

# HALLIBURTON

iCem<sup>®</sup> Service

## **TERRA ENERGY PARTNERS**

**For: Terra**

Date: Sunday, March 18, 2018

**PA 424-24 Surface**

API#05-045-23645

Sincerely,

**Grand Junction Cement Engineering**

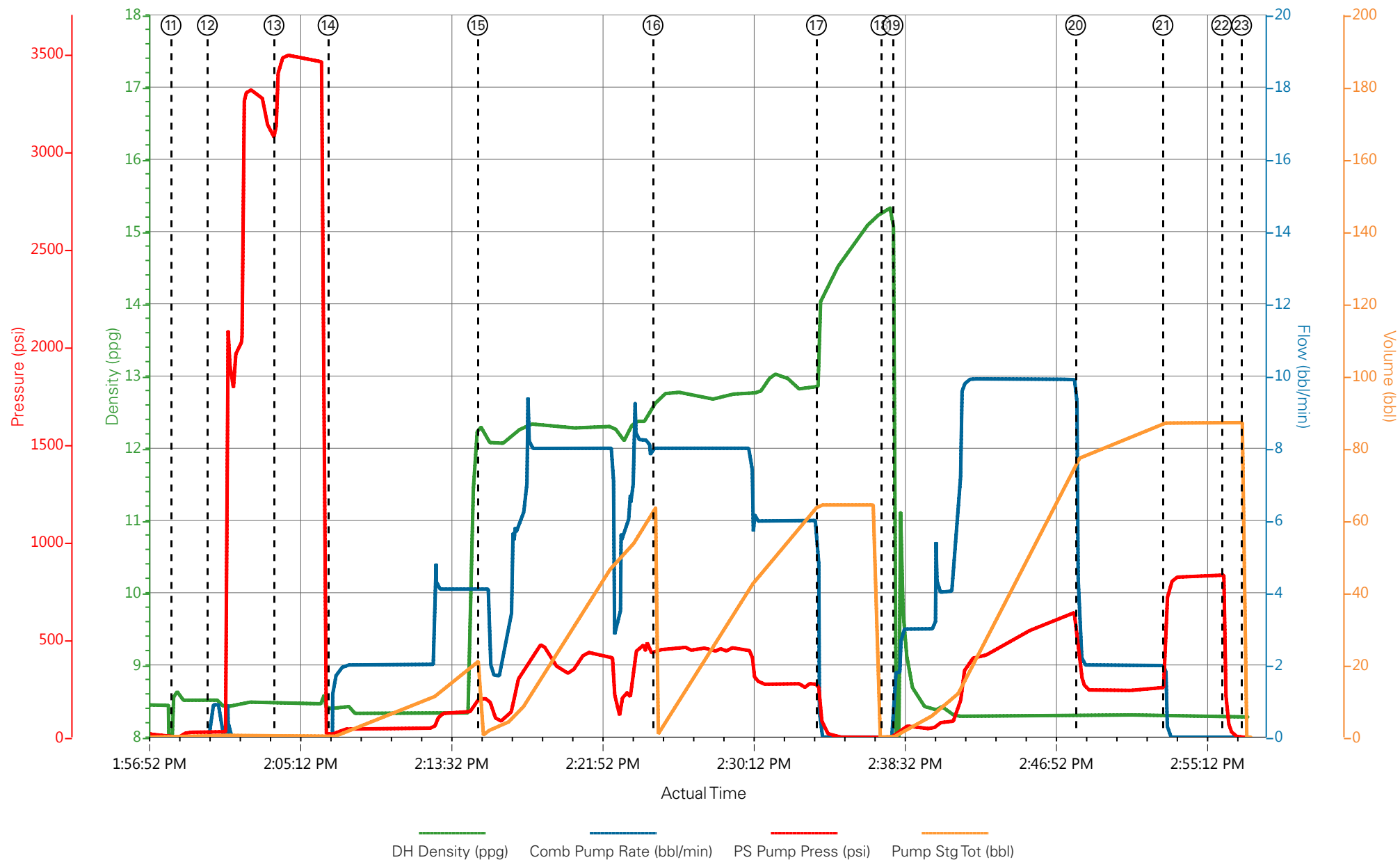
## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Pass-Side Pump Pressure (psi)	Pump Stage Total (bbl)	Comments
Event	1	Call Out	3/18/2018	08:30:00	USER					ON LOCATION 13:00
Event	2	Pre-Convoy Safety Meeting	3/18/2018	10:30:00	USER					JOURNEY CREATED - ALL HES INVOLVED IN SAFETY MEETING
Event	3	Crew Leave Yard	3/18/2018	10:45:00	USER					1-F-550 PICKUP, 1-ELITE PUMP TRUCK, 1-660 BULK TRUCK
Event	4	Arrive At Loc	3/18/2018	13:00:00	USER					ARRIVED ON TIME
Event	5	Assessment Of Location Safety Meeting	3/18/2018	13:05:00	USER					RIG WAS RUNNING CASING - HES REP SPOKE WITH COMPANY REP THEN SPOTTED EQUIPMENT
Event	6	Pre-Rig Up Safety Meeting	3/18/2018	13:10:00	USER					JSA FILLED OUT AND REVIEWED BY ALL HES
Event	7	Rig-Up Equipment	3/18/2018	13:15:00	USER					RIG-UP IRO TO THE RIG STAND PIPE - RIG UP WATER HOSES TO BOTH RIG UPRIGHTS - RIG UP BULK EQUIPMENT TO PUMP TRUCK
Event	8	Well Info/Water Test	3/18/2018	13:20:00	USER					TD: 1137FT TP: 1131.88FT SJ: 44.53FT OH: 13 1/2" CSG: 9 5/8" 36# J-55 MUD WT: 10.4 - WATER TEST: TEMP- 60 PH- 7 CHLOR- 0
Event	9	Rig-Up Completed	3/18/2018	13:45:00	USER					COMPLETED SAFELY
Event	10	Pre-Job Safety Meeting	3/18/2018	13:50:00	USER					ALL HES, RIG CREW AND COMPANY REP IN ATTENDANCE FOR SAFETY MEETING
Event	11	Start Job	3/18/2018	13:58:15	COM5					START JOB
Event	12	Fill Lines	3/18/2018	14:00:15	COM5	8.34	2	26	2	FILL LINES WITH 2BBLs OF WATER TO PRESSURE TEST
Event	13	Test Lines	3/18/2018	14:03:55	COM5			3490		PRESSURE TEST LINES TO 3490PSI - PRESSURE TEST GOOD
Event	14	Fresh Water Spacer	3/18/2018	14:06:54	COM5	8.34	4	116	4	20BBL FRESH WATER SPACER AHEAD PUMPED AT 4BPM PRESSURE WAS 116PSI
Event	15	Pump Lead Cement	3/18/2018	14:15:09	COM5	12.3	8	430	52.9	125SKS OF VARICEM CEMENT (52.9BBLs) 12.3PPG

										2.38YIELD 13.77GAL/SK WEIGHT OF CEMENT VERIFIED VIA PRESSURIZED MUD SCALES THROUGHOUT LEAD CEMENT
Event	16	Pump Tail Cement	3/18/2018	14:24:49	COM5	12.8	8	440	65.7	175SKS OF VARICEM CEMENT (65.7BBLS) 12.8PPG 2.11YIELD 11.77GAL/SK WEIGHT OF CEMENT VERIFIED VIA PRESSURIZED MUD SCALES THROUGHOUT TAIL CEMENT
Event	17	Shutdown	3/18/2018	14:33:50	USER					SHUTDOWN END OF CEMENT - HES WASH UP ON TOP OF THE PLUG - READY TANKS FOR DISPLACEMENT
Event	18	Drop Top Plug	3/18/2018	14:37:23	USER					TOP PLUG LAUNCHED - NO PROBLEMS
Event	19	Pump Displacement	3/18/2018	14:38:03	COM5	8.34	10	650	74.1	FRESH WATER DISPLACEMENT
Event	20	Slow Rate	3/18/2018	14:48:07	USER	8.34	2	245	10	SLOW RATE TO BUMP THE PLUG - PRESSURE PRIOR TO SLOWING WAS 650PSI AT 10BPM - PRESSURE AFTER SLOWING WAS 245PSI AT 2BPM
Event	21	Bump Plug	3/18/2018	14:52:56	USER	8.34	2	265	84.1	PLUG BUMPED AT CALCULATED DISPLACEMENT - PLUG BUMPED AT 265PSI AT 2BPM TOOK TO 813PSI
Event	22	Check Floats	3/18/2018	14:56:10	USER					FLOATS HELD .5BBL BACK TO TANKS - 16BBLS OF CEMENT TO SURFACE - RIG USED 40 POUNDS OF SUGAR
Event	23	End Job	3/18/2018	14:57:16	COM5					THANK YOU FOR CHOOSING HALLIBURTON CEMENT CARL KUKUS AND CREW
Event	24	Pre-Rig Down Safety Meeting	3/18/2018	15:00:00	USER					JSA REVIEWED - ALL HES INVOLVED IN SAFETY MEETING
Event	25	Rig-Down Equipment	3/18/2018	15:05:00	USER					WASH UP AND BLOW DOWN PUMP TRUCK AND ALL IRON - RIG DOWN ALL LINES AND EQUIPMENT
Event	26	Rig-Down Completed	3/18/2018	16:05:00	USER					COMPLETED SAFELY
Event	27	Pre-Convoy Safety Meeting	3/18/2018	16:15:00	USER					JOURNEY CREATED - ALL HES INVOLVED IN SAFETY MEETING
Event	28	Crew Leave Location	3/18/2018	16:20:00	USER					1-F-550 PICKUP, 1-ELITE PUMP TRUCK, 1-660 BULK TRUCK

# TEP - TRI STATE TRUCKING PA 424-24 - 904705093 - 9 5/8" SURFACE



- |                             |                   |   |                        |                          |              |                      |             |
|-----------------------------|-------------------|---|------------------------|--------------------------|--------------|----------------------|-------------|
| ① Call Out                  | ③ Crew Leave Yard | ⑤ Assessment Of Location Safety Meeting | ⑦ Rig-Up Equipment     | ⑨ Rig-Up Completed       | ⑪ Start Job  | ⑬ Test Lines         | ⑮ Pump Lea  |
| ② Pre-Convoy Safety Meeting | ④ Arrive At Loc   | ⑥ Pre-Rig Up Safety Meeting             | ⑧ Well Info/Water Test | ⑩ Pre-Job Safety Meeting | ⑫ Fill Lines | ⑭ Fresh Water Spacer | ⑯ Pump Tail |

# TEP - TRI STATE TRUCKING PA 424-24 - 904705093 - 9 5/8" SURFACE

