

HALLIBURTON

iCem® Service

TERRA ENERGY PARTNERS

For: Craig Borgstede

Date: Wednesday, September 25, 2019

PA 322-24

API#05-045-23895

Job Date: Wednesday, September 25, 2019

Sincerely,

Rock Springs Engineering

iCem® Service

(v. 5.0.161.0)

Created: Wednesday, September 25, 2019

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	9/24/2019	15:00:00	USER					Requested on location at 2100
Event	2	Depart Yard Safety Meeting	9/24/2019	17:45:00	USER					All HES Present
Event	3	Depart from Service Center	9/24/2019	18:00:00	USER					
Event	4	Arrive at Location	9/24/2019	19:15:00	USER					Meet with customer and go over job parameters and procedure. Walk around location and collected water sample (PH - 7, Chlorides - 0, Temp - 65F). Customer was offered SDS For all chemicals used by HES.
Event	5	Assess Location	9/24/2019	19:30:00	USER					All HES Present
Event	6	Spot Equipment	9/24/2019	20:00:00	USER					1 F550, 1 Elite Pump Truck & 1 660 Bulk Truck
Event	7	Pre-Rig Up Safety Meeting	9/24/2019	20:15:00	USER					All HES Present
Event	8	Rig Up Equipment	9/24/2019	20:30:00	USER					Equipment rigged up without entering the red zone
Event	9	Pre-Job Safety Meeting	9/24/2019	23:15:00	USER					Discuss all job related safety issues and pump schedule with Company Rep., HES crew, and rig crew.
Event	10	Start Job	9/24/2019	23:43:49	COM4					TD 1144', TP 1134', SJ 44.1, FC 1089.9', Surface Csg. 9 5/8" 36# J-55, OH 13.5", Mud 10.2 ppg
Event	11	Fill Lines	9/24/2019	23:45:00	USER	8.4	2	50	2	Fresh Water
Event	12	Test Lines	9/24/2019	23:47:02	USER	8.4	.5	2930	.5	HES lines held 2930 psi for 2 Minutes
Event	13	Pump Water Spacer	9/24/2019	23:50:15	USER	8.4	4	150	20	20 bbls Fresh Water
Event	14	Check Weight	9/24/2019	23:55:39	COM4					Density verified with pressurized mud scales

Event	15	Pump Lead Cement	9/24/2019	23:56:49	USER	12.3	8	430	53	VariCem 125 sks (53 bbls), 12.3 ppg, 2.38 ft3/sk, 13.77 gal/sk
Event	16	Pump Tail Cement	9/25/2019	00:04:35	COM4	12.8	8	480	65.8	VariCem 175 sks (65.8 bbls), 12.8 ppg, 2.11 ft3/sk, 11.78 gal/sk.
Event	17	Check Weight	9/25/2019	00:05:08	COM4					Density verified with pressurized mud scales
Event	18	Shutdown	9/25/2019	00:15:36	USER					Wash up on top of the plug.
Event	19	Drop Top Plug	9/25/2019	00:17:30	USER					Customer witnessed releasing the top plug.
Event	20	Pump Displacement	9/25/2019	00:18:41	COM4	8.4	10	650	84.2	84.2 bbls Fresh Water
Event	21	Slow Rate	9/25/2019	00:28:53	USER	8.4	2	250	74.2	Slow to 2 bpm to land plug
Event	22	Bump Plug	9/25/2019	00:33:24	COM4	8.4	2	925	84.2	Bump plug at 250 psi and held 925 psi over for 3 minutes
Event	23	Check Floats	9/25/2019	00:35:18	USER					Floats held, .5 bbl back to the truck.
Event	24	End Job	9/25/2019	00:36:42	COM4					Good returns throughout job, 18 bbls Cement back to surface, 40 lbs. sugar used.
Event	25	Post-Job Safety Meeting (Pre Rig-Down)	9/25/2019	00:45:00	USER					All HES Present
Event	26	Rig-Down Equipment	9/25/2019	00:50:00	USER					
Event	27	Pre-Convoy Safety Meeting	9/25/2019	01:15:00	USER					All HES Present
Event	28	Depart Location	9/25/2019	01:30:00	USER					Thank you for using Halliburton Cement, Ryan Muhlestein and Crew

2.0 Attachments

2.1 Chart .png

