

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

Rock Springs District, CO

For:

Date: Wednesday, September 04, 2019

PA 13-24

API# 05-045-23893

Garfield County, PA 13-24

Case 1

Job Date: Wednesday, September 04, 2019

Sincerely,
Rock Springs Engineering

1.0 Real-Time Job Summary

1.1 Job Event Log

| Type | Seq. No. | 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 | Call Out | 9/4/2019 | 00:45:00 | USER | | | | | REQUESTED ON LOCATION @ 0700 |
| Event | 2 | Pre-Convoy Safety Meeting | 9/4/2019 | 05:00:00 | USER | | | | | ALL HES PRESENT |
| Event | 3 | Crew Leave Yard | 9/4/2019 | 05:30:00 | USER | | | | | 1 F550, 1 PUMP TRUCK & 1 660 BULK TURCK |
| Event | 4 | Arrive at Location from Service Center | 9/4/2019 | 06:00:00 | USER | | | | | RIG PULLING DRILL PIPE |
| Event | 5 | Assessment Of Location Safety Meeting | 9/4/2019 | 06:15:00 | USER | | | | | MET WITH COMP REP, , AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (PH- 7, CHLORIDES- 0, TEMP- 69F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES. |
| Event | 6 | Safety Meeting - Pre Rig-Up | 9/4/2019 | 06:30:00 | USER | | | | | ALL HES PRESENT |
| Event | 7 | Rig-Up Equipment | 9/4/2019 | 06:45:00 | USER | | | | | HES RIGGED UP EQUIPMENT WITHOUT ENTERING RED ZONE. |
| Event | 8 | Pre-Job Safety Meeting | 9/4/2019 | 09:30:00 | USER | | | | | ALL HES AND RIG CREW PRESENT |
| Event | 9 | Start Job | 9/4/2019 | 10:17:13 | COM2 | | | | | TD 1138', TP 1132.38', SJ 39.4', OH 13.5'', CSG 9.625'' 36#, MUD 9.6 PPG. RIG CIRCULATED WELL FOR APPROX 1 HRS. |
| Event | 10 | Prime Pumps | 9/4/2019 | 10:17:43 | USER | 60.00 | 8.33 | 2.00 | 2.00 | 8.33 PPG FRESH WATER |
| Event | 11 | Test Lines | 9/4/2019 | 10:19:35 | COM2 | 3274.00 | 8.33 | 0.50 | 0.50 | ALL LINES HELD PRESSURE AT 3240 PSI |
| Event | 12 | Pump Spacer 1 | 9/4/2019 | 10:22:32 | COM2 | 180.00 | 8.33 | 6.00 | 20.00 | 8.33 PPG FRESH WATER (20 BBL) |
| Event | 13 | Pump Lead Cement | 9/4/2019 | 10:28:30 | COM2 | 470.00 | 12.30 | 8.00 | 53.00 | VARICEM CEMENT 125 SKS (53 BBLs), 12.3 PPG, 2.38 FT3/SK, 13.77 GAL/SK |
| Event | 14 | Check Weight | 9/4/2019 | 10:28:58 | COM2 | | | | | WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES |

| | | | | | | | | | | |
|-------|----|--|----------|----------|------|--------|-------|-------|-------|--|
| Event | 15 | Pump Tail Cement | 9/4/2019 | 10:35:50 | COM2 | 470.00 | 12.80 | 8.00 | 66.00 | VARICEM CEMENT 175 SKS (66 BBLS), 12.8 PPG, 2.11 FT3/SK, 11.78 GAL/SK. |
| Event | 16 | Check Weight | 9/4/2019 | 10:35:55 | COM2 | | | | | WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES |
| Event | 17 | Shutdown | 9/4/2019 | 10:44:46 | USER | | | | | END OF CMT |
| Event | 18 | Drop Top Plug | 9/4/2019 | 10:47:34 | COM2 | | | | | WASH UP PUMPS AND LINES ON TOP OF PLUG |
| Event | 19 | Pump Displacement | 9/4/2019 | 10:48:02 | COM2 | 640.00 | 8.33 | 10.00 | 74.50 | 8.34 PPG FRESH WATER (84.5 BBLS) |
| Event | 20 | Slow Rate | 9/4/2019 | 10:59:18 | USER | 256.00 | 8.33 | 4.00 | 10.00 | SLOW RATE TO 4 BPM PER CO REP TO LAND PLUG |
| Event | 21 | Bump Plug | 9/4/2019 | 11:02:10 | USER | 861.00 | 8.33 | 4.00 | 84.40 | LAND PLUG AT 256 PSI, BROUGHT UP TO 861 PSI |
| Event | 22 | Check Floats | 9/4/2019 | 11:03:16 | USER | 912.00 | 8.33 | 4.00 | | FLOATS HELD, 1 BBL BACK TO TRUCK |
| Event | 23 | End Job | 9/4/2019 | 11:03:55 | COM2 | | | | | RETURNS THROUGHOUT JOB, 20 BBL OF CEMENT BACK TO SURFACE, 100# OF SUGAR USED |
| Event | 24 | Post-Job Safety Meeting (Pre Rig-Down) | 9/4/2019 | 11:10:00 | USER | | | | | ALL HES PRESENT |
| Event | 25 | Rig-Down Equipment | 9/4/2019 | 11:20:00 | USER | | | | | ALL HES PRESENT |
| Event | 26 | Pre-Convoy Safety Meeting | 9/4/2019 | 11:40:00 | USER | | | | | ALL HES PRESENT |
| Event | 27 | Crew Leave Location | 9/4/2019 | 11:50:00 | USER | | | | | THANK YOU FOR CHOOSING HALLIBURTON CEMENT, CHRIS SMITH AND CREW |

2.0 Attachments

2.1 CHART.png

