

# HALLIBURTON

iCem<sup>®</sup> Service

## **TERRA ENERGY PARTNERS**

Rock Springs District, Colorado

### **For: Terra**

Date: Monday, July 15, 2019

**RWF 514-8 Surface**

**API#05-045-24034**

Sincerely,

**Grand Junction Cement Engineering**

## 1.0 Real-Time Job Summary

### 1.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	DS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	7/15/2019	06:30:00						Requested on Location @ 12:00
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	7/15/2019	08:50:00						
Event	3	Crew Leave Yard	Crew Leave Yard	7/15/2019	09:00:00						1 Elite, 1 660, 1 pickup
Event	4	Arrive At Loc	Arrive At Loc	7/15/2019	12:00:00						Rig running casing
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	7/15/2019	12:10:00						JSA completed - Customer offered/received SDS - water test pH 7.0, Cl <200, temp 68 degrees
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	7/15/2019	12:15:00						
Event	7	Rig-Up Equipment	Rig-Up Equipment	7/15/2019	12:30:00						1 hardline to standpipe, water hoses to upright, bulk hoses to 660.
Event	8	Other	Other	7/15/2019	12:40:00						Rig Circulated 30 mins prior to cement job at 450 gpm 300 psi. Mud scales calibrated to drinking water prior to job.
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	7/15/2019	13:00:00						All HES personnel, rig crew, and company rep
Event	10	Other	Start Job	7/15/2019	14:32:16						TD 1152', TP 1145.34, SJ 42.74', FC 1102.6 OH 13.5'', Csg 9.625'' 32.3 lb/ft J-55, Mud 9.4 ppg
Event	11	Other	Fill Lines	7/15/2019	14:32:38		8.33	2	35	5	Fresh Water

Event	12	Test Lines	Test Lines	7/15/2019	14:36:09			3250		No Leaks
Event	13	Pump Spacer	Pump Spacer	7/15/2019	14:40:05	8.33	4	115	15	Fresh Water
Event	14	Check Weight	Check Weight	7/15/2019	14:43:55					Density Verified via Mud Scales
Event	15	Pump Lead Cement	Pump Lead Cement	7/15/2019	14:46:30	12.3	8	450	53	125 Sks 12.3 ppg 2.38 yield 13.77 gal/sk
Event	16	Pump Tail Cement	Pump Tail Cement	7/15/2019	14:54:10	12.8	8	460	65.8	175 Sks 12.8 ppg 2.11 yield 11.78 gal/sk
Event	17	Shutdown	Shutdown	7/15/2019	15:02:51					Wash up on top of plug
Event	18	Drop Top Plug	Drop Top Plug	7/15/2019	15:04:30					Customer verified top plug launched
Event	19	Pump Displacement	Pump Displacement	7/15/2019	15:06:35	8.33	10	620	85.2	Fresh Water
Event	20	Slow Rate	Slow Rate	7/15/2019	15:15:16	8.33	2	290	75	Slow Rate 10 bbls to Calculated Displacement
Event	21	Bump Plug	Bump Plug	7/15/2019	15:19:31			1000		Plug Bumped at 290 psi, Brought up to 1000 psi
Event	22	Check Floats	Check Floats	7/15/2019	15:22:25					Floats held – .5 bbl back to the truck
Event	23	Other	End Job	7/15/2019	15:23:45					Good returns throughout job, pipe was not reciprocated during cement, 10 bbls of cement to surface
Event	24	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	7/15/2019	15:35:24					No sugar, No add hours
Event	25	Rig-Down Equipment	Rig-Down Equipment	7/15/2019	15:37:03					
Event	26	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	7/15/2019	15:44:06					
Event	27	Crew Leave Location	Crew Leave Location	7/15/2019	15:45:59					Thank you for using Halliburton – Chris Martinez and crew.

2.0 Attachments

2.1 RWF 514-8-Custom Results.png

