

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

United States of America, COLORADO

For: Terra

Date: Tuesday, March 26, 2019

SG 541-21 Surface PJR

API# 05-045-24139-00

Sincerely,

Grand Junction Cement Engineering

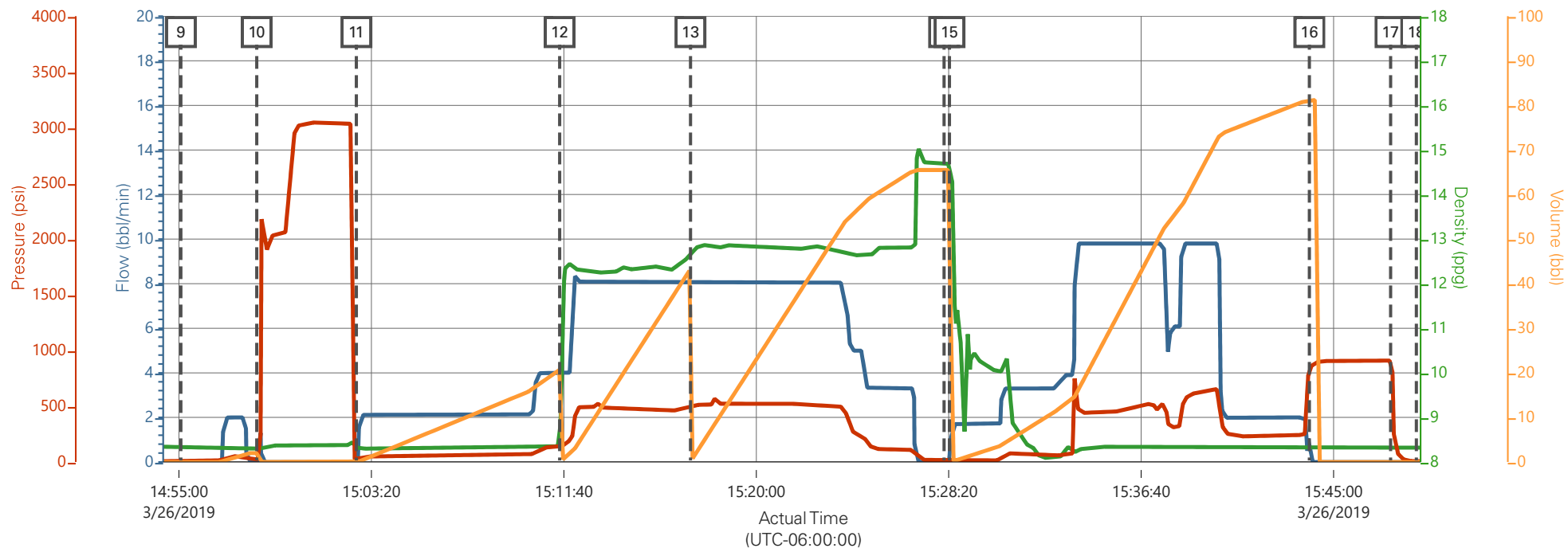
2.0 Real-Time Job Summary

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	3/26/2019	07:00:00	USER					REQUESTED ON LOCATION 3/26/19 @ 12:00
Event	2	Depart Yard Safety Meeting	3/26/2019	09:55:00	USER					JSA COMPLETED
Event	3	Crew Leave Shop	3/26/2019	10:00:00	USER					
Event	4	Arrive At Loc	3/26/2019	11:00:00	USER					RIG RIGGING UP CASERS
Event	5	Assessment Of Location Safety Meeting	3/26/2019	11:15:00	USER					JSA COMPLETED
Event	6	Pre-Rig Up Safety Meeting	3/26/2019	11:25:00	USER					JSA COMPLETED
Event	7	Rig-Up Equipment	3/26/2019	11:30:00	USER					
Event	8	Pre-Job Safety Meeting	3/26/2019	12:00:00	USER					JSA COMPLETED, PRESSURIZED MUD SCALES CALIBRATED TO FRESH WATER
Event	9	Start Job	3/26/2019	14:55:05	COM4					9 5/8"-32.3# CASING IN 13 1/2" OH, TD 1053', TP 1046.9, ST 43.9', MUD 9.4 PPG, WATER TEMP 50, PH 7, CHLORIDES 0
Event	10	Test Lines	3/26/2019	14:58:22	COM4			3000.00		TEST LINES TO 3000 PSI
Event	11	Pump Spacer 1	3/26/2019	15:02:41	COM4	4.00	8.33	130.00	20.00	20 BBLS FRESH WATER
Event	12	Pump Lead Cement	3/26/2019	15:11:29	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	13	Pump Tail Cement	3/26/2019	15:17:09	COM4	8.00	12.80	520.00	65.80	65.8 BBLS TAIL CEMENT, 175 SKS @ 12.8 PPG / 2.11 YLD / 11.78 GAL/SK
Event	14	Drop Top Plug	3/26/2019	15:28:08	COM4					PLUG AWAY
Event	15	Pump Displacement	3/26/2019	15:28:22	COM4	10.00	8.33	650.00	78.90	78.9 BBLS FRESH WATER DISPLACEMENT
Event	16	Bump Plug	3/26/2019	15:43:57	COM4	2.00	8.33	240.00	78.90	PLUG BUMPED AT CALCULATED DISPLACEMENT, FINAL CIRCULATING PRESSURE 240 PSI @ 2 BBL/MIN, BROUGHT TO 900 PSI
Event	17	CHECK FLOATS	3/26/2019	15:47:28	COM4					FLOATS HELD, .5 BBL BACK TO PUMP
Event	18	End Job	3/26/2019	15:48:35	COM4					PIPE LEFT STATIC, GOOD RETURNS THROUGHOUT, 12 BBLS LEAD CEMENT TO SURFACE, 80# SUGAR USED
Event	19	Pre-Rig Down Safety Meeting	3/26/2019	16:15:00	USER					JSA COMPLETED
Event	20	Rig-Down Equipment	3/26/2019	16:20:00	USER					
Event	21	Pre-Convoy Safety Meeting	3/26/2019	16:55:00	USER					JSA COMPLETED
Event	22	Crew Leave Location	3/26/2019	17:00:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENTING OF GRAND JUNCTION, CO - RYAN MARTIN AND CREW

TERRA - FEDERAL SG 541-21- 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	14:55:05	0.00	8.34	5.00	0.00	
10 Test Lines	14:58:22	0.00	8.31	22.00	2.00	
11 Pump Spacer 1	15:02:41	0.00	8.32	22.00	0.00	
12 Pump Lead Cement	15:11:29	4.00	8.48	134.00	20.70	
13 Pump Tail Cement	15:17:09	8.00	12.68	492.00	0.10	
14 Drop Top Plug	15:28:08	0.00	14.68	8.00	65.50	
15 Pump Displacement	15:28:22	0.00	14.70	7.00	65.50	
16 Bump Plug	15:43:57	0.00	8.34	844.00	81.20	
17 CHECK FLOATS	15:47:28	0.00	8.34	910.00	0.00	
18 End Job	15:48:35	0.00	8.32	6.00	0.00	

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