

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

United States of America, COLORADO

For: Terra

Date: Sunday, August 26, 2018

NR 12-3 Surface PJR

API# 05-045-23921-00

Sincerely,

Grand Junction Cement Engineering

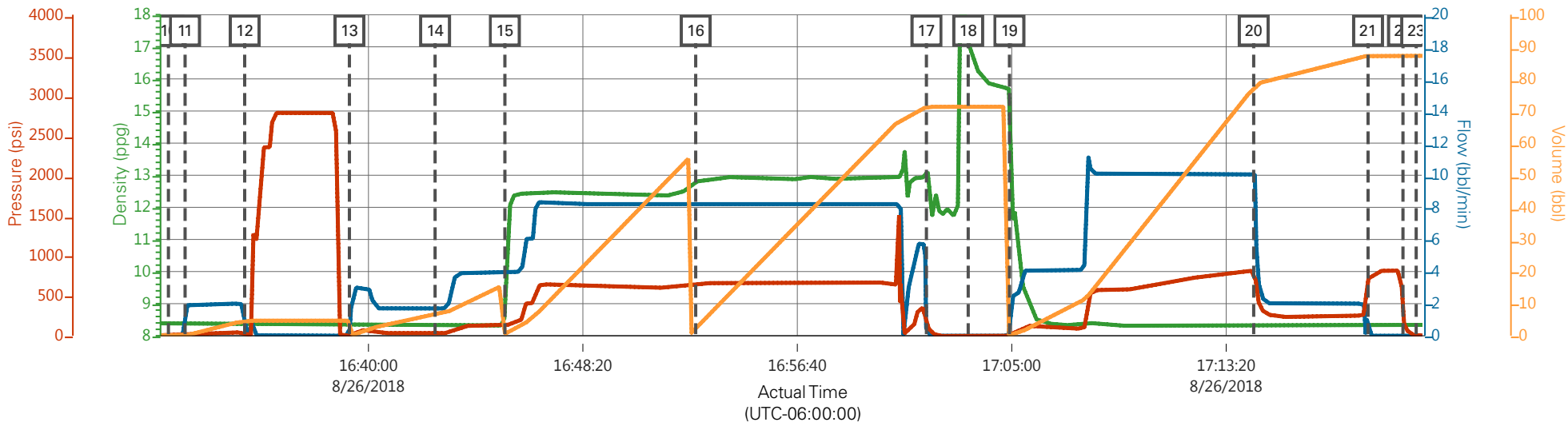
1.0 Real-Time Job Summary

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	8/26/2018	09:30:00						Requested on Location @ 15:00
Event	2	Pre-Convoy Safety Meeting	8/26/2018	11:00:00						
Event	3	Crew Leave Yard	8/26/2018	11:10:00						1 Elite, 1 660's, 1 pickup
Event	4	Arrive At Loc	8/26/2018	15:00:00						Rig running casing
Event	5	Assessment Of Location Safety Meeting	8/26/2018	15:10:00						JSA completed - Customer offered/received SDS - water test pH 7.0, Cl <200, temp 80 degrees
Event	6	Pre-Rig Up Safety Meeting	8/26/2018	15:15:10						
Event	7	Rig-Up Equipment	8/26/2018	15:20:00						DME iron to ground manifold, standpipe. Water hoses to both uprights, bulk hose to 660.
Event	8	Other	8/26/2018	15:25:00						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	8/26/2018	15:30:00						All HES personnel, rig crew, and company rep.
Event	10	Start Job	8/26/2018	16:32:14						TD 1138', TP 1132.23', SJ 44.48', OH 13.5", Csg 9.5/8" 36 lb/ft J-55, Mud 9.6 ppg.
Event	11	Fill Lines	8/26/2018	16:32:52		8.33	2	52	5	Fresh Water
Event	12	Test Lines	8/26/2018	16:35:11				2785		Held pressure 2 minutes
Event	13	Pump Spacer	8/26/2018	16:39:16		8.33	4	130	15	Fresh Water

Event	14	Check Weight	8/26/2018	16:42:35					Density verified via mud cup
Event	15	Pump Lead Cement	8/26/2018	16:45:18	12.3	8	640	53	125 sacks, 12.3 ppg, 2.38 yield, 13.77 gal/sk
Event	16	Pump Tail Cement	8/26/2018	16:52:43	12.8	8	685	68.8	175 sks, 12.8 ppg, 1.32 Yield, 13.77 gal/sk
Event	17	Shutdown	8/26/2018	17:01:41					Wash up on plug
Event	18	Drop Top Plug	8/26/2018	17:03:18					Co-Rep Verify Plug Launched
Event	19	Pump Displacement	8/26/2018	17:04:55	8.33	10	840	84.1	Fresh Water
Event	20	Slow Rate	8/26/2018	17:14:24	8.33	2	260	74	Slow Rate 20 bbls to Calculated Displacement
Event	21	Bump Plug	8/26/2018	17:18:51			820		Plug Bumped at 260 psi, Brought up to 820 psi
Event	22	Check Floats	8/26/2018	17:20:12					Floats held – .5 bbl back to the truck
Event	23	End Job	8/26/2018	17:20:43					Good returns throughout job. 16 bbl of cement to surface
Event	24	Pre-Rig Down Safety Meeting	8/26/2018	17:33:39					40 lbs of sugar used, HES top plug used, 0 add hours.
Event	25	Rig-Down Equipment	8/26/2018	17:36:14					
Event	26	Pre-Convoy Safety Meeting	8/26/2018	17:43:09					
Event	27	Crew Leave Location	8/26/2018	17:45:51					Thanks for using Halliburton Cement, Chris Martinez and crew.

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Description	Actual Time (UTC-06:00:00)	DH Density (ppg)	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Pump Stg Tot (bbl)	
10 Start Job	16:32:14	8.39	0.00	4.00	0.00	
11 Fill Lines	16:32:52	8.37	1.60	10.00	0.00	
12 Test Lines	16:35:11	8.33	0.00	29.00	4.70	
13 Pump Spacer	16:39:16	8.35	0.00	0.00	0.00	
14 Check Weight	16:42:35	8.32	1.70	33.00	6.70	
15 Pump Lead Cement	16:45:18	8.78	4.00	128.00	0.60	
16 Pump Tail Cement	16:52:43	12.81	8.20	639.00	2.30	
17 Shutdown	17:01:41	12.97	0.00	175.00	71.30	
18 Drop Top Plug	17:03:18	17.16	0.00	-4.00	71.30	
19 Pump Displacement	17:04:55	15.71	2.40	0.00	0.00	
20 Slow Rate	17:14:24	8.34	10.10	811.00	77.40	
21 Bump Plug	17:18:51	8.34	0.00	699.00	87.20	
22 Check Floats	17:20:12	8.36	0.00	250.00	87.20	
23 End Job	17:20:43	8.33	0.00	0.00	87.20	

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