

# HALLIBURTON

iCem<sup>®</sup> Service

## **Terra Energy Partners**

**For: Terra**

Date: Friday, November 17, 2017

**PA 542-26 Surface PJR**

API# 05-045-23647-00

Sincerely,

**Grand Junction Cement Engineering**

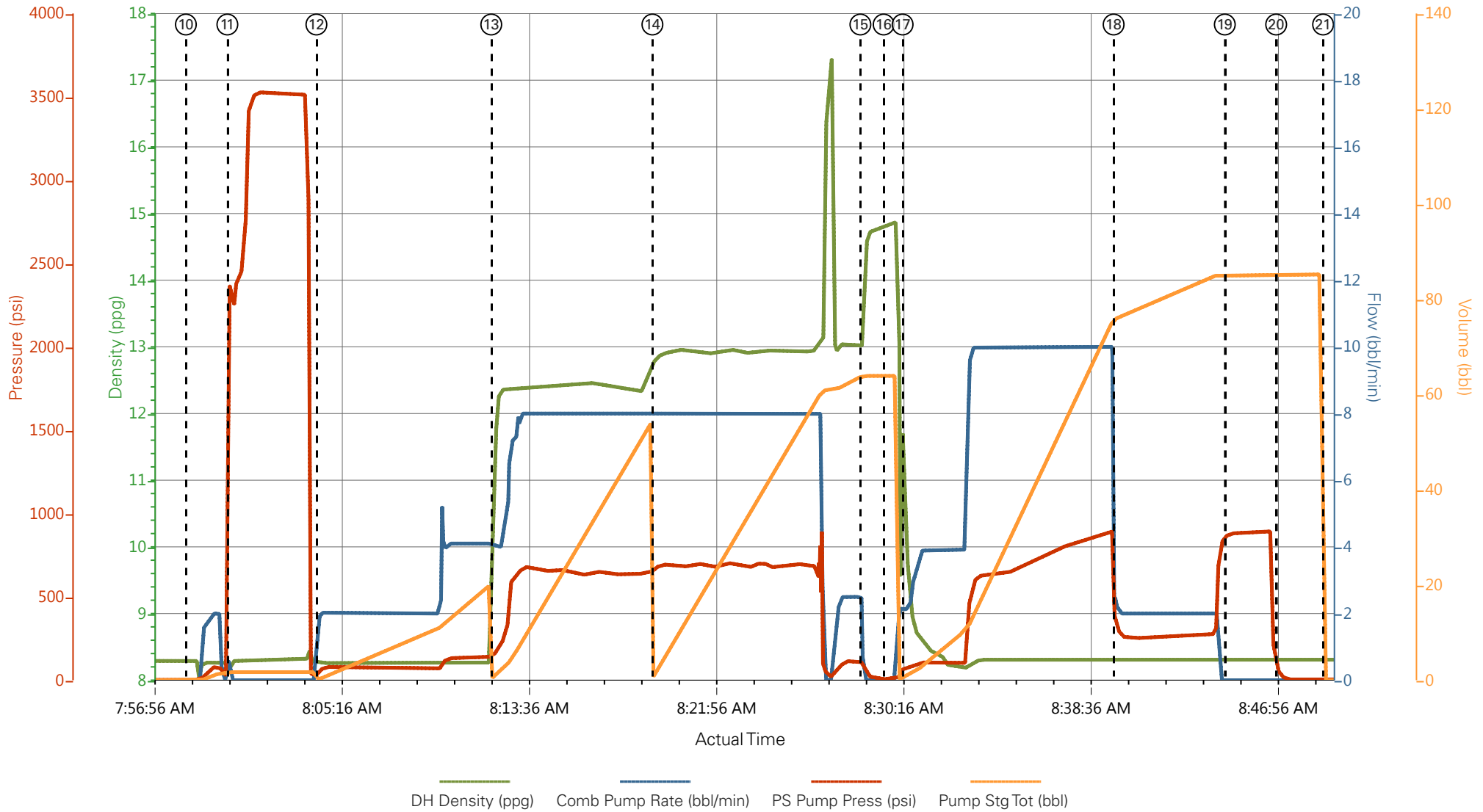
## 1.0 Real-Time Job Summary

### 1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	11/17/2017	01:30:00	USER					
Event	2	Pre-Convoy Safety Meeting	11/17/2017	02:50:00	USER					
Event	3	Crew Leave Yard	11/17/2017	03:00:00	USER					
Event	4	Arrive At Loc	11/17/2017	04:30:00	USER					
Event	5	Assessment Of Location Safety Meeting	11/17/2017	04:40:00	USER					
Event	6	Spot Equipment	11/17/2017	04:45:00	USER					
Event	7	Pre-Rig Up Safety Meeting	11/17/2017	04:50:00	USER					
Event	8	Rig-Up Equipment	11/17/2017	05:00:00	USER					
Event	9	Pre-Job Safety Meeting	11/17/2017	06:15:00	USER					
Event	10	Start Job	11/17/2017	07:58:28	COM5					TD: 1150 TP: 1140 SJ: 41.42 MW: 9.4 9 5/8" 32.3#/FT CSG IN 13 1/2" OH WATER TEST: PH: 7 POTASSIUM: 700 CHLORIDES: 0 SULFATES: <200 TEMP: 68 DEGREES
Event	11	Test Lines	11/17/2017	08:00:18	COM5	8.33	0.00	3500.00	2.0	3500 PSI TEST
Event	12	Pump Spacer 1	11/17/2017	08:04:16	COM5	8.33	2.00	58.00	20.0	FRESH H2O SPACER
Event	13	Pump Lead Cement	11/17/2017	08:12:03	COM5	12.30	8.00	660.00	53.1	125 SKS @ 12.3 PPG 2.38 YLD 13.77 GAL/SK H2O

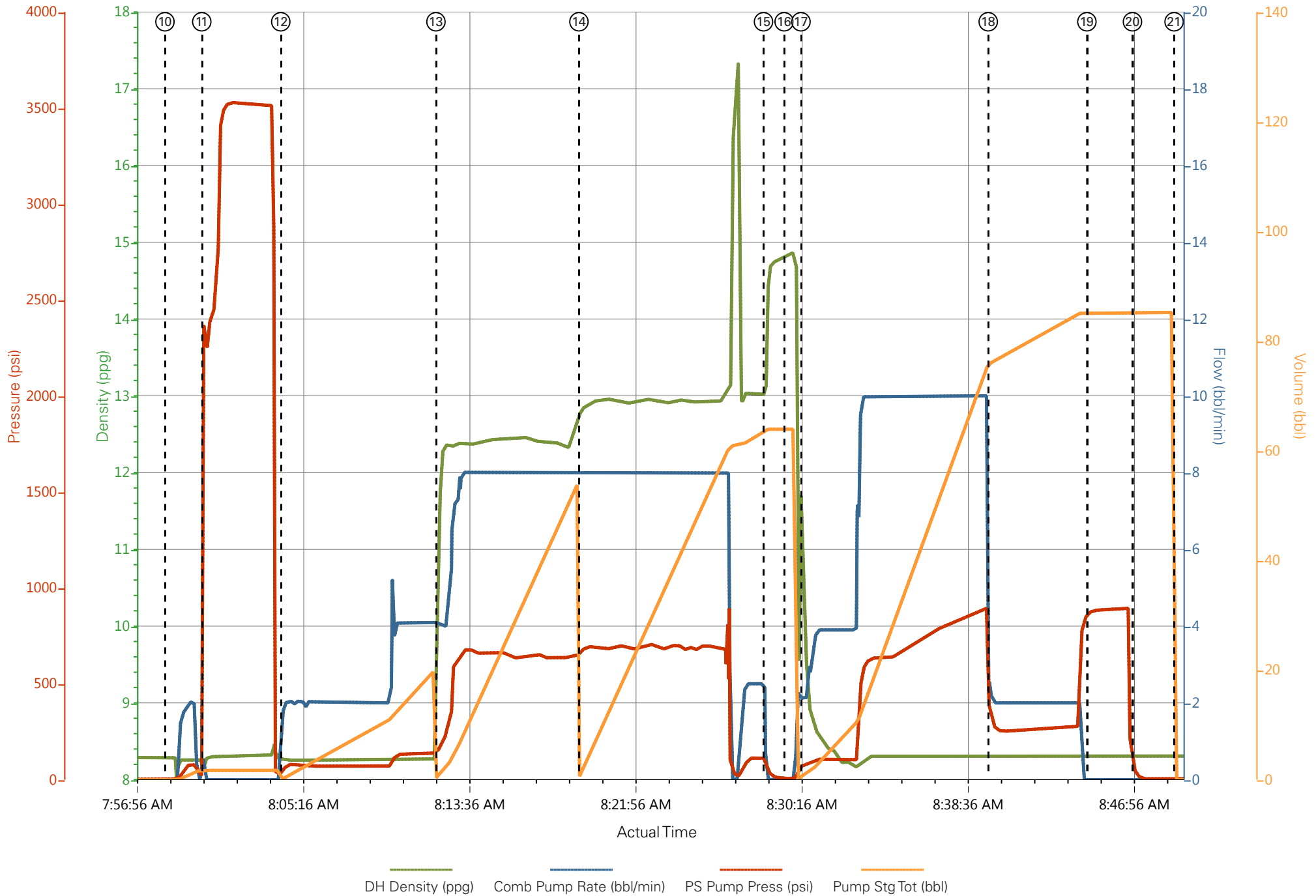
Event	14	Pump Tail Cement	11/17/2017	08:19:14	COM5	12.82	8.00	679.00	65.8	175 SKS @ 12.8 PPG 2.11 YLD 11.78 GAL/SK H2O
Event	15	Shutdown	11/17/2017	08:28:29	USER					
Event	16	Drop Top Plug	11/17/2017	08:29:31	COM5					
Event	17	Pump Displacement	11/17/2017	08:30:22	COM5	8.33	10.00	880.00	86.5	FRESH H2O DISPLACEMENT
Event	18	Slow Rate	11/17/2017	08:39:45	USER	8.33	2.00	246.00	76.0	
Event	19	Bump Plug	11/17/2017	08:44:42	COM5	8.33	2.00	845.00	86.5	PLUG BUMPED AT CALCULATED DISPLACEMENT
Event	20	Check Floats	11/17/2017	08:47:00	USER					FLOATS HELD, GAINED 1/2 BBL BACK TO PUMP.
Event	21	End Job	11/17/2017	08:49:05	COM5					
Event	22	Post-Job Safety Meeting (Pre Rig-Down)	11/17/2017	08:55:00	USER					GOOD CIRCULATION THROUGHOUT JOB. PIPE WAS LEFT STATIC THROUGHOUT JOB. CIRCULATED 16 BBL CEMENT TO SURFACE, 40# SUGAR USED, NO ADD HOURS CHARGED.
Event	23	Rig-Down Equipment	11/17/2017	09:00:00	USER					
Event	24	Pre-Convoy Safety Meeting	11/17/2017	09:55:00	USER					
Event	25	Crew Leave Location	11/17/2017	10:00:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENTING OF GRAND JUNCTION, CO ANTHONY ANDREWS AND CREW

# TEP - PA 542-26 - 9 5/8" SURFACE



- |   |                          |                     |  |
|---|--------------------------|---------------------|--|
| ① Call Out                              | ⑧ Rig-Up Equipment       | ⑮ Shutdown          | ⑳ Post-Job Safety Meeting (Pre Rig-Down) |
| ② Pre-Convoy Safety Meeting             | ⑨ Pre-Job Safety Meeting | ⑯ Drop Top Plug     | ㉑ Rig-Down Equipment                     |
| ③ Crew Leave Yard                       | ⑩ Start Job              | ⑰ Pump Displacement | ㉒ Pre-Convoy Safety Meeting              |
| ④ Arrive At Loc                         | ⑪ Test Lines             | ⑱ Slow Rate         | ㉓ Crew Leave Location                    |
| ⑤ Assessment Of Location Safety Meeting | ⑫ Pump Spacer 1          | ㉒ Bump Plug         |  |
| ⑥ Spot Equipment                        | ⑬ Pump Lead Cement       | ㉓ Check Floats      |  |
| ⑦ Pre-Rig Up Safety Meeting             | ⑭ Pump Tail Cement       | ㉔ End Job           |  |

# TEP - PA 542-26 - 9 5/8" SURFACE



— DH Density (ppg)    
 — Comb Pump Rate (bbl/min)    
 — PS Pump Press (psi)    
 — Pump Stg Tot (bbl)