

# HALLIBURTON

iCem<sup>®</sup> Service

## **TERRA ENERGY PARTNERS**

**For: Terra**

Date: Thursday, July 26, 2018

**PA 512-26 Surface PJR**

API# 05-045-23723-00

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 (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	7/26/2018	03:30:00	USER					REQUESTED ON LOCATION @ 09:30
Event	2	Pre-Convoy Safety Meeting	7/26/2018	06:00:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	7/26/2018	06:05:00	USER					1 HT 400 PUMP TRUCK E1, 1 660 BULK TRUCK, 1 250 SERVICE PICKUP
Event	4	Arrive At Loc	7/26/2018	07:30:00	USER					RIG RUNNING CASING WHEN HES ARRIVED AT LOCATION
Event	5	Assessment Of Location Safety Meeting	7/26/2018	07:35:00	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- 70F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Pre-Rig Up Safety Meeting	7/26/2018	07:45:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	7/26/2018	08:00:00	USER					HES RIGGED UP EQUIPMENT WITHOUT ENTERING RED ZONE.
Event	8	Pre-Job Safety Meeting	7/26/2018	12:30:00	USER					ALL HES EMPLOYEES AND RIG CREW PRESENT, RIG CIRCULATED @ 12 BPM PRIOR TO JOB PRESSURE @ 200 PSI.
Event	9	Start Job	7/26/2018	13:09:45	COM6					TD 1137', TP 1131.6' OF 9 5/8" 36# SURFACE CSG, FC @ 1086.8', OH 13.5", MUD 9.5 PPG
Event	10	Prime Lines	7/26/2018	13:10:33	USER	8.33	2	48	2	8.33 PPG FRESH WATER

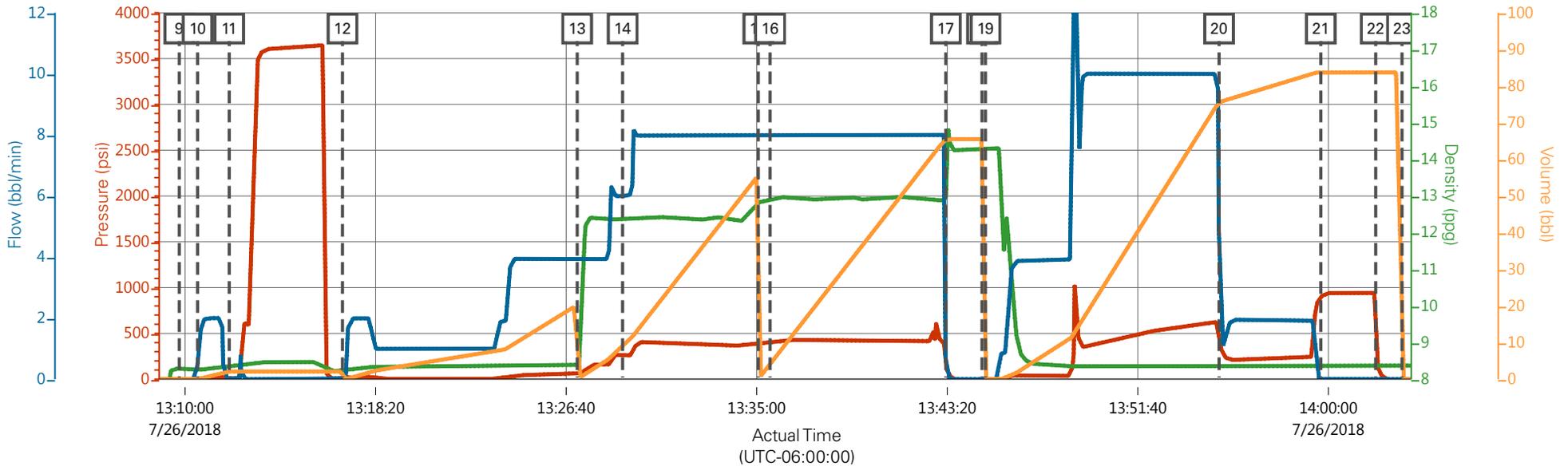
Event	11	Test Lines	7/26/2018	13:11:56	COM6			3690		ALL LINES HELD PRESSURE AT 3690 PSI
Event	12	Pump H2O Spacer	7/26/2018	13:16:53	COM6	8.33	4	105	20	FRESH WATER
Event	13	Pump Lead Cement	7/26/2018	13:27:09	COM6	12.3	8	420	53	125 SKS VARICEM CMT 12.3 PPG, 2.38 FT3/SK, 13.77 GAL/SK
Event	14	Check Weight	7/26/2018	13:29:08	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	15	Pump Tail Cement	7/26/2018	13:35:04	COM6	12.8	8	480	66	175 SKS VARICEM CMT 12.8 PPG, 2.11 FT3/SK, 11.78 GAL/SK
Event	16	Check Weight	7/26/2018	13:35:35	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	17	Shutdown	7/26/2018	13:43:16	USER					END OF CEMENT, WASH UP ON TOP OF PLUG
Event	18	Pump Displacement	7/26/2018	13:44:51	COM6	8.33	10	640	84	FRESH WATER
Event	19	Drop Top Plug	7/26/2018	13:45:00	USER					VERIFIED BY FLAG INDICATOR
Event	20	Slow Rate	7/26/2018	13:55:13	USER	8.33	2	225	74	SLOW RATE TO 2 BPM TO BUMP PLUG
Event	21	Bump Plug	7/26/2018	13:59:40	COM6	8.33	2	260	84	LAND PLUG AT 260 PSI, BROUGHT UP TO 950 PSI
										FLOATS HELD, .5 BBL BACK TO TRUCK
Event	22	Check Floats	7/26/2018	14:02:04	USER					
Event	23	End Job	7/26/2018	14:03:13	COM6					RETURNS THROUGHOUT JOB, 24 BBLS CMT TO SURFACE, 40# OF SUGAR USED.
Event	24	Post-Job Safety Meeting (Pre Rig-Down)	7/26/2018	14:05:00	USER					ALL HES PRESENT
Event	25	Rig Down Equipment	7/26/2018	14:10:00	USER					ALL HES PRESENT
Event	26	Pre-Convoy Safety Meeting	7/26/2018	15:00:00	USER					ALL HES PRESENT

Event 27 Crew Leave Location 7/26/2018 15:05:00 USER

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THANK YOU FOR CHOOSING HALLIBURTON  
CEMENT, SHAWN BLOSSOM AND CREW

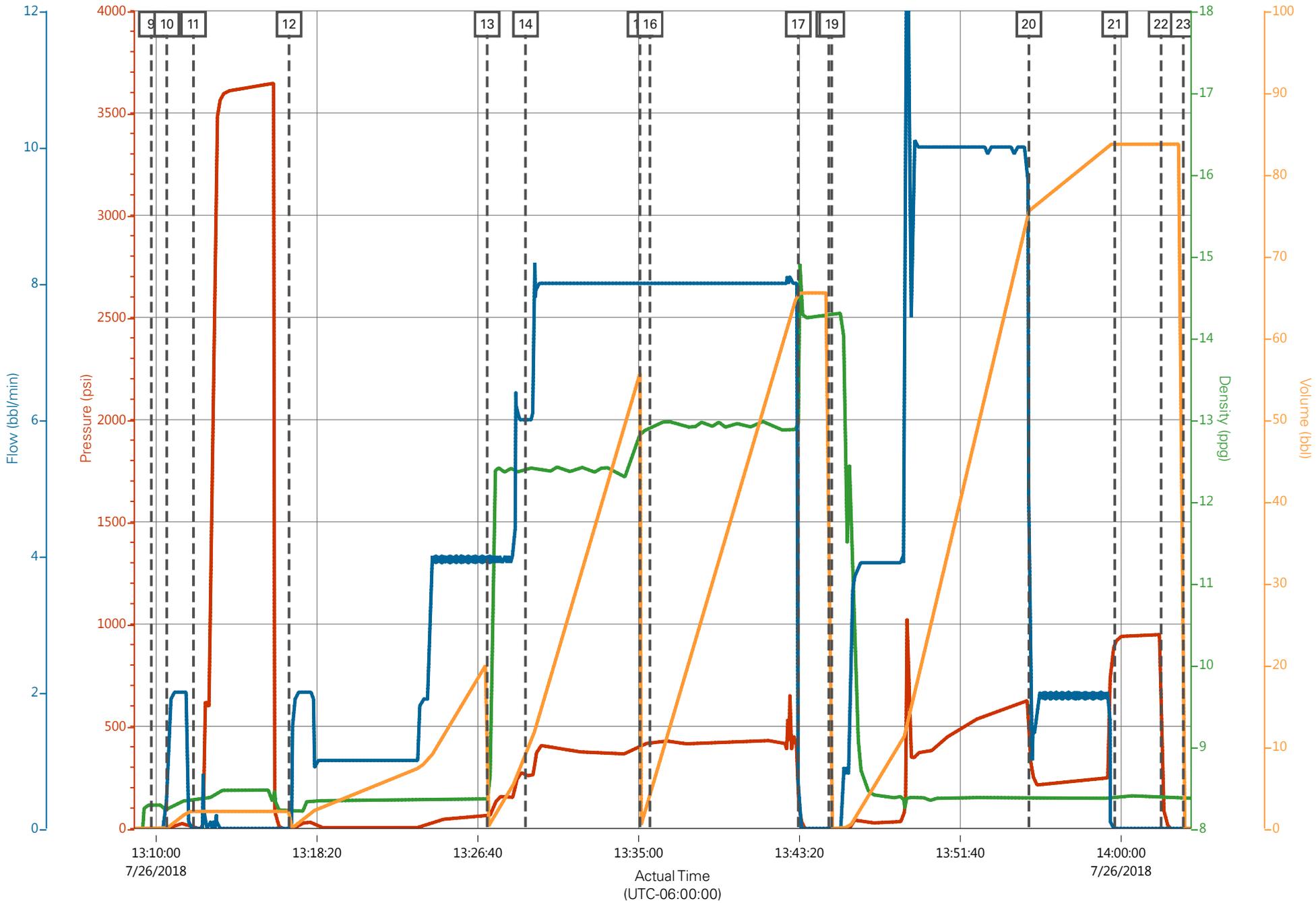
TEP PA 512-26 Surface 9 5/8"



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

Description	Actual Time (UTC-06:00:00)	PS Pump Press (psi)	DH Density (ppg)	Comb Pump Rate (bbl/min)	Pump Stg Tot (bbl)
9 Start Job	13:09:45	-19.70	8.29	0.00	0.00
10 Prime Lines	13:10:33	0.30	8.24	0.90	0.00
11 Test Lines	13:11:56	1.30	8.36	0.00	2.10
12 Pump H2O Spacer	13:16:53	-6.70	8.22	0.00	0.00
13 Pump Lead Cement	13:27:09	57.30	8.36	3.90	0.00
14 Check Weight	13:29:08	259.30	12.39	6.00	9.00
15 Pump Tail Cement	13:35:04	402.30	12.82	8.00	55.70
16 Check Weight	13:35:35	416.30	12.88	8.00	4.10
17 Shutdown	13:43:16	152.30	12.96	0.00	65.50
18 Pump Displacement	13:44:51	-16.70	14.28	0.00	65.50
19 Drop Top Plug	13:45:00	-16.70	14.28	0.00	0.00
20 Slow Rate	13:55:13	441.30	8.38	4.40	75.50
21 Bump Plug	13:59:40	903.30	8.39	0.00	83.70
22 Check Floats	14:02:04	514.30	8.40	0.00	83.70
23 End Job	14:03:13	-15.70	8.37	0.00	0.00

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