

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

United States of America, COLORADO

For: Terra

Date: Wednesday, October 10, 2018

NR 13-3 Surface PJR

API #: 05-045-23910

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)	DS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	10/10/2018	10:00:00						Requested on Location @ 14:00
Event	2	Pre-Convoy Safety Meeting	10/10/2018	11:25:00						
Event	3	Crew Leave Yard	10/10/2018	11:30:00						1 Elite, 1 660's, 1 pickup
Event	4	Arrive At Loc	10/10/2018	14:00:00						Rig running casing
Event	5	Assessment Of Location Safety Meeting	10/10/2018	14:05:00						JSA completed - Customer offered/received SDS - water test pH 7.0, CI <200, temp 60 degrees
Event	6	Pre-Rig Up Safety Meeting	10/10/2018	14:10:00						
Event	7	Rig-Up Equipment	10/10/2018	14:15:00						DME iron to ground manifold, standpipe. Water hoses to both uprights, bulk hose to 660.
Event	8	Other	10/10/2018	14:20:00						Rig Circulated 1 hrs prior to cement job at 8 bpm @ 300 psi. Mud scales calibrated to drinking water prior to job.
Event	9	Pre-Job Safety Meeting	10/10/2018	14:25:00						All HES personnel, rig crew, and company rep.
Event	10	Start Job	10/10/2018	15:36:26						TD 1135', TP 1128.59', SJ 43.15', OH 13.5'', Csg 9.5/8" 36 lb/ft J-55, Mud 9.6 ppg.
Event	11	Fill Lines	10/10/2018	15:39:48		8.33	2	58	5	Fresh Water
Event	12	Test Lines	10/10/2018	15:45:40				3064		Held pressure 2 minutes
Event	13	Pump Spacer	10/10/2018	15:48:58		8.33	4	240	15	Fresh Water
Event	14	Check Weight	10/10/2018	15:57:01						Density verified via mud cup
Event	15	Pump Lead Cement	10/10/2018	15:58:18		12.3	8	570	53	125 sacks, 12.3 ppg, 2.38 yield, 13.77 gal/sk

Event	16	Pump Tail Cement	10/10/2018	16:05:22	12.8	8	600	65.7	175 sks, 12.8 ppg, 2.11 Yield, 11.78 gal/sk
Event	17	Shutdown	10/10/2018	16:15:08					Wash up on plug
Event	18	Drop Top Plug	10/10/2018	16:20:27					Co-Rep Verify Plug Launched
Event	19	Pump Displacement	10/10/2018	16:21:42	8.33	10	775	83.9	Fresh Water
Event	20	Slow Rate	10/10/2018	16:31:43	8.33	2	280	73	Slow Rate 10 bbls to Calculated Displacement
Event	21	Bump Plug	10/10/2018	16:35:45			1067		Plug Bumped at 280 psi, Brought up to 1067 psi
Event	22	Check Floats	10/10/2018	16:39:13					Floats held – .5 bbl back to the truck
Event	23	End Job	10/10/2018	16:41:08					Good returns throughout job. 18 bbl of cement to surface
Event	24	Pre-Rig Down Safety Meeting	10/10/2018	16:49:46					40 lbs of sugar used, HES top plug used, 0 add hours.
Event	25	Rig-Down Equipment	10/10/2018	16:50:19					
Event	26	Pre-Convoy Safety Meeting	10/10/2018	16:55:09					
Event	27	Crew Leave Location	10/10/2018	16:56:02					Thanks for using Halliburton Cement, Chris Martinez and crew.

TEP NR 13-3 9 5/8" SURFACE

