36 # SURFACE CASING SET AT 1907'. DV TOOL AT 6763.38'.  |
| Event | 4        | Start Job                              | Start Job                              | 4/18/2016 | 08:45:00 | COM6   |                                 |                           |                                  | HELD PRE JOB SAFETY MEETING WITH ALL PRESENT PERSONNEL PRIOR TO STARTING JOB.   |
| Event | 5        | Test Lines                             | Test Lines                             | 4/18/2016 | 08:47:57 | COM6   | 0.00                            | 8.65                      | 64.00                            | PRESSURE TEST LINES TO 4800 PSI   |
| Event | 6        | Pump Spacer 1                          | Pump Spacer 1                          | 4/18/2016 | 08:54:21 | COM6   | 0.00                            | 8.57                      | 34.00                            | PUMP 40 BBLs TUNED SPACER MIXED AT 12.5 PPG. 16 GALLONS MUSOL A AND DUAL SPACER B ADDED TO MIX WATER. 10 GALLONS D-AIR ADDED TO CONTROL AIR ENTRAINMENT. DENSITY VERIFIED BY SCALE. |
| Event | 7        | Pump Spacer 2                          | Pump Spacer 2                          | 4/18/2016 | 09:06:40 | USER   | 2.40                            | 12.34                     | 80.00                            | PUMP 40 BBLs TUNED SPACER MIXED AT 12.5 PPG. DENSITY VERIFIED BY SCALE.   |
| Event | 8        | Pump Cement                            | Pump Cement                            | 4/18/2016 | 09:19:27 | COM6   | 5.90                            | 13.48                     | 254.00                           | PUMP 199 BBLs (596 SKS) ELASTICEM MIXED AT 13.6 PPG. DENSITY VERIFIED BY SCALE.   |
| Event | 9        | Shutdown                               | Shutdown                               | 4/18/2016 | 09:48:58 | COM6   | 0.00                            | 13.28                     | 63.00                            |   |
| Event | 10       | Clean Lines                            | Clean Lines                            | 4/18/2016 | 09:52:37 | COM6   | 0.00                            | 17.20                     | 32.00                            | CLEAN LINES TO WASH UP TANK.  |
| Event | 11       | Drop Top Plug                          | Drop Top Plug                          | 4/18/2016 | 09:54:52 | COM6   | 0.00                            | 8.33                      | 34.00                            | 3RD PARTY TOP PLUG PRELOADED AND DROPPED DURING SHUTDOWN. CUSTOMER WITNESSED.   |
| Event | 12       | Pump Displacement                      | Pump Displacement                      | 4/18/2016 | 09:55:22 | COM6   | 1.10                            | 7.78                      | 45.00                            | DISPLACE USING 148 BBLs WATER. 5 GALLONS MMCR ADDED TO FIRST 10 BBLs. GOOD RETURNS THROUGHOUT. APPROX 5 BBLs TUNED SPACER TO SURFACE.   |

|       |    |                 |                 |           |          |      |      |      |         |   |
|-------|----|-----------------|-----------------|-----------|----------|------|------|------|---------|---|
| Event | 13 | Bump Plug       | Bump Plug       | 4/18/2016 | 10:13:04 | COM6 | 6.20 | 8.08 | 1997.00 | PLUG LANDED AT 1997 PSI. PRESSURE BROUGHT TO 4040 PSI AND HELD 5 MIN.       |
| Event | 14 | Check Floats    | Check Floats    | 4/18/2016 | 10:18:39 | USER | 0.00 | 8.04 | 4140.00 | FLOATS HELD. 2 BBLS BACK TO TRUCK.  |
| Event | 15 | End Job         | End Job         | 4/18/2016 | 10:33:48 | USER |      |      |         | HELD PRE RIG DOWN SAFETY MEETING WITH CREW PRIOR TO RIGGING DOWN EQUIPMENT. |
| Event | 16 | Depart Location | Depart Location | 4/18/2016 | 11:30:00 | USER |      |      |         | JOURNEY MGMNT PRIOR TO LEAVING LOCATION,                                    |