

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

For: Terra

Date: Sunday, July 21, 2019

RWF 513-8 Surface PJR

API# 05-045-24032-00

Sincerely,

Grand Junction Cement Engineering

2.0 Real-Time Job Summary

2.1 Job Event Log

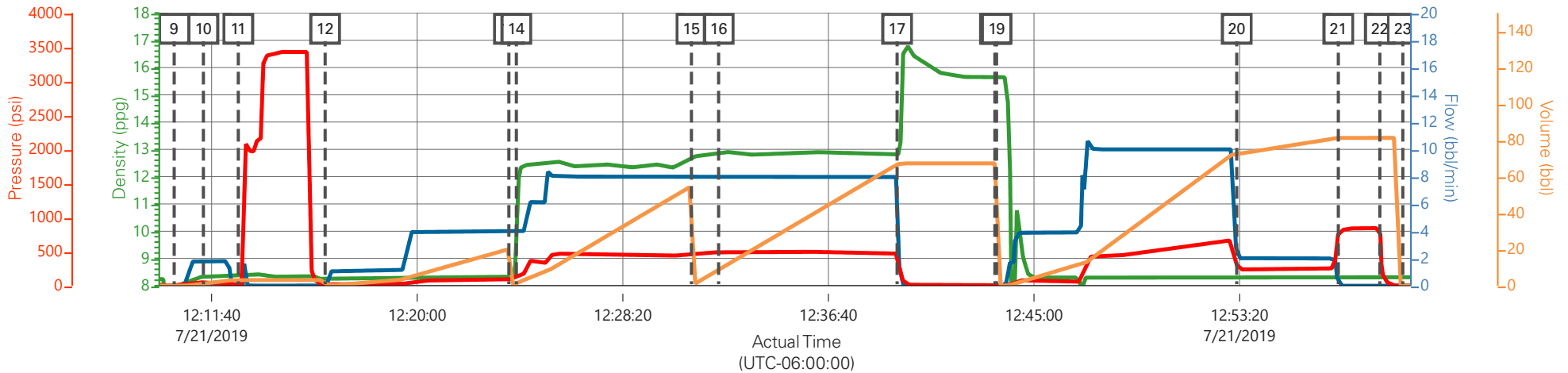
Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	7/21/2019	03:30:00	USER					REQUESTED ON LOCATION @ 8:30
Event	2	Pre-Convoy Safety Meeting	7/21/2019	05:30:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	7/21/2019	05:40:00	USER					1 HT 400 PUMP TRUCK, 1 660 BULK TRUCK, 1 550 SERVICE PICKUP
Event	4	Arrive At Loc	7/21/2019	07:00:00	USER					RIG WAS PULLING DRILL PIPE WHEN HES ARRIVED AT LOCATION
Event	5	Assessment Of Location Safety Meeting	7/21/2019	07:15:00	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 CHEMICALS USED BY HES. CALIBRATED MUD SCALES ON WATER.
Event	6	Pre-Rig Up Safety Meeting	7/21/2019	08:00:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	7/21/2019	08:10:00	USER					HES RIGGED UP 1 HT 400 PUMP TRUCK, 1 660 BULK TRUCK, 2" DISCHARGE IRON, AND 4" SUCTION HOSE WITHOUT ENTERING RED ZONE.
Event	8	Pre-Job Safety Meeting	7/21/2019	11:45:00	USER					ALL HES EMPLOYEES AND RIG CREW PRESENT. RIG CIRCULATED @ 10 BPM PRIOR TO JOB. PRESSURE WAS 138PSI.
Event	9	Start Job	7/21/2019	12:10:09	COM4					TD 1113', TP 1107.49' OF 9 5/8" 36# SURFACE CSG, FC @ 1065.11', OH 13.5", MUD 9.6 PPG

Event	10	Prime Lines	7/21/2019	12:11:20	USER	8.33	2	52	3	FRESH WATER
Event	11	Test Lines	7/21/2019	12:12:45	COM4			3430		ALL LINES HELD PRESSURE AT 3430 PSI
Event	12	Pump H2O Spacer	7/21/2019	12:16:16	COM4	8.33	4	100	20	20BBLS FRESH WATER
Event	13	Pump Lead Cement	7/21/2019	12:23:43	COM4	12.3	8	460	53	125 SKS VARICEM CMT 12.3 PPG, 2.38 FT3/SK, 13.77 GAL/SK
Event	14	Check Weight	7/21/2019	12:24:01	COM4					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	15	Pump Tail Cement	7/21/2019	12:31:07	COM4	12.8	8	490	66	175 SKS VARICEM CMT 12.8 PPG, 2.11 FT3/SK, 11.78 GAL/SK
Event	16	Check Weight	7/21/2019	12:32:13	USER					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	17	Shutdown	7/21/2019	12:39:27	USER					END OF CEMENT, WASH UP ON TOP OF PLUG
Event	18	Drop Top Plug	7/21/2019	12:43:25	COM4					VERIFIED BY FLAG INDICATOR
Event	19	Pump Displacement	7/21/2019	12:43:29	COM4	8.33	10	660	82.4	FRESH WATER
Event	20	Slow Rate	7/21/2019	12:53:13	USER	8.33	2	230	72.4	SLOW RATE TO 2 BPM TO BUMP PLUG
Event	21	Bump Plug	7/21/2019	12:57:20	COM4	8.33	2	250	82.4	LAND PLUG AT 250 PSI, BROUGHT UP TO 843 PSI
Event	22	Check Floats	7/21/2019	12:59:01	USER					FLOATS HELD, .5 BBL BACK TO TRUCK
Event	23	End Job	7/21/2019	12:59:57	COM4					RETURNS THROUGHOUT JOB, 20 BBLS CMT TO SURFACE, NO SUGAR USED.
Event	24	Post-Job Safety Meeting (Pre Rig-Down)	7/21/2019	13:05:00	USER					ALL HES PRESENT
Event	25	Rig-Down Equipment	7/21/2019	13:15:00	USER					ALL HES PRESENT
Event	26	Pre-Convoy Safety Meeting	7/21/2019	14:00:00	USER					ALL HES PRESENT

Event 27 Crew Leave Location 7/21/2019 14:05:00 USER

THANK YOU FOR CHOOSING HALLIBURTON
CEMENT, SHAWN BLOSSOM AND CREW.

TERRA RWF 513-8, 9 5/8" SURFACE



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

Description	Actual Time (UTC-06:00:00)	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)
9 Start Job	12:10:09	7.43	0.00	-2.00	0.00
10 Prime Lines	12:11:20	8.32	1.80	51.00	1.10
11 Test Lines	12:12:45	8.36	0.00	16.00	3.00
12 Pump H2O Spacer	12:16:16	8.27	0.00	6.00	3.10
13 Pump Lead Cement	12:23:43	8.33	4.00	94.00	20.20
14 Check Weight	12:24:01	10.00	4.00	111.00	1.20
15 Pump Tail Cement	12:31:07	12.68	8.00	456.00	54.90
16 Check Weight	12:32:13	12.86	8.00	486.00	8.80
17 Shutdown	12:39:27	12.80	8.00	448.00	66.80
18 Drop Top Plug	12:43:25	15.65	0.00	0.00	67.30
19 Pump Displacement	12:43:29	15.66	0.00	0.00	67.30
20 Slow Rate	12:53:13	8.14	2.30	282.00	73.20
21 Bump Plug	12:57:20	8.29	0.00	759.00	81.30
22 Check Floats	12:59:01	8.32	0.00	838.00	81.30
23 End Job	12:59:57	8.30	0.00	-3.00	0.00

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