

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

United States of America, COLORADO

For: Terra

Date: Friday, March 22, 2019

SG 441-21 Surface PJR

API# 05-045-24130-00

Sincerely,

Grand Junction Cement Engineering

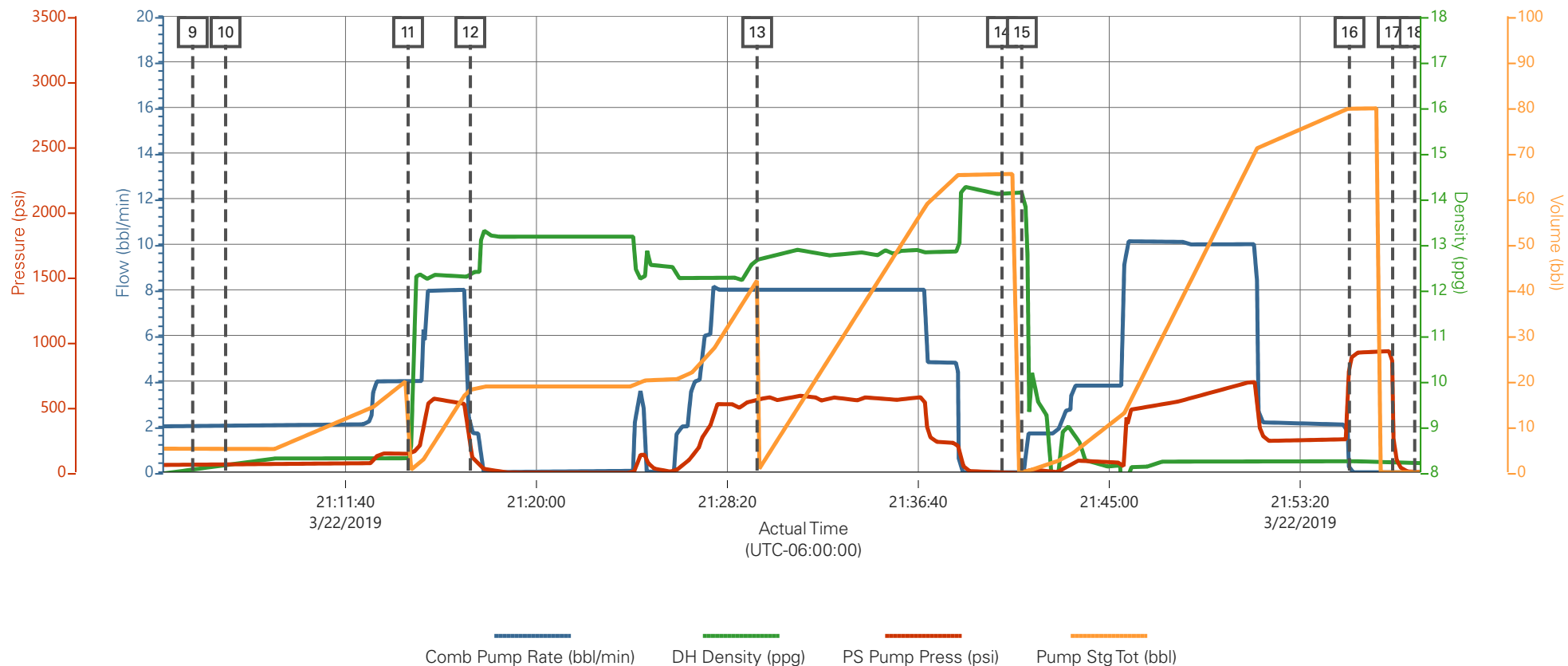
2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	DH Density (ppg)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	3/22/2019	11:00:00	USER					REQUESTED ON LOCATION 3/22/19 @ 17:00
Event	2	Depart Yard Safety Meeting	3/22/2019	12:55:00	USER					JSA COMPLETED
Event	3	Crew Leave Shop	3/22/2019	13:00:00	USER					
Event	4	Arrive At Loc	3/22/2019	15:30:00	USER					RIG TRIPPING OUT OF HOLE
Event	5	Assessment Of Location Safety Meeting	3/22/2019	15:35:00	USER					JSA COMPLETED
Event	6	Pre-Rig Up Safety Meeting	3/22/2019	15:55:00	USER					JSA COMPLETED
Event	7	Rig-Up Equipment	3/22/2019	16:00:00	USER					
Event	8	Pre-Job Safety Meeting	3/22/2019	20:30:00	USER					JSA COMPLETED, PRESSURIZED MUD SCALES CALIBRATED TO FRESH WATER
Event	9	Start Job	3/22/2019	21:05:00	USER					9 5/8"-32.3# CASING IN 13 1/2" OH, TD 1042', TP 1035.3', ST 44.5', MUD 9.5 PPG, WATER TEMP 55, PH 7, CHLORIDES 0
Event	10	Pump Spacer	3/22/2019	21:06:26	USER	4.00	8.33	150.00	20.00	20 BBLS FRESH WATER SPACER
Event	11	Pump Lead Cement	3/22/2019	21:14:24	COM4	8.00	12.30	500.00	42.40	42.4 BBLS LEAD CEMENT, 100 SKS @ 12.3 PPG / 2.38 YLD / 13.77 GAL/SK
Event	12	Other	3/22/2019	21:17:07	USER					RIG CELLAR PUMP BROKE, SHUT DOWN UNTIL FIXED

Event	13	Pump Tail Cement	3/22/2019	21:29:38	COM4	8.00	12.80	570.00	65.80	65.8 BBLS TAIL CEMENT, 175 SKS @ 12.8 PPG / 2.11 YLD / 11.78 GAL/SK
Event	14	Drop Top Plug	3/22/2019	21:40:19	COM4					PLUG AWAY
Event	15	Pump Displacement	3/22/2019	21:41:11	COM4	10.00	8.33	670.00	78.00	78 BBLS FRESH WATER DISPLACEMENT
Event	16	Bump Plug	3/22/2019	21:55:29	COM4	2.00	8.33	245.00	78.00	PLUG BUMPED AT CALCULATED, FINAL CIRCULATING PRESSURE 245 PSI @ 2 BBL/MIN, BROUGHT TO 925 PSI
Event	17	CHECK FLOATS	3/22/2019	21:57:22	COM4					FLOATS HELD, 1 BBL BACK TO PUMP
Event	18	End Job	3/22/2019	21:58:20	COM4					PIPE LEFT STATIC, GOOD RETURNS THROUGHOUT, 15 BBLS CEMENT TO SURFACE, NO SUGAR USED
Event	19	Pre-Rig Down Safety Meeting	3/22/2019	22:25:00	USER					JSA COMPLETED
Event	20	Rig-Down Equipment	3/22/2019	22:30:00	USER					
Event	21	Pre-Convoy Safety Meeting	3/22/2019	22:55:00	USER					JSA COMPLETED
Event	22	Crew Leave Location	3/22/2019	23:00:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENTING OF GRAND JUNCTION, CO - RYAN MARTIN AND CREW

TERRA - FEDERAL SG 441-21- 9 5/8" SURFACE CASING



Description	Actual Time (UTC-06:00:00)	Comb Pump Rate (bbl/min)	DH Density (ppg)	PS Pump Press (psi)	Pump Stg Tot (bbl)
9 Start Job	21:05:00	2.04	8.07	56.05	4.86
10 Pump Spacer	21:06:26	2.07	8.17	56.45	4.83
11 Pump Lead Cement	21:14:24	4.00	8.29	138.00	0.00
12 Other	21:17:07	1.70	12.35	156.00	18.10
13 Pump Tail Cement	21:29:38	8.00	12.65	556.00	42.10
14 Drop Top Plug	21:40:19	0.00	14.09	-8.00	65.40
15 Pump Displacement	21:41:11	0.00	14.14	-7.00	0.00
16 Bump Plug	21:55:29	0.00	8.23	855.00	79.80
17 CHECK FLOATS	21:57:22	0.00	8.22	559.00	0.00
18 End Job	21:58:20	0.00	8.20	-2.00	0.00

TERRA - FEDERAL SG 441-21- 9 5/8" SURFACE CASING

