

# HALLIBURTON

iCem<sup>®</sup> Service

## **TERRA ENERGY PARTNERS**

United States of America, COLORADO

### **For: Terra**

Date: Monday, November 05, 2018

### **NR 413-3 Surface**

API#05-045-23907

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 (ppg)	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	Call Out	11/4/2018	14:00:00						on location @ 20:00
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/4/2018	16:50:00						
Event	3	Crew Leave Yard	Crew Leave Yard	11/4/2018	17:00:00						1 Elite, 1 660's, 1 pickup
Event	4	Arrive At Loc	Arrive At Loc	11/4/2018	20:00:00						Rig running casing
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	11/4/2018	20:10:00						JSA completed - Customer offered/received SDS - water test pH 7.0, Cl <200, temp 46 degrees
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	11/4/2018	20:20:00						
Event	7	Rig-Up Equipment	Rig-Up Equipment	11/4/2018	20:30:00						DME iron to ground manifold, standpipe. Water hoses to both uprights, bulk hose to 660.
Event	8	Other	Other	11/4/2018	20:40:00						Rig Circulated 1 hrs prior to cement job 10 bpm @ 115 psi. Mud scales calibrated to drinking water prior to job.
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	11/4/2018	21:44:42						All HES personnel, rig crew, and company rep.
Event	10	Other	Start Job	11/4/2018	22:49:16						TD 1138', TP 1128', SJ 44.49', OH 13.5", Csg 9.5/8" 36 lb/ft J-55, Mud 9.9 ppg.
Event	11	Other	Fill Lines	11/4/2018	22:49:59		8.33	2	115	5	Fresh Water
Event	12	Test Lines	Test Lines	11/4/2018	22:53:07				3009		Held pressure 2 minutes

Event	13	Pump Spacer	Pump Spacer	11/4/2018	22:58:48	8.33	4	194	15	Fresh Water
Event	14	Check Weight	Check Weight	11/4/2018	23:01:36					Density verified via mud cup
Event	15	Pump Lead Cement	Pump Lead Cement	11/4/2018	23:03:37	12.3	8	620	53	125 sacks, 12.3 ppg, 2.38 yield, 13.77 gal/sk
Event	16	Pump Tail Cement	Pump Tail Cement	11/4/2018	23:11:58	12.8	8	650	65.8	175 sks, 12.8 ppg, 1.32 Yield, 13.77 gal/sk
Event	17	Shutdown	Shutdown	11/4/2018	23:19:33					Wash up on plug
Event	18	Drop Top Plug	Drop Top Plug	11/4/2018	23:21:47					Co-Rep Verify Plug Launched
Event	19	Pump Displacement	Pump Displacement	11/4/2018	23:23:36	8.33	10	900	83.8	Fresh Water
Event	20	Slow Rate	Slow Rate	11/4/2018	23:35:50	8.33	2	300	73	Slow Rate 10 bbls to Calculated Displacement
Event	21	Bump Plug	Bump Plug	11/4/2018	23:37:22			1007		Plug Bumped at 300 psi, Brought up to 1007 psi
Event	22	Check Floats	Check Floats	11/4/2018	23:40:21					Floats held – .5 bbl back to the truck
Event	23	Other	End Job	11/4/2018	23:41:13					Good returns throughout job. 23 bbl of cement to surface
Event	24	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	11/4/2018	23:53:52					40 lbs of sugar used, HES top plug used, 0 add hours.
Event	25	Rig-Down Equipment	Rig-Down Equipment	11/4/2018	23:57:54					
Event	26	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	11/5/2018	00:28:59					
Event	27	Crew Leave Location	Crew Leave Location	11/5/2018	00:32:24					Thanks for using Halliburton Cement, Chris Martinez and crew.

2.0 Attachments

2.1 NR 413-3-Custom Results.png

