

HALLIBURTON

iCem[®] Service

Terra Energy Partners

For: Terra

Date: Thursday, January 18, 2018

SR 424-12 Surface PJR

API #05-045-23450-00

Sincerely,

Grand Junction Cement Engineering

1.0 Real-Time Job Summary

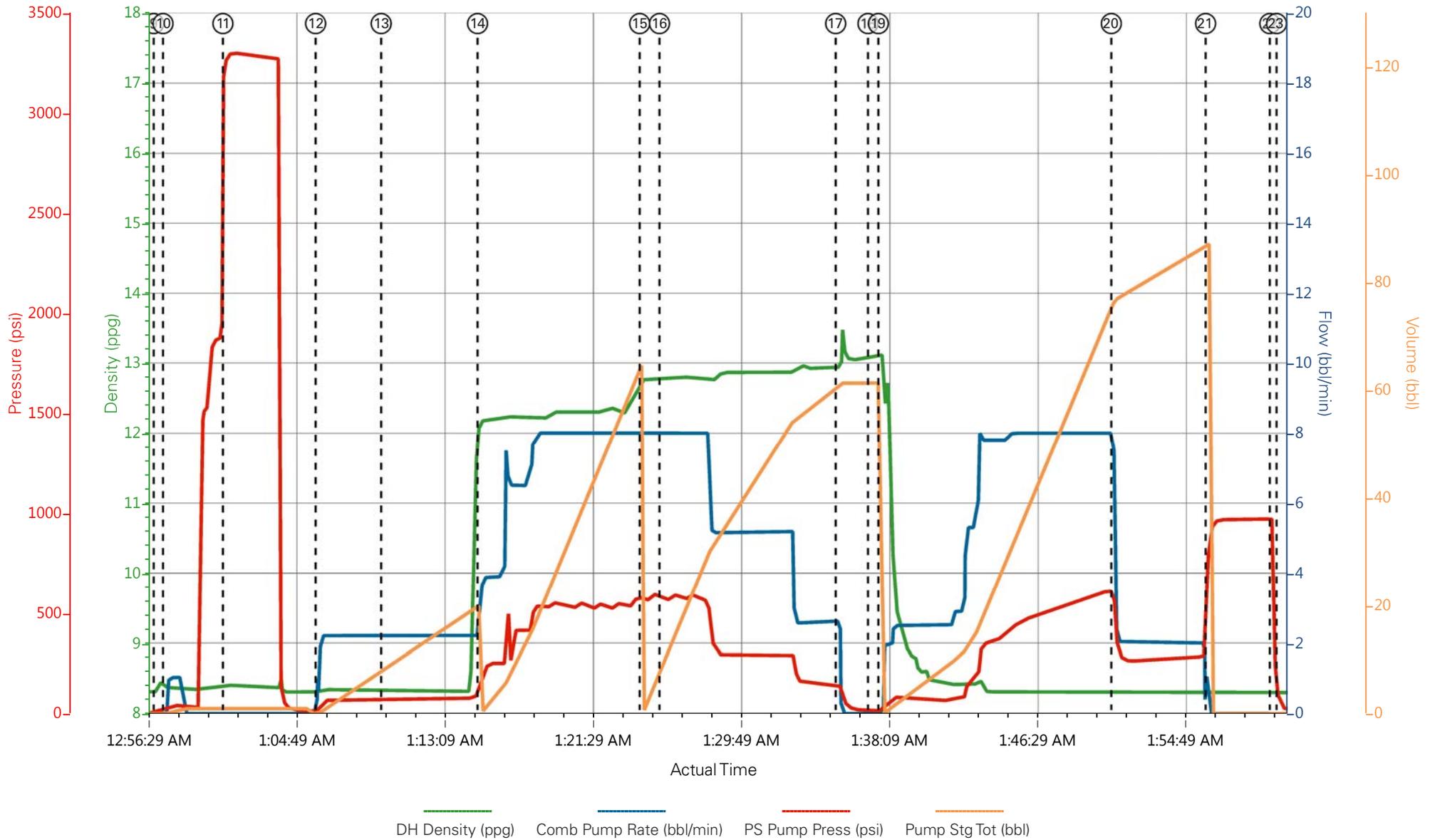
1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	1/17/2018	14:30:00	USER					REQUESTED ON LOCATION @ 20:00
Event	2	Pre-Convoy Safety Meeting	1/17/2018	16:45:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	1/17/2018	17:00:00	USER					1 HT 400 PUMP TRUCK E4, 1 660 BULK TRUCKS, 1 550 SERVICE PICKUP
Event	4	Arrive At Loc	1/17/2018	19:00:00	USER					ARRIVED TO LOCATION 1 HOUR EARLY WITH ALL EQUIPMENT, RIG PULLING DRILL PIPE
Event	5	Assessment Of Location Safety Meeting	1/17/2018	19:15:00	USER					MET WITH COMP REP, AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (TEMP 43F, PH 7.0, CHLORIDES 500). COMPANY REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Spot Equipment	1/17/2018	21:00:00	USER					1 HT 400 PUMP TRUCK E4, 1 660 BULK TRUCKS, 1 550 SERVICE PICKUP
Event	7	Pre-Rig Up Safety Meeting	1/17/2018	21:30:00	USER					ALL HES PRESENT

Event	8	Pre-Job Safety Meeting	1/18/2018	00:00:00	USER					ALL HES EMPLOYEES AND RIG CREW PRESENT, RIG CIRCULATED @ 12 BPM PRIOR TO JOB, PRESSURE 380 PSI.
Event	9	Start Job	1/18/2018	00:56:57	USER					TP 1107.67', OH 13 1/2", CSG 9 5/8" 32.3# H-40, SJ 44.15', MUD 9.2 PPG
Event	10	Prime Lines	1/18/2018	00:57:29	USER	8.33	1.6	40	2	FRESH WATER
Event	11	Test Lines	1/18/2018	01:00:51	COM5				3300	PRESSURE HELD
Event	12	Pump H2O Spacer	1/18/2018	01:06:04	COM5	8.33	2.2	81	20	FRESH WATER
Event	13	Check weight	1/18/2018	01:09:45	COM5					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	14	Pump Lead Cement	1/18/2018	01:15:10	COM5	12.3	8.0	540	53	125 SKS VARICEM CMT 12.3 PPG, 2.38 FT3/SK, 13.77 GAL/SK.
Event	15	Pump Tail Cement	1/18/2018	01:24:17	COM5	12.8	8.0	570	65.8	175 SKS VARICEM CMT 12.8 PPG, 2.11 FT3/SK, 11.78 GAL/SK
Event	16	Check weight	1/18/2018	01:25:23	COM5					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	17	Shutdown	1/18/2018	01:35:18	USER					END OF CEMENT
Event	18	Drop Top Plug	1/18/2018	01:37:07	USER					VERIFIED BY FLAG INDICATOR
Event	19	Pump Displacement	1/18/2018	01:37:42	COM5	8.33	8.0	610	73.7	FRESH WATER
Event	20	Slow Rate	1/18/2018	01:50:48	USER	8.33	2.0	284	10	SLOWED TO BUMP PLUG
Event	21	Bump Plug	1/18/2018	01:56:06	COM5	8.33	2.0	284	83.7	PLUG BUMPED
Event	22	Check Floats	1/18/2018	01:59:42	USER				969	FLOATS HELD .5 BBL FLOWED BACK TO TRUCK

Event	23	End Job	1/18/2018	02:00:05	USER	RETURNS THROUGHOUT JOB. 27 BBL CMT TO SURFACE USED 40 LBS SUGAR
Event	24	Post-Job Safety Meeting (Pre Rig-Down)	1/18/2018	02:30:00	USER	ALL HES PRESENT
Event	25	Pre-Convoy Safety Meeting	1/18/2018	03:45:00	USER	ALL HES PRESENT
Event	26	Crew Leave Location	1/18/2018	04:00:00	USER	THANK YOU FOR CHOOSING HALLIBURTON CEMENT, DUSTIN HYDE AND CREW

TERRA - WARE SR 424-12 - 9 5/8" SURFACE



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|---|-----------------------------|--------------------|---------------------|---|------------------------|
| ① Call Out | ⑥ Spot Equipment | ⑪ Test Lines | ⑯ Check weight | 21 Bump Plug | 26 Crew Leave Location |
| ② Pre-Convoy Safety Meeting | ⑦ Pre-Rig Up Safety Meeting | ⑫ Pump H2O Spacer | ⑰ Shutdown | 22 Check Floats | |
| ③ Crew Leave Yard | ⑧ Pre-Job Safety Meeting | ⑬ Check weight | ⑱ Drop Top Plug | 23 End Job | |
| ④ Arrive At Loc | ⑨ Start Job | ⑭ Pump Lead Cement | ⑲ Pump Displacement | 24 Post-Job Safety Meeting (Pre Rig-Down) | |
| ⑤ Assessment Of Location Safety Meeting | ⑩ Prime Lines | ⑮ Pump Tail Cement | 20 Slow Rate | 25 Pre-Convoy Safety Meeting | |

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