

HALLIBURTON

iCem[®] Service

Laramie Energy LLC

United States of America, COLORADO

For: Laramie

Date: Sunday, May 12, 2019

CC 697-04-09E Surface

API#05-045-23991

Sincerely,

Grand Junction Cement Engineering

1.0 Real-Time Job Summary

1.1 Job Event Log

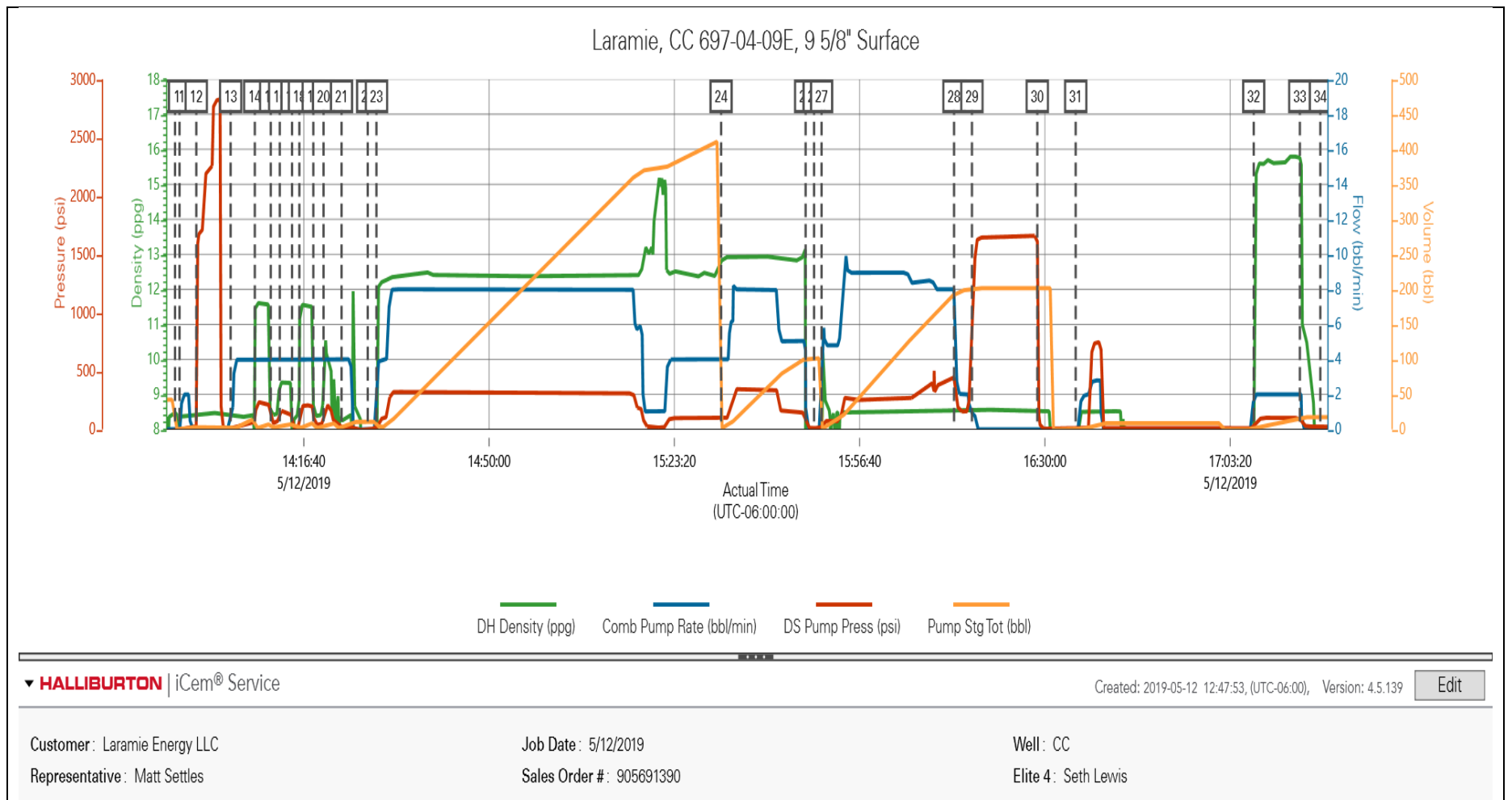
Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	Call Out	5/12/2019	07:00:00						Requested on Location @ 13:00
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/12/2019	08:50:00						
Event	3	Crew Leave Yard	Crew Leave Yard	5/12/2019	09:00:00						1 Elite, 1 Transport, 1 pickup
Event	4	Arrive At Loc	Arrive At Loc	5/12/2019	12:00:00						Rig running casing
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	5/12/2019	12:10:00						JSA completed - Customer offered/received SDS - water test pH 7.0, Cl <200, temp 52 degrees
Event	6	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	5/12/2019	12:20:00						
Event	7	Rig-Up Equipment	Rig-Up Equipment	5/12/2019	12:40:00						hardline to rig cellar. Water hoses to both uprights, bulk hoses to Silo's.
Event	8	Other	Other	5/12/2019	13:00:00						Mud scales calibrated to drinking water prior to job.
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	5/12/2019	13:20:00						All HES personnel, rig crew, and company rep.
Event	10	Other	Start Job	5/12/2019	13:53:30						TD 2582', TP 2572', SJ 46.7', OH 14 3/4", Csg 9 5/8" 36 lb/ft J-55'
Event	11	Other	Fill Lines	5/12/2019	13:54:19		8.33	2	29	5	Fresh Water
Event	12	Test Lines	Test Lines	5/12/2019	13:57:20				2835		No Leaks

Event	13	Pump Spacer	Pump Spacer	5/12/2019	14:03:31	8.33	4	57	15	Fresh Water
Event	14	Pump Spacer 1	Pump Spacer 1	5/12/2019	14:07:51	11.7	4	120	10	10 bbl Super Flush 100
Event	15	Pump Spacer	Pump Spacer	5/12/2019	14:10:44	8.33	4	160	5	Fresh Water
Event	16	Pump Spacer	Pump Spacer	5/12/2019	14:12:21	9.4	4	73	10	Calcium Chloride
Event	17	Pump Spacer	Pump Spacer	5/12/2019	14:14:33	8.33	4	60	5	Fresh Water
Event	18	Pump Spacer	Pump Spacer	5/12/2019	14:15:53	11.7	4	112	10	Super Flush
Event	19	Pump Spacer	Pump Spacer	5/12/2019	14:18:23	8.33	4	67	5	Fresh Water
Event	20	Pump Spacer	Pump Spacer	5/12/2019	14:20:13	9.4	4	55	10	Calcium Chloride
Event	21	Pump Spacer	Pump Spacer	5/12/2019	14:23:28	8.33	4	62	10	Fresh Water
Event	22	Check Weight	Check Weight	5/12/2019	14:28:10					Density verified via mud cup
Event	23	Pump Lead Cement	Pump Lead Cement	5/12/2019	14:29:45	12.3	8	360	370.6	878 sks, 12.3 ppg, 2.37 yield, 13.74 gal/sk
Event	24	Pump Tail Cement	Pump Tail Cement	5/12/2019	15:31:45	12.8	8	370	94.7	252 sks, 12.8 ppg, 2.11 Yield, 11.75 gal/sk
Event	25	Shutdown	Shutdown	5/12/2019	15:46:57					Wash up on plug
Event	26	Drop Top Plug	Drop Top Plug	5/12/2019	15:48:29					Co-Rep Verify Plug Launched
Event	27	Pump Displacement	Pump Displacement	5/12/2019	15:49:50	8.33	9	470	195.2	Fresh Water
Event	28	Slow Rate	Slow Rate	5/12/2019	16:13:39	8.33	2	200	180	Slow Rate 15 bbls to Calculated Displacement
Event	29	Bump Plug	Bump Plug	5/12/2019	16:16:53			1654		Plug Bumped at 200 psi, Brought up to 1654 psi, and held pressure for 10 min.
Event	30	Check Floats	Check Floats	5/12/2019	16:28:38					Floats held – 1.5 bbl back to the truck
Event	31	Pump Spacer	Pump Spacer	5/12/2019	16:35:33	8.33	2	300	10	Pump 10 bbl of sugar water down parasite string

Event	32	Pump Cement	Pump Cement	5/12/2019	17:07:34	15.6	2	430	14.8	Pump top out cement, 70 sks 15.6 ppg, 1.19 Yield, 5.24 Gal/sk, and 4 bbl of super flush down back side.
Event	33	Shutdown	Shutdown	5/12/2019	17:15:52					
Event	34	Other	End Job	5/12/2019	17:19:33					No returns during primary job
Event	35	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	5/12/2019	17:41:54					40 lbs sugar, 1 HES top plug used, 0 add hours, 5 Transport hours
Event	36	End Job	End Job	5/12/2019	17:48:17					
Event	37	Rig-Down Equipment	Rig-Down Equipment	5/12/2019	17:48:22					
Event	38	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/12/2019	18:43:40					
Event	39	Crew Leave Location	Crew Leave Location	5/12/2019	18:50:21					Thanks for using Halliburton Cement, Chris Martinez and crew.

2.0 Attachments

2.1 CC 697-04-09E-Custom Results.png



HALLIBURTON

iCem[®] Service

Laramie Energy LLC

United States of America, COLORADO

For: Laramie

Date: Tuesday, May 14, 2019

CC 697-04-09E Production

API#05-045-23991

Sincerely,

Grand Junction Cement Engineering

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	Call Out	5/14/2019	14:00:00	USER					
Event	2	Crew Leave Yard	Crew Leave Yard	5/14/2019	17:00:00	USER					
Event	3	Arrive At Loc	Arrive At Loc	5/14/2019	18:30:00	USER					JOURNEY MANAGEMENT CLOSED OUT. RIG ON BOTTOM.
Event	4	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	5/14/2019	18:35:00	USER					
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	5/14/2019	18:50:00	USER					JSA COMPLETE
Event	6	Rig-Up Equipment	Rig-Up Equipment	5/14/2019	19:00:00	USER					2 SILOS, 1 ELITE, 1 BULK TRUCKS, 2 UPRIGHT WATER TANKS, DAY TANK FOR BACK UP
Event	7	Other	Other	5/14/2019	19:30:00	USER					WATER TEST: PH-7, CL-0, TEMP-67 WELL INFO: 4.5 11.6# SET AT 19478, TD-9488, S.J.-95.26, HOLE- 8 3/4", MUD#-9.1, 9 5/8 36# SET @ 2530
Event	8	Other	Other	5/14/2019	19:45:00	USER					MUD SCALES CHECKED WITH WATER PRIOR TO JOB.
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	5/14/2019	20:00:00	USER					JSA COMPLETE
Event	10	Start Job	Start Job	5/14/2019	20:17:32	COM5					
Event	11	Test Lines	Test Lines	5/14/2019	20:23:06	USER			5830.00		5830 PSI

Event	12	Pump Spacer	Pump Spacer	5/14/2019	20:26:52	USER	8.33	6.00	170	60.00	MUD FLUSH
Event	13	Pump Lead Cement	Pump Lead Cement	5/14/2019	20:41:01	USER	12.30	8.00	640.00	347.9	1007 SKS NEOCEM, 12.5 PPG, 1.94 FT3/SK, 9.59 GAL/SK
Event	14	Pump Tail Cement	Pump Tail Cement	5/14/2019	21:29:24	USER	13.00	8.00	706.00	162.2	440 SKS NEOCEM, 13 PPG, 2.07 FT3/SK, 9.42 GAL/SK
Event	15	Shutdown	Shutdown	5/14/2019	21:52:18	USER					TO WASH UP PUMPS AND LINES, AND DROP TOP PLUGS
Event	16	Drop Top Plug	Drop Top Plug	5/14/2019	21:56:24	USER					2 TOP PLUGS AWAY
Event	17	Pump Displacement	Pump Displacement	5/14/2019	21:57:03	USER	8.33	7.00	1297.0	146.4	FRESH WATER WITH 5 GAL CLA WEB, 1 GAL MMCR
Event	18	Slow Rate	Slow Rate	5/14/2019	22:19:05	USER	8.33	4.00	966.00	136.4	TO BUMP PLUG
Event	19	Bump Plug	Bump Plug	5/14/2019	22:19:44	USER	8.33	4.00	979.00	146.4	PLUGS BUMPED
Event	20	Standby - Other - see comments	Standby - Other - see comments	5/14/2019	22:20:35	USER	8.33	0.00	2665.00	0.00	CASING TEST FOR 10 MINS.
Event	21	Check Floats	Check Floats	5/14/2019	22:29:40	USER			2883.00		FLOATS HELD, 1.5 BBLS BACK TO TRUCK
Event	22	Standby - Other - see comments	Standby - Other - see comments	5/14/2019	22:45:27	USER	15.6	1.80	1693.00	6.3	PUMP PARISITE STRING WITH 6.3 BBLS OF 15.6 CEMENT 30 SKS
Event	23	End Job	End Job	5/14/2019	22:54:00	USER					HAD CIRCULATION UP UNTILL WE SHUT DOWN TO DROP PLUG, AT 90 BBLS GONE IN DISPLACEMENT WE GOT FLOW FOR 20 BBLS THEN STOPPED. RIG CUT AIR OFF TO PARISITE AT 90 BBLS GONE IN DISPLACEMENT, NO PIPE MOVEMENT, RIG HAD 1250 CFM GOING DOWN THE PARISITE STRING DURING JOB.

Event	24	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	5/14/2019	23:10:00	USER	JSA COMPLETE
Event	25	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	5/14/2019	23:50:00	USER	JOURNEY MANAGEMENT COMPLETE, AS WELL AS JSA
Event	26	Crew Leave Location	Crew Leave Location	5/15/2019	00:20:00	USER	THANK YOU FOR USING HALLIBURTON CEMENT, JAMES LEIST AND CREW

3.0 Attachments

3.1 CHART.png

