

HALLIBURTON

iCem[®] Service

Laramie Energy LLC

United States of America, COLORADO

For: Laramie

Date: Thursday, November 08, 2018

SUP & SHEP 993-25-10W Surface PJR

API #: 05-077-10573

Sincerely,

Grand Junction Cement Engineering

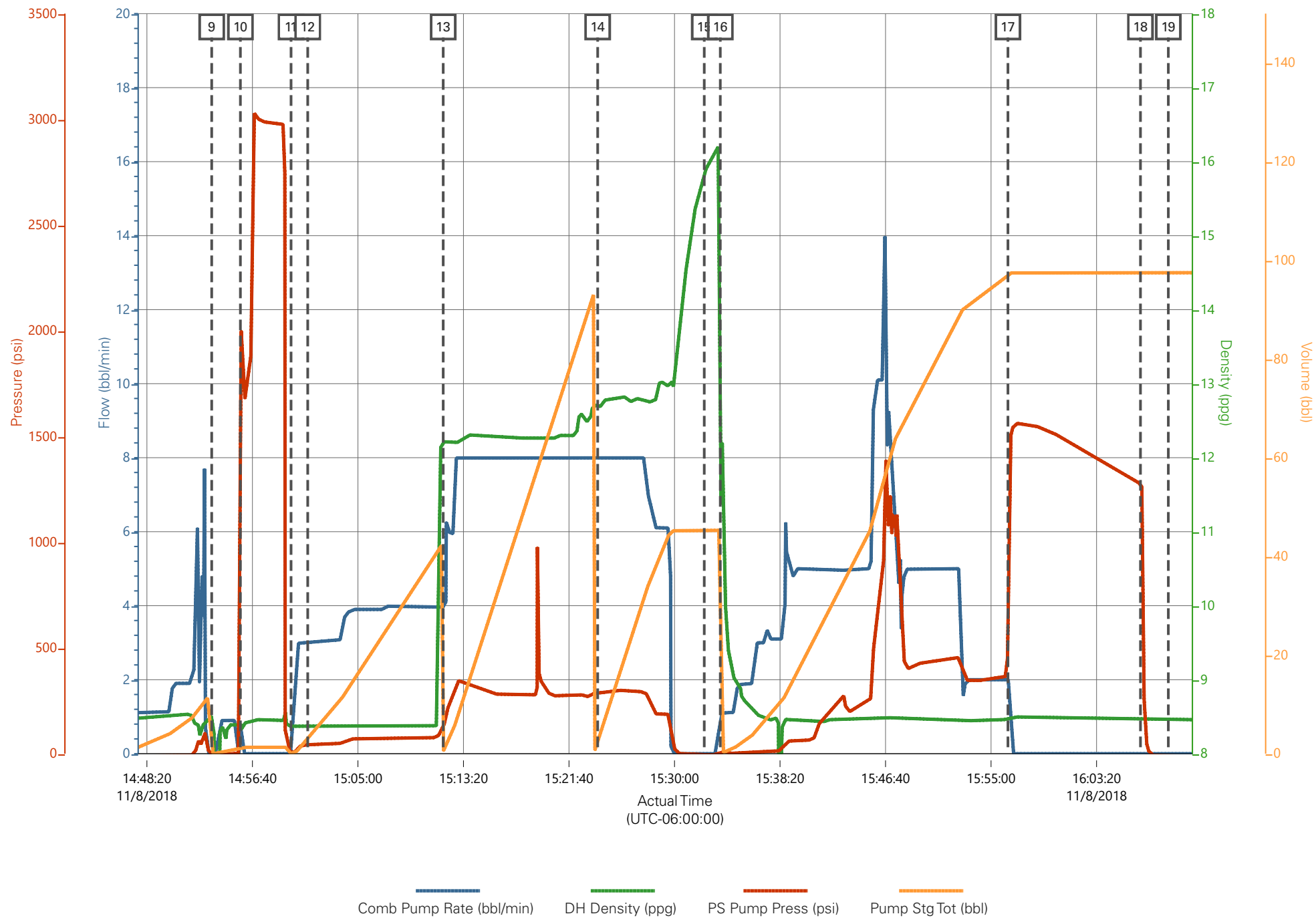
2.0 Real-Time Job Summary

2.1 Job Event Log

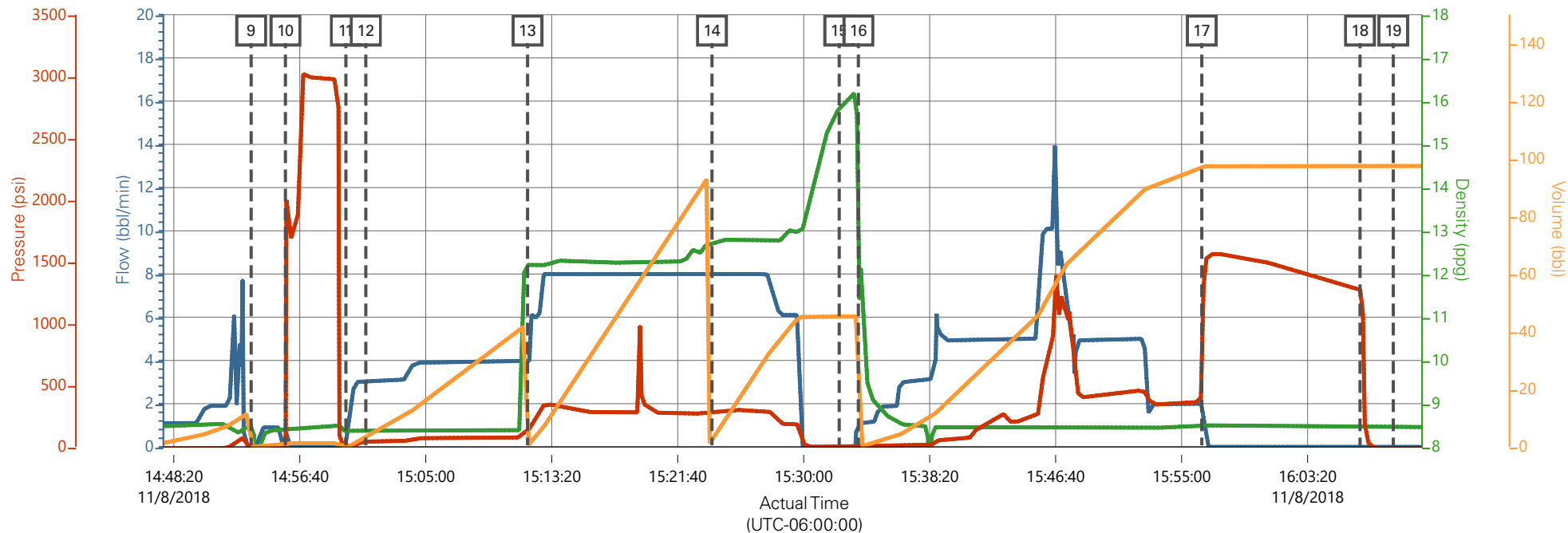
Type	Seq. No.	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	DH Density (ppg)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	11/8/2018	04:30:00	USER					REQUESTED ON LOCATION 11/8/18 @ 10:30
Event	2	Depart Yard Safety Meeting	11/8/2018	06:55:00	USER					JSA COMPLETED
Event	3	Crew Leave Shop	11/8/2018	07:00:00	USER					
Event	4	Arrive At Loc	11/8/2018	09:00:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	11/8/2018	09:15:00	USER					JSA COMPLETED
Event	6	Pre-Rig Up Safety Meeting	11/8/2018	09:25:00	USER					JSA COMPLETED
Event	7	Rig-Up Equipment	11/8/2018	09:30:00	USER					
Event	8	Pre-Job Safety Meeting	11/8/2018	14:30:00	USER					JSA COMPLETED, PRESSURIZED MUD SCALES CALIBRATED TO FRESH WATER
Event	9	Start Job	11/8/2018	14:53:27	COM4					8 5/8"-24# CASING IN 11" OH, TD 1554', TP 1544', ST 47.1', WATER TEMP 45, PH 7, CHLORIDES 0
Event	10	Test Lines	11/8/2018	14:55:43	COM4			3000.00		TEST LINES TO 3000 PSI
Event	11	Pump Spacer 1	11/8/2018	14:59:43	COM4	4.00	8.33	65.00	40.00	40 BBLS FRESH WATER SPACER
Event	12	Drop Bottom Plug	11/8/2018	15:01:02	USER					PLUG AWAY
Event	13	Pump Lead Cement	11/8/2018	15:11:44	COM4	8.00	12.30	300.00	86.30	86.3 BBLS LEAD CEMENT, 197 SKS @ 12.3 PPG / 2.46 YLD / 14.17 GAL/SK
Event	14	Pump Tail Cement	11/8/2018	15:23:56	COM4	8.00	12.80	300.00	42.30	42.3 BBLS TAIL CEMENT, 109 SKS @ 12.8 PPG / 2.18 YLD / 12.11 GAL/SK
Event	15	Drop Top Plug	11/8/2018	15:32:21	COM4					PLUG AWAY

Event	16	Pump Displacement	11/8/2018	15:33:37	COM4	5.00	8.33	460.00	95.20	95.2 BBLS FRESH WATER DISPLACEMENT, STAYED AT 5 BBLS/MIN UNTIL OVERBOARD LINE WAS HOOKED UP, STARTED TO LIFT PIPE WHEN BROUGHT TO 10 BBL/MIN SLOWED TO 5 FOR REST OF DISPLACEMENT
Event	17	Bump Plug	11/8/2018	15:56:20	COM4	2.00	8.33	360.00	95.20	PLUG BUMPED AT CALCULATED, FINAL CIRCULATING PRESSURE 360 PSI, BROUGHT TO 1600 PSI FOR 10 MINUTE CASING TEST
Event	18	CHECK FLOATS	11/8/2018	16:06:48	COM4					FLOATS HELD, .5 BBL BACK TO PUMP
Event	19	End Job	11/8/2018	16:09:00	COM4					PIPE LEFT STATIC, GOOD RETURNS THROUHGOUT, 35 BBLS LEAD TO SURFACE, TOP AND BOTTOM PLUG USED, 40# SUGAR USED, NO ADD HOURS CHARGED
Event	20	Pre-Rig Down Safety Meeting	11/8/2018	16:25:00	USER					JSA COMPLETED
Event	21	Rig-Down Equipment	11/8/2018	16:30:00	USER					
Event	22	Pre-Convoy Safety Meeting	11/8/2018	16:55:00	USER					JSA COMPLETED
Event	23	Crew Leave Location	11/8/2018	17:00:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENTING OF GRAND JUNCTION, CO - RYAN MARTIN AND CREW

LARAMIE - SUP & SHEP 993-25-10W - 8 5/8" SURFACE CASING



LARAMIE - SUP & SHEP 993-25-10W - 8 5/8" SURFACE CASING



Comb Pump Rate (bbl/min) DH Density (ppg) PS Pump Press (psi) Pump Stg Tot (bbl)

Description	Actual Time (UTC-06:00:00)	Comb Pump Rate (bbl/min)	DH Density (ppg)	PS Pump Press (psi)	Pump Stg Tot (bbl)
9 Start Job	14:53:27	0.00	8.50	-5.00	0.00
10 Test Lines	14:55:43	0.00	8.39	0.00	1.20
11 Pump Spacer 1	14:59:43	0.00	8.37	2.00	0.00
12 Drop Bottom Plug	15:01:02	3.00	8.39	43.00	3.10
13 Pump Lead Cement	15:11:44	4.00	12.22	138.00	0.50
14 Pump Tail Cement	15:23:56	8.00	12.66	289.00	2.50
15 Drop Top Plug	15:32:21	0.00	15.84	-6.00	45.20
16 Pump Displacement	15:33:37	1.10	12.94	5.00	45.40
17 Bump Plug	15:56:20	2.00	8.47	565.00	97.10
18 CHECK FLOATS	16:06:48	0.00	8.48	1277.00	97.50
19 End Job	16:09:00	0.00	8.46	-13.00	97.50

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Created: 2018-11-08 09:22:03, (UTC-07:00), Version: 4.5.139

Edit

Customer : Laramie Energy LLC
Representative : MATT SETTLES

Job Date : 11/8/2018
Sales Order # : 905260255

Well : SUP & SHEP 993-25-10W
ELITE #4 : KIEL CHRIST / RYAN MARTIN

HALLIBURTON

iCem[®] Service

LARAMIE ENERGY II LLC

United States of America, COLORADO

For: Laramie

Date: Monday, November 12, 2018

Sup & Shep 993-25-10W Production

Sincerely,

Grand Junction Cement Engineering

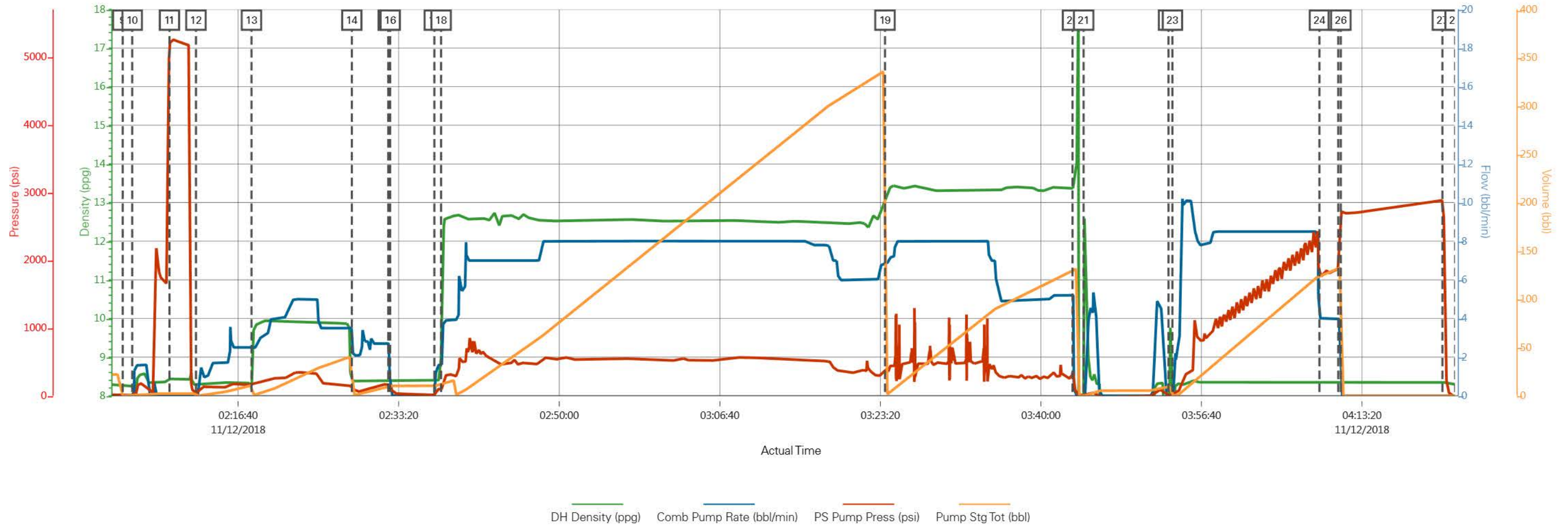
2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	11/11/2018	16:00:00	USER					Requested on Location @ 22:00
Event	2	Pre-Convoy Safety Meeting	11/11/2018	18:45:00	USER					All HES Present
Event	3	Crew Leave Yard	11/11/2018	19:00:00	USER					1 Elite, 1 660, 1 Transport, 1 pickup
Event	4	Arrive at Location from Service Center	11/11/2018	22:00:00	USER					Rig running casing
Event	5	Assessment Of Location Safety Meeting	11/11/2018	22:10:00	USER					JSA completed - Customer offered/received SDS - water test pH 7.0, Cl <200, temp 60 degrees
Event	6	Pre-Rig Up Safety Meeting	11/11/2018	22:20:00	USER					1 hardline to standpipe, water hoses to upright, bulk hose to 660.
Event	7	Other	11/12/2018	01:40:00	USER					Rig Circulated 2 Bottoms up prior to cement job at 1100gpm 800 psi
Event	8	Pre-Job Safety Meeting	11/12/2018	01:45:00	USER					All HES personnel, rig crew, and company rep
Event	9	Start Job	11/12/2018	02:04:41	USER	8.35	0.00	2.00	0.00	TD 8627', TP 8616.35', SJ 84.81', FC 8532.19' OH 7 7/8", Csg 4.5", 11.6 lb/ft, P-110, Scsg 8.625" 24# @1544', Mud 9.2 ppg.
Event	10	Fill Lines	11/12/2018	02:05:40	USER	8.35	0.00	170.00	2.00	Fresh Water
Event	11	Test Lines	11/12/2018	02:09:32	USER	8.43	0.00	5164.00	2.20	Held pressure 2 minutes no leaks
Event	12	Pump Spacer 1	11/12/2018	02:12:17	COM5	8.29	2.00	180.00	10.00	Fresh water 5# Poly-flake
Event	13	Pump Super Flush	11/12/2018	02:18:03	COM5	10.00	5.00	340.00	40.00	Super Flush 10.0ppg
Event	14	Pump Spacer 1	11/12/2018	02:28:28	COM5	8.36	3.50	146.00	10.00	Fresh water
Event	15	Drop Bottom Plug	11/12/2018	02:32:15	USER					Plug Away
Event	16	Shutdown	11/12/2018	02:32:27	COM5					Shutdown, 2 top plugs loaded into cement head

Event	17	Check Weight	11/12/2018	02:37:02	USER					Density Verified via Mud Scales
Event	18	Pump Lead Cement	11/12/2018	02:37:44	COM5	12.50	8.00	573.00	315.10	Neocem 912sks, 12.5ppg, 1.94cf/sk, 9.59gl/sk
Event	19	Pump Tail Cement	11/12/2018	03:23:49	COM5	13.30	8.00	580.00	112.2	Thermacem 362sks, 13.3ppg, 1.74cf/sk, 7.8gl/sk
Event	20	Shutdown	11/12/2018	03:43:17	USER					Clean lines to cellar
Event	21	Clean Lines	11/12/2018	03:44:26	COM5					
Event	22	Drop Top Plug	11/12/2018	03:53:15	USER					Co-Rep Verify Plug Launched, 2 Top Plug
Event	23	Pump Displacement	11/12/2018	03:53:39	USER	8.35	8.50	2450.00	132.20	Fresh Water, 5 Gal CLAWEB, 1 Gal MMCR, 5# BE6
Event	24	Slow Rate	11/12/2018	04:08:55	USER	8.35	4.00	1773.00	122.30	Slow Rate 10 bbls to calculated displacement
Event	25	Bump Plug	11/12/2018	04:10:52	USER	8.35	4.00	1928.00	132.10	Plug Bumped at 1928 psi, Brought up to 2885 psi
Event	26	Casing Test	11/12/2018	04:11:08	COM5	8.37	0.00	2713.00	0.00	2500 psi Casing Test
Event	27	Check Floats	11/12/2018	04:21:41	USER	8.34	0.00	2885.00	0.00	Floats held – 1 ½ bbl back to the truck
Event	28	End Job	11/12/2018	04:23:00	USER	8.29	0.00	3.00	0.00	Good returns throughout cement and slowed to minimal at 80 barrels away of displacement. 5 barrels Super Flush circulated to surface.
Event	29	Post-Job Safety Meeting (Pre Rig-Down)	11/12/2018	04:27:00	USER					All HES Present
Event	30	Pre-Convoy Safety Meeting	11/12/2018	05:45:00	USER					All HES Present
Event	31	Crew Leave Location	11/12/2018	06:00:00	USER					Thanks For Using Halliburton Cement. Andrew Brennecke And Crew.

LARAMIE ENERGY - SUP & SHEP 993-25-10W - 4.5" PRODUCTION



Job Information

Request/Slurry	2513632/1	Rig Name	H&P 522	Date	07/NOV/2018
Submitted By	Lukas Van Zyl	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Sup & Shep 0993-25-10W

Well Information

Casing/Liner Size	4.5 in	Depth MD	8677 ft	BHST	113°C / 236°F
Hole Size	7.875 in	Depth TVD	8611 ft	BHCT	74°C / 165°F
Pressure	5328 psi				

Drilling Fluid Information

Mud Supplier Name	Baroid	Mud Trade Name	BARADRIL-N	Density	9.9 lbm/gal
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Cement Information - Lead Design

<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		NeoCem				Slurry Density	12.5	lbm/gal
						Slurry Yield	1.946	ft3/sack
						Water Requirement	9.615	gal/sack
						Total Mix Fluid	9.615	gal/sack
						Water Source	Field (Fresh) Water	
						Water Chloride		

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Operation Test Results Request ID 2513632/1

Thickening Time - ON-OFF-ON

09/NOV/2018

Test Temp (degF)	Pressure (psi)	Reached in (min)	30 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
165	5328	44	6:47	6:47	6:47	6:47	8	54	15	9

Total sks = 912

CS2423, Trailer 8677, 400 sks

CS2424, Trailer 8678, 400 sks

CS2426, Trailer 4549, 112 sks

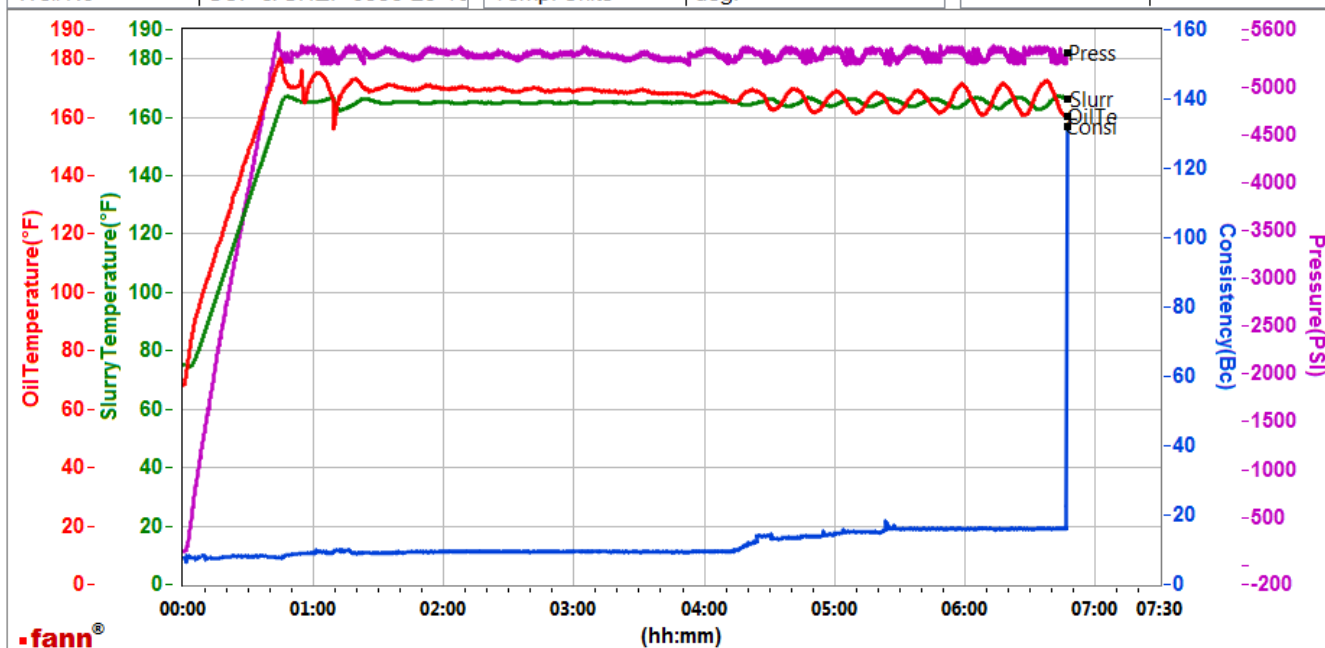
Deflection: 9 - 9. Please note temp oscillation started around 4:15. No core setting or balling around the paddle was evident when test was taken off.

GRAND JUNCTION

Fields	Values
Project Name	GJ2513632-1 Laramie Pr
SW Version	1.0
Test ID	35962648 - TT
Request ID	2513632-1
Tested by	CT
Customer	LARAMIE ENERGY
Well No	SUP & SHEP 0993-25-1C

Fields	Values
Rig	H&P 522
Casing/Liner Size	4.5 INCH
Job Type	PRODUCTION CASING
Cement Weight	GCC TYPE I-II
Comments	Standard
Date Time	11/8/2018 10:51:47.756
Temp. Units	degF

Events	Results
30 Bc	06:47
50 Bc	06:47
70 Bc	06:47
100 Bc	06:47



Data File P:\Z Lab\HPHT 1\GJ2513632-1 LARAMIE BULK PRODUCTION LEAD.tdms

Comments Standard

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Rockies, Grand Junction

Lab Results- Tail

Job Information

Request/Slurry	2513633/1	Rig Name	H&P 522	Date	07/NOV/2018
Submitted By	Lukas Van Zyl	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Sup & Shep 0993-25-10W

Well Information

Casing/Liner Size	4.5 in	Depth MD	8667 ft	BHST	113°C / 236°F
Hole Size	7.875 in	Depth TVD	8611 ft	BHCT	74°C / 165°F
Pressure	5328 psi				

Drilling Fluid Information

Mud Supplier Name	Baroid	Mud Trade Name	BARADRIL-N	Density	9.9 lbm/gal
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Cement Information - Tail Design



<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties	
		ThermaCem				Slurry Density	13.3 lbm/gal
						Slurry Yield	1.738 ft3/sack
						Water Requirement	7.795 gal/sack
						Total Mix Fluid	7.795 gal/sack
						Water Source	Field (Fresh) Water
						Water Chloride	

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Operation Test Results Request ID 2513633/1

Thickening Time - ON-OFF-ON

08/NOV/2018

Test Temp (degF)	Pressure (psi)	Reached in (min)	30 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
165	5328	44	3:34	3:43	3:44	3:46	12	54	15	10

Total sks = 362

CS2425, Trailer 2878, 362 sks

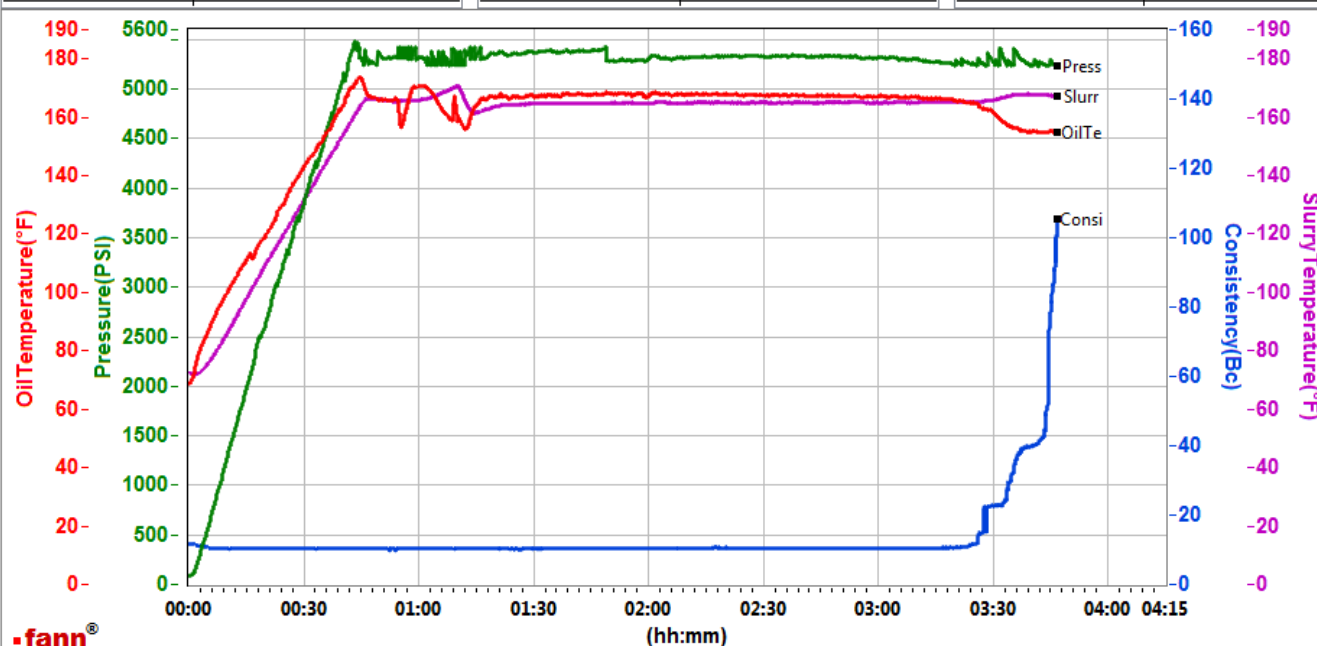
Deflection: 10 – 10

GRAND JUNCTION

Fields	Values
Project Name	2513633-1 H&P 522 Lara
SW Version	1.0
Test ID	35962650 - TT
Request ID	2513633-1
Tested by	CT
Customer	LARAMIE ENERGY
Well No	SUP & SHEP 0993-25-10

Fields	Values
Rig	H&P 522
Casing/Liner Size	4.5 INCH
Job Type	PRODUCTION CASING
Cement Weight	MOUNTAIN G
Comments	Standard
Date Time	11/8/2018 10:35:47.681
Temp. Units	degF

Events	Results
30 BC	3:34
50 BC	3:43
70 BC	3:44
100 BC	3:46



Data File C:\Users\H185329\Desktop\000 Graphs\GJ2513633-1 LARAMIE BULK PRODUCTION TAIL.tdms

Comments Standard

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