

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

For: Terra

Date: Monday, December 18, 2017

PA 511-25 Surface PJR

API# 05-045-23643-00

Sincerely,

Grand Junction Cement Engineering

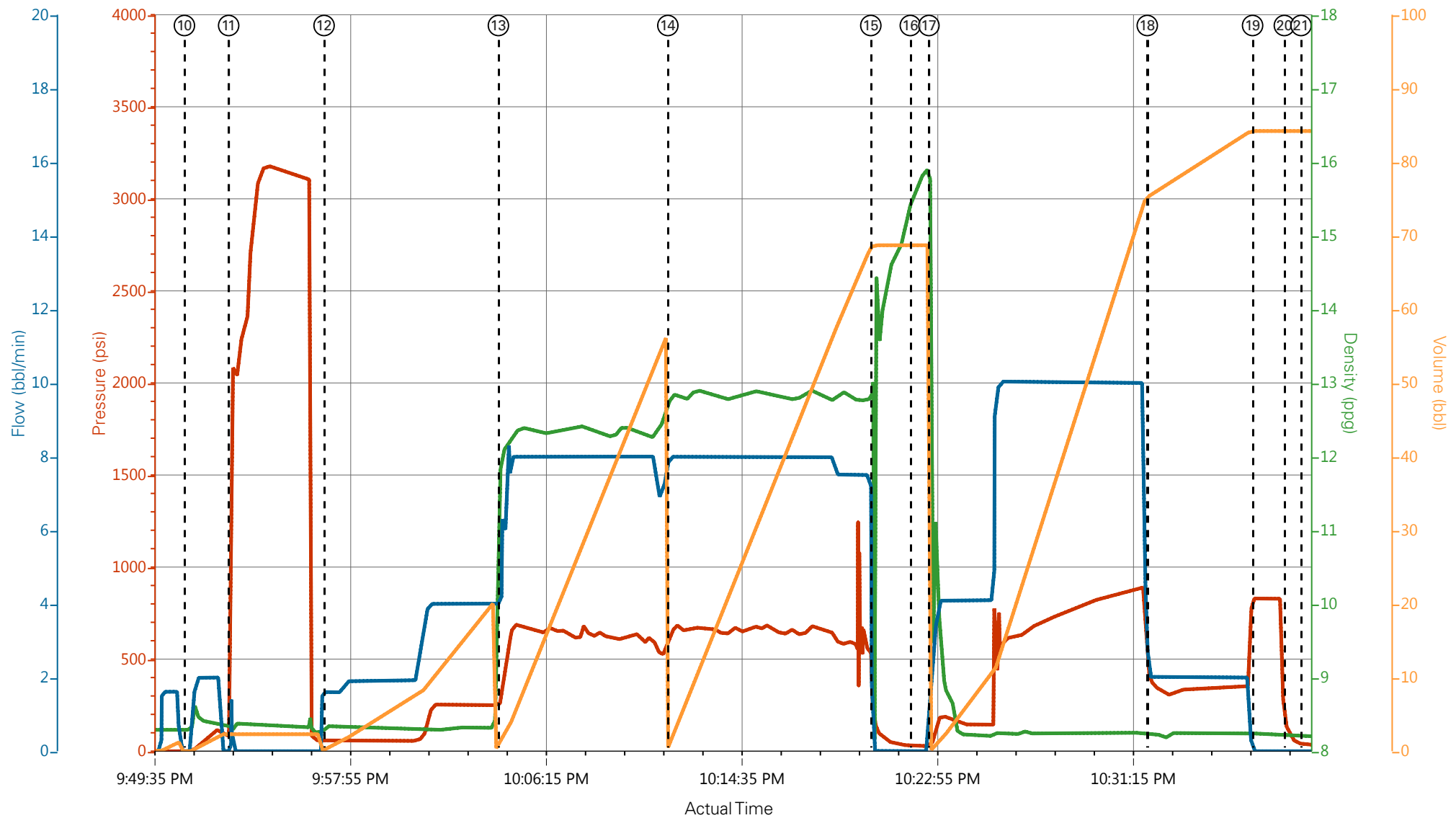
1.0 Real-Time Job Summary

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	12/18/2017	14:00:00	USER					
Event	2	Pre-Convoy Safety Meeting	12/18/2017	15:55:00	USER					
Event	3	Crew Leave Yard	12/18/2017	16:00:00	USER					
Event	4	Arrive At Loc	12/18/2017	17:00:00	USER					
Event	5	Assessment Of Location Safety Meeting	12/18/2017	17:05:00	USER					
Event	6	Spot Equipment	12/18/2017	17:10:00	USER					
Event	7	Pre-Rig Up Safety Meeting	12/18/2017	17:15:00	USER					
Event	8	Rig-Up Equipment	12/18/2017	17:20:00	USER					
Event	9	Pre-Job Safety Meeting	12/18/2017	21:30:00	USER					
Event	10	Start Job	12/18/2017	21:51:00	COM5					TD: 1130 TP: 1126 SJ: 43.73 MW: 9.6 9 5/8" 32.3#/FT CSG IN 13 1/2" OH WATER TEST: PH: 7 POTASSIUM: 450 CHLORIDES: 0 SULFATES: <200 TEMP: 58 DEGREES
Event	11	Test Lines	12/18/2017	21:52:52	COM5	8.33	0.00	3000.00	2.0	3000 PSI TEST
Event	12	Pump Spacer 1	12/18/2017	21:56:56	COM5	8.33	4.00	170.00	20.0	FRESH H2O SPACER
Event	13	Pump Lead Cement	12/18/2017	22:04:22	COM5	12.30	8.00	650.00	53.0	125 SKS @ 12.3 PPG 2.38 YLD 13.77 GAL/SK H2O

Event	14	Pump Tail Cement	12/18/2017	22:11:35	COM5	12.80	8.00	622.00	65.8	175 SKS @ 12.8 PPG 2.11 YLD 11.78 GAL/SK H2O
Event	15	Shutdown	12/18/2017	22:20:13	USER					
Event	16	Drop Top Plug	12/18/2017	22:21:54	COM5					PLUG AWAY
Event	17	Pump Displacement	12/18/2017	22:22:42	COM5	8.33	10.00	890.00	85.2	FRESH H2O DISPLACEMENT
Event	18	Slow Rate	12/18/2017	22:32:00	USER	8.33	2.00	350.00	75.0	
Event	19	Bump Plug	12/18/2017	22:36:29	COM5	8.33	0.00	837.00	85.2	PLUG BUMPED AT CALCULATED DISPLACEMENT. FINAL CIRCULATING PRESSURE WAS 350 PSI.
Event	20	Check Floats	12/18/2017	22:37:50	USER					FLOATS HELD, GAINED 1/2 BBL BACK TO PUMP
Event	21	End Job	12/18/2017	22:38:32	COM5					
Event	22	Post-Job Safety Meeting (Pre Rig-Down)	12/18/2017	22:45:00	USER					GOOD CIRCULATION THROUGHOUT JOB. PIPE WAS LEFT STATIC. CIRCULATED 25 BBL CMT TO SURFACE. 40# SUGAR USED, NO ADD HOURS CHARGED.
Event	23	Rig-Down Equipment	12/18/2017	22:50:00	USER					
Event	24	Pre-Convoy Safety Meeting	12/18/2017	23:40:00	USER					
Event	25	Crew Leave Location	12/18/2017	23:45:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENTING OF GRAND JUNCTION, CO ANTHONY ANDREWS AND CREW

TEP PA 511-25 Surface - 9 5/8" Casing



① Call Out n/a;n/a;n/a;n/a	⑧ Rig-Up Equipment n/a;n/a;n/a;n/a	⑮ Shutdown 167;8.16;0;68.7	22 Post-Job Safety Meeting (Pre Rig-Down) 20;8.18;0;0
② Pre-Convoy Safety Meeting n/a;n/a;n/a;n/a	⑨ Pre-Job Safety Meeting -1;0.04;0;0	⑯ Drop Top Plug 30;15.52;0;68.7	23 Rig-Down Equipment 18;8.19;0;0
③ Crew Leave Yard n/a;n/a;n/a;n/a	⑩ Start Job -1;8.29;0;0	⑰ Pump Displacement 46;11.6;2.2;0.3	24 Pre-Convoy Safety Meeting n/a;n/a;n/a;n/a
④ Arrive At Loc n/a;n/a;n/a;n/a	⑪ Test Lines 2088;8.25;0;2.3	⑱ Slow Rate 387;8.22;2;75.5	25 Crew Leave Location n/a;n/a;n/a;n/a
⑤ Assessment Of Location Safety Meeting n/a;n/a;n/a;n/a	⑫ Pump Spacer 1 59;8.34;1.6;0.4	⑲ Bump Plug 837;8.24;0;84.2	
⑥ Spot Equipment n/a;n/a;n/a;n/a	⑬ Pump Lead Cement 303;12.01;5.3;1.4	20 Check Floats 111;8.2;0;84.2	
⑦ Pre-Rig Up Safety Meeting n/a;n/a;n/a;n/a	⑭ Pump Tail Cement 622;12.81;8;1.6	21 End Job 36.26;8.2;0;84.2	

TEP PA 511-25 Surface - 9 5/8" Casing

