

# HALLIBURTON

iCem<sup>®</sup> Service

## **TERRA ENERGY PARTNERS**

### **For: Terra**

Date: Sunday, December 02, 2018

CLOUGH NR 14-3 SURFACE

API#05-045-23901-00

Job Date: Sunday, December 02, 2018

Sincerely,

Grand Junction Cement Engineering

## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

| Type  | Seq. No. | Graph Label                           | Date      | Time     | Source | DH Density<br>(ppg) | Comb Pump Rate<br>(bbl/min) | PS Pump Press<br>(psi) | Pump Stg Tot<br>(bbl) | Comments  |
|-------|----------|---------------------------------------|-----------|----------|--------|---------------------|-----------------------------|------------------------|-----------------------|---|
| Event | 1        | Call Out                              | 12/2/2018 | 00:00:30 | USER   |                     |                             |                        |                       | REQUESTED ON LOCATION @ 06:00   |
| Event | 2        | Pre-Convoy Safety Meeting             | 12/2/2018 | 02:00:00 | USER   |                     |                             |                        |                       | ALL HES PRESENT   |
| Event | 3        | Crew Leave Yard                       | 12/2/2018 | 02:10:00 | USER   |                     |                             |                        |                       | 1 HT 400 PUMP TRUCK E1, 1 660 BULK TRUCK, 1 550 SERVICE PICKUP  |
| Event | 4        | Arrive At Loc                         | 12/2/2018 | 04:30:00 | USER   |                     |                             |                        |                       | RIG RUNNING CASING WHEN HES ARRIVED AT LOCATION   |
| Event | 5        | Assessment Of Location Safety Meeting | 12/2/2018 | 04:40:00 | USER   |                     |                             |                        |                       | MET WITH COMP REP, AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (PH- 7.0, CHLORIDES- 500, TEMP- 69F). COMP REP WAS OFFERED SDS FOR ALL CHEMICALS USED BY HES. |
| Event | 6        | Pre-Rig Up Safety Meeting             | 12/2/2018 | 04:50:00 | USER   |                     |                             |                        |                       | ALL HES PRESENT   |
| Event | 7        | Rig-Up Equipment                      | 12/2/2018 | 04:55:00 | USER   |                     |                             |                        |                       | HES RIGGED UP 1 HT400 PUMP TRUCK, 1 660 BULK TRUCK, 2" DISCHARGE IRON, AND 4" SUCTION HOSE WITHOUT ENTERING RED ZONE.   |
| Event | 8        | Pre-Job Safety Meeting                | 12/2/2018 | 10:15:00 | USER   |                     |                             |                        |                       | ALL HES EMPLOYEES AND RIG CREW PRESENT, RIG CIRCULATED @ 10 BPM PRIOR TO JOB PRESSURE @ 178 PSI.  |
| Event | 9        | Start Job                             | 12/2/2018 | 10:38:45 | COM6   |                     |                             |                        |                       | TD 1019', TP 1013.18' OF 9 5/8" 36# SURFACE CSG, FC @ 1070.51', OH 13.5", MUD 9.4 PPG   |
| Event | 10       | Prime Lines                           | 12/2/2018 | 10:39:19 | USER   | 8.33                | 2                           | 130                    | 2                     | FRESH WATER   |
| Event | 11       | Test Lines                            | 12/2/2018 | 10:41:37 | COM6   |                     |                             | 3150                   |                       | ALL LINES HELD PRESSURE AT 3150 PSI   |
| Event | 12       | Pump H2O Spacer                       | 12/2/2018 | 10:43:42 | COM6   | 8.33                | 4                           | 190                    | 20                    | 20BBLs FRESH WATER  |

|       |    |  |           |          |      |      |    |     |      |  |
|-------|----|--|-----------|----------|------|------|----|-----|------|--|
| Event | 13 | Pump Lead Cement                       | 12/2/2018 | 10:52:04 | COM6 | 12.3 | 8  | 650 | 53   | 125 SKS VARICEM CMT 12.3 PPG, 2.38 FT3/SK, 13.77 GAL/SK            |
| Event | 14 | Check Weight                           | 12/2/2018 | 10:53:36 | COM6 |      |    |     |      | WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES                        |
| Event | 15 | Pump Tail Cement                       | 12/2/2018 | 10:59:26 | COM6 | 12.8 | 8  | 660 | 66   | 175 SKS VARICEM CMT 12.8 PPG, 2.11 FT3/SK, 11.78 GAL/SK            |
| Event | 16 | Check Weight                           | 12/2/2018 | 11:00:41 | COM6 |      |    |     |      | WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES                        |
| Event | 17 | Shutdown                               | 12/2/2018 | 11:07:47 | USER |      |    |     |      | END OF CEMENT, WASH UP ON TOP OF PLUG                              |
| Event | 18 | Drop Top Plug                          | 12/2/2018 | 11:11:06 | COM6 |      |    |     |      | VERIFIED BY FLAG INDICATOR   |
| Event | 19 | Pump Displacement                      | 12/2/2018 | 11:11:08 | COM6 | 8.33 | 10 | 850 | 82.8 | FRESH WATER  |
| Event | 20 | Slow Rate                              | 12/2/2018 | 11:20:31 | USER | 8.33 | 2  | 300 | 72.8 | SLOW RATE TO 2 BPM TO BUMP PLUG                                    |
| Event | 21 | Bump Plug                              | 12/2/2018 | 11:24:40 | COM6 | 8.33 | 2  | 310 | 82.8 | LAND PLUG AT 310 PSI, BROUGHT UP TO 1036 PSI                       |
| Event | 22 | Check Floats                           | 12/2/2018 | 11:27:21 | USER |      |    |     |      | FLOATS HELD, .5 BBL BACK TO TRUCK                                  |
| Event | 23 | End Job                                | 12/2/2018 | 11:28:22 | COM6 |      |    |     |      | RETURNS THROUGHOUT JOB, 27 BBLs CMT TO SURFACE, 40# OF SUGAR USED. |
| Event | 24 | Post-Job Safety Meeting (Pre Rig-Down) | 12/2/2018 | 11:35:00 | USER |      |    |     |      | ALL HES PRESENT  |
| Event | 25 | Rig Down Lines                         | 12/2/2018 | 11:45:00 | USER |      |    |     |      | ALL HES PRESENT  |
| Event | 26 | Pre-Convoy Safety Meeting              | 12/2/2018 | 13:00:00 | USER |      |    |     |      | ALL HES PRESENT  |
| Event | 27 | Crew Leave Location                    | 12/2/2018 | 13:05:00 | USER |      |    |     |      | THANK YOU FOR CHOOSING HALLIBURTON CEMENT, SHAWN BLOSSOM AND CREW  |

3.0 Attachments

3.1 CHART .png

