

# HALLIBURTON

iCem<sup>®</sup> Service

## **TERRA ENERGY PARTNERS**

United States of America, COLORADO

Date: Monday, March 11, 2019

### **Trail Ridge 544-22-597 Surface**

Terra Trail Ridge 544-22-597 Surface

API# 05-045-23691

Job Date: Wednesday, February 20, 2019

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 (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	2/19/2019	18:30:00	USER					Requested on Location @ 19:30
Event	2	Pre-Convoy Safety Meeting	2/19/2019	18:45:00	USER					
Event	3	Crew Leave Yard	2/19/2019	19:00:00	USER					1 Elite, 1 660, 1 pickup
Event	4	Arrive at Location from Service Center	2/19/2019	23:30:00	USER					Rig running casing
Event	5	Assessment Of Location Safety Meeting	2/20/2019	00:00:01	USER					JSA completed - Customer offered/received SDS - water test pH 7.0, CI <200, temp 60 degrees
Event	6	Pre-Rig Up Safety Meeting	2/20/2019	08:00:00	USER					1 hardline to standpipe, water hoses to upright, bulk hose to 660.
Event	7	Other	2/20/2019	10:30:00	USER					Rig Circulated 30 mins prior to cement job at 600 gpm 380 psi
Event	8	Pre-Job Safety Meeting	2/20/2019	10:45:00	USER					All HES personnel, rig crew, and company rep
Event	9	Start Job	2/20/2019	11:10:15	USER	8.27	0.00	8.00	0.00	TD 2756', TP 2762.97', SJ 31.0', OH 14.75", Csg 9.625" 36 lb/ft J-55, Mud 9.5 ppg.
Event	10	Fill Lines	2/20/2019	11:11:23	USER	8.27	2.00	200.00	5.00	Fresh Water
Event	11	Test Lines	2/20/2019	11:15:07	USER	8.37	0.00	2926.00	5.00	Held pressure 2 minutes no leaks
Event	12	Pump Super Flush	2/20/2019	11:16:56	COM5	11.70	4.00	567.00	10.00	10 bbls Super Flush 100
Event	13	Pump Water Spacer	2/20/2019	11:20:05	COM5	8.35	4.10	220.00	10.30	Fresh water
Event	14	Pump Calcium Chloride	2/20/2019	11:21:22	COM5	9.00	4.10	171.00	5.20	10 bbls Calcium Chloride

Event	15	Pump Water Spacer	2/20/2019	11:24:02	COM5	8.40	4.10	144.00	10.90	Fresh water
Event	16	Pump Super Flush	2/20/2019	11:25:21	COM5	11.70	4.10	440.00	5.40	10 bbls Super Flush 100
Event	17	Pump Water Spacer	2/20/2019	11:28:54	COM5	8.35	4.10	207.00	14.50	Fresh water
Event	18	Pump Calcium Chloride	2/20/2019	11:30:15	COM5	9.08	4.10	200.00	5.50	10 bbls Calcium Chloride
Event	19	Pump Water Spacer	2/20/2019	11:33:20	COM5	8.35	4.10	220.00	12.60	Fresh water
Event	20	Pump Lead Cement	2/20/2019	11:41:08	COM5	12.30	8.00	509.00	11.00	925 Sks 12.3 ppg 2.37 yield 13.74 gal/sk
Event	21	Check Weight	2/20/2019	11:44:31	COM5					Density Verified via Mud Scales
Event	22	Pump Tail Cement	2/20/2019	12:35:38	COM5	12.80	8.00	473.00	430.10	345 Sks 12.8 ppg 2.11 yield 11.75 gal/sk
Event	23	Check Weight	2/20/2019	12:36:18	COM5					Density Verified via Mud Scales
Event	24	Shutdown	2/20/2019	12:55:06	USER					Wash up on top of plug
Event	25	Drop Top Plug	2/20/2019	12:57:18	COM5					Verified away by tattle tail
Event	26	Pump Displacement	2/20/2019	12:58:07	COM5	8.40	10.00	1070.00	211.20	Fresh water
Event	27	Slow Rate	2/20/2019	13:20:56	USER	8.28	4.10	478.00	200.00	Slow Rate 10 bbls to calculated displacement
Event	28	Bump Plug	2/20/2019	13:21:56	USER	8.34	3.90	555.00	211.20	Plug Bumped at 555 psi, Brought up to 1780 psi
Event	29	Check Floats	2/20/2019	13:23:48	USER	8.37	0.00	1780.00	211.20	Floats held – 1½ bbl back to the truck
Event	30	Clear Parasite Line	2/20/2019	13:40:33	COM5	8.35	0.00	550.00	10.00	10 bbls sugar water
Event	31	Pump Super Flush	2/20/2019	14:37:21	COM5	11.70	2.00	56.00	10.00	Super flush 100
Event	32	Pump Cement	2/20/2019	14:48:38	USER	15.60	1.00	23.00	9.50	45sks 15.6ppg, 1.19 yield, 5.24 gl/sk 1 bag CaCl-
Event	33	End Job	2/20/2019	15:02:36	USER	8.35	0.10	5.00	2.00	Partial returns through job,.
Event	34	Post-Job Safety Meeting (Pre Rig-Down)	2/20/2019	15:25:00	USER					10 lbs sugar, 5 add hours
Event	35	Pre-Convoy Safety Meeting	2/20/2019	16:45:00	USER					
Event	36	Crew Leave Location	2/20/2019	17:00:00	USER					Thanks For Using Halliburton Cement. Andrew Brennecke And Crew.

# TERRA - TR 544-22-597 - 9.625" SURFACE

