

# HALLIBURTON

iCem<sup>®</sup> Service

## **LARAMIE ENERGY LLC**

**For: Chuck Mallary**

Date: Wednesday, October 18, 2017

## **Bruton 30-10W Surface PJR**

API# 05-077-10464-00

Sincerely,

**Grand Junction Cement Engineering**

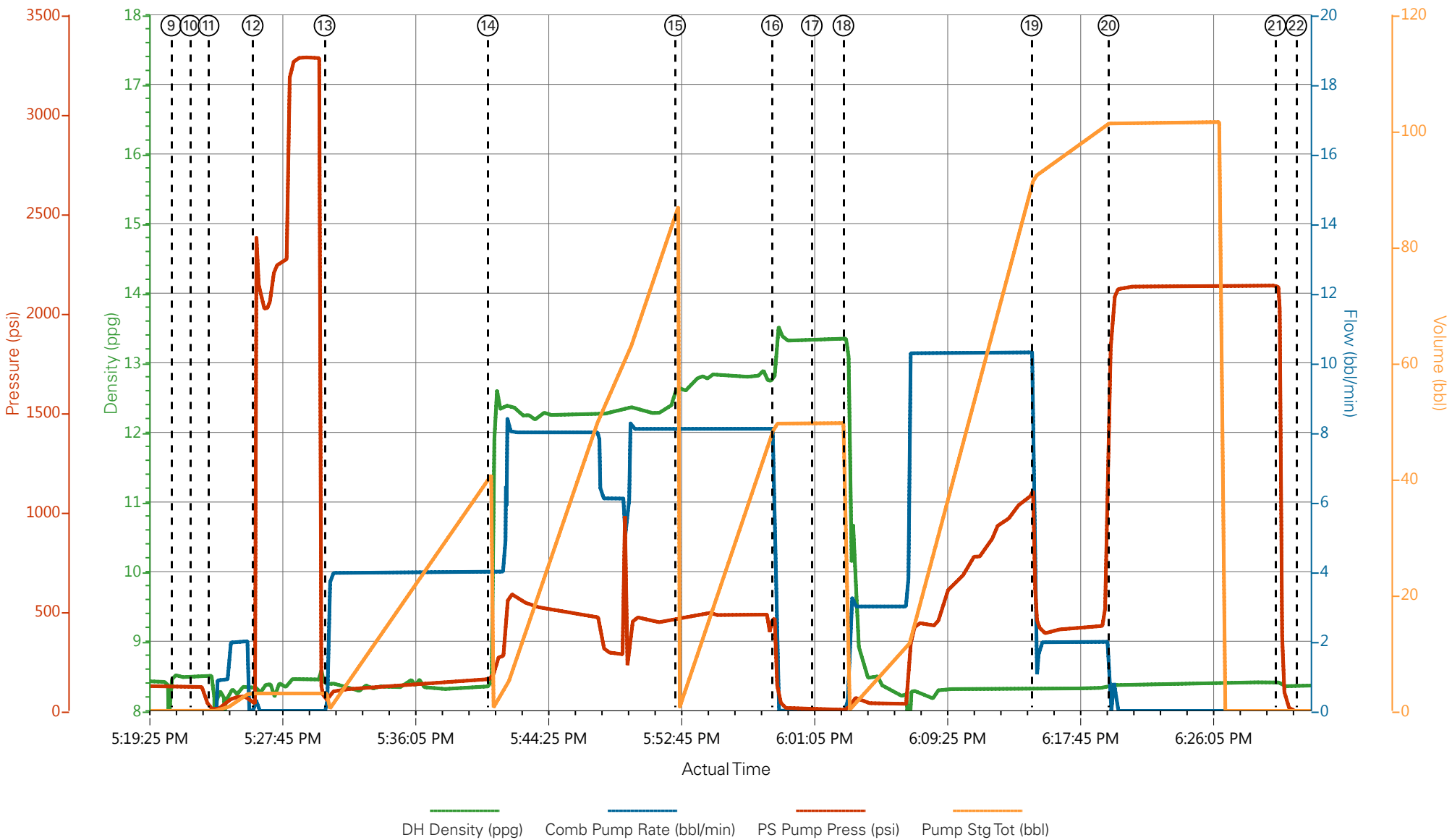
## 2.0 Real-Time Job Summary

### 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	10/18/2017	11:00:00	USER					ELITE # 4, REQUESTED ON LOCATION TIME 1700
Event	2	Pre-Convoy Safety Meeting	10/18/2017	14:00:00	USER					ALL HES EMPLOYEES
Event	3	Arrive At Loc	10/18/2017	15:30:00	USER					ARRIVED ON LOCATION 1 1/2 HOURS EARLY, RIG RUNNING CASING
Event	4	Meet With Company Rep	10/18/2017	15:35:00	USER					COMPANY REP OFFERED SDS / WATER TEST: TEMP: 50 PH: 7 CHLORIDES: 0
Event	5	Assessment Of Location Safety Meeting	10/18/2017	15:40:00	USER					ALL HES EMPLOYEES
Event	6	Pre-Rig Up Safety Meeting	10/18/2017	15:45:00	USER					ALL HES EMPLOYEES AND RIG CREW, RIG CIRCULATED @ 11 BPM @ 300 PSI PRIOR TO THE JOB
Event	7	Rig-Up Equipment	10/18/2017	16:00:00	USER					1 HT-400 PUMP TRUCK 1 660 BULK TRUCK 1 F-550 PICKUP
Event	8	Pre-Job Safety Meeting	10/18/2017	17:15:00	USER					ALL HES EMPLOYEES AND RIG CREW
Event	9	Start Job	10/18/2017	17:21:00	COM5					TD: 1566 TP: 1556 SJ; 44.65 CSG: 8 5/8 24# J-55 OH: 11 MUD WT: 9.1 PPG
Event	10	Drop Bottom Plug	10/18/2017	17:22:10	USER					PLUG AWAY NO PROBLEMS
Event	11	Prime Lines	10/18/2017	17:23:20	COM5	8.33	2.0	72	3.0	PRIME LINES WITH 3 BBLS FRESH WATER
Event	12	Test Lines	10/18/2017	17:26:05	USER	8.33	0.0	3286	3.0	PRESSURE TEST OK

Event	13	Pump Fresh Water Spacer	10/18/2017	17:30:36	COM5	8.33	4.0	155	40	PUMP 40 BBL FRESH WATER SPACER
Event	14	Pump Lead Cement	10/18/2017	17:40:50	COM5	12.3	8.0	570	86.3	197 SKS 12.3 PPG 2.46 YIELD 14.17 GAL/SK LEAD CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	15	Pump Tail Cement	10/18/2017	17:52:34	COM5	12.8	8.0	478	42.3	109 SKS 12.8 PPG 2.18 YIELD 12.11 GAL/SK TAIL CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	16	Shutdown	10/18/2017	17:58:38	USER					SHUTDOWN TO DROP TOP PLUG
Event	17	Drop Top Plug	10/18/2017	18:01:08	COM5					PLUG AWAY NO PROBLEMS, WASHED UP ON TOP OF THE PLUG
Event	18	Pump Displacement	10/18/2017	18:03:07	COM5	8.33	10.0	1100	96.1	FRESH WATER DISPLACEMENT
Event	19	Slow Rate	10/18/2017	18:14:54	USER	8.33	2.0	430	86	SLOW RATE TO BUMP PLUG
Event	20	Bump Plug	10/18/2017	18:19:44	COM5	8.33	2.0	2100	96.1	PSI BEFORE BUMPING PLUG @ 430 BUMPED PLUG UP TO 2100 FOR 10 MINUTE CSG TEST
Event	21	Check Floats	10/18/2017	18:30:11	USER			2127		PRESSURE AFTER 10 MINUTE CASING TEST @ 2137. FLOATS HELD, 1BBL BACK TO DISPLACEMENT TANKS
Event	22	End Job	10/18/2017	18:31:30	COM5					GOOD RETURNS THROUGHOUT JOB, PIPE STATIC THROUGHOUT JOB. 36 BBLS OF CEMENT TO SURFACE
Event	23	Pre-Rig Down Safety Meeting	10/18/2017	18:35:00	USER					ALL HES EMPLOYEES
Event	24	Rig-Down Equipment	10/18/2017	18:45:00	USER					
Event	25	Pre-Convoy Safety Meeting	10/18/2017	19:50:00	USER					ALL HES EMPLOYEES
Event	26	Crew Leave Location	10/18/2017	20:00:00	USER					THANK YOU FOR USING HALLIBURTON CEMENT, DUSTIN SMITH AND CREW

LARAMIE - BRUTON 30-10W - 8 5/8 SURFACE



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

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Created: 2017-10-18 11:37:06, Version: 4.2.393

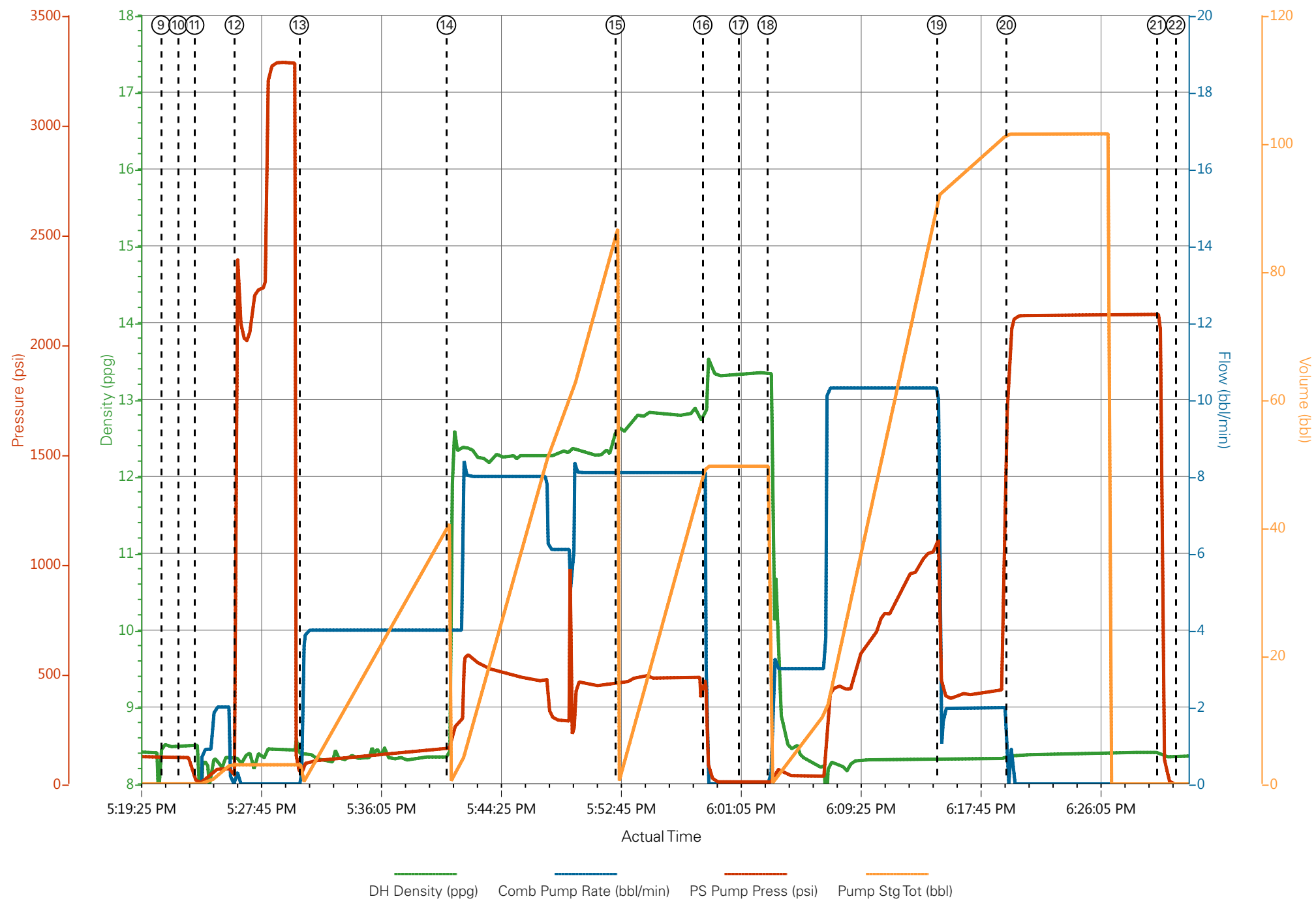
Edit

Customer : LARAMIE ENERGY II LLC  
Representative : TYLER HALE

Job Date : 10/18/2017 3:58:12 PM  
Sales Order # : 0904370412

Well : BRUTON 30-10W  
ELITE # 4 : DUSTIN SMITH / WES GOWEN

LARAMIE - BRUTON 30-10W - 8 5/8 SURFACE



# HALLIBURTON

iCem<sup>®</sup> Service

## **LARAMIE ENERGY LLC**

**For: Chuck Mallery**

Date: Sunday, October 22, 2017

**Bruton 30-10W Production PJR**

API# 05-077-10464-00

Sincerely,

**Grand Junction Cement Engineering**

## 1.0 Real-Time Job Summary

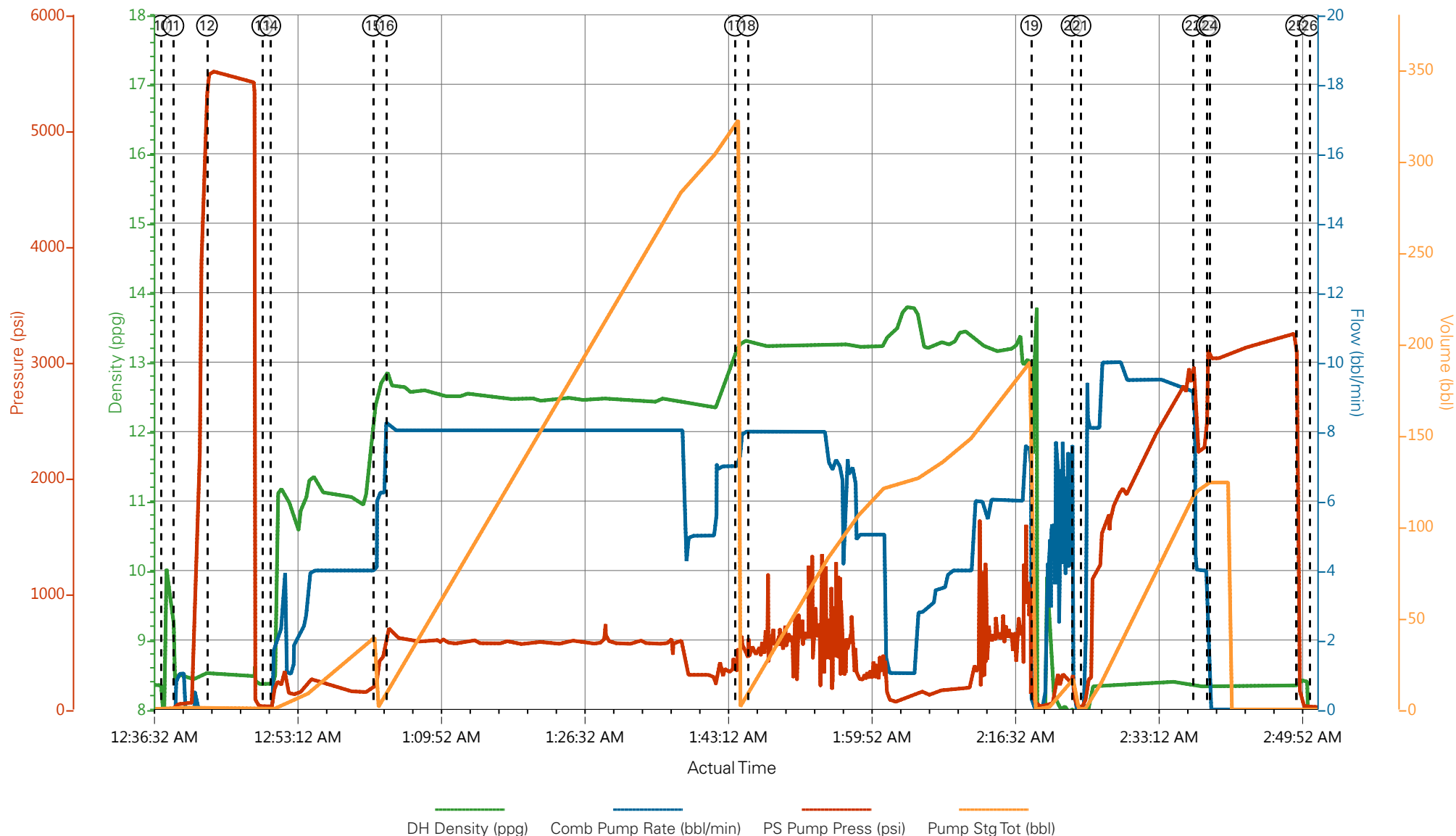
## 1.1 Job Event Log

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	10/21/2017	17:30:00	USER					Requested on Location @ 17:30
Event	2	Pre-Convoy Safety Meeting	10/21/2017	20:15:00	USER					
Event	3	Crew Leave Yard	10/21/2017	20:30:00	USER					1 Elite, 1 660, 1 pickup
Event	4	Arrive at Location	10/21/2017	22:00:00	USER					Rig running casing
Event	5	Assessment Of Location Safety Meeting	10/21/2017	22:15:00	USER					JSA completed - Customer offered/received SDS - Water test pH 7.0, Cl <500, temp 42 degrees
Event	6	Pre-Rig Up Safety Meeting	10/21/2017	22:30:00	USER					
Event	7	Rig-Up Equipment	10/21/2017	22:45:00	USER					DME iron to ground manifold, standpipe, wash up to cellar. Water hoses to upright and day tank, bulk hoses to silos and 660.
Event	8	Other	10/21/2017	23:30:00	USER					Rig Circulated 1 hr prior to cement job at 10 bpm 500 psi, Gas >300
Event	9	Pre-Job Safety Meeting	10/22/2017	00:20:00	USER					All HES personnel, rig crew, and Company Rep
Event	10	Start Job	10/22/2017	00:37:43	USER					TD 7861', TP 7851', FC 7773.8' SJ 77.2', OH 7.875'', Csg 4.5'' 11.6 lb/ft N-80, Prev. Csg. 8.625'' 24# @ 1556', Mud 9.1 ppg.
Event	11	Fill Lines	10/22/2017	00:39:09	COM6	8.4	2	60	2	Fresh water
Event	12	Test Lines	10/22/2017	00:43:03	COM6	8.4	.5	5514	.5	Fresh water, Held pressure 5 minutes

Event	13	Check weight	10/22/2017	00:49:28	COM6					Density verified via mud cup
Event	14	Pump Tuned Spacer III	10/22/2017	00:50:24	COM6	11	4	200	40	Tuned Spacer III @ 11 ppg, bottom plug released ahead of spacer
Event	15	Pump Lead Cement	10/22/2017	01:02:19	COM6	12.5	8	600	278.8	807 sks 12.5 ppg 1.94 yield 9.6 gal/sk
Event	16	Check weight	10/22/2017	01:03:53	COM6					Density verified via mud cup
Event	17	Pump Tail Cement	10/22/2017	01:44:22	COM6	13.3	8	630	142	461 Sks 13.3 ppg 1.73 yield 7.81 gal/sk
Event	18	Check weight	10/22/2017	01:45:50	COM6					Density verified via mud cup
Event	19	Shutdown	10/22/2017	02:18:46	USER					Wash lines to cellar
Event	20	Drop Top Plug	10/22/2017	02:23:27	USER					Customer witnessed plug departure.
Event	21	Pump Displacement	10/22/2017	02:24:29	COM6	8.4	9.5	2950	120.5	1 gal MMCR, 5 gals Clay-Web II
Event	22	Slow Rate	10/22/2017	02:37:32	USER	8.4	4	2250	110	Slow Rate 10 bbls prior to Calculated Displacement
Event	23	Bump Plug	10/22/2017	02:39:08	COM6	8.4	4	3050	120.5	Plug Bumped at 2250 psi, Brought up to 3050 psi
Event	24	Pressure Up Well	10/22/2017	02:39:30	USER					10 minute 3000 psi casing test Per Company Rep.
Event	25	Check Floats	10/22/2017	02:49:32	USER					Floats held – 1 bbl back to the truck
Event	26	End Job	10/22/2017	02:51:05	USER					Good Returns Throughout job. 30 bbls Tuned Spacer to surface
Event	27	Pre-Rig Down Safety Meeting	10/22/2017	03:00:00	USER					40 lbs sugar, No add hours
Event	28	Rig-Down Equipment	10/22/2017	03:10:00	USER					
Event	29	Pre-Convoy Safety Meeting	10/22/2017	03:50:00	USER					
Event	30	Crew Leave Location	10/22/2017	04:00:00	USER					Thank you for using Halliburton – Grand Junction, CO Cement Dept.



# LARAMIE ENERGY II - Bruton 30-10W - Production Casing



- |   |                          |                         |                      |                                |
|---|--------------------------|-------------------------|----------------------|--------------------------------|
| ① Call Out                              | ⑦ Rig-Up Equipment       | ⑬ Check weight          | ⑰ Shutdown           | 25 Check Floats                |
| ② Pre-Convoy Safety Meeting             | ⑧ Other                  | ⑭ Pump Tuned Spacer III | 20 Drop Top Plug     | 26 End Job                     |
| ③ Crew Leave Yard                       | ⑨ Pre-Job Safety Meeting | ⑮ Pump Lead Cement      | 21 Pump Displacement | 27 Pre-Rig Down Safety Meeting |
| ④ Arrive at Location                    | ⑩ Start Job              | ⑯ Check weight          | 22 Slow Rate         | 28 Rig-Down Equipment          |
| ⑤ Assessment Of Location Safety Meeting | ⑪ Fill Lines             | ⑰ Pump Tail Cement      | 23 Bump Plug         | 29 Pre-Convoy Safety Meeting   |
| ⑥ Pre-Rig Up Safety Meeting             | ⑫ Test Lines             | ⑱ Check weight          | 24 Pressure Up Well  | 30 Crew Leave Location         |

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Created: 2017-10-21 19:55:20, Version: 4.2.393

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Customer : LARAMIE ENERGY II LLC

Job Date : 10/22/2017

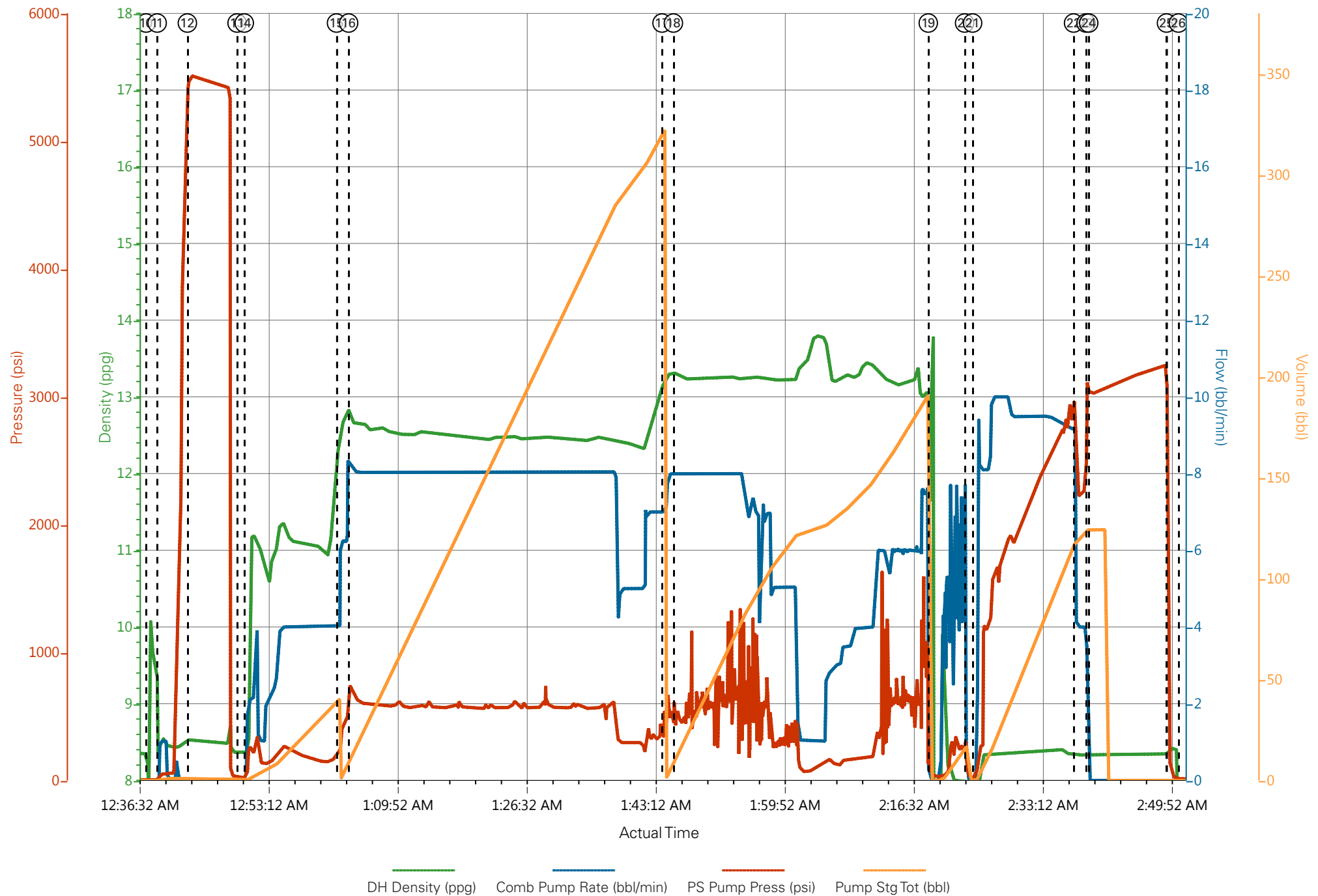
Well : Bruton 30-10W

Representative : Tyler Hale

Sales Order # : 904379096

Elite 4 : Muhlestein/Hyde

# LARAMIE ENERGY II - Bruton 30-10W - Production Casing



### Job Information

<b>Request/Slurry</b>	2424058/1	<b>Rig Name</b>	H&P 522	<b>Date</b>	18/OCT/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 30-10W

### Well Information

<b>Casing/Liner Size</b>	4.5 in	<b>Depth MD</b>	7882 ft	<b>BHST</b>	114°C / 238°F
<b>Hole Size</b>	7.875 in	<b>Depth TVD</b>	7654 ft	<b>BHCT</b>	77°C / 170°F
<b>Pressure</b>	4658 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		

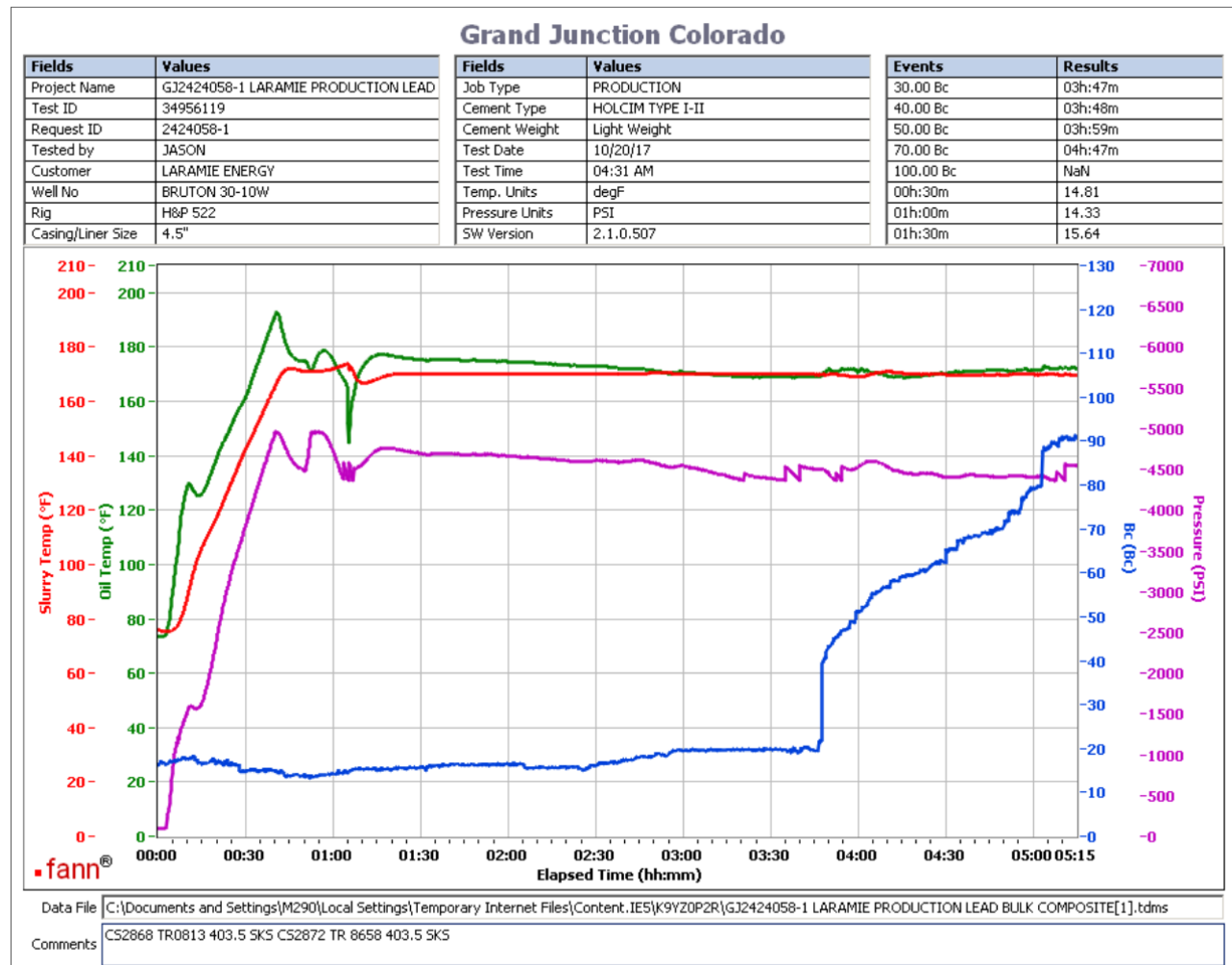
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# **Operation Test Results Request ID 2424058/1**

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

**20/OCT/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)
170	4658	40	3:47	3:59	4:47	16	50	15	15



Total sks = 807

Composite:

CS2868 TR 0813 403.5 SKS

CS2872 TR 8658 403.5 SKS

Deflection: 10 - 15 (pulled from graph)

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## Job Information

<b>Request/Slurry</b>	2424059/1	<b>Rig Name</b>	H&P 522	<b>Date</b>	18/OCT/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 30-10W

## Well Information

<b>Casing/Liner Size</b>	4.5 in	<b>Depth MD</b>	7882 ft	<b>BHST</b>	114°C / 238°F
<b>Hole Size</b>	7.875 in	<b>Depth TVD</b>	7654 ft	<b>BHCT</b>	77°C / 170°F
<b>Pressure</b>	4658 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		

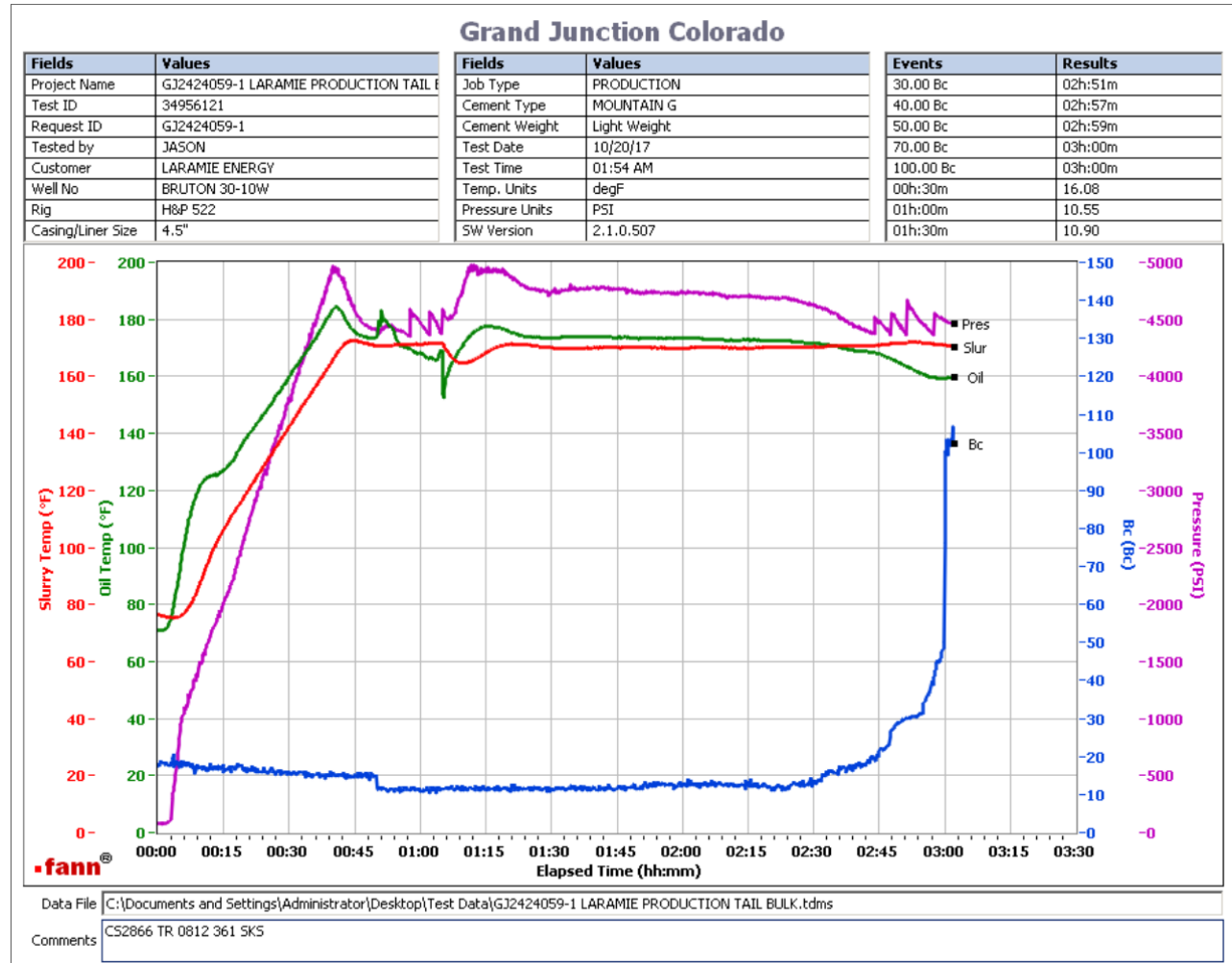
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# **Operation Test Results Request ID 2424059/1**

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

**19/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)
170	4658	40	2:51	2:59	3:00	3:00	17	50	15	12



Total sks = 461

CS2866 TR 0812 361 SKS

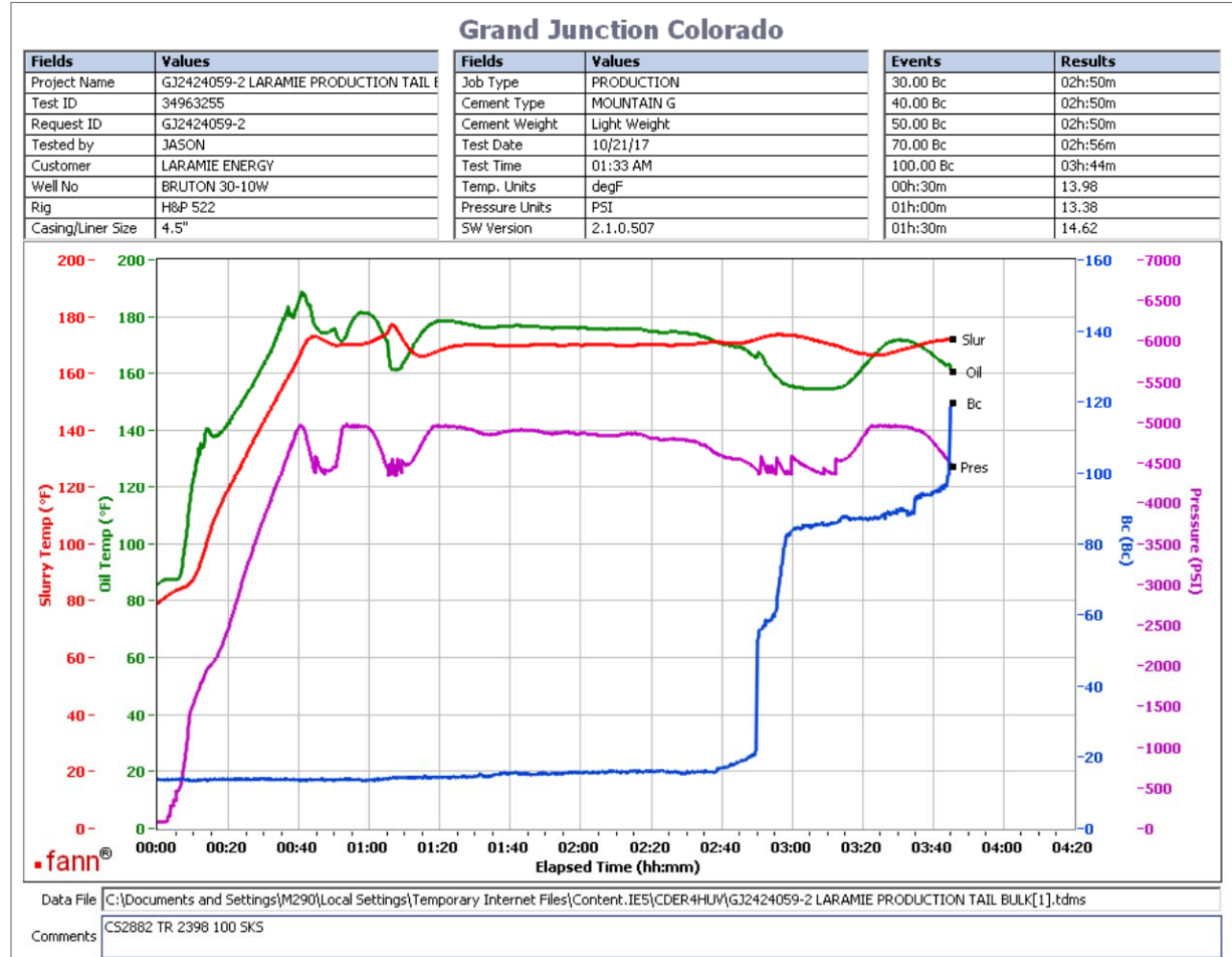
No deflection. Heat of hydration started around 2:30.

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Thickening Time - ON-OFF-ON

21/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)
170	4658	40	2:50	2:50	2:56	3:44	14	50	15	14



Total sks = 461  
CS2882 TR 2398 100 SKS  
Deflection: 14 - 14

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