

HALLIBURTON

iCem[®] Service

LARAMIE ENERGY II LLC

For: Laramie Energy

Date: Monday, May 15, 2017

Piceance 29-18W Surface

API# 05-077-10358-00

Sincerely,
Grand Junction Cement Engineering

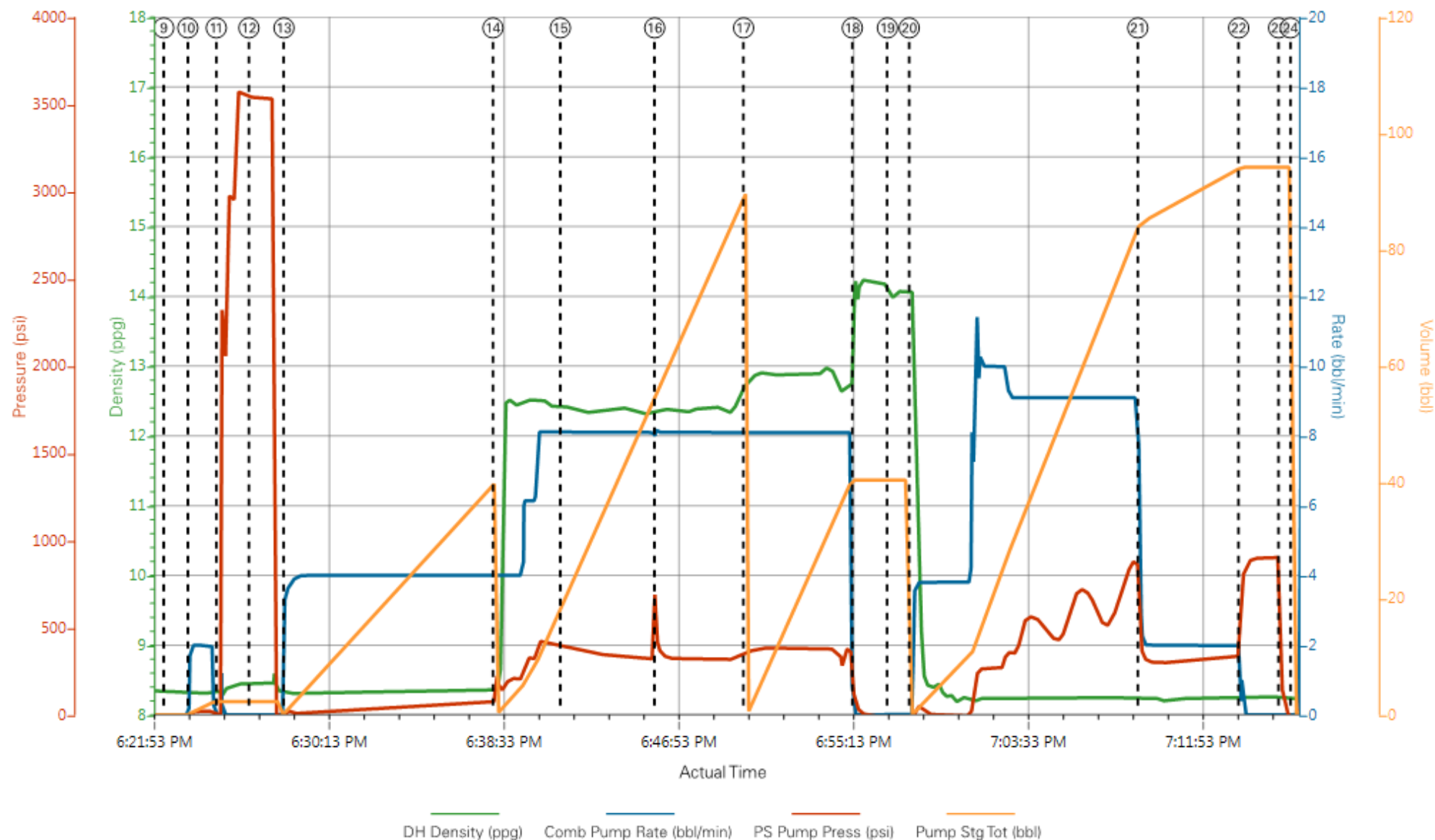
1.0 Real-Time Job Summary

1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	5/15/2017	12:00:00	USER					O/L time 1800
Event	2	Pre-Convoy Safety Meeting	5/15/2017	13:45:00	USER					
Event	3	Crew Leave Yard	5/15/2017	14:00:00	USER					1 660, 1 pickup - Elite already on location
Event	4	Arrive At Location	5/15/2017	15:30:00	USER					Rig running casing
Event	5	Assessment Of Location Safety Meeting	5/15/2017	15:45:00	USER					JSA completed - customer offered/received SDS - water test pH 7.5, Cl 0, temp 54 degrees
Event	6	Pre-Rig Up Safety Meeting	5/15/2017	16:15:00	USER					
Event	7	Rig-Up Equipment	5/15/2017	16:30:00	USER					Hard line to standpipe, water hose to upright, bulk hose to 660
Event	8	Pre-Job Safety Meeting	5/15/2017	18:10:00	USER					All HES personnel, rig crew, and company rep - Rig circulating @ 4.5 bpm w/ 240 psi for 30 minutes
Event	9	Start Job	5/15/2017	18:22:30	USER					TD 1551', TP 1541', SJ 44', Mud 9.6 ppg, 11" OH, 8 5/8" 24# J55 casing
Event	10	Prime Lines	5/15/2017	18:23:38	USER	8.33	2.0	35	2.0	Fresh water
Event	11	Drop Bottom Plug	5/15/2017	18:25:00	USER					Plug launched
Event	12	Test Lines	5/15/2017	18:26:33	COM5			3540		Pressure held well
Event	13	Pump Spacer 1	5/15/2017	18:28:13	COM5	8.33	4.0	70	40.0	Fresh water - returns established
Event	14	Pump Lead Cement	5/15/2017	18:38:11	COM5	12.3	8.0	410	86.3	197 sks, 12.3 ppg, 2.46 yield, 14.17 gal/sk
Event	15	Check weight	5/15/2017	18:41:24	COM5	12.3				Recirc matched mud scales
Event	16	Bottom Plug Burst	5/15/2017	18:45:54	USER					
Event	17	Pump Tail Cement	5/15/2017	18:50:08	COM5	12.8	8.0	385	42.6	109 sks, 12.8 ppg, 2.18 yield, 12.11 gal/sk

Event	18	Shutdown	5/15/2017	18:55:19	USER						Wash up on top of plug
Event	19	Drop Top Plug	5/15/2017	18:57:00	USER						Plug launched - verified by driller
Event	20	Pump Displacement	5/15/2017	18:58:02	COM5	8.33	9.0	890	95.2		Fresh water
Event	21	Slow Rate	5/15/2017	19:08:56	USER	8.33	2.0	320	@85		Good returns throughout job
Event	22	Bump Plug	5/15/2017	19:13:44	COM5			351			Approx 30 bbls cement to surface
Event	23	Check Floats	5/15/2017	19:15:39	COM5			915			Floats held – ½ bbl flowback
Event	24	End Job	5/15/2017	19:16:12	COM5						40 lbs sugar used
Event	25	Pre-Rig Down Safety Meeting	5/15/2017	19:45:00	USER						
Event	26	Rig-Down Equipment	5/15/2017	20:00:00	USER						
Event	27	Pre-Convoy Safety Meeting	5/15/2017	20:15:00	USER						
Event	28	Crew Leave Location	5/15/2017	20:30:00	USER						Thank you for using Halliburton - Ed Deussen and crew

LARAMIE - Piceance 29-18W - 8 5/8" Surface



- | | | | | | |
|---|-----------------------------|--------------------|----------------------|--------------------------------|------------------------------|
| ① Call Out | ⑥ Pre-Rig Up Safety Meeting | ⑪ Drop Bottom Plug | ⑯ Bottom Plug Burst | 21 Slow Rate | 26 Rig-Down Equipment |
| ② Pre-Convoy Safety Meeting | ⑦ Rig-Up Equipment | ⑫ Test Lines | ⑰ Pump Tail Cement | 22 Bump Plug | 27 Pre-Convoy Safety Meeting |
| ③ Crew Leave Yard | ⑧ Pre-Job Safety Meeting | ⑬ Pump Spacer 1 | ⑱ Shutdown | 23 Check Floats | 28 Crew Leave Location |
| ④ Arrive At Location | ⑨ Start Job | ⑭ Pump Lead Cement | ⑲ Drop Top Plug | 24 End Job | |
| ⑤ Assessment Of Location Safety Meeting | ⑩ Prime Lines | ⑮ Check weight | 20 Pump Displacement | 25 Pre-Rig Down Safety Meeting | |

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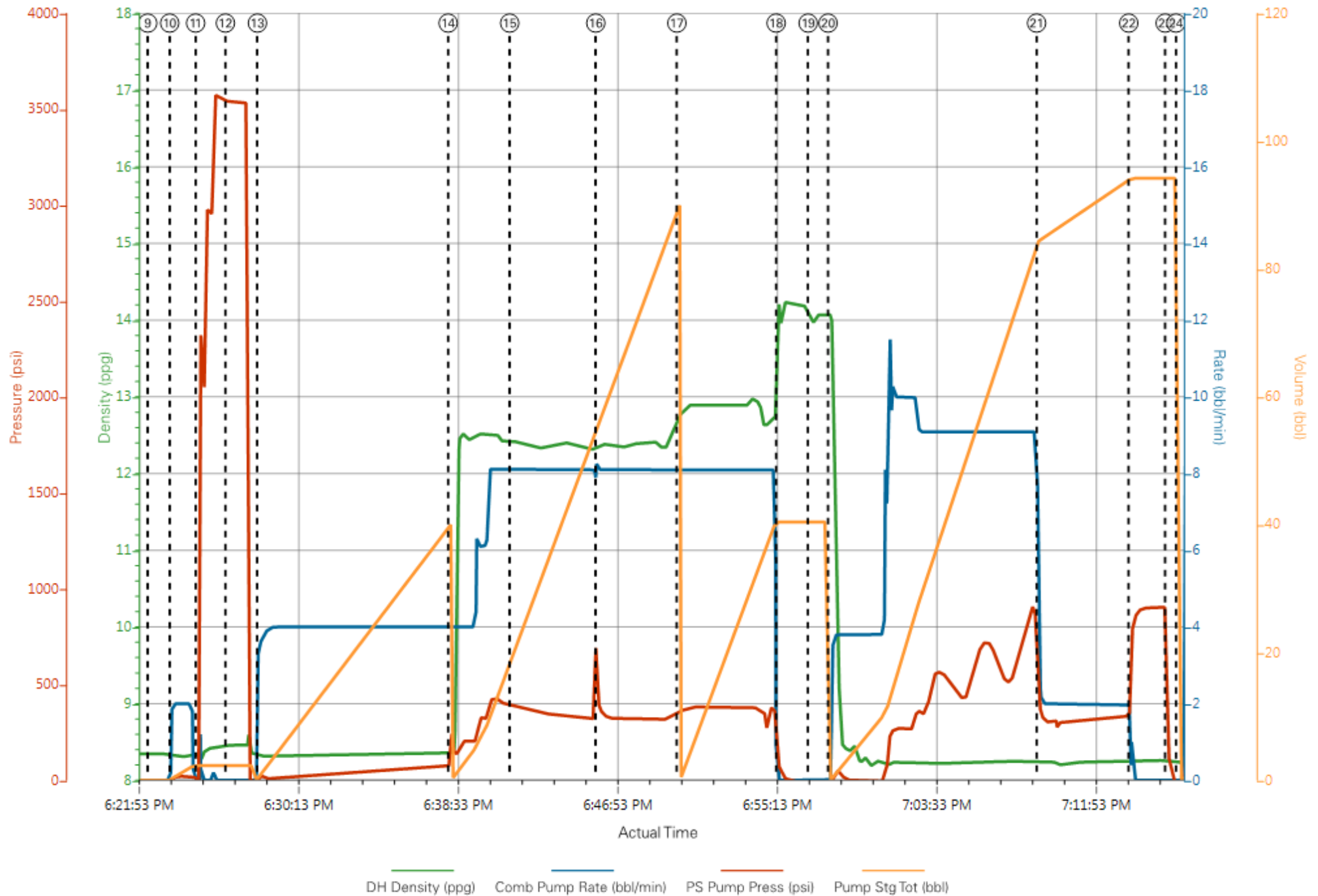
Edit

Customer: LARAMIE ENERGY II LLC
Representative: Shane Heard

Job Date: 5/15/2017 5:19:32 PM
Sales Order #: 904033387

Well: Piceance 29-18W
Elite #1: Ed Deussen / Dillon Martin

LARAMIE - Piceance 29-18W - 8 5/8" Surface



HALLIBURTON

iCem[®] Service

LARAMIE ENERGY II LLC

For: Laramie Energy

Date: Friday, May 19, 2017

Piceance Fed 29-18W Production PJR

API#05-077-10358-00

Sincerely,
Grand Junction Cement Engineering

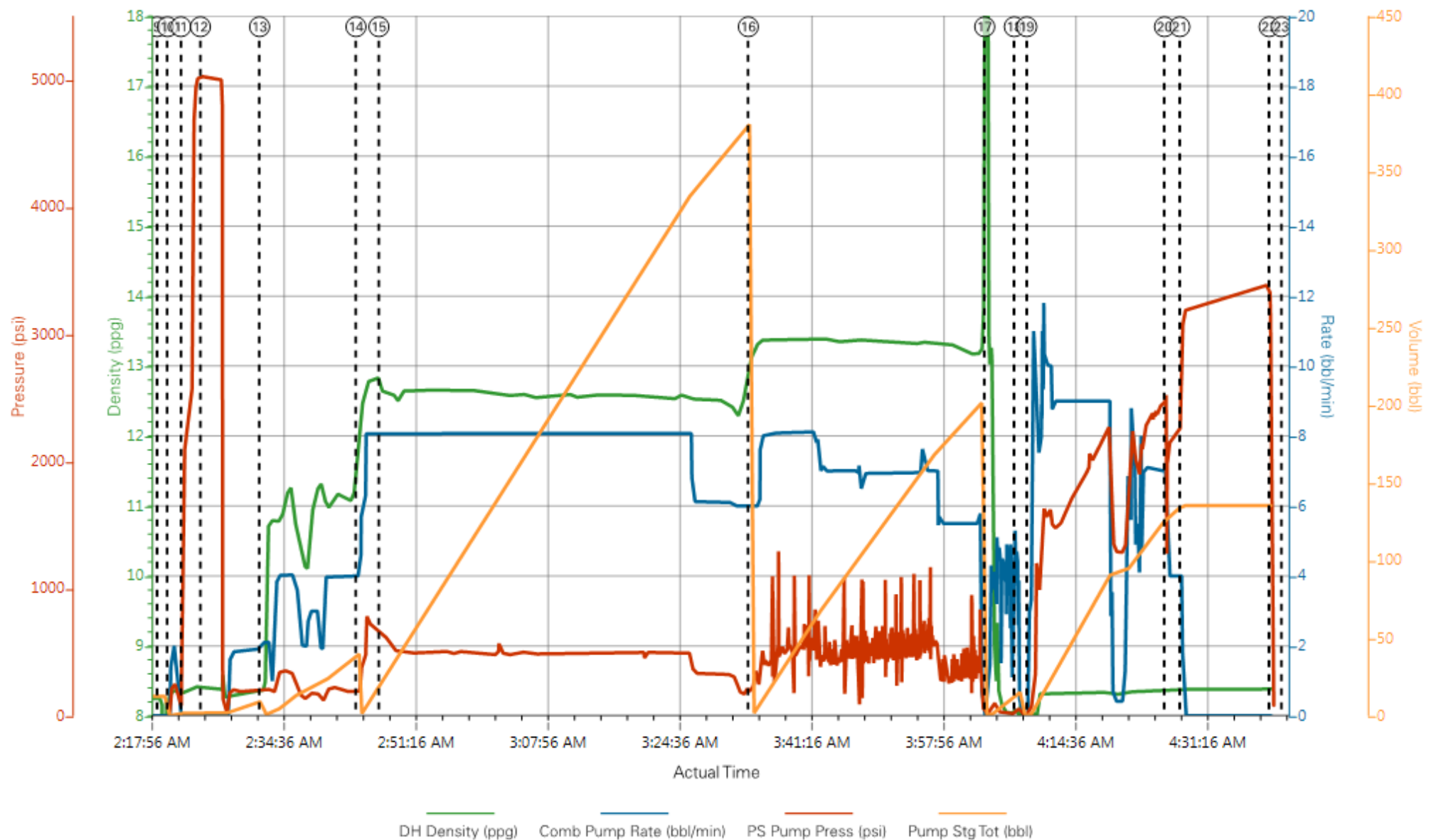
1.0 Real-Time Job Summary

1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	5/18/2017	18:00:00	USER					O/L time 0000
Event	2	Pre-Convoy Safety Meeting	5/18/2017	19:45:00	USER					
Event	3	Crew Leave Yard	5/18/2017	20:00:00	USER					1 Elite, 1 660, 1 pickup
Event	4	Arrive At Location	5/18/2017	21:30:00	USER					Rig running casing
Event	5	Assessment Of Location Safety Meeting	5/18/2017	21:45:00	USER					JSA completed - customer offered/received SDS - water test pH 7.5, Cl 0, temp 40 degrees
Event	6	Pre-Rig Up Safety Meeting	5/18/2017	22:15:00	USER					
Event	7	Rig-Up Equipment	5/18/2017	22:30:00	USER					Manifold on ground, hard line to standpipe, hard line into cellar for wash up, water hoses to upright and day tank, bulk hoses to silos and 660
Event	8	Pre-Job Safety Meeting	5/19/2017	01:45:00	USER					All HES personnel, rig crew, and company rep - Rig circulating @ 10 bpm w/ 950 psi for 1 1/2 hrs
Event	9	Start Job	5/19/2017	02:19:00	USER					TD 8477', TP 8467', SJ 84', Mud 9.1 ppg, 7 7/8" OH, Surf csg @ 1541', 4 1/2" 11.6# N80 casing
Event	10	Prime Lines	5/19/2017	02:20:18	USER	8.33	2.0	230	2.0	Fresh water
Event	11	Drop Bottom Plug	5/19/2017	02:22:00	USER					Plug launched
Event	12	Test Lines	5/19/2017	02:24:28	COM5			5043		Pressure held well
Event	13	Pump Tuned Spacer	5/19/2017	02:31:56	COM5	11.0	4.0	205	40.0	40 bbls Tuned Spacer, 11.0 ppg, 4.86 yield, 31.90 gal/sk
Event	14	Pump Lead Cement	5/19/2017	02:44:07	COM5	12.5	8.0	755	328.2	950 sks, 12.5 ppg, 1.94 yield, 9.60 gal/sk
Event	15	Check weight	5/19/2017	02:47:00	COM5	12.5				Recirc matched mud scales
Event	16	Pump Tail Cement	5/19/2017	03:33:40	COM5	13.3	8.0	545	128.8	418 sks, 13.3 ppg, 1.73 yield, 7.81 gal/sk

Event	17	Shutdown	5/19/2017	04:03:31	USER						Wash lines into cellar
Event	18	Drop Top Plug	5/19/2017	04:07:16	COM5						Plug launched – verified by driller
Event	19	Pump Displacement	5/19/2017	04:08:50	COM5	8.4	10.0	2505	129.9		1 gal MMCR, 5 gal Cla-Web – water delivery issue during displacement caused a temporary slowdown in rate
Event	20	Slow Rate	5/19/2017	04:26:14	USER	8.4	4.0	2150	@ 120		Good returns throughout job
Event	21	Bump Plug	5/19/2017	04:28:10	COM5			2280			Approx 35 bbls Tuned Spacer to surface
Event	22	Check Floats	5/19/2017	04:39:27	USER			3310			10 min. casing test to 3000 psi – floats held, 1 bbl flowback
Event	23	End Job	5/19/2017	04:41:00	USER						No sugar used
Event	24	Pre-Rig Down Safety Meeting	5/19/2017	04:45:00	USER						
Event	25	Rig-Down Equipment	5/19/2017	05:00:00	USER						
Event	26	Pre-Convoy Safety Meeting	5/19/2017	05:45:00	USER						
Event	27	Crew Leave Location	5/19/2017	06:00:00	USER						Thank you for using Halliburton - Ed Deussen and crew

LARAMIE - Piceance 29-18W - 4 1/2" Production



- | | | | | | |
|---|-----------------------------|---------------------|---------------------|--------------------------------|------------------------------|
| ① Call Out | ⑥ Pre-Rig Up Safety Meeting | ⑪ Drop Bottom Plug | ⑯ Pump Tail Cement | 21 Bump Plug | 26 Pre-Convoy Safety Meeting |
| ② Pre-Convoy Safety Meeting | ⑦ Rig-Up Equipment | ⑫ Test Lines | ⑰ Shutdown | 22 Check Floats | 27 Crew Leave Location |
| ③ Crew Leave Yard | ⑧ Pre-Job Safety Meeting | ⑬ Pump Tuned Spacer | ⑱ Drop Top Plug | 23 End Job | |
| ④ Arrive At Location | ⑨ Start Job | ⑭ Pump Lead Cement | ⑲ Pump Displacement | 24 Pre-Rig Down Safety Meeting | |
| ⑤ Assessment Of Location Safety Meeting | ⑩ Prime Lines | ⑮ Check weight | 20 Slow Rate | 25 Rig-Down Equipment | |

▼ **HALLIBURTON** | iCem® Service

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Edit

Customer: LARAMIE ENERGY II LLC

Job Date: 5/19/2017 12:07:04 AM

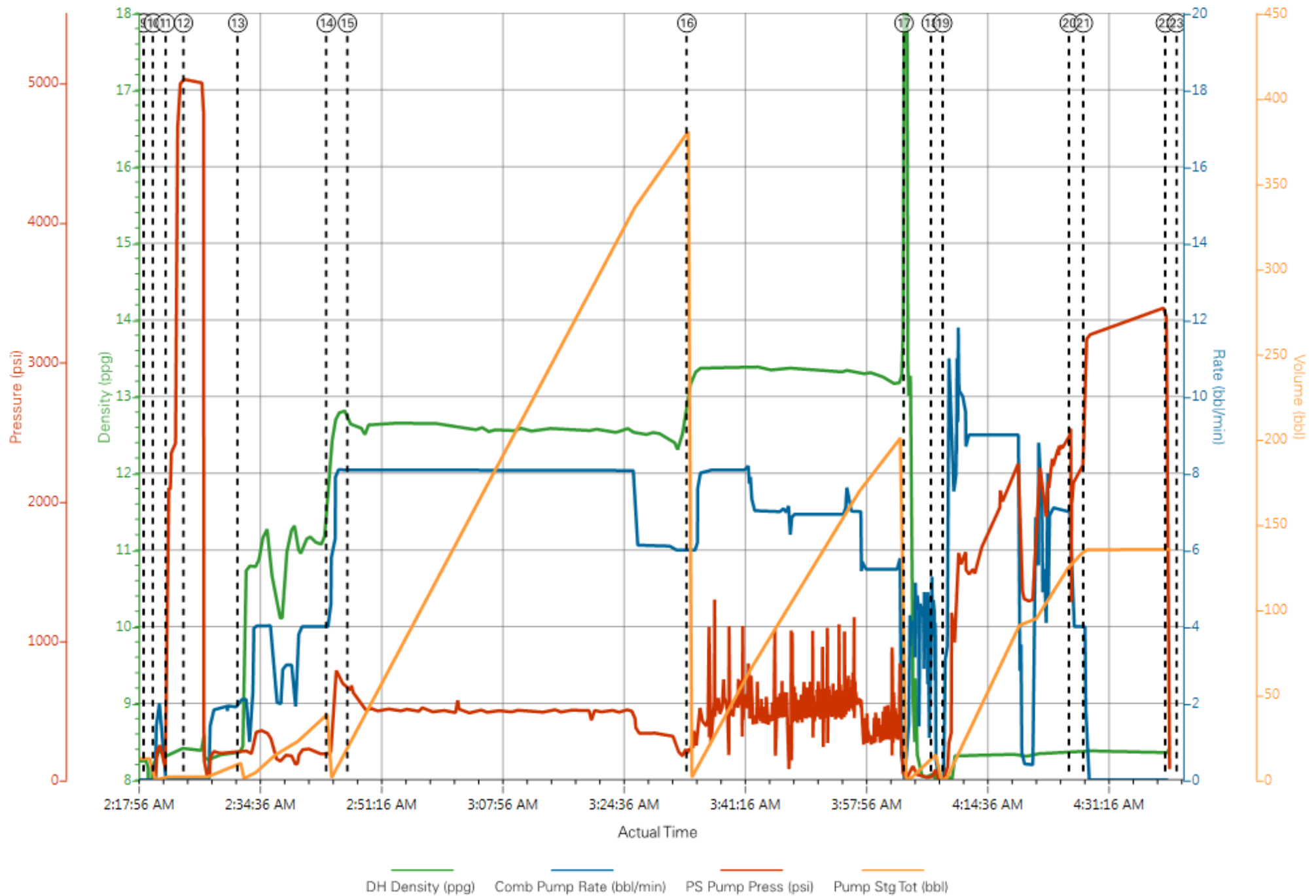
Well: Piceance Fed 29-18W

Representative: Shane Heard

Sales Order #: 904038804

Elite #4: Ed Deussen / Ryan Martin

LARAMIE - Piceance 29-18W - 4 1/2" Production



Job Information

Request/Slurry	2388040/1	Rig Name	H&P 522	Date	15/MAY/2017
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Piceance Federal 29-18W

Well Information

Casing/Liner Size	4.5 in	Depth MD	8466 ft	BHST	114°C / 237°F
Hole Size	7.875 in	Depth TVD	7626 ft	BHCT	77°C / 170°F
Pressure	4638 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 Lead				Slurry Density	12.5	lbm/gal
						Slurry Yield	1.941	ft3/sack
						Water Requirement	9.623	gal/sack
						Total Mix Fluid	9.623	gal/sack
						Water Source	Field (Fresh) Water	
						Water Chloride		

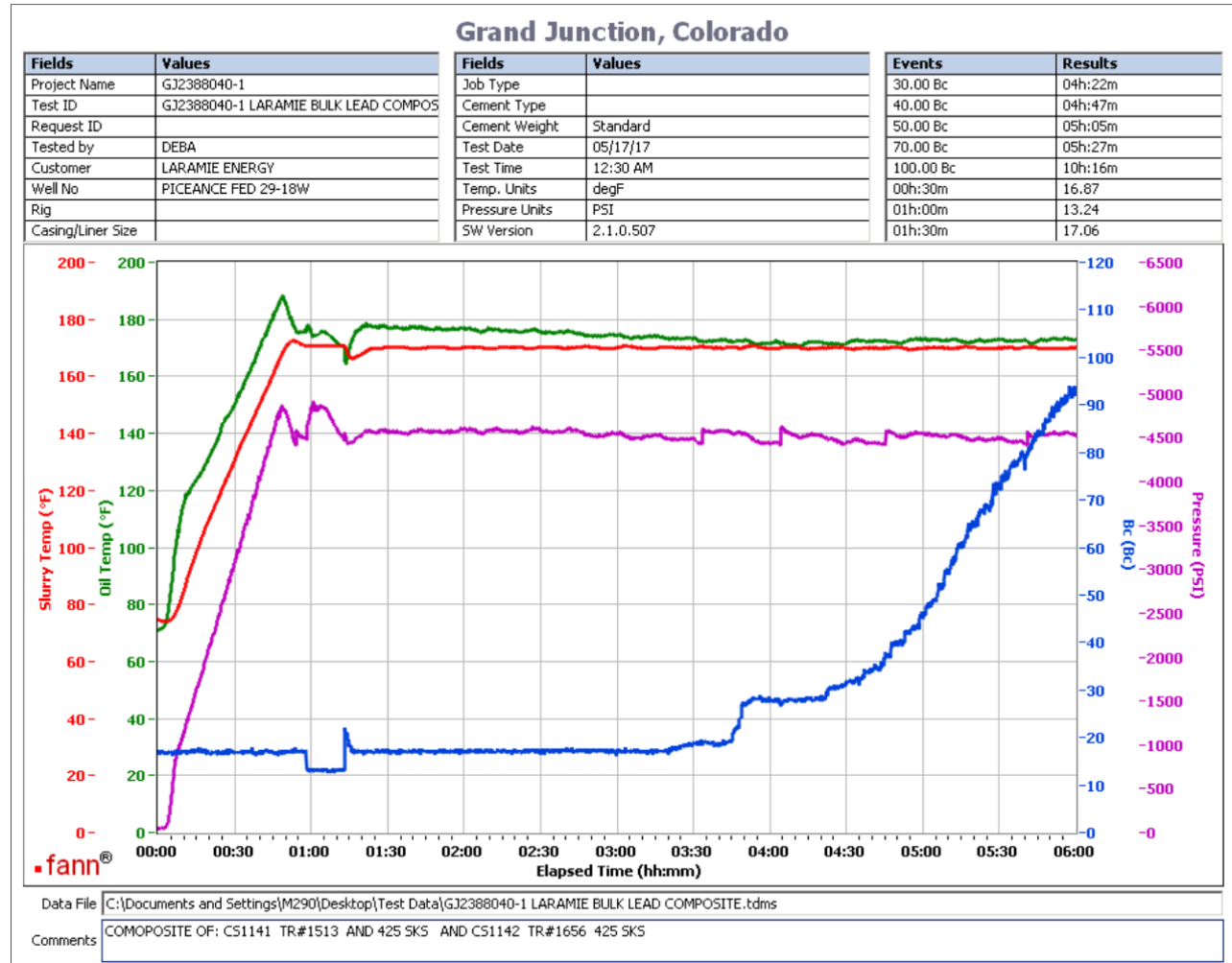
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Operation Test Results Request ID 2388040/1

Thickening Time - ON-OFF-ON

17/MAY/2017

Test Temp (°F)	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)
170	4638	48	4:22	5:05	5:27	10:16	16	58	15	22



Total sks = 950

Composite of:

CS1141 TR# 1513 425 SKS

CS1142 TR# 1656 425 sks

Deflected 10-- > 22-- > 17

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Operation Test Results Request ID 2388040/2

Thickening Time - ON-OFF-ON

18/MAY/2017

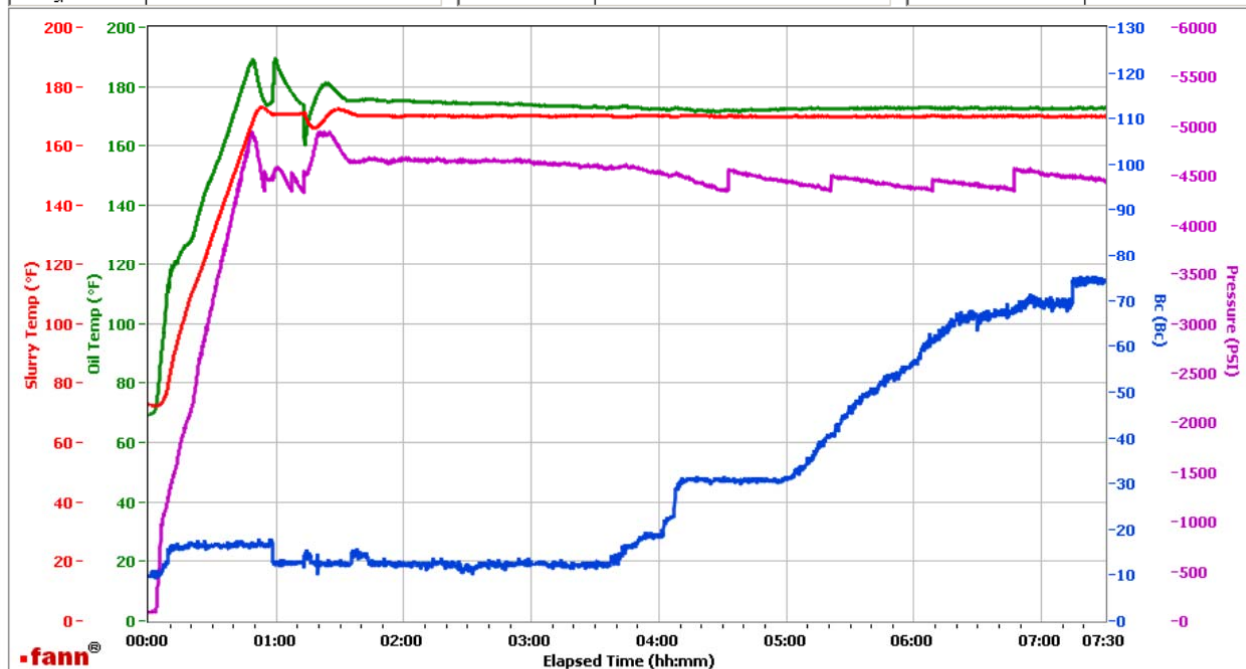
Test Temp (°F)	Pressure (psi)	Reached in (min)	30 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
170	4638	48	4:09	5:39	6:50	14:42	10	58	15	15

Grand Junction Colorado

Fields	Values
Project Name	GJ2388040-2 LARAMIE PRODUCTION BULK
Test ID	34553510
Request ID	GJ2388040-2 LARAMIE PRODUCTION BULK
Tested by	JASON
Customer	LARAMIE ENERGY
Well No	PICEANCE FED 29-18W
Rig	H&P 522
Casing/Liner Size	4.5

Fields	Values
Job Type	PRODUCTION
Cement Type	NEOCEM
Cement Weight	Light Weight
Test Date	05/17/17
Test Time	08:19 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	04h:09m
40.00 Bc	05h:18m
50.00 Bc	05h:39m
70.00 Bc	06h:50m
100.00 Bc	14h:42m
00h:30m	12.76
01h:00m	12.76
01h:30m	12.76



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Comments CS1152 TR 4053 100 SK5

Total sks = 950
CS1152 TR 4053 100 SKS
Deflected 12-- > 15-- > 14

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HALLIBURTON

Rockies, Grand Junction

Lab Results- Tail

Job Information

Request/Slurry	2388041/1	Rig Name	H&P 522	Date	15/MAY/2017
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Piceance Federal 29-18W

Well Information

Casing/Liner Size	4.5 in	Depth MD	8466 ft	BHST	114°C / 237°F
Hole Size	7.875 in	Depth TVD	7626 ft	BHCT	77°C / 170°F
Pressure	4638 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 Tail				Slurry Density	13.3	lbm/gal
						Slurry Yield	1.733	ft3/sack
						Water Requirement	7.799	gal/sack
						Total Mix Fluid	7.799	gal/sack
						Water Source	Field (Fresh) Water	
						Water Chloride	N/A	

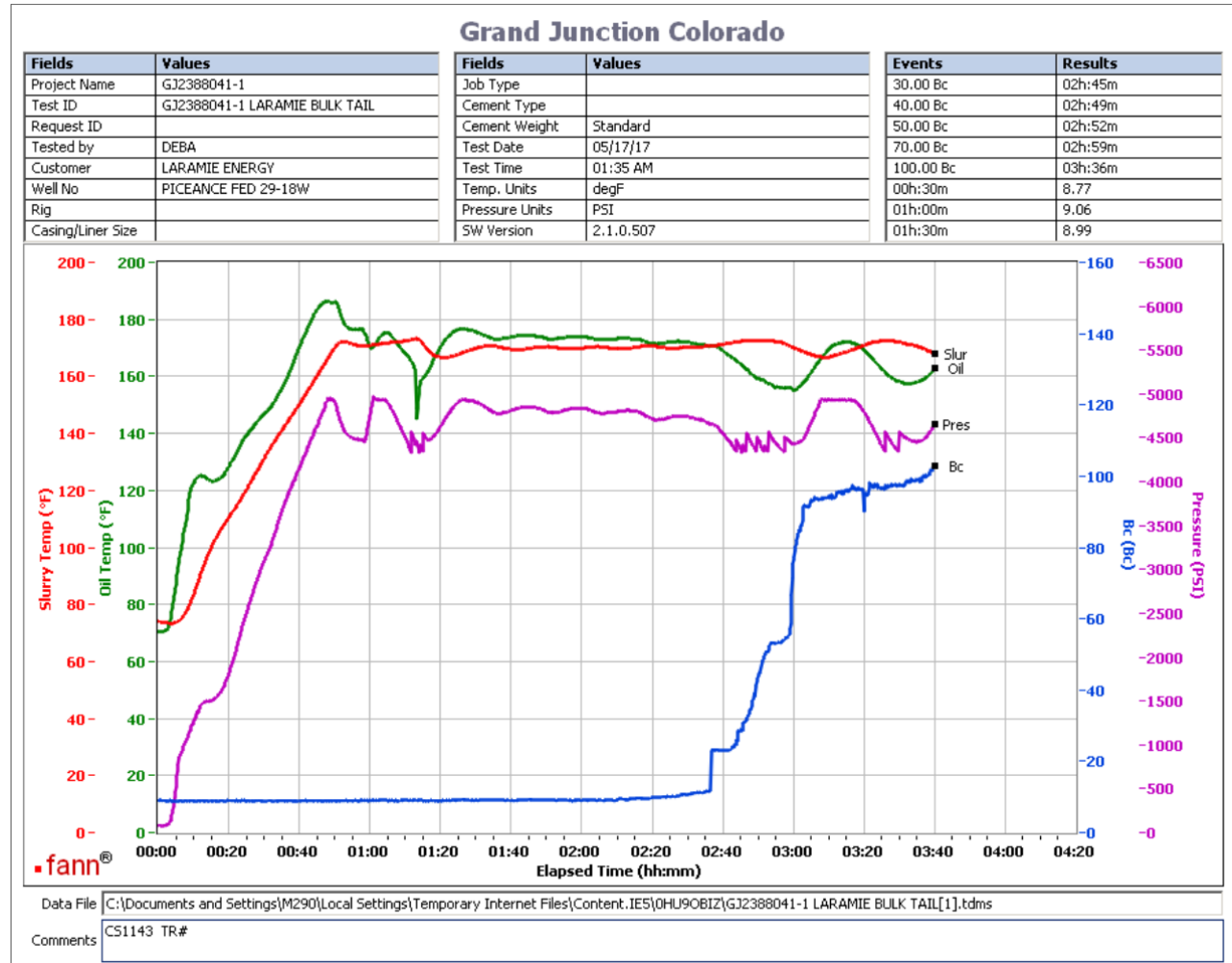
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Operation Test Results Request ID 2388041/1

Thickening Time - ON-OFF-ON

17/MAY/2017

Test Temp (°F)	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)
170	4638	48	2:45	2:52	2:59	3:36	9	58	15	9



CS1143 TR#0812 418 SKS
No deflection

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