

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

United States of America, COLORADO

For: Terra

Date: Saturday, January 05, 2019

RWF 421-10 Surface PJR

API# 05-045-23926-00

Sincerely,

Grand Junction Cement Engineering

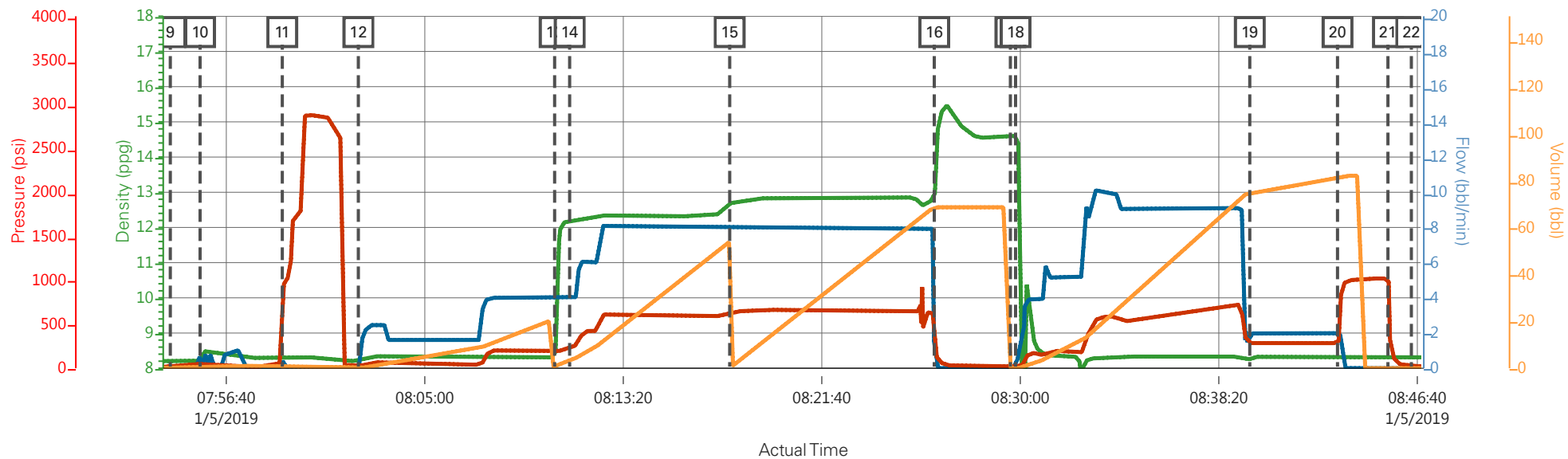
2.0 Real-Time Job Summary

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	1/4/2019	23:30:00	USER					Requested on Location @ 6:00
Event	2	Pre-Convoy Safety Meeting	1/5/2019	00:15:00	USER					
Event	3	Crew Leave Yard	1/5/2019	00:30:00	USER					1 Elite, 1 660, 1 pickup
Event	4	Arrive at Location from Service Center	1/5/2019	05:15:00	USER					Rig running casing
Event	5	Assessment Of Location Safety Meeting	1/5/2019	05:20:00	USER					JSA completed - Customer offered/received SDS - water test pH 7.0, Cl <200, temp 60 degrees
Event	6	Pre-Rig Up Safety Meeting	1/5/2019	06:05:00	USER					1 hardline to standpipe, water hoses to upright, bulk hose to 660.
Event	7	Other	1/5/2019	06:55:00	USER					Rig Circulated 45 mins prior to cement job at 450 gpm 90 psi
Event	8	Pre-Job Safety Meeting	1/5/2019	07:15:02	USER					All HES personnel, rig crew, and company rep
Event	9	Start Job	1/5/2019	07:54:19	USER	8.30	0.00	4.00	0.00	TD 1124', TP 1110', SJ 42.46', FC 1067.54', OH 13.5", Csg 9.625" 36 lb/ft J-55, Mud 9.7 ppg.
Event	10	Fill Lines	1/5/2019	07:55:34	USER	8.30	1.50	50.00	4.00	Fresh Water
Event	11	Test Lines	1/5/2019	07:59:01	USER	8.37	0.00	2887.00	4.00	Held pressure no leaks
Event	12	Pump Spacer 1	1/5/2019	08:02:13	USER	8.31	4.00	189.00	20.00	Fresh Water
Event	13	Pump Lead Cement	1/5/2019	08:10:27	USER	12.30	8.00	620.00	52.98	125 Sks 12.3 ppg 2.38 yield 13.77 gal/sk
Event	14	Check Weight	1/5/2019	08:11:05	USER					Density Verified via Mud Scales

Event	15	Pump Tail Cement	1/5/2019	08:17:48	USER	12.80	8.00	670.00	65.76	175 Sks 12.8 ppg 2.11 yield 11.78 gal/sk
Event	16	Shutdown	1/5/2019	08:26:23	USER					Wash up on top of plug
Event	17	Drop Top Plug	1/5/2019	08:29:35	USER					Company Rep verified plug away
Event	18	Pump Displacement	1/5/2019	08:29:48	USER	8.33	9.00	725.00	82.50	Fresh Water
Event	19	Slow Rate	1/5/2019	08:39:38	USER	8.29	1.90	289.00	72.50	Slow Rate 10 bbls to calculated displacement
Event	20	Bump Plug	1/5/2019	08:43:19	USER	8.30	2.00	285.00	82.50	Plug Bumped at 285 psi, Brought up to 1019 psi
Event	21	Check Floats	1/5/2019	08:45:26	USER	8.33	0.00	1019.00	0.00	Floats held – ½ bbl back to the truck
Event	22	End Job	1/5/2019	08:46:25	USER	8.31	0.00	22.00	0.00	Good returns throughout job, 28 bbls of cement to surface.
Event	23	Post-Job Safety Meeting (Pre Rig-Down)	1/5/2019	08:50:00	USER					70 lbs sugar, No add hours
Event	24	Pre-Convoy Safety Meeting	1/5/2019	09:30:00	USER					
Event	25	Crew Leave Location	1/5/2019	09:45:00	USER					Thanks For Using Halliburton Cement. Andrew Brennecke And Crew.

TEP - RWF 421-10 - 9.625" SURFACE



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

Description	Actual Time	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)
9 Start Job	07:54:19	8.20	0.00	4.00	0.00
10 Fill Lines	07:55:34	8.20	0.50	50.00	0.00
11 Test Lines	07:59:01	8.27	0.00	57.00	1.00
12 Pump Spacer 1	08:02:13	8.21	0.00	25.00	1.00
13 Pump Lead Cement	08:10:27	8.31	4.00	180.00	0.80
14 Check Weight	08:11:05	12.21	4.00	252.00	3.30
15 Pump Tail Cement	08:17:48	12.67	8.00	618.00	53.90
16 Shutdown	08:26:23	12.78	0.10	235.00	68.60
17 Drop Top Plug	08:29:35	14.58	0.00	19.00	0.00
18 Pump Displacement	08:29:48	14.60	0.00	18.00	0.00
19 Slow Rate	08:39:38	8.29	1.90	289.00	74.50
20 Bump Plug	08:43:19	8.30	2.00	285.00	81.70
21 Check Floats	08:45:26	8.33	0.00	1019.00	0.00
22 End Job	08:46:25	8.31	0.00	22.00	0.00

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