

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

Rock Springs District, Colorado

For:Terra

Date: Thursday, July 04, 2019

RWF 14-17Production

API#05-045-24033

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	7/3/2019	01:30:00						Requested on Location @ 07:30
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	7/3/2019	02:50:00						
Event	3	Crew Leave Yard	Crew Leave Yard	7/3/2019	03:00:00						1 Elite, 1 660, 1 pickup
Event	4	Arrive At Loc	Arrive At Loc	7/3/2019	07:30:00						Rig running casing
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	7/3/2019	07:40:00						JSA completed - Customer offered/received SDS - water test pH 7.0, CI <200, temp 78 degrees
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	7/3/2019	08:00:00						
Event	7	Rig-Up Equipment	Rig-Up Equipment	7/3/2019	08:20:00						1 hardline to standpipe, water hoses to upright, bulk hoses to silo's and 660.
Event	8	Other	Other	7/3/2019	19:00:00						Rig Circulated 2 hours prior to cement job at 450 gpm 1480 psi. Mud scales calibrated to drinking water prior to job. Rig packed off floats and had to perf casing to cement.
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	7/3/2019	20:36:20						All HES personnel, rig crew, and company rep
Event	10	Other	Start Job	7/3/2019	21:25:58						TD 9035', TP 9029.08, SJ 30.40', OH 8 3/4", Csg 4.5"

11.6 lb/ft P-110, Mud 12.6
ppg, top perf @ 8984'

Event	11	Other	Fill Lines	7/3/2019	21:27:00	8.33	2	225	5	Fresh Water
Event	12	Test Lines	Test Lines	7/3/2019	21:30:35			8075		No Leaks
Event	13	Pump Spacer	Pump Spacer	7/3/2019	21:36:22	8.33	4	460	5	Fresh Water
Event	14	Pump Spacer 2	Pump Spacer 2	7/3/2019	21:38:09	8.4	4	715	20	80 lbs. Mud Flush III
Event	15	Check Weight	Check Weight	7/3/2019	21:43:48					Density Verified via Mud S
Event	16	Pump Lead Cement	Pump Lead Cement	7/3/2019	21:49:27	13.0	8	1800	346	1110 Sks 13.0 ppg 1.75 yield 7.86 gal/sk
Event	17	Pump Tail Cement	Pump Tail Cement	7/3/2019	22:36:55	14.2	8	1700	150.3	825 Sks 14.2 ppg 1.705 yield 7.522 gal/sk, Customer requested we only pump 495 sacks. a remainder of 330 sacks of tail cement is in silo 11749216.
Event	18	Shutdown	Shutdown	7/3/2019	23:03:43					Wash up on plug
Event	19	Drop Top Plug	Drop Top Plug	7/3/2019	23:06:17					Customer verified top plug
Event	20	Pump Displacement	Pump Displacement	7/3/2019	23:07:34	8.4	10	2840	137.5	3 lbs BE-6, 1 gal MMCR, 2% KCl
Event	21	Slow Rate	Slow Rate	7/3/2019	23:23:13	8.4	4	2280	127	Slow Rate 10 bbls to Calculated Displacement
Event	22	Shutdown	Shutdown	7/3/2019	23:28:05			2380		Shut down and shut in well with 2380 psi.
Event	23	Other	End Job	7/3/2019	23:29:23					Good returns throughout job, pipe was reciprocated
Event	24	Rig-Down Equipment	Rig-Down Equipment	7/3/2019	23:50:00					No Sugar. 8 Add hours
Event	25	Pre-Convoy Safety	Pre-Convoy Safety	7/3/2019	23:52:00					
Event	26	Crew Leave Location	Crew Leave Location	7/4/2019	00:20:00					Thank you for using Halliburton – Chris Martinez and crew.

2.0 Attachments

2.1 RWF 14-17-Custom Results.png

