

HALLIBURTON

iCem[®] Service

LARAMIE ENERGY LLC

For: Laramie

Date: Saturday, September 16, 2017

BRUTON 30-04E Surface

API# 05-077-10445

Sincerely,

Grand Junction Cement Engineering

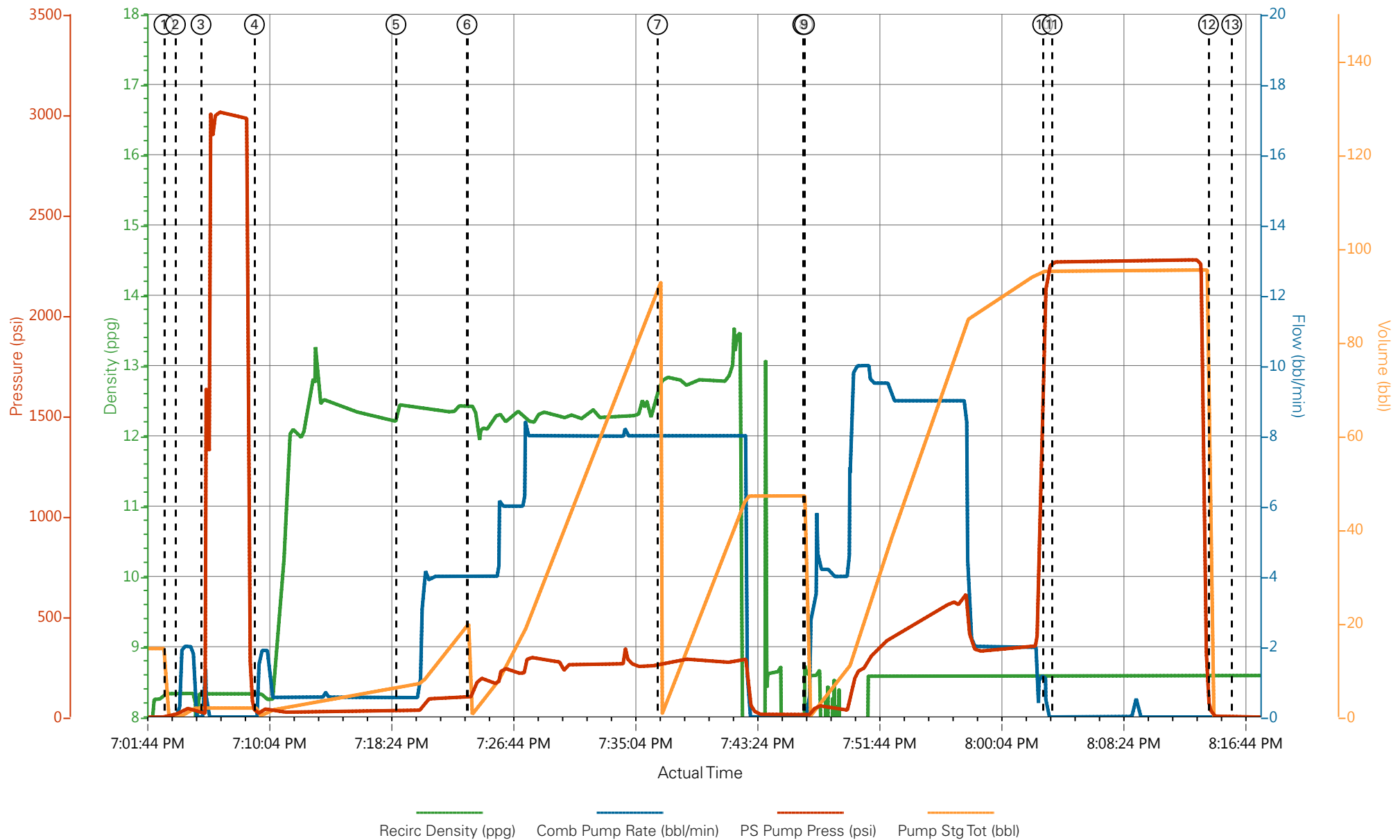
1.0 Real-Time Job Summary

1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	Pass-Side Pump Pressure (psi)	Recirc Density (ppg)	Combined Pump Rate (bbl/min)	Pump Stage Total (bbl)	Comments
Event	1	Start Job	9/16/2017	19:03:04	COM5					8 5/8" 24#, TP 1553, SJ 41, OH 11", TD 1563', MUD # 9.1 ppg
Event	2	Prime Lines	9/16/2017	19:03:51	USER	46	8.33	.5	2	DROP 8 5/8" BOTTOM PLUG, PUMP 2 BBL AHEAD TO FILL LINES
Event	3	Test Lines	9/16/2017	19:05:36	COM5	3000				TEST TO 3000 PSI
Event	4	Pump Spacer 1	9/16/2017	19:09:15	COM5	92	8.33	4	20	20 BBL FRESH WATER SPACER AHEAD OF CEMENT
Event	5	Check weight	9/16/2017	19:18:55	COM5					USED MUD SCALES TO VERIFY DENSOMETER
Event	6	Pump Lead Cement	9/16/2017	19:23:46	COM5	100	12.3	8	86.3	197 SKS OF 12.3 PPG , 2.46 YEILD, 14.17 GAL/SK
Event	7	Pump Tail Cement	9/16/2017	19:36:47	COM5	280	12.8	8	42.3	109 SKS OF 12.8 PPG, 2.18 YEILD, 12.11 GAL/SK
Event	8	Drop Top Plug	9/16/2017	19:46:42	COM5					DROP 8 5/8" TOP PLUG, CUSTOMER VERIFIED PLUG AWAY
Event	9	Pump Displacement	9/16/2017	19:46:49	COM5	620	8.33	10	85	PUMP FRESH WATER DISPLACEMENT @ 9 BPM
Event	10	Bump Plug	9/16/2017	20:03:05	COM5	2250	8.33	2	96.2	SLOW RATE @ 85 BBL AWAY, BUMPED PLUG @ CALCULATED DISPLACEMENT
Event	11	Casing Test	9/16/2017	20:03:44	USER	2276				HOLD PRESSURE ON CASING, PER CUSTOMER REP
Event	12	Other	9/16/2017	20:14:24	COM5					CHECK FLOATS, FLOATS HELD
Event	13	End Job	9/16/2017	20:16:00	COM5					42 BBLS OF CEMENT TO SURFACE
Event	14	Pre-Rig Down Safety Meeting	9/16/2017	20:29:50	USER					
Event	15	Rig-Down Equipment	9/16/2017	20:55:00	USER					
Event	16	Pre-Convoy Safety Meeting	9/16/2017	21:00:00	USER					

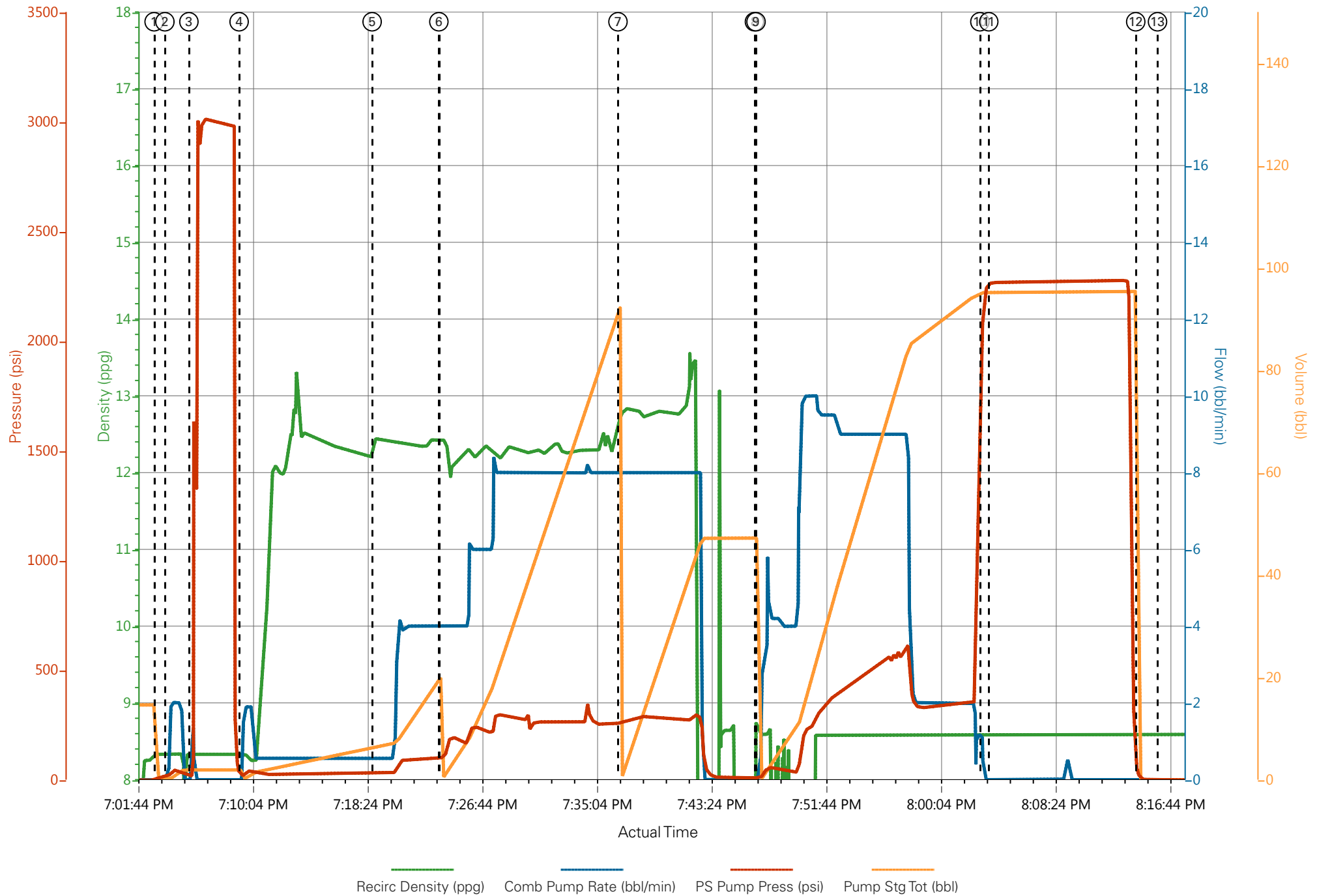
Event	17	Crew Leave Location	9/16/2017	21:20:00	USER
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LARAMIE BRUTON 30-04E SURFACE



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|-----------------|--------------------|---------------------|-------------------------------|-----------------------|
| ① Start Job | ⑤ Check weight | ⑨ Pump Displacement | ⑬ End Job | ⑰ Crew Leave Location |
| ② Prime Lines | ⑥ Pump Lead Cement | ⑩ Bump Plug | ⑭ Pre-Rig Down Safety Meeting | |
| ③ Test Lines | ⑦ Pump Tail Cement | ⑪ Casing Test | ⑮ Rig-Down Equipment | |
| ④ Pump Spacer 1 | ⑧ Drop Top Plug | ⑫ Other | ⑯ Pre-Convoy Safety Meeting | |

LARAMIE BRUTON 30-04E SURFACE



HALLIBURTON

iCem[®] Service

LARAMIE ENERGY LLC-EBUS

For: Laramie

Date: Wednesday, September 20, 2017

BRUTON 30-04E Production

Sincerely,

Grand Junction Cement Engineering

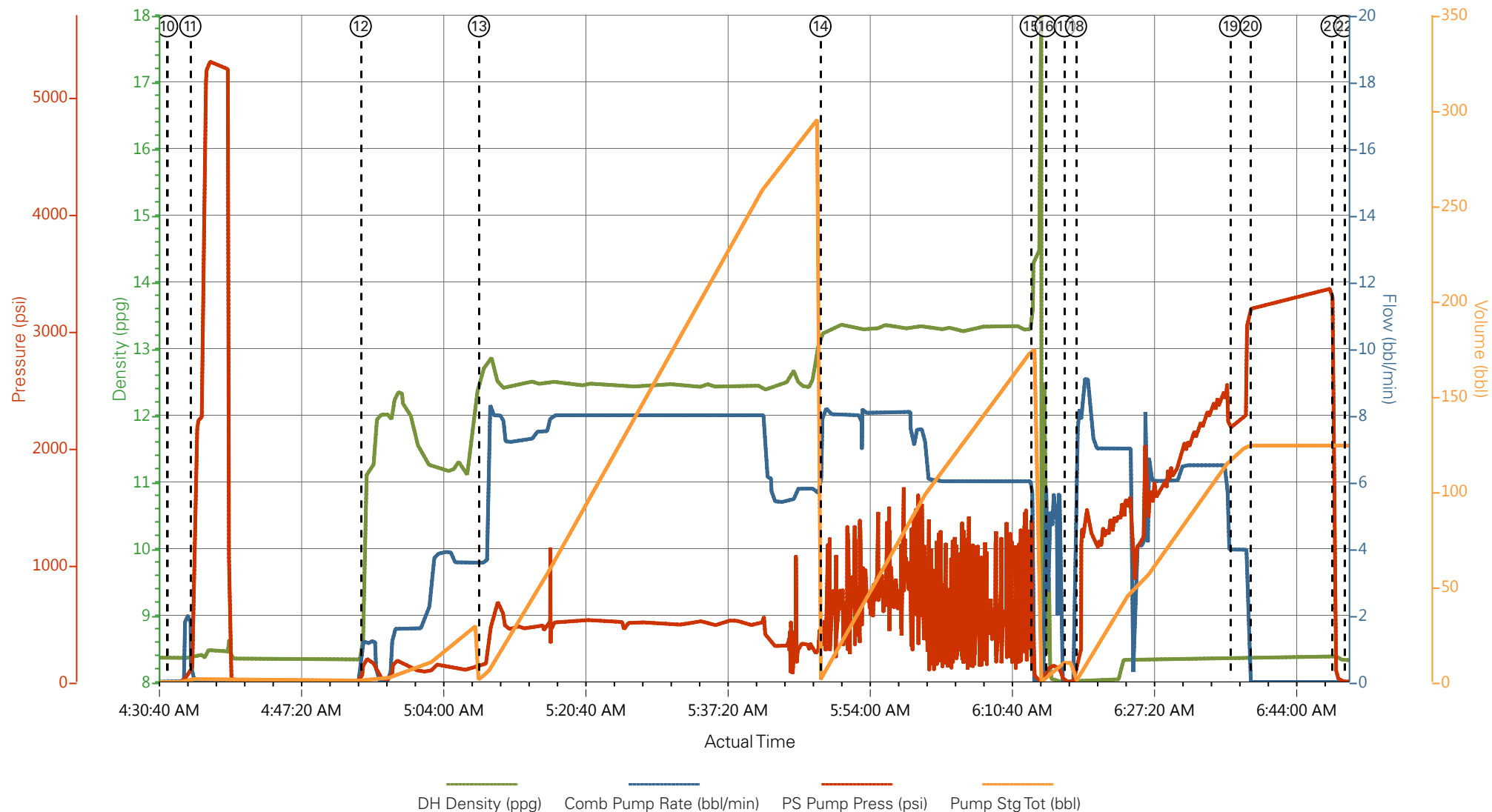
1.0 Real-Time Job Summary

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	9/19/2017	21:00:00	USER					
Event	2	Pre-Convoy Safety Meeting	9/19/2017	23:30:00	USER					
Event	3	Crew Leave Yard	9/19/2017	23:45:00	USER					
Event	4	Arrive At Loc	9/20/2017	01:30:00	USER					
Event	5	Assessment Of Location Safety Meeting	9/20/2017	01:35:00	USER					
Event	6	Spot Equipment	9/20/2017	01:40:00	USER					
Event	7	Pre-Rig Up Safety Meeting	9/20/2017	01:45:00	USER					
Event	8	Rig-Up Equipment	9/20/2017	01:50:00	USER					
Event	9	Pre-Job Safety Meeting	9/20/2017	03:45:00	USER					
Event	10	Start Job	9/20/2017	04:32:00	COM5					TD: 8219 TP: 8209 SJ: 76.93 MW: 9.1PPG 4 1/2" 11.6#/FT CSG IN 7 7/8" OH WATER TEST: PH: 6.5 POTASSIUM: 450 CHLORIDES: 0 SULFATES: <200 TEMP: 60 DEGREES
Event	11	Test Lines	9/20/2017	04:34:43	COM5	8.33	0.00	5000.00	2.0	5000 PSI TEST
Event	12	Tuned Spacer	9/20/2017	04:54:42	COM5	11.00	4.00	232.00	40.0	40 BBL TUNED SPACER @ 11.0 PPG
Event	13	Pump Lead Cement	9/20/2017	05:08:34	COM5	12.50	8.00	485.00	297.8	862 SKS @ 12.5 PPG 1.94 YLD 9.6 GAL/SK H2O
Event	14	Pump Tail Cement	9/20/2017	05:48:36	COM5	13.30	8.00	494.00	142.0	461 SKS @ 13.3 PPG 1.73 YLD 7.81 GAL/SK H2O
Event	15	Shutdown	9/20/2017	06:13:14	USER					
Event	16	Clean Lines	9/20/2017	06:14:59	COM5					

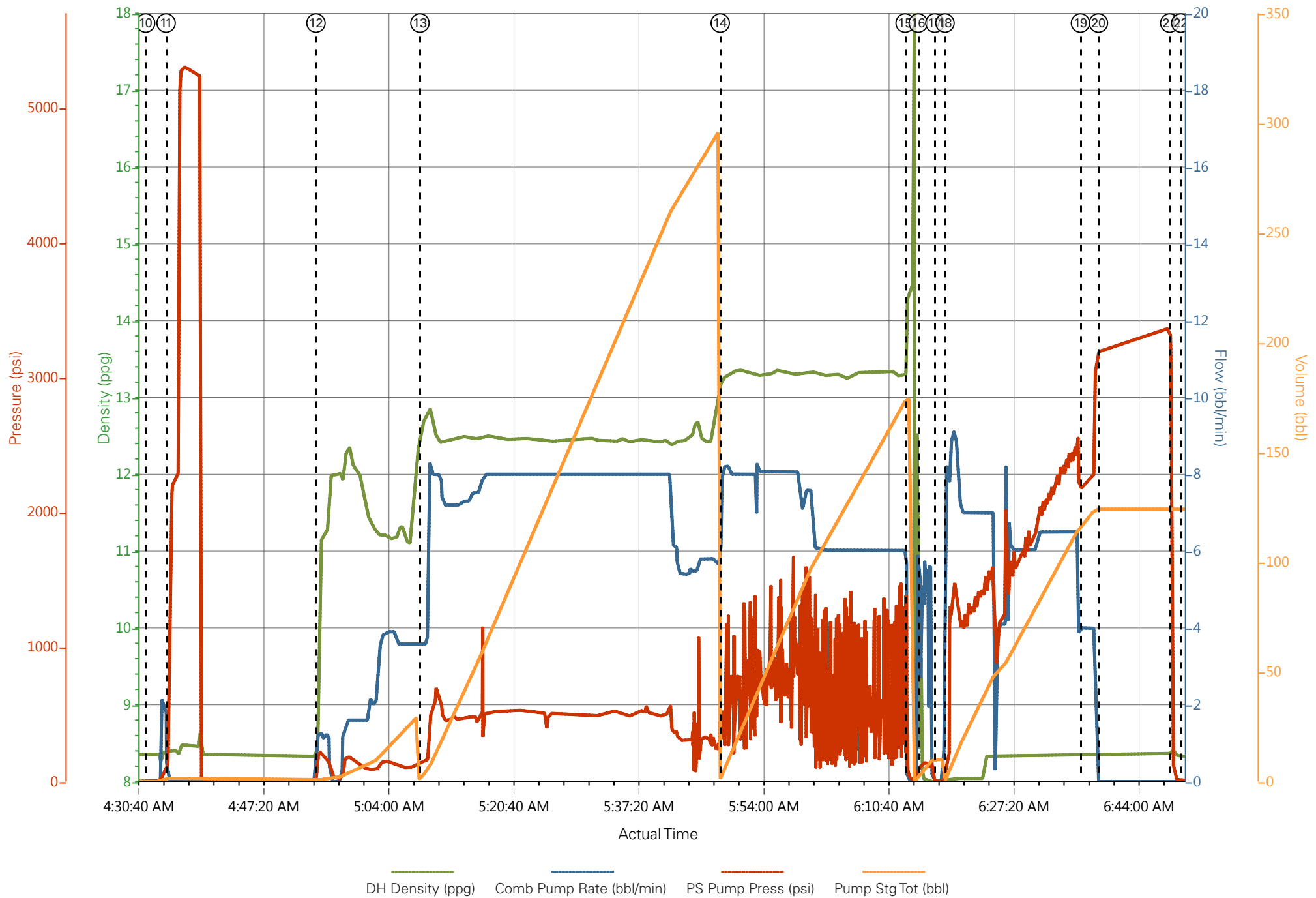
Event	17	Drop Top Plug	9/20/2017	06:17:12	COM5					PLUG AWAY
Event	18	Pump Displacement	9/20/2017	06:18:33	COM5	8.33	7.00	1240.00	126.0	FRESH H2O DISPLACEMENT W/ MMCR, CLAY-WEB.
Event	19	Slow Rate	9/20/2017	06:36:37	USER	8.33	4.00	2189.00	116.0	
Event	20	Bump Plug	9/20/2017	06:39:01	COM5	8.33	0.00	3190.00	126.0	PLUG BUMPED AT CALCULATED DISPLACEMENT. PERFORMED A 10 MINUTE, 3000 PSI CASING TEST UPON BUMPING PLUG. TEST HELD GOOD.
Event	21	Check Floats	9/20/2017	06:48:31	COM5					FLOATS HELD.
Event	22	End Job	9/20/2017	06:50:00	COM5					
Event	23	Post-Job Safety Meeting (Pre Rig-Down)	9/20/2017	07:00:00	USER					GOOD CIRCULATION THROUGHOUT JOB, PIPE WAS LEFT STATIC. CIRCULATED 40 BBL SPACER AND 10 BBL CMT TO SURFACE. USED 40# SUGAR, NO ADD HOURS CHARGED.
Event	24	Rig-Down Equipment	9/20/2017	07:10:00	USER					DISPLACEMENT RATE WAS SLOWER THAN PLANNED (7 BPM) DUE TO TROUBLE GETTING ENOUGH WATER RATE. THIS IS BELIEVED TO BE BECAUSE THE IN LINE ROCK CATCHER GETTING PARTIALLY PLUGGED OFF. JOB WAS ABLE TO BE COMPLETED WITHOUT SHUTTING DOWN.
Event	25	Pre-Convoy Safety Meeting	9/20/2017	08:20:00	USER					
Event	26	Crew Leave Location	9/20/2017	08:30:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENTING OF GRAND JUNCTION, COLORADO ANTHONY ANDREWS AND CREW

LARAMIE ENERGY - BRUTON 30-04E - 4 1/2" PRODUCTION



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

LARAMIE ENERGY - BRUTON 30-04E - 4 1/2" PRODUCTION



Job Information

Request/Slurry	2417448/1	Rig Name	H&P 522	Date	17/SEP/2017
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Bruton 30-04E

Well Information

Casing/Liner Size	4.5 in	Depth MD	8188 ft	BHST	115°C / 239°F
Hole Size	7.875 in	Depth TVD	7740 ft	BHCT	78°C / 172°F
Pressure	4720 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

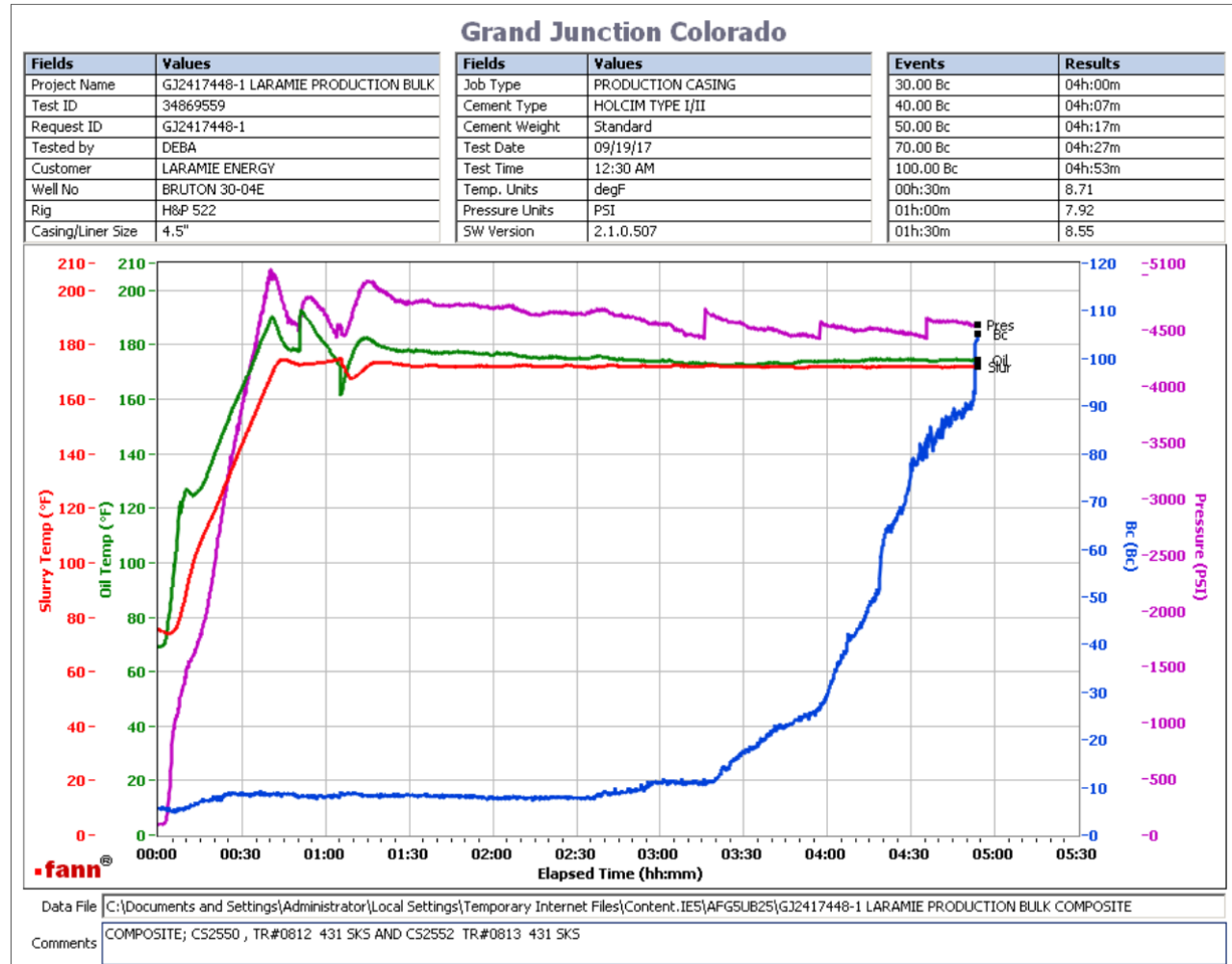
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		NeoCem Lead				Slurry Density	12.5	lbm/gal
						Slurry Yield	1.941	ft3/sack
						Water Requirement	9.623	gal/sack
						Total Mix Fluid	9.623	gal/sack
						Water Source	Field (Fresh) Water	
						Water Chloride		

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Thickening Time - ON-OFF-ON

18/SEP/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)
172	4720	40	4:00	4:17	4:27	4:53	5	50	15	8



Total sks = 862

Composite:

CS2550 TR#0812 431 sks

CS2552 TR#0813 431 SKS

No deflection was observed. 8Bc--- > 8Bc

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HALLIBURTON

Rockies, Grand Junction

Lab Results- Tail

Job Information

Request/Slurry	2417449/1	Rig Name	H&P 522	Date	17/SEP/2017
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Bruton 30-04E

Well Information

Casing/Liner Size	4.5 in	Depth MD	8188 ft	BHST	115°C / 239°F
Hole Size	7.875 in	Depth TVD	7740 ft	BHCT	78°C / 172°F
Pressure	4720 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



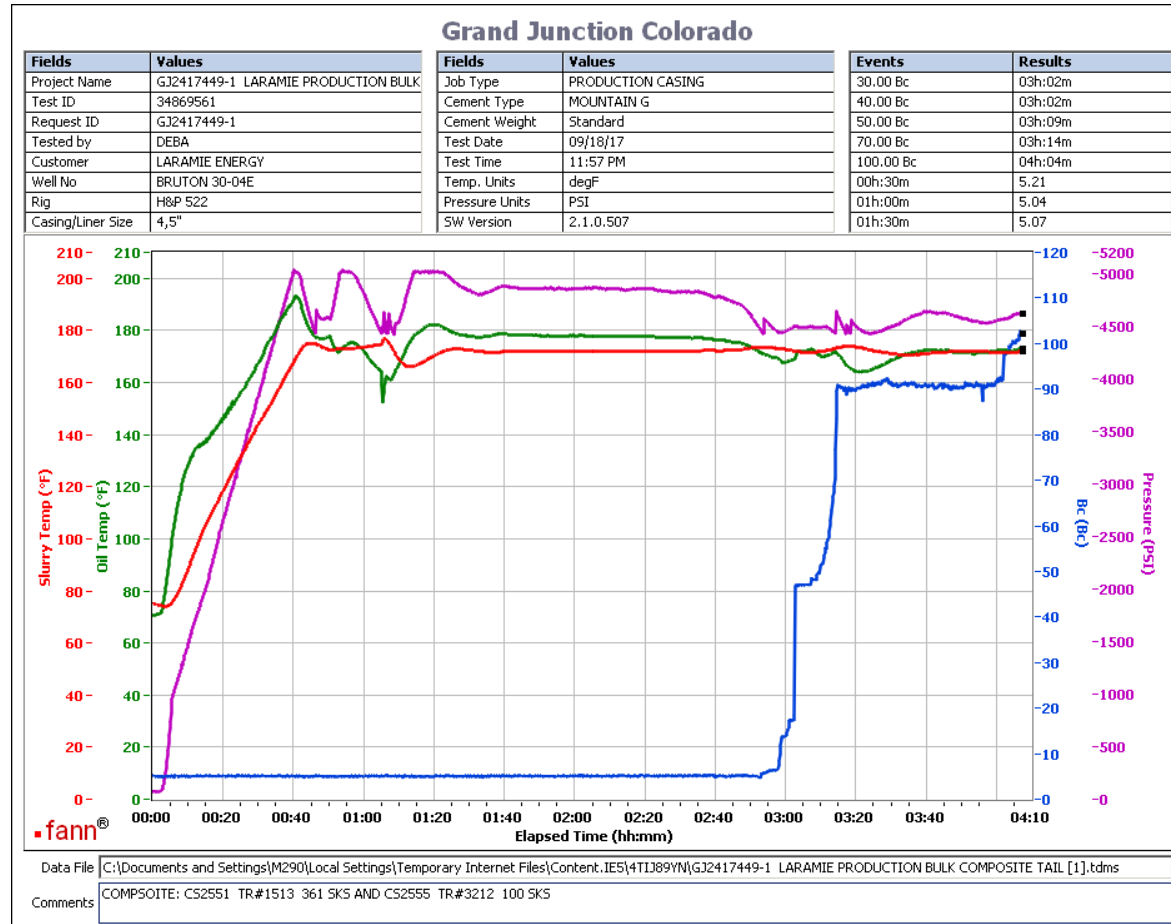
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		ThermaCem Tail				Slurry Density	13.3	lbm/gal
						Slurry Yield	1.733	ft3/sack
						Water Requirement	7.799	gal/sack
						Total Mix Fluid	7.799	gal/sack
						Water Source	Field (Fresh) Water	
						Water Chloride		

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Thickening Time - ON-OFF-ON

18/SEP/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)
172	4720	40	3:02	3:09	3:14	4:04	5	50	15	5



Total sks = 461

Composite:

CS2551 TR#1513 361 SKS

CS2555 TR#3212 100 sks

no deflection was observed. 5Bc--- > 5Bc

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