

# HALLIBURTON

iCem<sup>®</sup> Service

## **TERRA ENERGY PARTNERS**

**For: Terra**

Date: Tuesday, October 16, 2018

**NR 313-3 Surface PJR**

API #05-045-23920-00

Sincerely,

**Grand Junction Cement Engineering**

## 2.0 Real-Time Job Summary

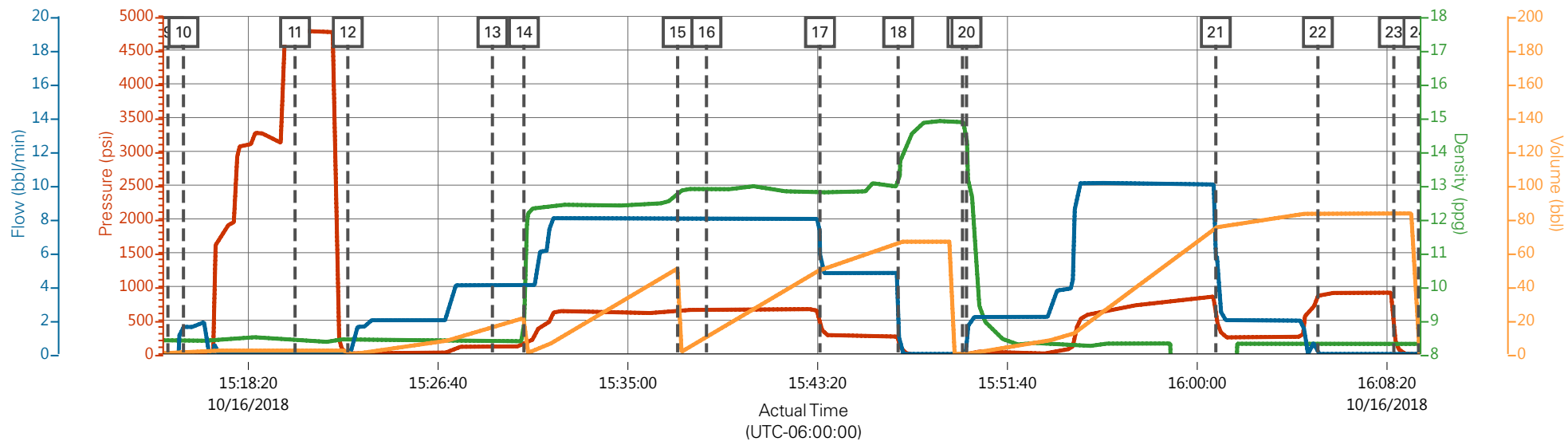
## 2.1 Job Event Log

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	10/16/2018	10:00:00	USER					REQUESTED ON LOCATION @ 15:00
Event	2	Pre-Convoy Safety Meeting	10/16/2018	12:00:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	10/16/2018	12:10:00	USER					1 HT 400 PUMP TRUCK E1, 1 660 BULK TRUCK, 1 550 SERVICE PICKUP
Event	4	Arrive At Loc	10/16/2018	14:00:00	USER					RIG RUNNING CASING WHEN HES ARRIVED AT LOCATION
Event	5	Assessment Of Location Safety Meeting	10/16/2018	14:05:00	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- 62F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Pre-Rig Up Safety Meeting	10/16/2018	14:15:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	10/16/2018	14:20:00	USER					HES RIGGED UP 1 HT400 PUMP TRUCK, 1 660 BULK TRUCK, 2" DISCHARGE IRON, AND 4" SUCTION HOSE WITHOUT ENTERING RED ZONE.
Event	8	Pre-Job Safety Meeting	10/16/2018	15:00:00	USER					ALL HES EMPLOYEES AND RIG CREW PRESENT, RIG CIRCULATED @ 11 BPM PRIOR TO JOB PRESSURE @ 150 PSI.
Event	9	Start Job	10/16/2018	15:14:48	COM6					TD 1138', TP 1131.78' OF 9 5/8" 36# SURFACE CSG, FC @ 1088.54', OH 13.5", MUD 9.6 PPG

Event	10	Prime Lines	10/16/2018	15:15:29	USER	8.33	2	40	2	FRESH WATER
Event	11	Test Lines	10/16/2018	15:20:23	COM6			4780		ALL LINES HELD PRESSURE AT 4780 PSI
Event	12	Pump H2O Spacer	10/16/2018	15:22:42	COM6	8.33	4	125	20	20BBLs FRESH WATER
Event	13	Check Weight	10/16/2018	15:29:03	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	14	Pump Lead Cement	10/16/2018	15:30:26	COM6	12.3	8	650	53	125 SKS VARICEM CMT 12.3 PPG, 2.38 FT3/SK, 13.77 GAL/SK
Event	15	Pump Tail Cement	10/16/2018	15:37:11	COM6	12.8	8	650	66	175 SKS VARICEM CMT 12.8 PPG, 2.11 FT3/SK, 11.78 GAL/SK
Event	16	Check Weight	10/16/2018	15:38:27	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	17	Slow Rate	10/16/2018	15:43:26	USER					SLOWED RATE TO END CEMENT
Event	18	Shutdown	10/16/2018	15:46:52	USER					END OF CEMENT
Event	19	Drop Top Plug	10/16/2018	15:49:41	COM6					VERIFIED BY FLAG INDICATOR
Event	20	Pump Displacement	10/16/2018	15:49:52	COM6	8.33	10	870	84.2	FRESH WATER
Event	21	Slow Rate	10/16/2018	16:00:49	USER	8.33	2	230	74.2	SLOW RATE TO 2 BPM TO BUMP PLUG
Event	22	Bump Plug	10/16/2018	16:05:18	COM6	8.33	2	280	84.2	LAND PLUG AT 280 PSI, BROUGHT UP TO 910 PSI
Event	23	Check Floats	10/16/2018	16:08:38	USER					FLOATS HELD, .5 BBL BACK TO TRUCK
Event	24	End Job	10/16/2018	16:09:43	COM6					RETURNS THROUGHOUT JOB, 28 BBLs CMT TO SURFACE, 40# OF SUGAR USED.
Event	25	Post-Job Safety Meeting (Pre Rig-Down)	10/16/2018	16:15:00	USER					ALL HES PRESENT
Event	26	Rig Down Lines	10/16/2018	16:20:00	USER					ALL HES PRESENT

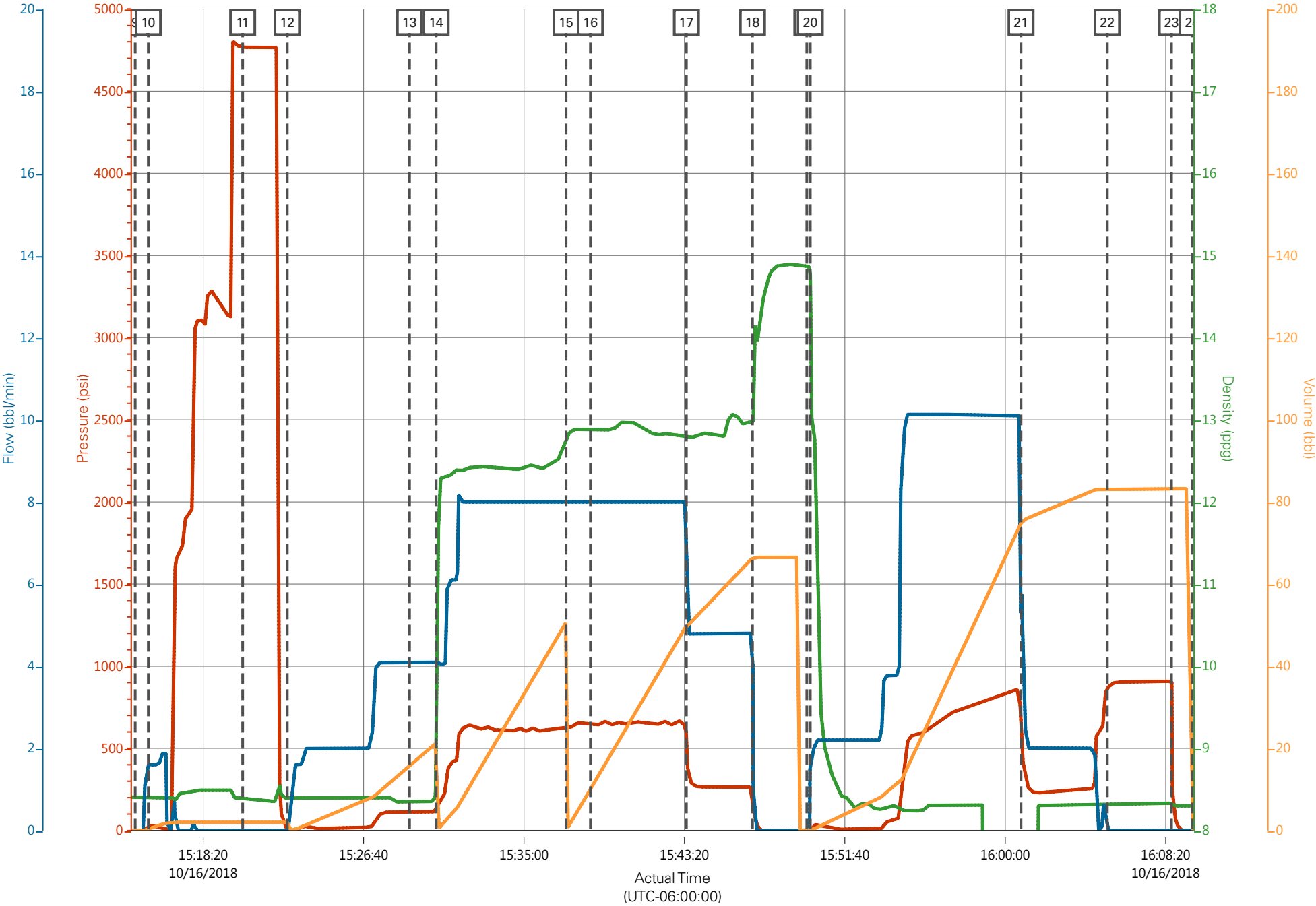
Event	27	Pre-Convoy Safety Meeting	10/16/2018	17:30:00	USER	ALL HES PRESENT
Event	28	Crew Leave Location	10/16/2018	17:45:00	USER	THANK YOU FOR CHOOSING HALLIBURTON CEMENT, SHAWN BLOSSOM AND CREW

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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	15:14:48	-4.70	8.41	0.00	0.00
10 Prime Lines	15:15:29	18.30	8.39	1.60	0.30
11 Test Lines	15:20:23	4767.30	8.39	0.00	2.00
12 Pump H2O Spacer	15:22:42	4.30	8.40	0.00	2.00
13 Check Weight	15:29:03	113.30	8.35	4.10	15.70
14 Pump Lead Cement	15:30:26	123.30	8.89	4.10	21.30
15 Pump Tail Cement	15:37:11	632.30	12.76	8.00	50.60
16 Check Weight	15:38:27	653.30	12.88	8.00	10.10
17 Slow Rate	15:43:26	553.30	12.81	5.90	49.80
18 Shutdown	15:46:52	270.30	12.97	4.80	66.40
19 Drop Top Plug	15:49:41	-12.70	14.87	0.00	0.00
20 Pump Displacement	15:49:52	7.30	14.77	1.70	0.00
21 Slow Rate	16:00:49	542.30	-0.27	5.70	74.90
22 Bump Plug	16:05:18	860.30	8.33	0.00	83.20
23 Check Floats	16:08:38	908.30	8.33	0.00	83.20
24 End Job	16:09:43	-10.70	8.30	0.00	0.00

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