

# HALLIBURTON

iCem<sup>®</sup> Service

## **LARAMIE ENERGY LLC**

**For: Chuck Mallary**

Date: Saturday, October 14, 2017

## **Bruton 30-09W Surface PJR**

API# 05-077-10458-00

Sincerely,

**Grand Junction Cement Engineering**

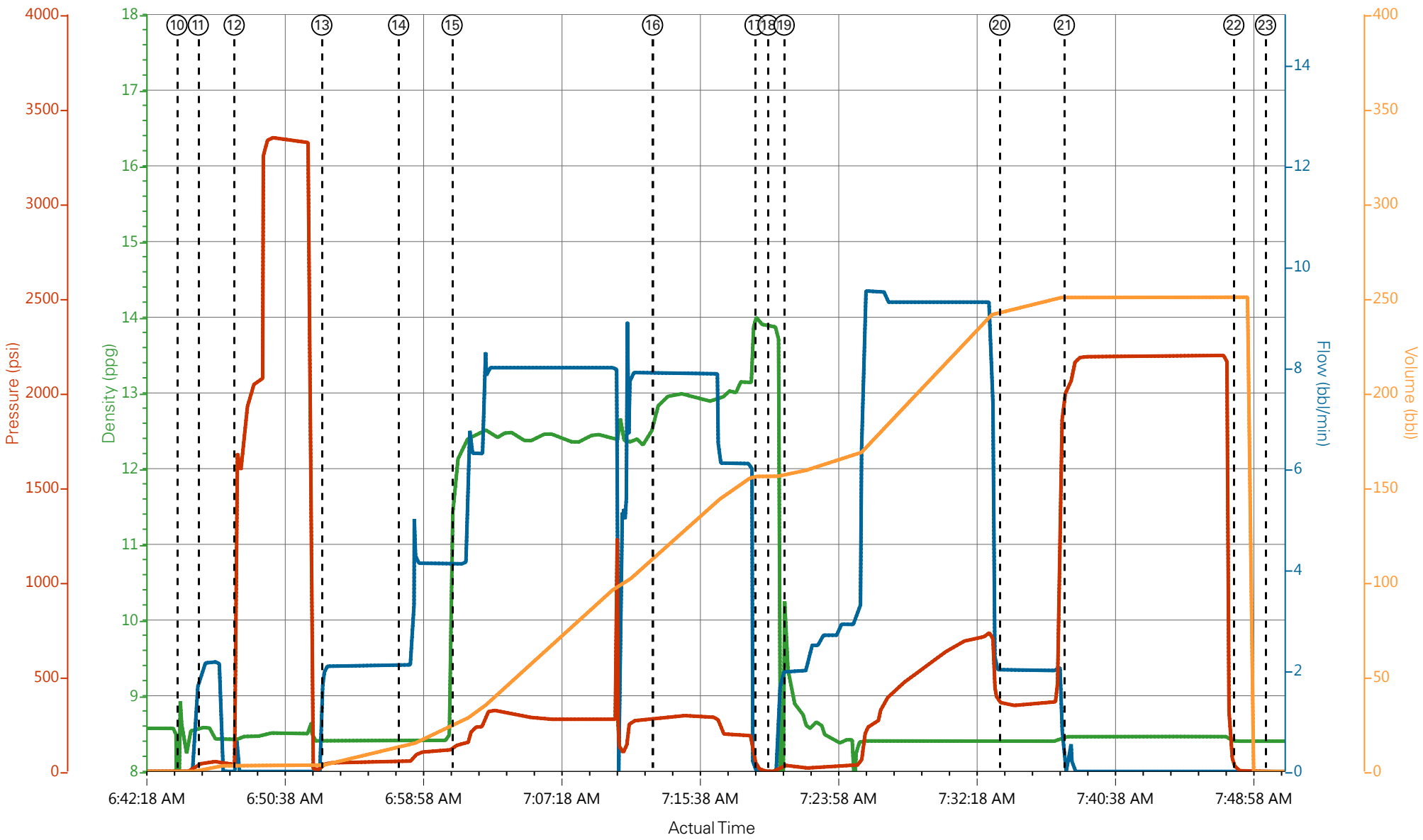
## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Driv-Side Pump Pressure (psi)	Combined Pump Total (bbl)	Comments
Event	1	Call Out	10/14/2017	00:00:00						Requested on Location @ 05:00
Event	2	Pre-Convoy Safety Meeting	10/14/2017	01:14:50						
Event	3	Crew Leave Yard	10/14/2017	01:30:00						1 Elite, 1 660, 1 pickup
Event	4	Arrive At Loc	10/14/2017	05:30:00						Rig running casing
Event	5	Assessment Of Location Safety Meeting	10/14/2017	05:31:10						
Event	6	Pre-Rig Up Safety Meeting	10/14/2017	05:32:29						
Event	7	Rig-Up Equipment	10/14/2017	05:34:47						1 hardline to standpipe, water hoses to upright, bulk hoses to 660.
Event	8	Prime Pumps	10/14/2017	05:35:29						
Event	9	Pre-Job Safety Meeting	10/14/2017	06:38:06						All HES personnel, Rig Crew, and Company Rep.
Event	10	Start job	10/14/2017	06:44:19						T
Event	11	Fill Lines	10/14/2017	06:45:36		8.33	1	25	3	Fresh Water
Event	12	Test Lines	10/14/2017	06:47:46				3387		Held pressure 2 minutes no leaks
Event	13	Pump Water Spacer	10/14/2017	06:53:03		8.33	4	130	20	Bottom plug released ahead of fresh water spacer.
Event	14	Check Weight	10/14/2017	06:57:40						Density verified via mud scales
Event	15	Pump Lead Cement	10/14/2017	07:00:54		12.3	8	388	86.3	197 Sks 12.3 ppg 2.46 yield 14.17 gal/sk

Event	16	Pump Tail Cement	10/14/2017	07:12:58	12.8	8	349	42.3	109 Sks 12.8 ppg 2.18 yield 12.11 gal/sk
Event	17	Shutdown	10/14/2017	07:19:08					Wash up on top of plug
Event	18	Drop Top Plug	10/14/2017	07:19:55					Customer verified plug launched
Event	19	Pump Displacement	10/14/2017	07:20:54	8.33	9.5	722	85	Fresh Water
Event	20	Slow Rate	10/14/2017	07:33:52	8.33	2	370	96.2	Slow Rate 10 bbls prior to Calculated Displacement
Event	21	Bump Plug	10/14/2017	07:37:46				96.2	Plug Bumped at 370 psi, Brought up to 2100 psi And Held For 10 Min
Event	22	Check Floats	10/14/2017	07:47:58					Floats Held 1 bbl Back to Truck
Event	23	End Job	10/14/2017	07:49:53					Good returns throughout job, pipe was not reciprocated during cement, 36 bbls of cement to surface
Event	24	Pre-Rig Down Safety Meeting	10/14/2017	07:52:51					40 lbs sugar, No add hours
Event	25	Rig-Down Equipment	10/14/2017	07:54:16					
Event	26	Pre-Convoy Safety Meeting	10/14/2017	08:01:42					
Event	27	Crew Leave Location	10/14/2017	08:03:03					Thank You For Using Halliburton Cement - Chris Martinez And Crew

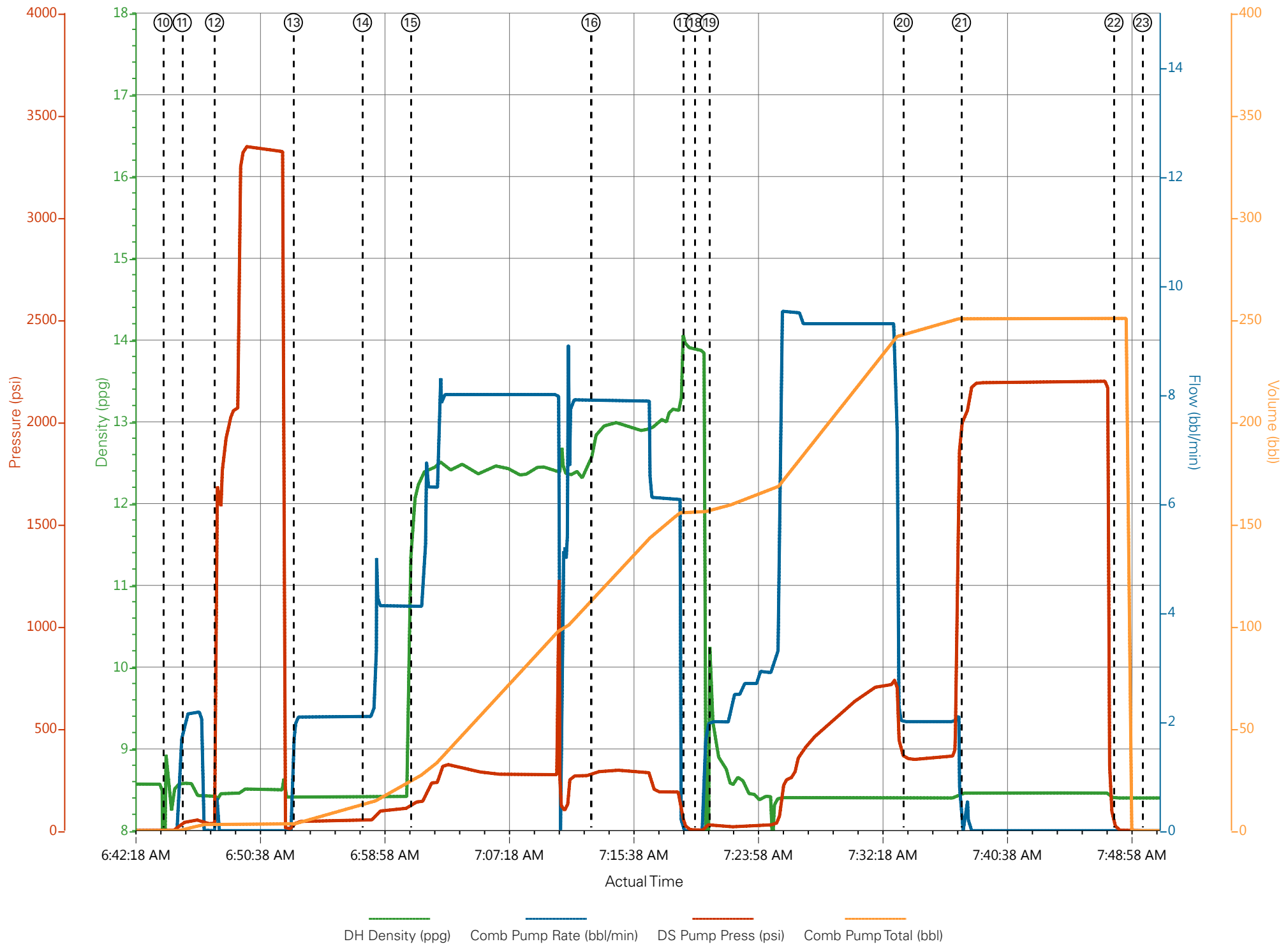
Bruton 30-09W 8 5/8" Surface Casing



DH Density (ppg)    Comb Pump Rate (bbl/min)    DS Pump Press (psi)    Comb Pump Total (bbl)

- |  |   |                                      |                                      |                        |
|--|---|--------------------------------------|--------------------------------------|------------------------|
| ① Call Out n/a;n/a;n/a;n/a                           | ⑥ Pre-Rig Up Safety Meeting 0.07;0;-2;0.1 | ⑪ Fill Lines 8.58;2;42;0.6           | ⑯ Pump Tail Cement 12.74;7.9;280;114 | ⑳ Bump Plug 8.46;0;20  |
| ② Pre-Convoy Safety Meeting n/a;n/a;n/a;n/a          | ⑦ Rig-Up Equipment 8.58;0;9;0.1           | ⑫ Test Lines 8.4;0;1670;3.1          | ⑰ Shutdown 13.94;0;15;155.9          | ㉑ Check Floats 8.4;0;9 |
| ③ Crew Leave Yard n/a;n/a;n/a;n/a                    | ⑧ Prime Pumps 8.57;1.1;25;0.1             | ⑬ Pump Water Spacer 8.42;2.1;43;3.6  | ⑱ Drop Top Plug 13.88;0;0;155.9      | ㉒ End Job 8.4;0;-3;0   |
| ④ Arrive At Loc 0.07;0;1;0.1                         | ⑨ Pre-Job Safety Meeting 8.57;0;1;0       | ⑭ Check Weight 8.41;2.1;52;13.1      | ㉓ Pump Displacement 9.39;2;31;157    | ㉔ Pre-Rig Down Safety  |
| ⑤ Assessment Of Location Safety Meeting 0.07;0;1;0.1 | ⑩ Start job 8.91;0;-1;0                   | ⑮ Pump Lead Cement 11.9;4.2;136;25.1 | ㉔ Slow Rate 8.4;2;360;243.5          | ㉕ Rig-Down Equipmen    |

# Bruton 30-09W 8 5/8" Surface Casing



# HALLIBURTON

iCem<sup>®</sup> Service

## **LARAMIE ENERGY LLC**

**For: Chuck Mallery**

Date: Tuesday, October 17, 2017

## **Bruton 30-09W Production PJR**

API# 05-077-10458-00

Sincerely,

**Grand Junction Cement Engineering**

## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

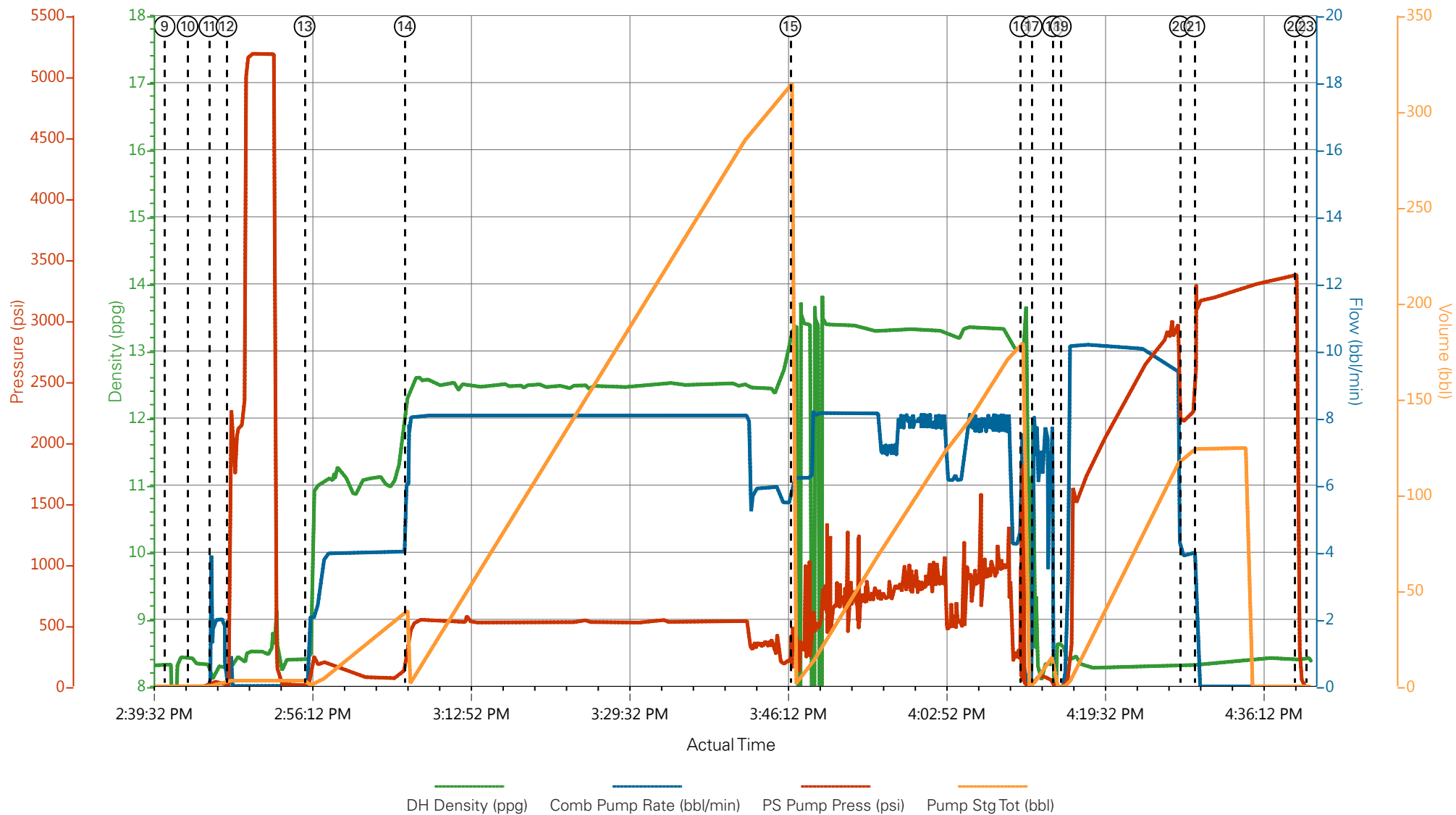
Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	10/17/2017	06:00:00	USER					ELITE #4, REQUESTED ON LOCATION TIME 1200
Event	2	Pre-Convoy Safety Meeting	10/17/2017	09:00:00	USER					ALL HES EMPLOYEES
Event	3	Arrive At Loc	10/17/2017	10:30:00	USER					ARRIVED ON LOCATION 1 1/2 HOURS EARLY, RIG RUNNING CASING
Event	4	Meet With Company Rep	10/17/2017	10:45:00	USER					COMPANY REP OFFERED SDS , WATER TEST: TEMP 50 PH: 7 CHLORIDES: 0
Event	5	Assessment Of Location Safety Meeting	10/17/2017	10:50:00	USER					ALL HES EMPLOYEES
Event	6	Pre-Rig Up Safety Meeting	10/17/2017	10:55:00	USER					ALL HES EMPLOYEES
Event	7	Rig-Up Equipment	10/17/2017	11:00:00	USER					1 HT-400 PUMP TRUCK 2 SILOS 1 660 BULK TRUCK 1 F-550 PICKUP
Event	8	Pre-Job Safety Meeting	10/17/2017	14:30:00	USER					ALL HES EMPLOYEES AND RIG CREW RIG CIRCULATED @ 10.5 BPM @ 940 PSI FOR 1 HOUR PRIOR TO THE JOB
Event	9	Start Job	10/17/2017	14:41:00	COM5					TD: 7815 TP: 7804.35 SJ: 77.68 CSG: 4 1/2 11.6# N-80 OH: 7 7/8 SURFACE SHOE @ 1564 8 5/8 24# J-55 MUD WT: 9.1 PPG
Event	10	Drop Bottom Plug	10/17/2017	14:43:24	USER					PLUG AWAY NO PROBLEMS
Event	11	Prime Lines	10/17/2017	14:45:42	COM5	8.33	2.0	36	3.0	PRIME LINES WITH 3 BBLS FRESH WATER
Event	12	Test Lines	10/17/2017	14:47:29	COM5	8.33	0.0	5188	3.0	PRESSURE TEST OK

Event	13	Pump Tuned Spacer III	10/17/2017	14:55:42	COM5	11.0	4.0	220	40	40 BBL TUNED SPACER III 11.0 PPG 4.86 YIELD 31.9 GAL/BBL TUNED SPACER WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	14	Pump Lead Cement	10/17/2017	15:06:14	COM5	12.5	8.0	530	275	796 SKS 12.5 PPG 1.94 YIELD 9.6 GAL/SK LEAD CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	15	Pump Tail Cement	10/17/2017	15:46:46	COM5	13.3	8.0	880	142	461 SKS 13.3 PPG 1.73 YIELD 7.81 GAL/SK TAIL CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES. DOWNHOLE DENSOMETER LOST CONNECTION 3 TIMES DURING TAIL. RECIRC DENSITY REMAINED CONSISTENT
Event	16	Shutdown	10/17/2017	16:10:56	COM5					SHUTDOWN TO CLEAN PUMPS AND LINES
Event	17	Clean Lines	10/17/2017	16:12:09	COM5	8.33			10	CLEAN PUMPS AND LINES TO CELLAR
Event	18	Drop Top Plug	10/17/2017	16:14:23	COM5					PLUG AWAY NO PROBLEMS
Event	19	Pump Displacement	10/17/2017	16:15:12	COM5	8.4	10.0	3015	119.8	1 GAL MMCR 5 GAL CLA-WEB, FRESH WATER DISPLACEMENT
Event	20	Slow Rate	10/17/2017	16:27:43	COM5	8.4	4.0	2270	109	SLOW RATE TO BUMP PLUG
Event	21	Bump Plug	10/17/2017	16:29:14	COM5	8.4	4.0	3376	119.89	PSI BEFORE BUMPING PLUG @ 2270 BUMPED PLUG UP TO 3000 PSI FOR 10 MINUTE CSG TEST
Event	22	Check Floats	10/17/2017	16:39:48	USER					PRESSURE @ 3376 PRIOR TO CHECKING FLOATS. FLOATS HELD 1 1/2 BBLS BACK TO DISPLACEMENT TANKS
Event	23	End Job	10/17/2017	16:41:00	COM5					MAINTAINED RETURNS THROUGHOUT JOB, PIPE STATIC THROUGHOUT JOB 40 BBLS OF TUNED SPACER TO SURFACE
Event	24	Pre-Rig Down Safety Meeting	10/17/2017	16:45:00	USER					ALL HES EMPLOYEES
Event	25	Rig-Down Equipment	10/17/2017	16:50:00	USER					



Event	26	Pre-Convoy Safety Meeting	10/17/2017	16:55:00	USER	ALL HES EMPLOYEES
Event	27	Crew Leave Location	10/17/2017	18:00:00	USER	THANK YOU FOR USING HALLIBURTON CEMENT, DUSTIN SMITH AND CREW

# LARAMIE - BRUTON 30-09W - 4 1/2 PRODUCTION



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

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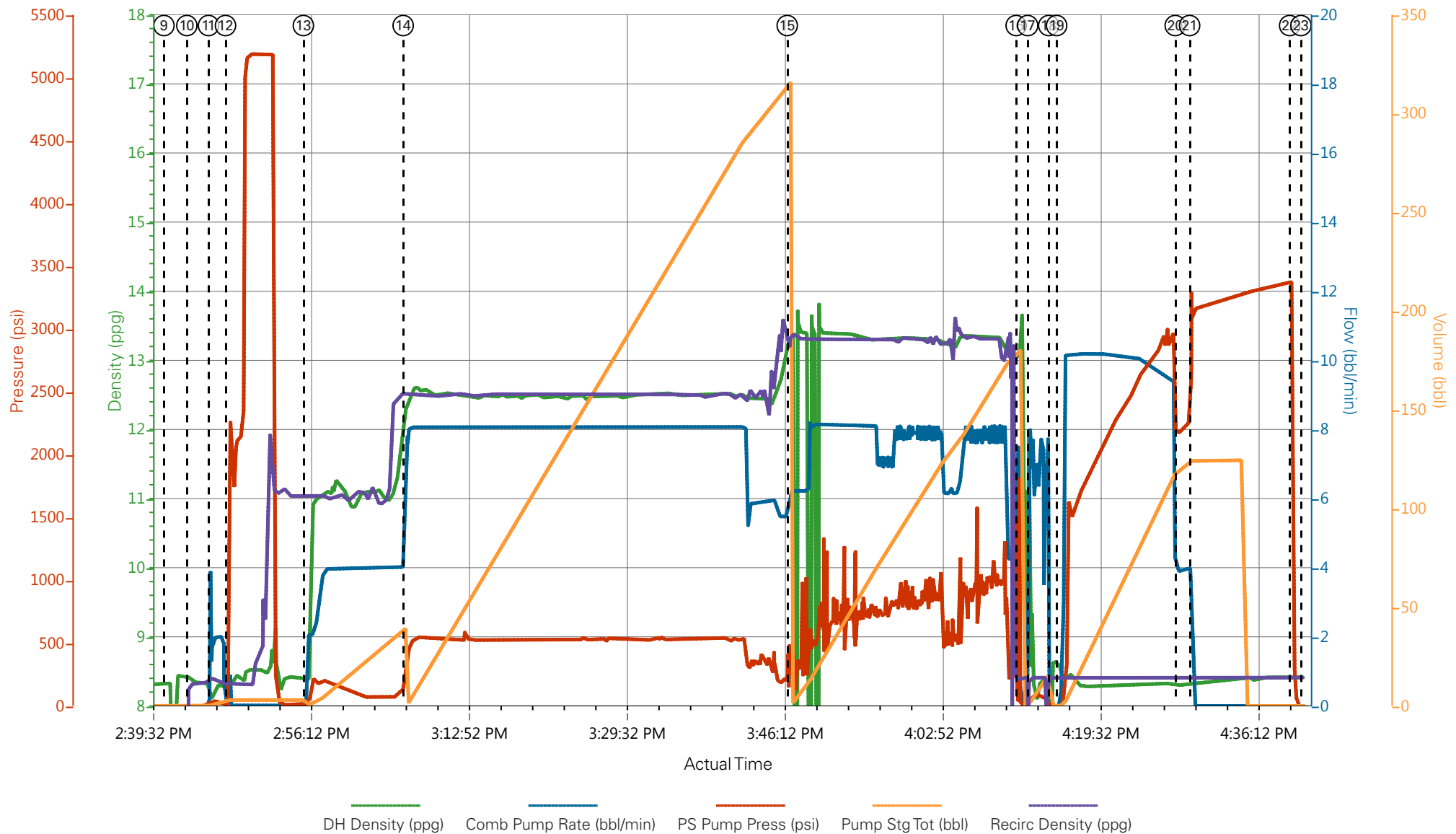
Edit

Customer : LARAMIE ENERGY II LLC  
Representative : TYLER HALE

Job Date : 10/17/2017 11:37:54 AM  
Sales Order # : 0904369770

Well : BRUTON 30-09W  
ELITE #4 : DUSTIN SMITH / WES GOWEN

# LARAMIE - BRUTON 30-09W - 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: 2017-10-17 07:16:54, Version: 4.2.393

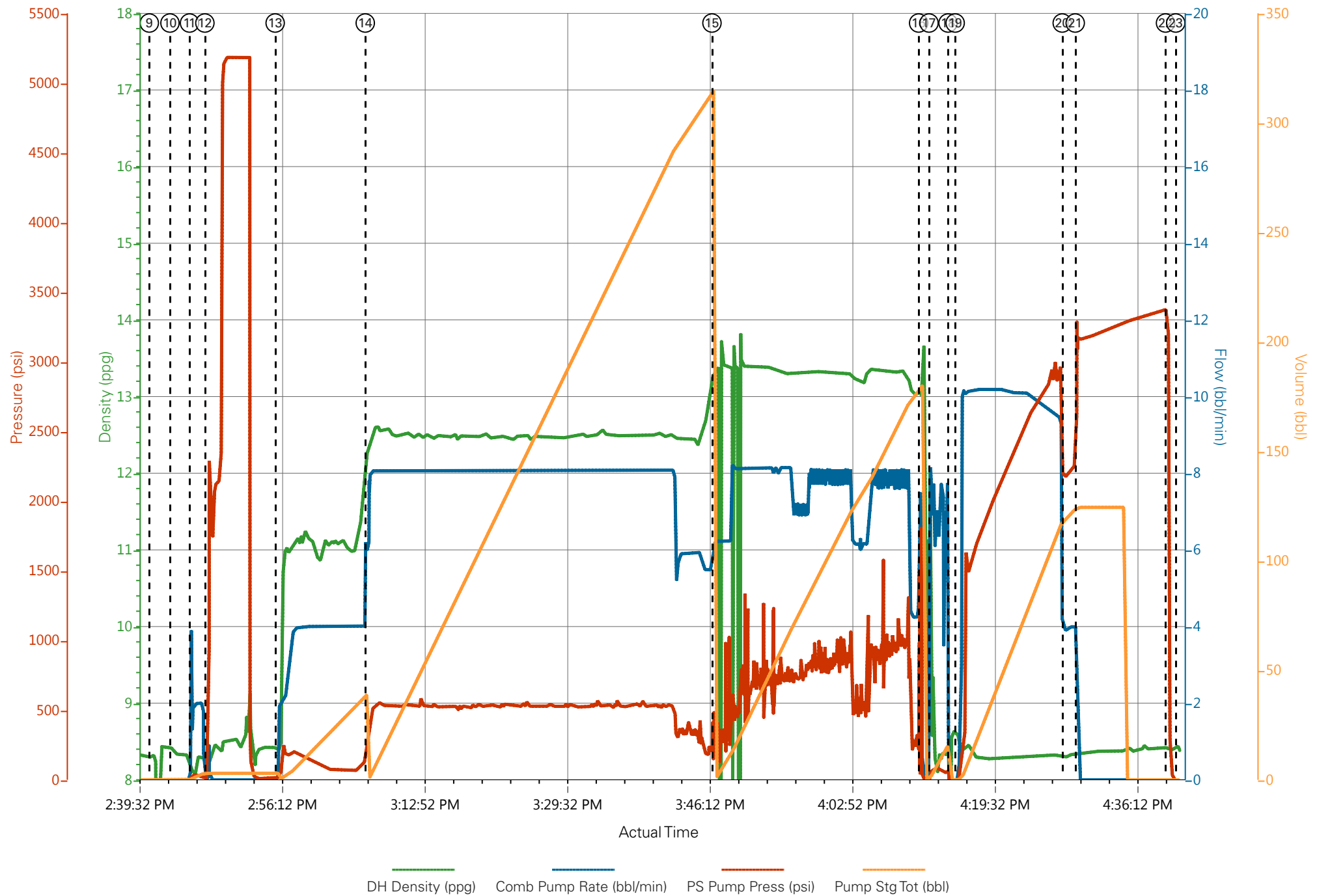
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Customer : LARAMIE ENERGY II LLC  
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Sales Order # : 0904369770

Well : BRUTON 30-09W  
ELITE #4 : DUSTIN SMITH / WES GOWEN

# LARAMIE - BRUTON 30-09W - 4 1/2 PRODUCTION



### Job Information

<b>Request/Slurry</b>	2423169/1	<b>Rig Name</b>	H&P 522	<b>Date</b>	14/OCT/2017
<b>Submitted By</b>	Philip Readle	<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 30-09W

### Well Information

<b>Casing/Liner Size</b>	4.5 in	<b>Depth MD</b>	8479 ft	<b>BHST</b>	123°C / 253°F
<b>Hole Size</b>	7.875 in	<b>Depth TVD</b>	8314 ft	<b>BHCT</b>	79°C / 174°F
<b>Pressure</b>	5120 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



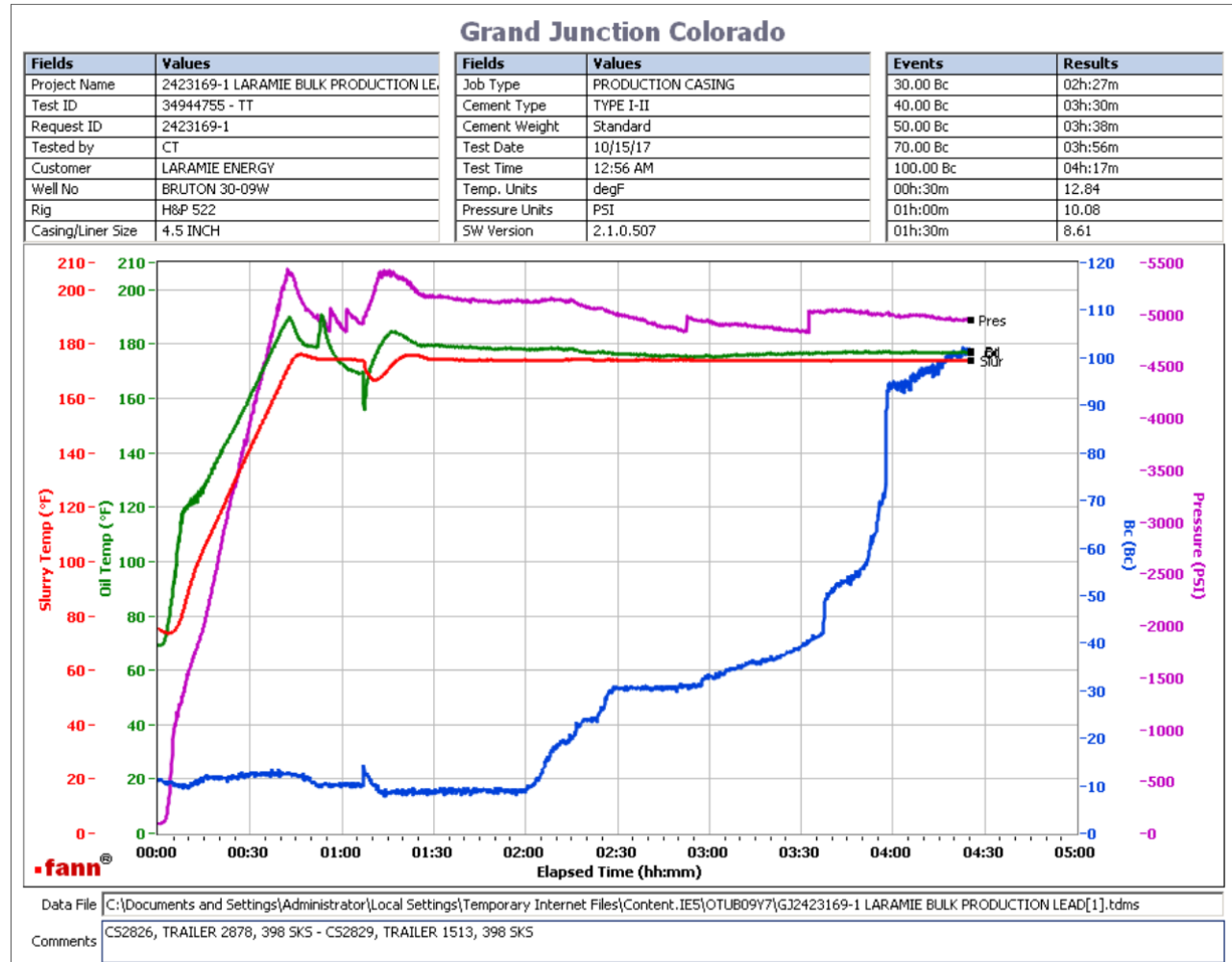
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	<b>Cement Properties</b>		
		NeoCem Lead				Slurry Density	12.5	lbm/gal
						Slurry Yield	1.941	ft3/sack
						Water Requirement	9.623	gal/sack
						Total Mix Fluid	9.623	gal/sack
						Water Source	Field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

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Thickening Time - ON-OFF-ON

15/OCT/2017

Test Temp (°F)	Pressure (psi)	Reached in (min)	30 Bc (hh:min)	50 Bc (hh:min)	70 Bc (hh:min)	100 Bc (hh:min)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
174	5120	42	2:27	3:38	3:56	4:17	11	52	15	15



Total sks = 796

Composite:

CS2826, Trailer 2878, 398 sks

CS2829, Trailer 1513, 398 sks

deflected from 10Bc--- > 15Bc ---- > 12 within one min

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## Job Information

<b>Request/Slurry</b>	2423170/1	<b>Rig Name</b>	H&P 522	<b>Date</b>	14/OCT/2017
<b>Submitted By</b>	Philip Readle	<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 30-09W

## Well Information

<b>Casing/Liner Size</b>	4.5 in	<b>Depth MD</b>	8429 ft	<b>BHST</b>	123°C / 254°F
<b>Hole Size</b>	7.875 in	<b>Depth TVD</b>	8314 ft	<b>BHCT</b>	79°C / 174°F
<b>Pressure</b>	5120 psi				

## Drilling Fluid Information

<b>Mud Supplier Name</b>		<b>Mud Trade Name</b>		<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		

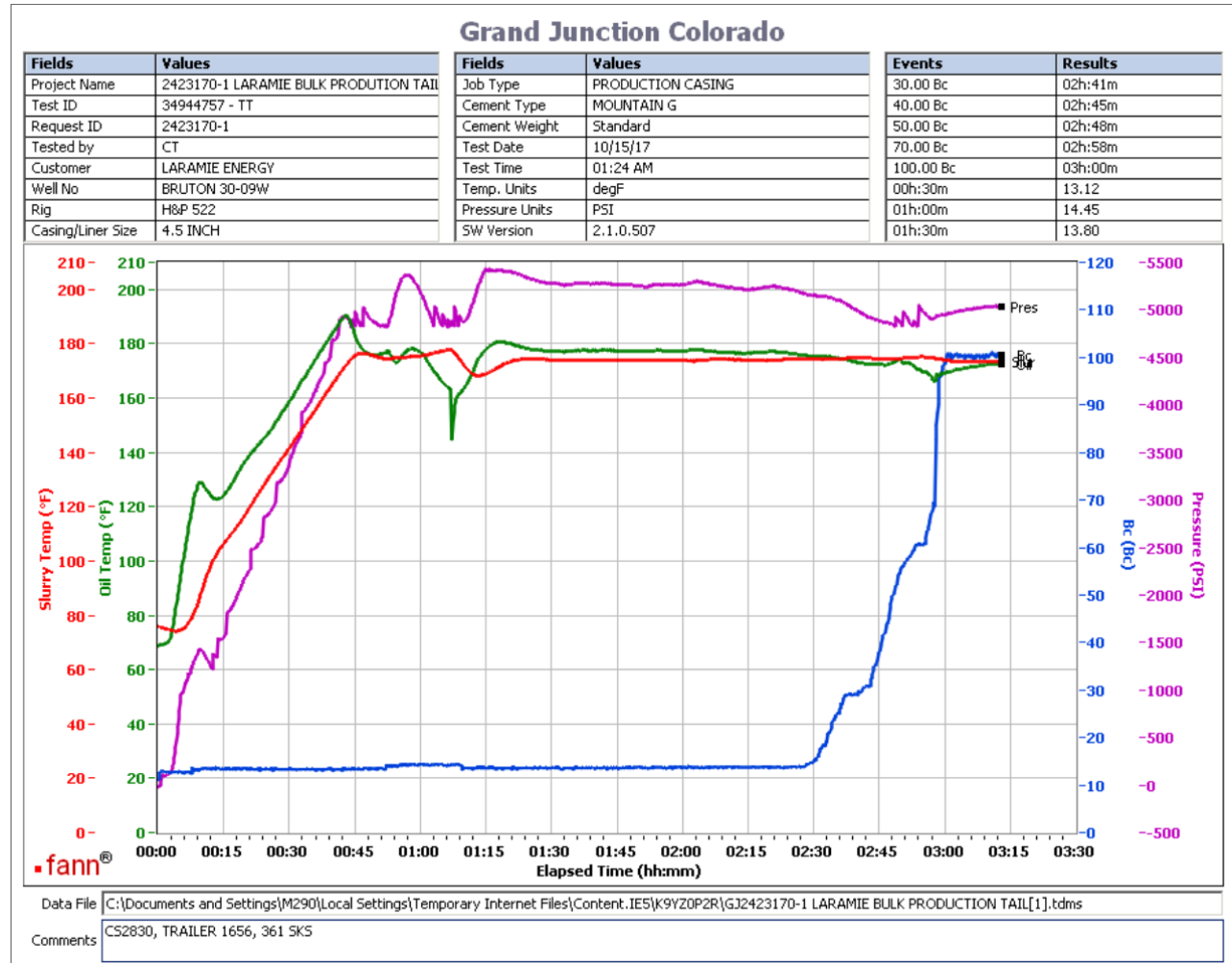
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# **Operation Test Results Request ID 2423170/1**

## **Thickening Time - ON-OFF-ON**

**15/OCT/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)
174	5120	42	2:41	2:48	2:58	3:03	11	52	15	14



Total sks = 461

CS2830, Trailer 1656, 361 sks

no deflection was observed. 14Bc--- > 14Bc

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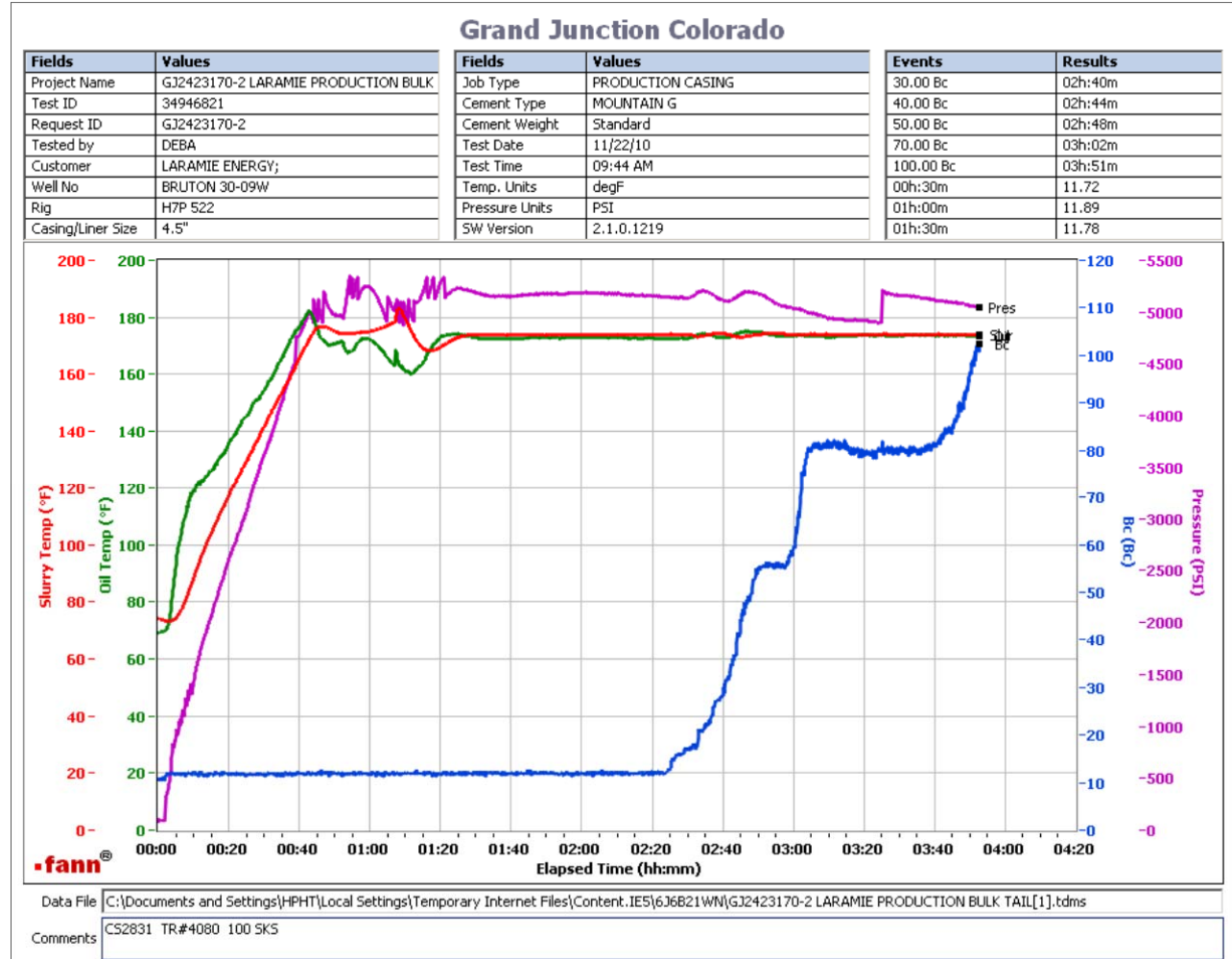


## Operation Test Results Request ID 2423170/2

### Thickening Time - ON-OFF-ON

15/OCT/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	5120	42	2:40	2:48	3:02	3:51	10	52	15	11



Total sks = 461

CS2831, Trailer 4080, 100 sks

no deflection was observed. 11Bc--- > 11Bc

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