

# HALLIBURTON

iCem<sup>®</sup> Service

## **LARAMIE ENERGY LLC**

**For: Laramie**

Date: Wednesday, September 06, 2017

**BRUTON 30-04W Surface**

**API# 05-077-10457-00**

Sincerely,

**Grand Junction Cement Engineering**

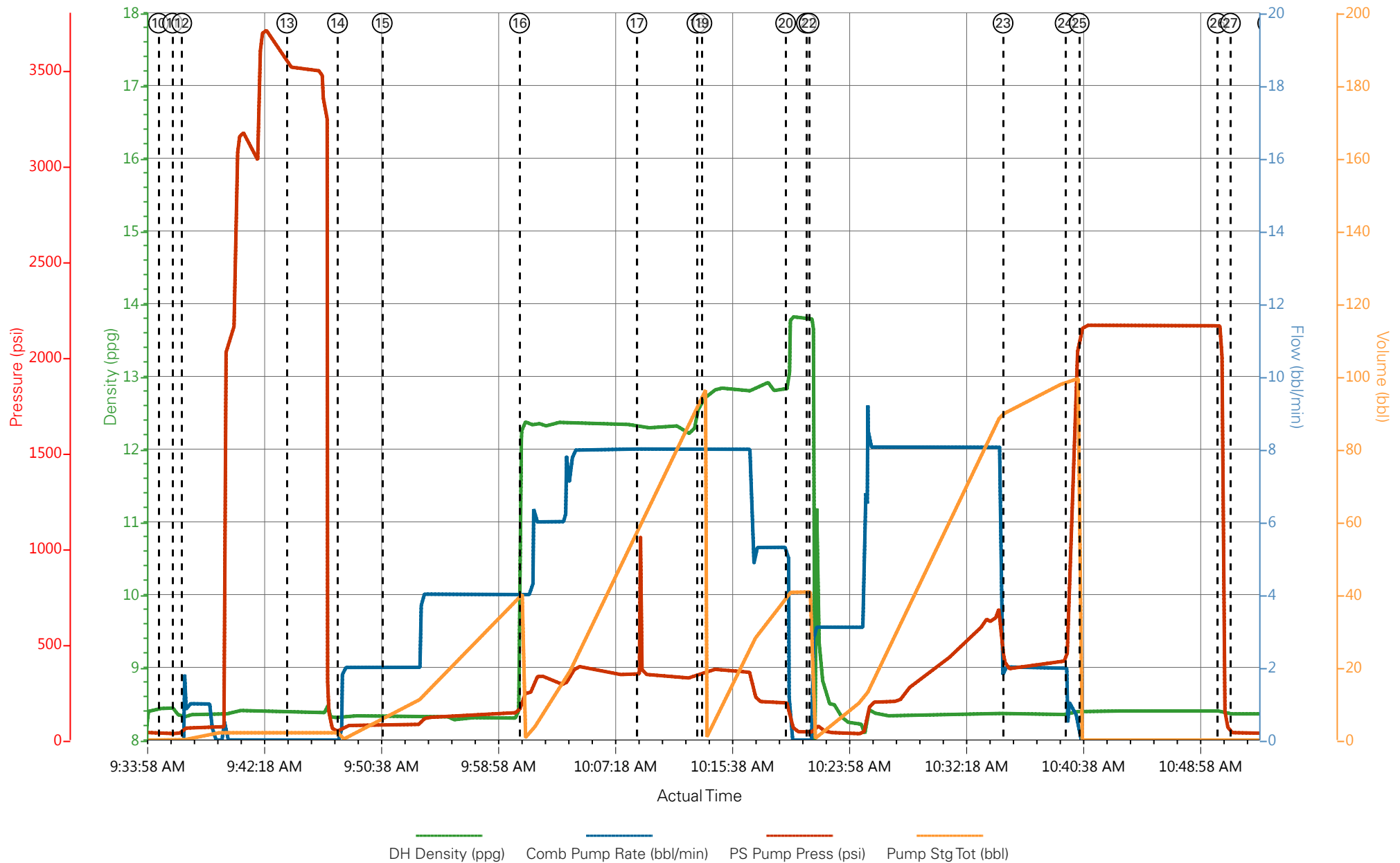
## 2.0 Real-Time Job Summary

## 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	9/6/2017	01:00:00	USER					ON LOCATION 7:00
Event	2	Pre-Convoy Safety Meeting	9/6/2017	03:45:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	9/6/2017	04:00:00	USER					
Event	4	Arrive at Location from Service Center	9/6/2017	05:15:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	9/6/2017	05:30:00	USER					MET WITH COMPANY REP DISCUSSED NUMBERS SDS OFFERED
Event	6	Pre-Rig Up Safety Meeting	9/6/2017	06:30:00	USER					ALL HES PRESENT
Event	7	Rig-Up Completed	9/6/2017	08:45:00	USER					1-ELITE, 1-660 BULK TRAILER, 2" PUMP IRON, 4" SUCTIONHOSE, 8.625" QL PLUG CONTAINER
Event	8	Pre-Job Safety Meeting	9/6/2017	09:15:00	USER					ALL HES AND RIG CREW PRESENT
Event	9	Other	9/6/2017	09:20:00	USER					WATER: TEMP-70, CL-0, PH-7
Event	10	Start Job	9/6/2017	09:35:00	USER	8.34	0.00	4.00	0.0	TD-1564', TP-1558.1', SJ-44.63', CSG8.625" 24# J55-, OH-11", MUD-9.3PPG
Event	11	Drop Bottom Plug	9/6/2017	09:36:00	USER	8.35	0.00	34.00	0.0	BOTTOM PLUG AWAY
Event	12	Prime Pumps	9/6/2017	09:36:39	USER	8.32	1.40	84.00	2.0	FRESH WATER
Event	13	Test Lines	9/6/2017	09:44:08	USER	8.40	0.00	3517.00	2.0	PRESSURE HELD ON LINES
Event	14	Pump Spacer 1	9/6/2017	09:47:45	COM5	8.31	4.00	225.00	40.0	FRESH WATER
Event	15	Check weight	9/6/2017	09:50:56	COM5					WEIGHT VERIFIED BY PRESSURIZED MUD SCALES
Event	16	Pump Lead Cement	9/6/2017	10:00:43	COM5	12.30	8.00	380.00	40.3	VARICEM LEAD 197 SKS, 12.3 PPG, 2.46 CF/SK, 14.17 GAL/SK

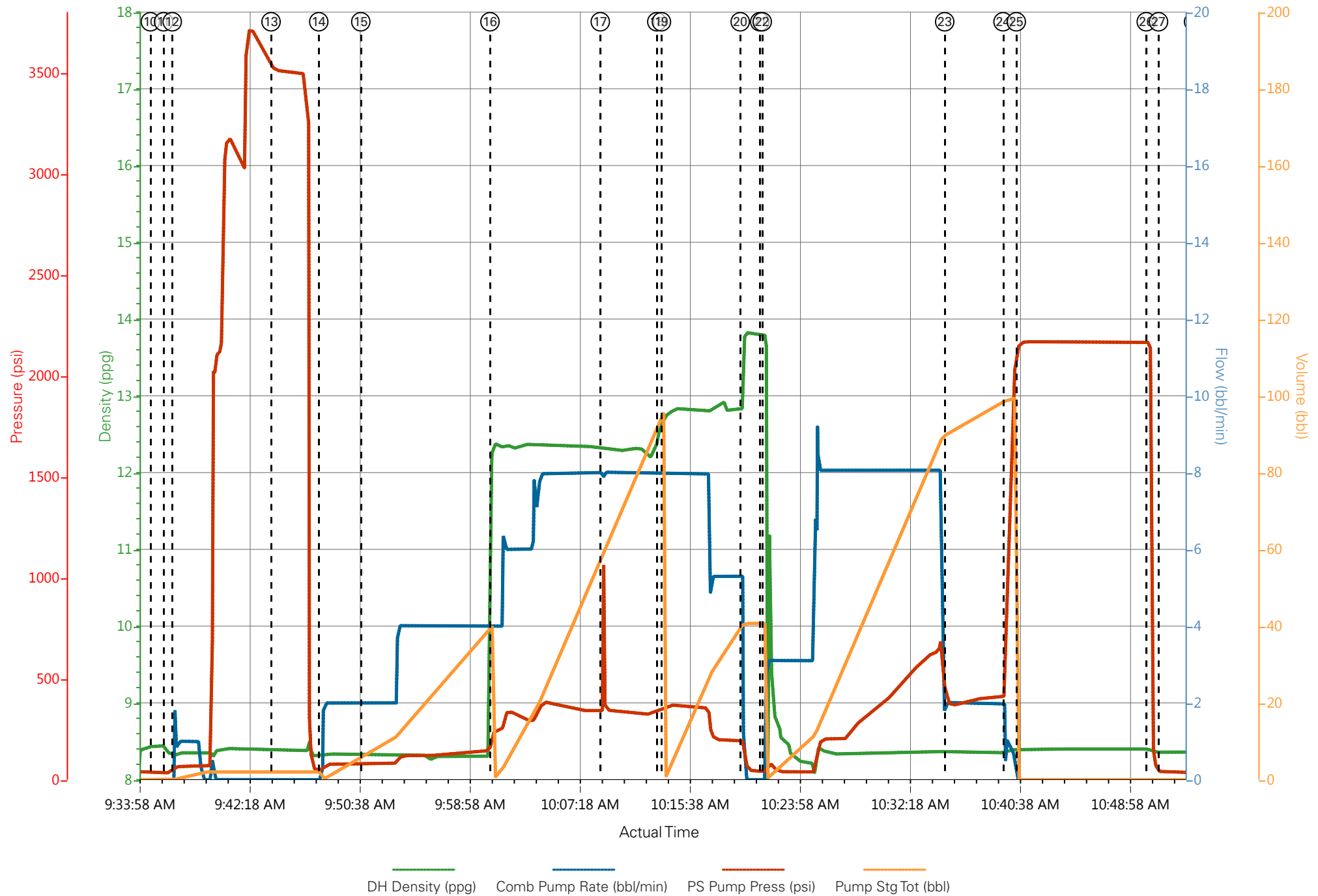
Event	17	Bottom Plug Landed	9/6/2017	10:09:04	USER	12.33	8.00	1061.00	59.0	BOTTOM PLUG RUPTURED
Event	18	Check weight	9/6/2017	10:13:21	COM5					WEIGHT VERIFIED BY PRESSURIZED MUD SCALES
Event	19	Pump Tail Cement	9/6/2017	10:13:42	COM5	12.80	8.00	388.00	42.3	VARICEM TAIL 109 SKS, 12.8 PPG, 2.18 CF/SK, 12.11 GAL/SK
Event	20	Shutdown	9/6/2017	10:19:40	USER					END OF CEMENT. WASHED PUMPS AND LINES ON TOP OF PLUG
Event	21	Drop Top Plug	9/6/2017	10:21:08	USER					PLUG AWAY
Event	22	Pump Displacement	9/6/2017	10:21:20	COM5	8.36	8.00	367.00	96.3	FRESH WATER
Event	23	Slow Rate	9/6/2017	10:35:09	USER	8.36	2.00	379.00	86.3	SLOW RATE LAST 10 BBLS
Event	24	Bump Plug	9/6/2017	10:39:34	COM5	8.36	2.00	410.00	96.3	PLUG BUMPED 410 PSI
Event	25	Casing Test	9/6/2017	10:40:34	USER	8.39	0.00	2164.00	0.0	10 MINUTE 2100 PSI TEST
Event	26	Check Floats	9/6/2017	10:50:25	USER	8.35	0.00	0.00	0.0	FLOATS HELD, 1 BBL BACK
Event	27	End Job	9/6/2017	10:51:20	COM5					GOOD RETURNS THROUGH OUT JOB, 23 BBLS CEMENT TO SURFACE
Event	28	Pre-Rig Down Safety Meeting	9/6/2017	10:54:00	USER					ALL HES PRESENT
Event	29	Rig-Down Completed	9/6/2017	11:30:00	USER					
Event	30	Pre-Convoy Safety Meeting	9/6/2017	11:40:00	USER					ALL HES PRESENT
Event	31	Crew Leave Location	9/6/2017	11:45:00	USER					THANK YOU FOR CHOOSING HALLIBURTON, ANDREW BRENNECKE AND CREW

# LARAMIE - BRUTON 30-04W - 8.625" SURFACE



- ① Call Out
- ② Pre-Convoy Safety Meeting
- ③ Crew Leave Yard
- ④ Arrive at Location from Service Center
- ⑤ Assessment Of Location Safety Meeting
- ⑥ Pre-Rig Up Safety Meeting
- ⑦ Rig-Up Completed
- ⑧ Pre-Job Safety Meeting
- ⑨ Other
- ⑩ Start Job
- ⑪ Drop Bottom Plug
- ⑫ Prime Pumps
- ⑬ Test Lines
- ⑭ Pump Spacer

# LARAMIE - BRUTON 30-04W - 8.625" SURFACE



# HALLIBURTON

iCem<sup>®</sup> Service

## **LARAMIE ENERGY LLC**

**For: Laramie**

Date: Monday, September 11, 2017

**BRUTON 30-04W Production**

Sincerely,

**Grand Junction Cement Engineering**

## 2.0 Real-Time Job Summary

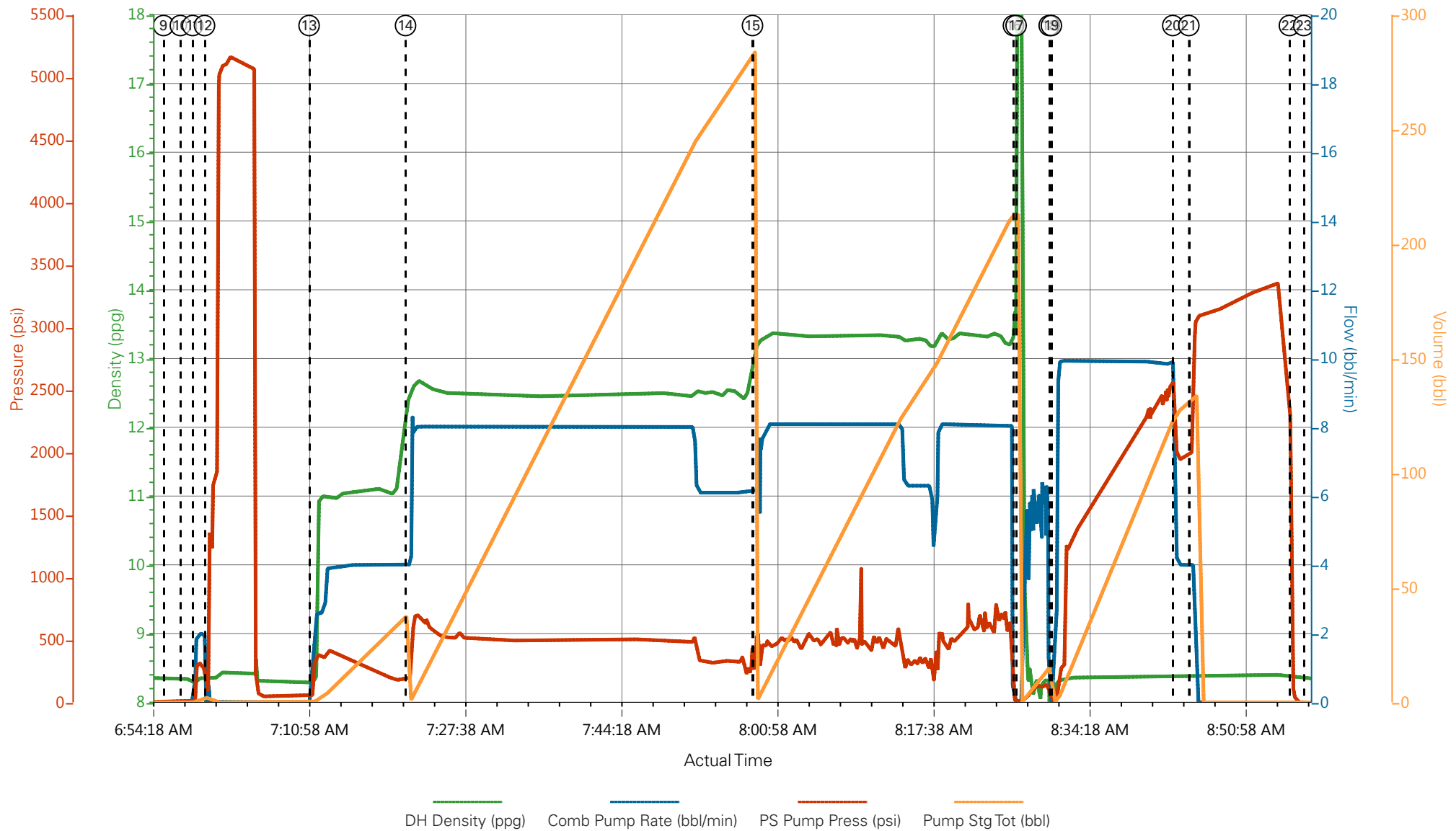
## 2.1 Job Event Log

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	9/10/2017	22:00:00	USER					ELITE # 8, REQUESTED ON LOCATION TIME 0500
Event	2	Pre-Convoy Safety Meeting	9/11/2017	01:00:00	USER					ALL HES EMPLOYEES
Event	3	Arrive At Loc	9/11/2017	02:30:00	USER					ARRIVED ON LOCATION 2 1/2 HOURS EARLY, RIG RUNNING CASING
Event	4	Meet With Company Rep	9/11/2017	03:00:00	USER					COMPANY REP OFFERED SDS WATER TEST: TEMP: 64 PH: 7 CHLORIDES: 0
Event	5	Assessment Of Location Safety Meeting	9/11/2017	04:00:00	USER					ALL HES EMPLOYEES
Event	6	Pre-Rig Up Safety Meeting	9/11/2017	04:10:00	USER					ALL HES EMPLOYEES
Event	7	Rig-Up Equipment	9/11/2017	04:30:00	USER					1 HT-400 PUMP TRUCK 2 SILOS 1 660 BULK TRUCK 1 F-550 PICKUP
Event	8	Pre-Job Safety Meeting	9/11/2017	06:00:00	USER					ALL HES EMPLOYEES AND RIG CREW RIG CIRCULATED @ 8.5 BPM @ 620 PSI FOR 2 HOURS PRIOR TO THE JOB
Event	9	Start Job	9/11/2017	06:55:44	COM5					TD: 8396 TP: 8385.36 SJ: 77.29 CSG: 4 1/2 11.6 L-80 OH: 7 7/8 SURFACE SHOE @ 1565 8 5/8 24# J-55 MUD WT: 9.4 PPG
Event	10	Drop Bottom Plug	9/11/2017	06:57:32	USER					PLUG AWAY NO PROBLEMS
Event	11	Prime Lines	9/11/2017	06:58:50	COM5	8.33	2.0	336	2.0	PRIME LINES WITH 2 BBLs FRESH WATER
Event	12	Test Lines	9/11/2017	07:00:06	COM5	8.33	0.0	5161	2.0	PRESSURE TEST OK
Event	13	Pump Tuned Spacer III	9/11/2017	07:11:16	COM5	11.0	4.0	480	40	PUMP 40 BBL TUNED SPACER III 11.0 PPG 4.86 YIELD 31.9 GAL/SK TUNED SPACER WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	14	Pump Lead Cement	9/11/2017	07:21:34	COM5	12.5	8.0	720	270	781 SKS 12.5 PPG 1.94 YIELD 9.6 GAL/SK LEAD CEMENT

WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES										
Event	15	Pump Tail Cement	9/11/2017	07:58:37	COM5	13.3	8.0	540	183	594 SKS 13.3 PPG 1.73 YIELD 7.81 GAL/SK TAIL CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	16	Shutdown	9/11/2017	08:26:29	COM5					SHUTDOWN TO CLEAN PUMPS AND LINES TO CELLAR
Event	17	Clean Lines	9/11/2017	08:26:46	COM5	8.33			10	CLEAN PUMPS AND LINES TO CELLAR
Event	18	Drop Top Plug	9/11/2017	08:30:18	COM5					PLUG AWAY NO PROBLEMS
Event	19	Pump Displacement	9/11/2017	08:30:32	COM5	8.4	10.0	2590	128.8	1 GAL MMCR 5 GAL CLA-WEB, FRESH WATER DISPLACEMENT
Event	20	Slow Rate	9/11/2017	08:43:30	COM5	8.4	4.0	2014	118	SLOW RATE TO BUMP PLUG
Event	21	Bump Plug	9/11/2017	08:45:13	COM5	8.4	4.0	3000	128.8	PSI BEFORE BUMPING PLUG @ 2014 BUMPED PLUG UP TO 3000 PSI FOR 10 MINUTE CSG TEST
Event	22	Check Floats	9/11/2017	08:55:58	COM5			3375		PRESSURE UP TO 3375 PRIOR TO CHECKING FLOATS 1 BBL BACK TO DISPLACEMENT TANKS
Event	23	End Job	9/11/2017	08:57:29	COM5					MAINTAINED RETURNS THROUGHOUT JOB PIPE STATIC THROUGHOUT JOB, 28 BBLs OF TUNED SPACER TO SURFACE RIG USED 40#S OF SUGAR
Event	24	Pre-Rig Down Safety Meeting	9/11/2017	09:00:00	USER					ALL HES EMPLOYEES
Event	25	Rig-Down Equipment	9/11/2017	09:10:00	USER					
Event	26	Pre-Convoy Safety Meeting	9/11/2017	10:20:00	USER					ALL HES EMPLOYEES
Event	27	Crew Leave Location	9/11/2017	10:30:00	USER					THANK YOU FOR USING HALLIBURTON CEMENT, DUSTIN SMITH AND CREW



# LARAMIE - BRUTON 30-04W - 4 1/2 PRODUCTION



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

▼ **HALLIBURTON** | iCem® Service

Created: 2017-09-10 23:37:59, Version: 4.2.393

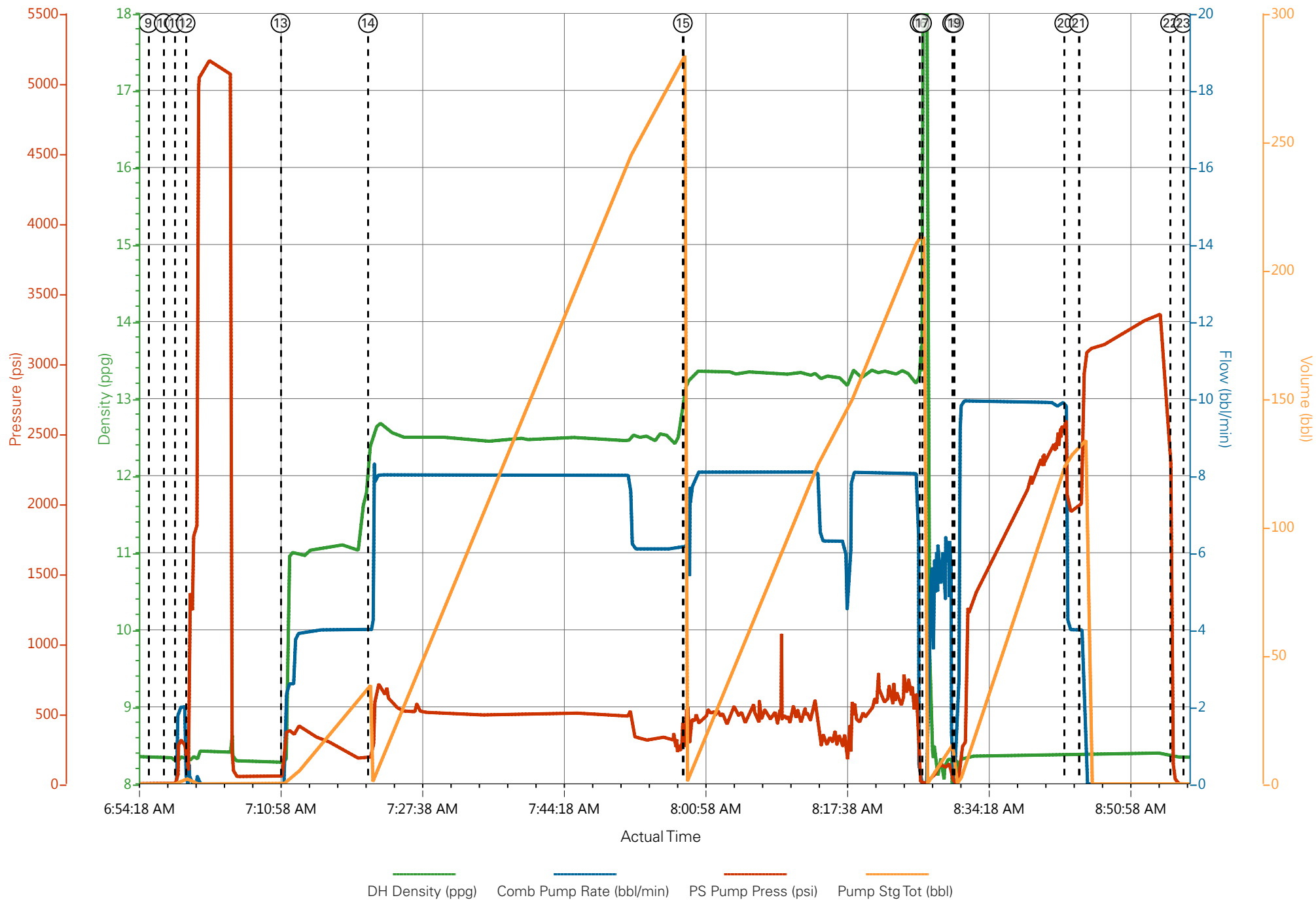
Edit

Customer: LARAMIE ENERGY II LLC  
Representative: SHANE HEARD / TYLER HALE

Job Date: 9/11/2017 5:04:42 AM  
Sales Order #: 0904291816

Well: BRUTON 30-04W  
ELITE #8: DUSTIN SMITH / WES GOWEN

# LARAMIE - BRUTON 30-04W - 4 1/2 PRODUCTION



# HALLIBURTON

## Rockies, Grand Junction

## Lab Results- Lead

### Job Information

<b>Request/Slurry</b>	2415546/1	<b>Rig Name</b>	H&P 522	<b>Date</b>	08/SEP/2017
<b>Submitted By</b>	Patrick Ealey	<b>Job Type</b>	Production Casing	<b>Bulk Plant</b>	Grand Junction
<b>Customer</b>	Laramie Energy	<b>Location</b>	Garfield	<b>Well</b>	Bruton 30-04W

### Well Information

<b>Casing/Liner Size</b>	4.5 in	<b>Depth MD</b>	8391 ft	<b>BHST</b>	123°C / 254°F
<b>Hole Size</b>	7.875 in	<b>Depth TVD</b>	8360 ft	<b>BHCT</b>	79°C / 175°F
<b>Pressure</b>	5150 psi				

### Drilling Fluid Information

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



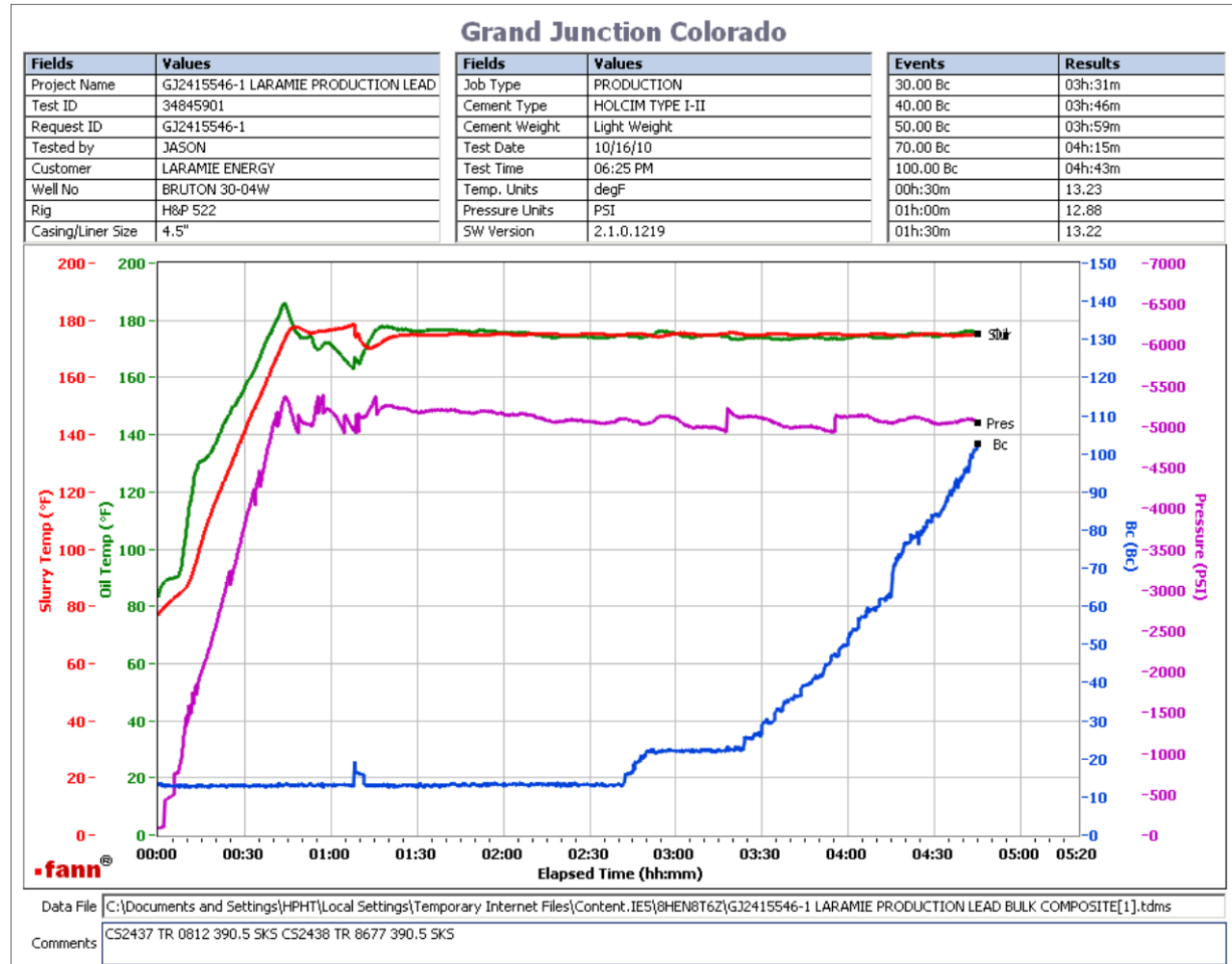
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	<b>Cement Properties</b>		
		NeoCem Lead				Slurry Density	12.5	lbm/gal
						Slurry Yield	1.941	ft3/sack
						Water Requirement	9.623	gal/sack
						Total Mix Fluid	9.623	gal/sack
						Water Source	Field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

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Thickening Time - ON-OFF-ON

09/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)
175	5150	43	3:31	3:59	4:15	4:43	13	53	18	18



Total sks = 781  
 Composite:  
 CS2437 TR 0812 390.5 SKS  
 CS2438 TR 8677 390.5 SKS  
 Deflection: 13 - 18

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# HALLIBURTON

## Rockies, Grand Junction

## Lab Results- Tail

### Job Information

<b>Request/Slurry</b>	2415547/1	<b>Rig Name</b>	H&P 522	<b>Date</b>	08/SEP/2017
<b>Submitted By</b>	Patrick Ealey	<b>Job Type</b>	Production Casing	<b>Bulk Plant</b>	Grand Junction
<b>Customer</b>	Laramie Energy	<b>Location</b>	Garfield	<b>Well</b>	Bruton 30-04W

### Well Information

<b>Casing/Liner Size</b>	4.5 in	<b>Depth MD</b>	8391 ft	<b>BHST</b>	123°C / 254°F
<b>Hole Size</b>	7.875 in	<b>Depth TVD</b>	8360 ft	<b>BHCT</b>	79°C / 175°F
<b>Pressure</b>	5150 psi				

### Drilling Fluid Information

<b>Mud Supplier Name</b>	Baroid	<b>Mud Trade Name</b>	BARADRIL-N	<b>Density</b>	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>	<b>Cement Properties</b>		
		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		

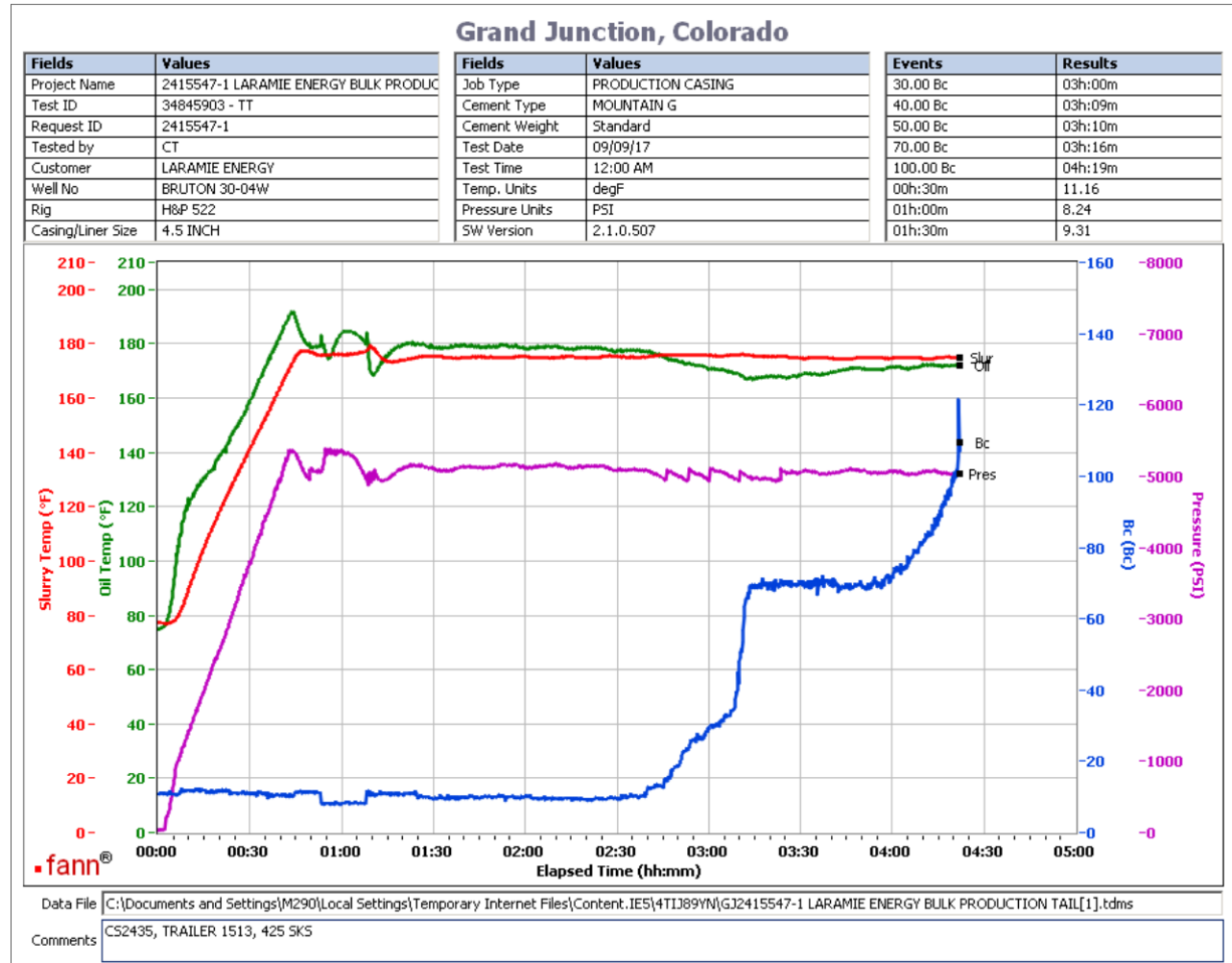
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# Operation Test Results Request ID 2415547/1

## Thickening Time - ON-OFF-ON

09/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)
175	5150	43	3:00	3:10	3:16	4:19	11	53	15	12



Total sks = 594  
CS2435 TR 1513 425 SKS  
Deflection: 8 – 12

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## Operation Test Results Request ID 2415547/2

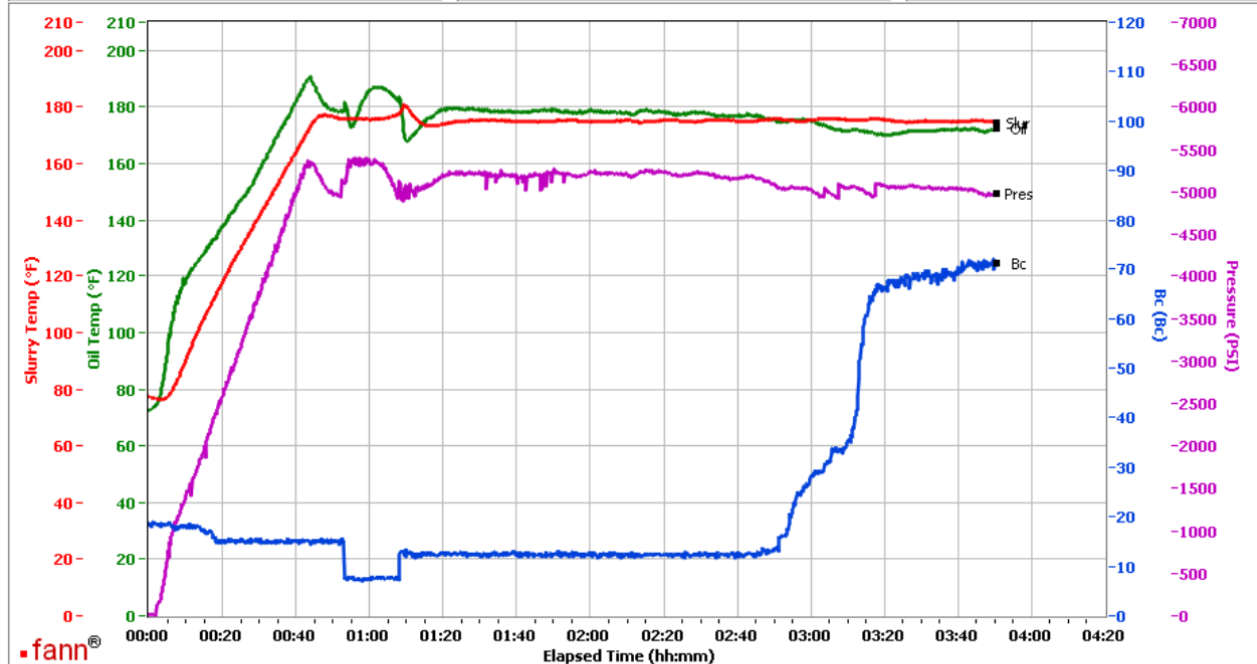
### Thickening Time - ON-OFF-ON

09/SEP/2017

Test Temp (°F)	Pressure (psi)	Reached in (min)	30 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)	Termination time (hh:mm)	Termination Bc
175	5150	43	3:03	3:13	3:40	18	53	15	13	3:50	72

### Grand Junction, Colorado

Fields	Values	Fields	Values	Events	Results
Project Name	2415547-2 LARAMIE ENERGY BULK PRODUCTION TAIL	Job Type	PRODUCTION CASING	30.00 Bc	03h:03m
Test ID	34849638 - TT	Cement Type	MOUNTAIN G	40.00 Bc	03h:12m
Request ID	2415547-2	Cement Weight	Standard	50.00 Bc	03h:13m
Tested by	CT	Test Date	09/09/17	70.00 Bc	03h:40m
Customer	LARAMIE ENERGY	Test Time	11:41 PM	100.00 Bc	NaN
Well No	bruton 30-04W	Temp. Units	degF	00h:30m	14.43
Rig	H&P 522	Pressure Units	PSI	01h:00m	7.21
Casing/Liner Size	4.5 INCH	SW Version	2.1.0.507	01h:30m	12.66



Data File C:\Documents and Settings\M290\Local Settings\Temporary Internet Files\Content.IE5\CDER4HUV\GJ2415547-2 LARAMIE ENERGY BULK PRODUCTION TAIL[1].tdms

Comments CS2448, TRAILER 2398, 169 SKS

Total sks = 594  
CS2448, Trailer 2398, 169 sks  
Deflection: 15 -13

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