

## HALLIBURTON

## Cementing Job Summary

*The Road to Excellence Starts with Safety*

| Sold To #: 345242                                  |                                       | Ship To #: 3789665                               |                 | Quote #:                         |                            | Sales Order #: 0904103103 |                             |               |              |                     |  |
|--|---------------------------------------|--|-----------------|----------------------------------|----------------------------|---------------------------|-----------------------------|---------------|--------------|---------------------|--|
| Customer: NOBLE ENERGY INC - EBUS                  |                                       |  |                 | Customer Rep: John Drahota       |                            |                           |                             |               |              |                     |  |
| Well Name: KONA                                    |                                       |  | Well #: A19-685 |                                  | API/UWI #: 05-123-44525-00 |                           |                             |               |              |                     |  |
| Field: WATTENBERG                                  |                                       | City (SAP): GILL                                 |                 | County/Parish: WELD              |                            | State: COLORADO           |                             |               |              |                     |  |
| Legal Description: NW SW-21-6N-64W-2343FSL-1100FWL |                                       |  |                 |                                  |                            |                           |                             |               |              |                     |  |
| Contractor: H & P DRLG                             |                                       |  |                 | Rig/Platform Name/Num: H & P 517 |                            |                           |                             |               |              |                     |  |
| Job BOM: 7523 7523                                 |                                       |  |                 |                                  |                            |                           |                             |               |              |                     |  |
| Well Type: HORIZONTAL OIL                          |                                       |  |                 |                                  |                            |                           |                             |               |              |                     |  |
| Sales Person: HALAMERICA\HB70026                   |                                       |  |                 | Srcv Supervisor: Nicholas Roles  |                            |                           |                             |               |              |                     |  |
| Job  |                                       |  |                 |                                  |                            |                           |                             |               |              |                     |  |
| Formation Name                                     |                                       |  |                 |                                  |                            |                           |                             |               |              |                     |  |
| Formation Depth (MD)                               |                                       | Top  |                 |                                  | Bottom                     |                           |                             |               |              |                     |  |
| Form Type  |                                       | BHST   |                 |                                  | 230 degF                   |                           |                             |               |              |                     |  |
| Job depth MD                                       |                                       | 18810ft  |                 |                                  | 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                               |                            | J-55                      | 0                           | 1958          | 0            | 1958                |  |
| Casing   | 0                                     | 5.5  | 4.778           | 20                               | BUTTRESS                   | P-110                     | 0                           | 18810         | 0            | 0                   |  |
| Open Hole Section                                  |                                       |  | 8.5             |                                  |                            |                           | 1958                        | 7376          | 1958         | 6909                |  |
| Open Hole Section                                  |                                       |  | 8.5             |                                  |                            |                           | 7376                        | 19292         |              |                     |  |
| 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  | 11.5 lb/gal Tuned Spacer III w/ Chems | Tuned Spacer III                                 |                 | 80                               | bbl                        | 11.5                      | 3.78                        |               | 4            |                     |  |
| 34.70 gal/bbl                                      |                                       | FRESH WATER                                      |                 |                                  |                            |                           |                             |               |              |                     |  |
| 0.60 gal/bbl                                       |                                       | DUAL SPACER SURFACTANT B, 5 GAL PAIL (100003665) |                 |                                  |                            |                           |                             |               |              |                     |  |
| 147.42 lbm/bbl                                     |                                       | BARITE, BULK (100003681)                         |                 |                                  |                            |                           |                             |               |              |                     |  |
| 0.60 gal/bbl                                       |                                       | MUSOL A, 330 GAL TOTE - (790828)                 |                 |                                  |                            |                           |                             |               |              |                     |  |
| 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  | ElastiCem                             | ELASTICEM (TM) SYSTEM                            |                 | 150                              | sack                       | 13.2                      | 1.57                        |               | 8            | 7.53                |  |
| 7.53 Gal   |                                       | FRESH WATER                                      |                 |                                  |                            |                           |                             |               |              |                     |  |

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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/mi<br>n | Total Mix<br>Fluid<br>Gal |
|--|----------------------|-----------------------|-------|---------|---------------------------|-------------------|------------------|---------------------|---------------------------|
| 3  | ElastiCem w/<br>SCBL | ELASTICEM (TM) SYSTEM | 719   | sack    | 13.2                      | 1.6               |                  | 8                   | 7.69                      |
| 7.69 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/mi<br>n | Total Mix<br>Fluid<br>Gal |
| 4  | NeoCem NT1           | NeoCem TM             | 1278  | sack    | 13.2                      | 2.04              |                  | 8                   | 9.75                      |
| 9.75 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/mi<br>n | Total Mix<br>Fluid<br>Gal |
| 5  | Displacement         | Displacement          | 416.5 | bbl     | 8.33                      |                   |                  | 10                  |                           |
| Cement Left In Pipe  | Amount               | 51ft                  |       |         | Reason                    | Shoe Joint        |                  |                     |                           |
| <b>Comment</b> Got trace spacer to surface. Estimated TOL#1-1507', TOL#2-2440',TOT-7462' |                      |                       |       |         |                           |                   |                  |                     |                           |

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

| Type  | Seq. No. | Activity                                 | Graph Label                              | Date      | Time     | Source | DH Density<br><i>(ppg)</i> | Comb Pump Rate<br><i>(bbl/min)</i> | DS Pump Press<br><i>(psi)</i> | Comments  |
|-------|----------|--|--|-----------|----------|--------|----------------------------|------------------------------------|-------------------------------|---|
| Event | 1        | Call Out                                 | Call Out                                 | 6/21/2017 | 01:00:00 | USER   |                            |                                    |                               | Crew call out for o/l at 0700   |
| Event | 2        | Pre-Convoy Safety Meeting                | Pre-Convoy Safety Meeting                | 6/21/2017 | 04:45:00 | USER   |                            |                                    |                               | All crew aware of hazards and directions. All fit to drive.   |
| Event | 3        | Depart from Service Center or Other Site | Depart from Service Center or Other Site | 6/21/2017 | 05:00:00 | USER   |                            |                                    |                               | Started journey management.   |
| Event | 4        | Arrive at Location from Service Center   | Arrive at Location from Service Center   | 6/21/2017 | 06:00:00 | USER   |                            |                                    |                               | Met with company man to discuss job details and procedure. Performed hazard hunt and site assessment. Rig had ~2000ft casing left to run.   |
| Event | 5        | Pre-Rig Up Safety Meeting                | Pre-Rig Up Safety Meeting                | 6/21/2017 | 06:15:00 | USER   |                            |                                    |                               | All hse present. Discussed bulk and iron placement and all red zone areas. Caution taped high pressure zones.   |
| Event | 6        | Other                                    | Other                                    | 6/21/2017 | 07:00:00 | USER   |                            |                                    |                               | Water Test- PH-6 Chlo-0 Temp-60 Cement temp-70  |
| Event | 7        | Safety Meeting - Pre Job                 | Safety Meeting - Pre Job                 | 6/21/2017 | 17:00:00 | USER   |                            |                                    |                               | Discussed job associated hazards, contingencies and job procedure with all job associated personnel.  |
| Event | 8        | Start Job                                | Start Job                                | 6/21/2017 | 17:37:49 | COM4   |                            |                                    |                               | TD-19292', TP-18810' 5.5" 20#, FC-18759', TVD-6909', SURF-1958' 9.625" 36#, OH-8.5" MUD-9.2#  |
| Event | 9        | Drop Bottom Plug                         | Drop Bottom Plug                         | 6/21/2017 | 17:48:02 | COM4   |                            |                                    |                               | Dropped by HES supervisor, witnessed by company man.  |
| Event | 10       | Test Lines                               | Test Lines                               | 6/21/2017 | 17:51:03 | COM4   | 8.31                       |                                    | 4530.00                       | Pumped 5bbbls fresh water to fill lines, closed 2" lo torc, performed 500psi k/o function test, followed with 5th gear stall at 1320psi, proceeded to bring pressure to 4500psi, held pressure, no leaks. |
| Event | 11       | Test Lines                               | Test Lines                               | 6/21/2017 | 17:57:22 | COM4   | 8.38                       |                                    | 2701.00                       | Performed 3000psi test on Rig Kelly Line. Held pressure, no leaks.  |
| Event | 12       | Pump Spacer 1                            | Pump Spacer 1                            | 6/21/2017 | 18:02:51 | COM4   | 11.44                      | 4.70                               | 410.00                        | Pumped 80bbbls Tuned Spacer III 11.5# 3.78y 23.5g/s with 50g Musol A, 50g Dual Spacer B and 20g D-Air at 4bpm 160psi.   |
| Event | 13       | Check Weight                             | Check Weight                             | 6/21/2017 | 18:05:18 | USER   | 11.51                      | 4.20                               | 327.00                        | Weight verified with pressurized mud scales.  |
| Event | 14       | Drop Bottom Plug                         | Drop Bottom Plug                         | 6/21/2017 | 18:22:48 | USER   |                            |                                    |                               | Dropped by HES supervisor, witnessed by company man.  |

|       |    |  |  |           |          |      |       |       |         |   |
|-------|----|--|--|-----------|----------|------|-------|-------|---------|---|
| Event | 15 | Pump Lead Cement                                 | Pump Lead Cement                                 | 6/21/2017 | 18:27:38 | COM4 | 13.34 | 5.00  | 278.00  | Pumped 150sks or 41.9bbbls Elasticem w/o CBL 13.2# 1.57y 7.53g/s at 8bpm 590psi.  |
| Event | 16 | Check Weight                                     | Check Weight                                     | 6/21/2017 | 18:29:37 | USER | 13.15 | 8.00  | 578.00  | Weight verified with pressurized mud scales.  |
| Event | 17 | Pump Lead Cement                                 | Pump Lead Cement                                 | 6/21/2017 | 18:33:29 | COM4 | 13.19 | 8.00  | 576.32  | Pumped 719sks or 204.9bbbls Elasticem w/CBL 13.2# 1.6y 7.69g/s at 8bpm 600psi.  |
| Event | 18 | Check Weight                                     | Check Weight                                     | 6/21/2017 | 18:38:58 | COM4 | 13.22 | 7.93  | 625.22  | Weight verified with pressurized mud scales.  |
| Event | 19 | Pump Tail Cement                                 | Pump Tail Cement                                 | 6/21/2017 | 19:01:26 | COM4 | 13.28 | 7.70  | 688.40  | Pumped 1278sks or 464.3bbbls 13.2# 2.04y 9.75g/s Neocem at 8bpm 920psi. Tail was cut short from 1339sks to 1278sks due to rig not running casing to calculated depth of 19276', casing was set at 18810'. |
| Event | 20 | Check Weight                                     | Check Weight                                     | 6/21/2017 | 19:07:27 | COM4 | 13.18 | 8.00  | 852.66  | Weight verified with pressurized mud scales.  |
| Event | 21 | Check Weight                                     | Check Weight                                     | 6/21/2017 | 19:32:36 | USER | 13.20 | 8.00  | 862.00  | Weight verified with pressurized mud scales.  |
| Event | 22 | Pump Tail Cement                                 | Pump Tail Cement                                 | 6/21/2017 | 19:58:27 | COM4 | 13.18 | 8.00  | 856.00  | Pumped the additional 38.5sks of Tail from last pod of 660.   |
| Event | 23 | Shutdown   | Shutdown   | 6/21/2017 | 20:04:05 | COM4 |       |       |         | Shutdown, rig blew air through lines to pits, followed with 5bbbls fresh water through pumps and lines.   |
| Event | 24 | Drop Top Plug                                    | Drop Top Plug                                    | 6/21/2017 | 20:04:18 | COM4 |       |       |         | Dropped by HES supervisor, witnessed by company man.  |
| Event | 25 | Pump Displacement                                | Pump Displacement                                | 6/21/2017 | 20:16:12 | COM4 | 8.24  | 10.10 | 480.00  | Pumped 416.5bbbls fresh water with 10g MMCR in first 20bbbls, 20g Algicide throughout.  |
| Event | 26 | Bump Plug  | Bump Plug  | 6/21/2017 | 21:03:03 | COM4 | 8.29  | 2.90  | 1875.00 | Slowed down to 3bpm at 395bbbls away, final circulating pressure-1730psi, bump pressure-2210PSI   |
| Event | 27 | Check Floats                                     | Check Floats                                     | 6/21/2017 | 21:08:04 | USER |       |       |         | Released pressure and got 4bbbls fresh water to truck, floats held.   |
| Event | 28 | End Job  | End Job  | 6/21/2017 | 21:11:10 | COM4 |       |       |         | Got trace spacer to surface. Estimated TOL#1-1507', TOL#2-2440',TOT-7462'   |
| Event | 29 | Safety Meeting - Pre Rig-Down                    | Safety Meeting - Pre Rig-Down                    | 6/21/2017 | 21:15:00 | USER |       |       |         | All HSE present. Discussed red zone areas and trapped pressure hazards. Watch for suspended loads and rig down procedures, including hand placement, lifting techniques, and swing radius.                |
| Event | 30 | Pre-Convoy Safety Meeting                        | Pre-Convoy Safety Meeting                        | 6/21/2017 | 22:45:00 | USER |       |       |         | All HSE present and fit to drive. Aware of directions and hazards.  |
| Event | 31 | Depart Location for Service Center or Other Site | Depart Location for Service Center or Other Site | 6/21/2017 | 23:00:00 | USER |       |       |         | Pre journey managment prior to departure.   |