

# HALLIBURTON

iCem<sup>®</sup> Service

## **LARAMIE ENERGY II LLC**

**For: Laramie**

Date: Tuesday, October 31, 2017

**BRUTON 30-11W Surface**

**API#05-077-10447**

Sincerely,

**Grand Junction Cement Engineering**

## 2.0 Real-Time Job Summary

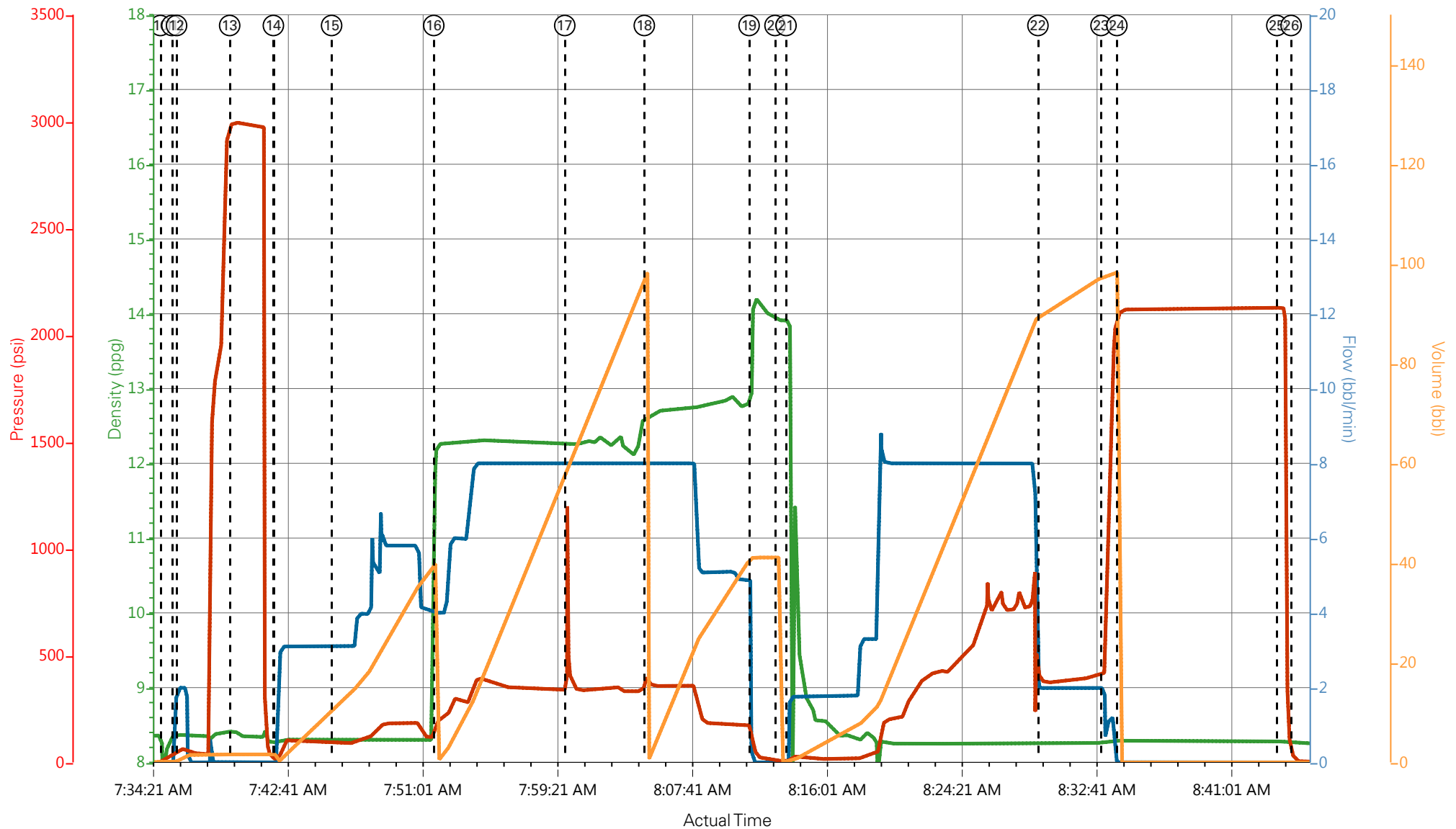
## 2.1 Job Event Log

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	10/31/2017	00:00:00	USER					ON LOCATION REQUESTED 6:00
Event	2	Pre-Convoy Safety Meeting	10/31/2017	02:00:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	10/31/2017	02:15:01	USER					
Event	4	Arrive at Location from Service Center	10/31/2017	04:00:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	10/31/2017	04:10:00	USER					MET WITH COMPANY REP, SDS OFFERED
Event	6	Pre-Rig Up Safety Meeting	10/31/2017	04:20:00	USER					ALL HES PRESENT
Event	7	Rig-Up Completed	10/31/2017	06:35:00	USER					1-ELITE, 1-660 BULK TRAILER, 8.625" QL, 2" PUMP IRON, 4" SUCTION HOSE
Event	8	Pre-Job Safety Meeting	10/31/2017	06:45:00	USER					ALL HES PRESENT AND RIG CREW PRESENT
Event	9	Other	10/31/2017	07:00:00	USER					WATER: TEMP-60, CL-0, PH-7. RIG CIRCULATED 1 HOUR 400 GPM, 270 PSI
Event	10	Start Job	10/31/2017	07:35:00	USER	8.35	0.00	3.00	0.0	TD-1546', TP-1540.1' SET @ 1535.1', SJ-42.94', OH-11", CSG-8.625" 24# J55, MUD-9.4PPG
Event	11	Prime Pumps	10/31/2017	07:35:42	COM5	8.35	1.40	34.00	3.0	FRESH WATER
Event	12	Drop Bottom Plug	10/31/2017	07:36:00	USER	8.37	2.00	58.00	0.6	PLUG AWAY
Event	13	Test Lines	10/31/2017	07:39:16	COM5	8.41	0.00	2994.00	3.0	ALL PRESSURE HELD ON LINES
Event	14	Pump Spacer 1	10/31/2017	07:41:59	COM5	8.27	6.00	190.00	40.0	FRESH WATER
Event	15	Check weight	10/31/2017	07:45:35	COM5					WEIGHT VERIFIED BY PRESSURIZED MUD SCALES
Event	16	Pump Lead Cement	10/31/2017	07:51:54	COM5	12.30	8.00	384.00	86.3	VARICEM LEAD 197SKS, 12.3PPG, 2.46CF/SK,

14.17GAL/SK

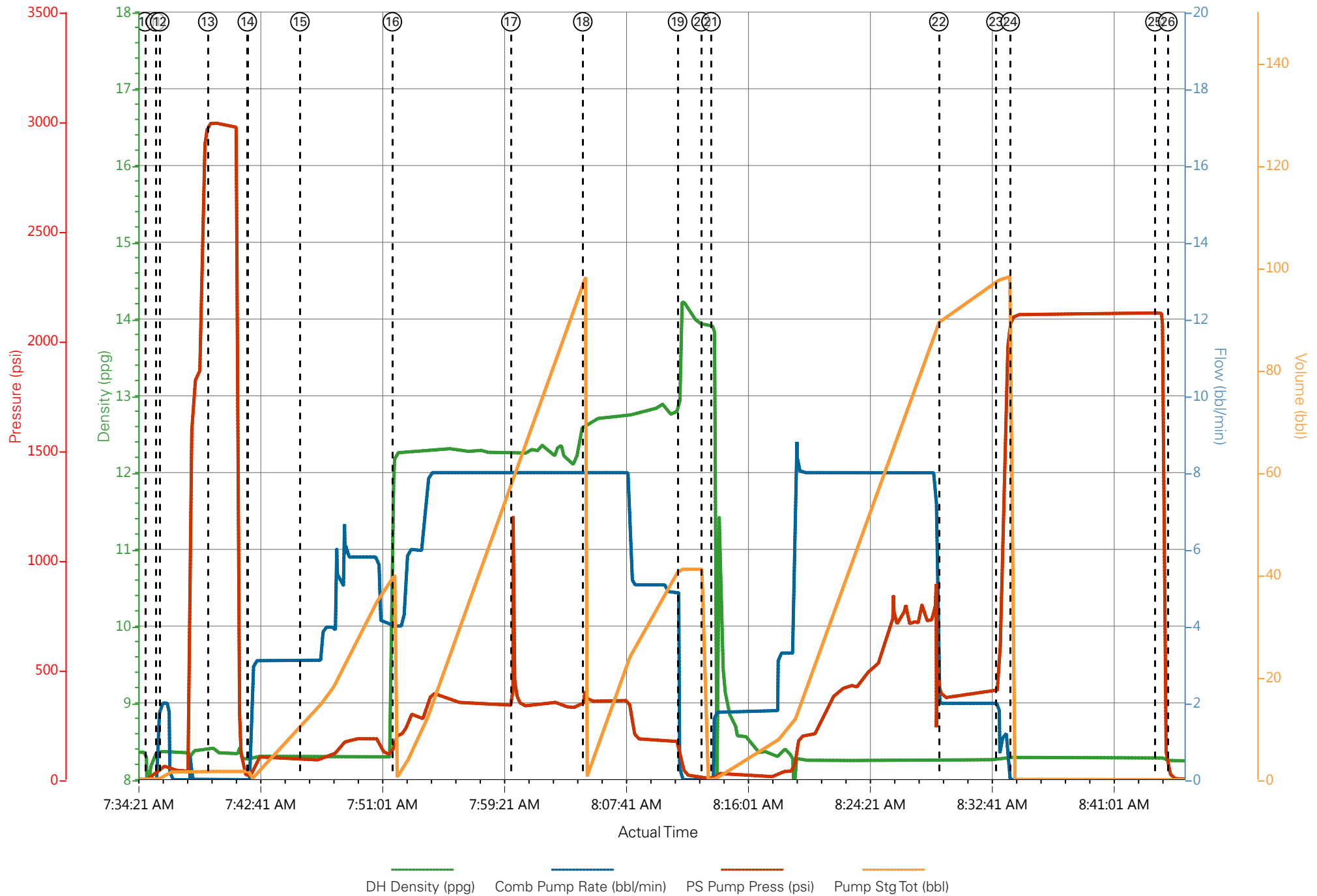
Event	17	Rupture Bottom Plug	10/31/2017	08:00:00	USER					
Event	18	Pump Tail Cement	10/31/2017	08:04:55	COM5	12.80	7.90	385.00	42.3	VARICEM TAIL 109SKS, 12.8PPG, 2.18CF/SK, 12.11GAL/SK
Event	19	Shutdown	10/31/2017	08:11:23	USER					END OF CEMENT
Event	20	Drop Top Plug	10/31/2017	08:13:00	USER					PLUG AWAY
Event	21	Pump Displacement	10/31/2017	08:13:40	COM5	8.30	8.00	910.00	95.3	FRESH WATER
Event	22	Slow Rate	10/31/2017	08:29:15	USER	8.26	2.00	387.00	85.0	SLOW RATE LAST 10 BBLS
Event	23	Bump Plug	10/31/2017	08:33:09	COM5	8.26	1.90	409.00	95.3	PLUG BUMPED 409 PSI
Event	24	Casing Test	10/31/2017	08:34:08	USER	8.29	0.00	2109.00	0.0	10 MINUTE CASING TEST
Event	25	Check Floats	10/31/2017	08:44:01	USER	8.28	0.00	2128.00	0.0	FLOATS HELD 1 BBL BACK
Event	26	End Job	10/31/2017	08:44:54	COM5					GOOD RETURNS THROUGH OUT JOB, 35 BBLS CEMENT TO SURFACE
Event	27	Post-Job Safety Meeting (Pre Rig-Down)	10/31/2017	08:50:00	USER					ALL HES PRESENT
Event	28	Rig-Down Completed	10/31/2017	09:15:00	USER					
Event	29	Pre-Convoy Safety Meeting	10/31/2017	09:30:00	USER					ALL HES PRESENT
Event	30	Crew Leave Location	10/31/2017	09:45:00	USER					THANK YOU FOR CHOOSING HALLIBURTON, ANDREW BRENNECKE AND CREW

# LARAMIE - BRUTON 30-11W - 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 Prime Pumps
- ⑫ Drop Bottom Plug
- ⑬ Test Lines
- ⑭ Pump Spacer

# LARAMIE - BRUTON 30-11W - 8.625" SURFACE



# HALLIBURTON

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## **LARAMIE ENERGY LLC-EBUS**

**For: Chuck Mallary**

Date: Monday, November 13, 2017

## **Bruton 30-11W Production PJR**

API# 05-077-10447-00

Sincerely,

**Grand Junction Cement Engineering**

## 2.0 Real-Time Job Summary

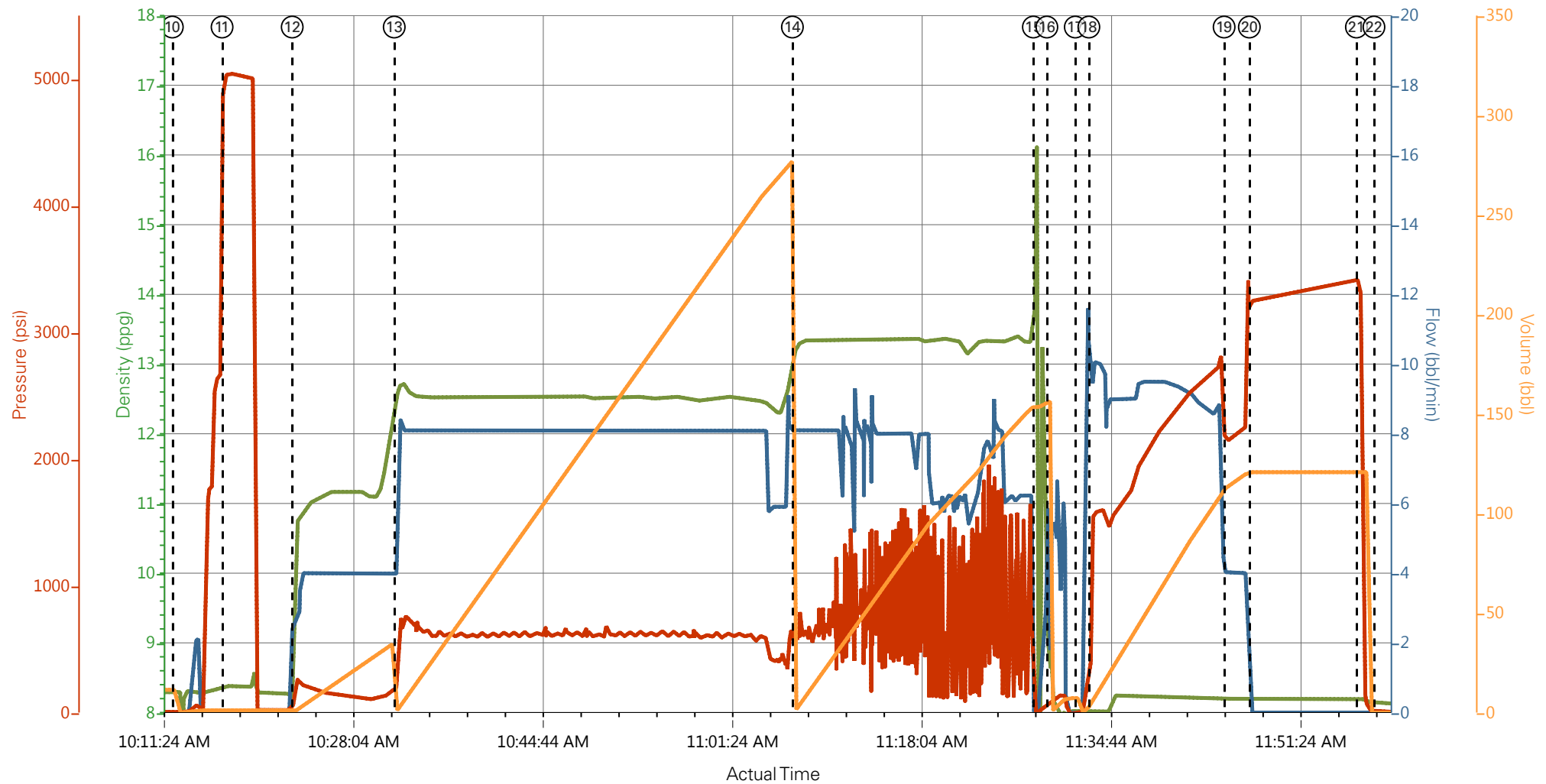
## 2.1 Job Event Log

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	11/13/2017	03:30:00	USER					
Event	2	Pre-Convoy Safety Meeting	11/13/2017	06:30:00	USER					
Event	3	Crew Leave Yard	11/13/2017	06:40:00	USER					
Event	4	Arrive At Loc	11/13/2017	08:15:00	USER					CREW ARRIVED ON LOC 1 HOUR EARLY, RIG WAS ALMOST ON BOTTOM WITH CASING
Event	5	Assessment Of Location Safety Meeting	11/13/2017	08:20:00	USER					
Event	6	Spot Equipment	11/13/2017	08:25:00	USER					
Event	7	Pre-Rig Up Safety Meeting	11/13/2017	08:30:00	USER					
Event	8	Rig-Up Equipment	11/13/2017	08:35:00	USER					
Event	9	Pre-Job Safety Meeting	11/13/2017	09:45:00	USER					
Event	10	Start Job	11/13/2017	10:12:26	COM5					TD: 7937 TP: 7927 SJ: 91.7 MW: 9.2 PPG 4 1/2" 11.6#/FT CSG IN 7 7/8" OH WATER TEST: PH: 7 POTASSIUM: 450 CHLORIDES: 0 SULFATES: <200 TEMP: 60 DEGREES
Event	11	Test Lines	11/13/2017	10:16:49	COM5	8.38	0.00	5030.00	2.0	5000 PSI TEST
Event	12	Pump Spacer 1	11/13/2017	10:22:59	COM5	11.00	4.00	287.00	40.0	TUNED SPACER MIXED @ 11.0 PPG
Event	13	Pump Lead Cement	11/13/2017	10:31:58	COM5	12.50	8.00	670.00	283.0	819 SKS @ 12.5 PPG 1.94 YLD 9.6 GAL/SK H2O

Event	14	Pump Tail Cement	11/13/2017	11:07:00	COM5	13.30	8.00	632.00	142.0	461 SKS @ 13.3 PPG 1.73 YLD 7.81 GAL/SK H2O
Event	15	Shutdown	11/13/2017	11:28:12	USER					
Event	16	Clean Lines	11/13/2017	11:29:23	COM5					
Event	17	Drop Top Plug	11/13/2017	11:31:53	COM5					PLUG AWAY
Event	18	Pump Displacement	11/13/2017	11:33:05	COM5	8.33	10.00	1570.00	121.4	FRESH H2O W/ CLAY-WEB, MMCR
Event	19	Slow Rate	11/13/2017	11:44:59	USER	8.33	4.00	2132.00	111.0	PRESSURE PRIOR TO SLOW WAS 2860PSI
Event	20	Bump Plug	11/13/2017	11:47:12	COM5	8.33	4.00	3246.00	121.4	PLUG BUMPED AT CALCULATED DISPLACEMENT, PRESSURE UP TO 3300PSI FOR A 10 MIN CASING TEST.
Event	21	Check Floats	11/13/2017	11:56:37	COM5					FLAOTS HELD, GAINED 1.5 BBL BACK TO PIT.
Event	22	End Job	11/13/2017	11:58:10	COM5					
Event	23	Post-Job Safety Meeting (Pre Rig-Down)	11/13/2017	12:15:00	USER					
Event	24	Rig-Down Equipment	11/13/2017	12:30:00	USER					GOOD CIRCULATION THROUGHOUT JOB. PIPE WAS LEFT STATIC. CIRCULATED 40 BBL TUNED SPACER BACK TO SURFACE. NO ADD HOURS CHARGED, 40 # SUGAR USED.
Event	25	Pre-Convoy Safety Meeting	11/13/2017	13:15:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENTING OF GRAND JUNCTION, CO
Event	26	Crew Leave Location	11/13/2017	13:30:00	USER					ANTHONY ANDREWS AND CREW



# LARAMIE ENERGY - BRUTON 30-11W - 4 1/2" PRODUCTION



— DH Density (ppg)   
 — Comb Pump Rate (bbl/min)   
 — PS Pump Press (psi)   
 — Pump Stg Tot (bbl)

- |   |                          |                     |   |
|---|--------------------------|---------------------|---|
| 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 Pump Spacer 1          | 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     |   |

▼ **HALLIBURTON** | iCem® Service

Created: 2017-11-13 08:50:42, Version: 4.2.393

Edit

Customer : LARAMIE ENERGY LLC-EBUS

Job Date : 11/13/2017 8:52:05 AM

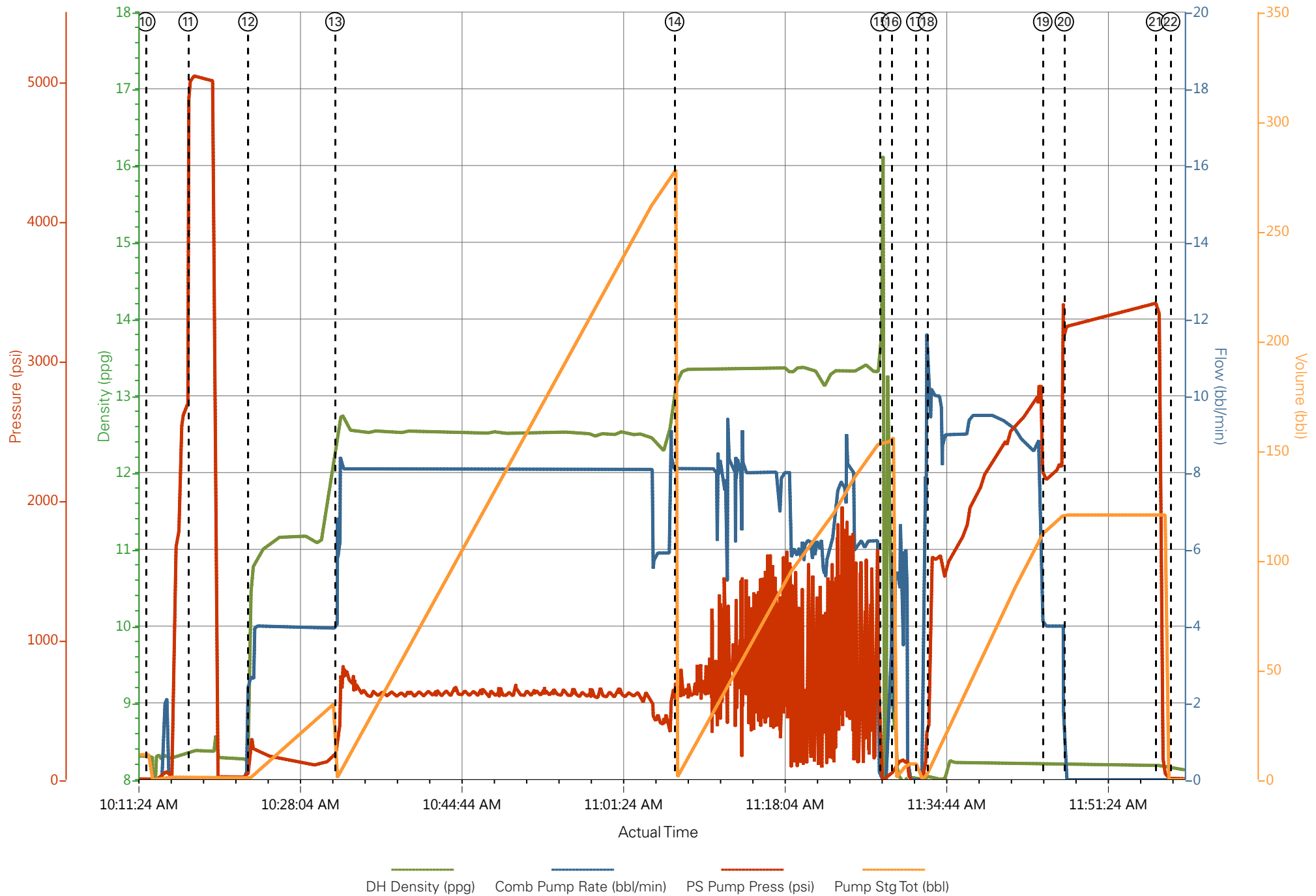
Well : BRUTON 30-11W

Representative : TYLER HALE

Sales Order # : 904434070

ELITE 2 : RYAN MARTIN/ ANTHONY ANDREWS

# LARAMIE ENERGY - BRUTON 30-11W - 4 1/2" PRODUCTION



### Job Information

<b>Request/Slurry</b>	2427828/1	<b>Rig Name</b>	H&P 522	<b>Date</b>	01/NOV/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 30-11W

### Well Information

<b>Casing/Liner Size</b>	4.5 in	<b>Depth MD</b>	7947 ft	<b>BHST</b>	114°C / 237°F
<b>Hole Size</b>	7.875 in	<b>Depth TVD</b>	7644 ft	<b>BHCT</b>	77°C / 170°F
<b>Pressure</b>	4651 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		

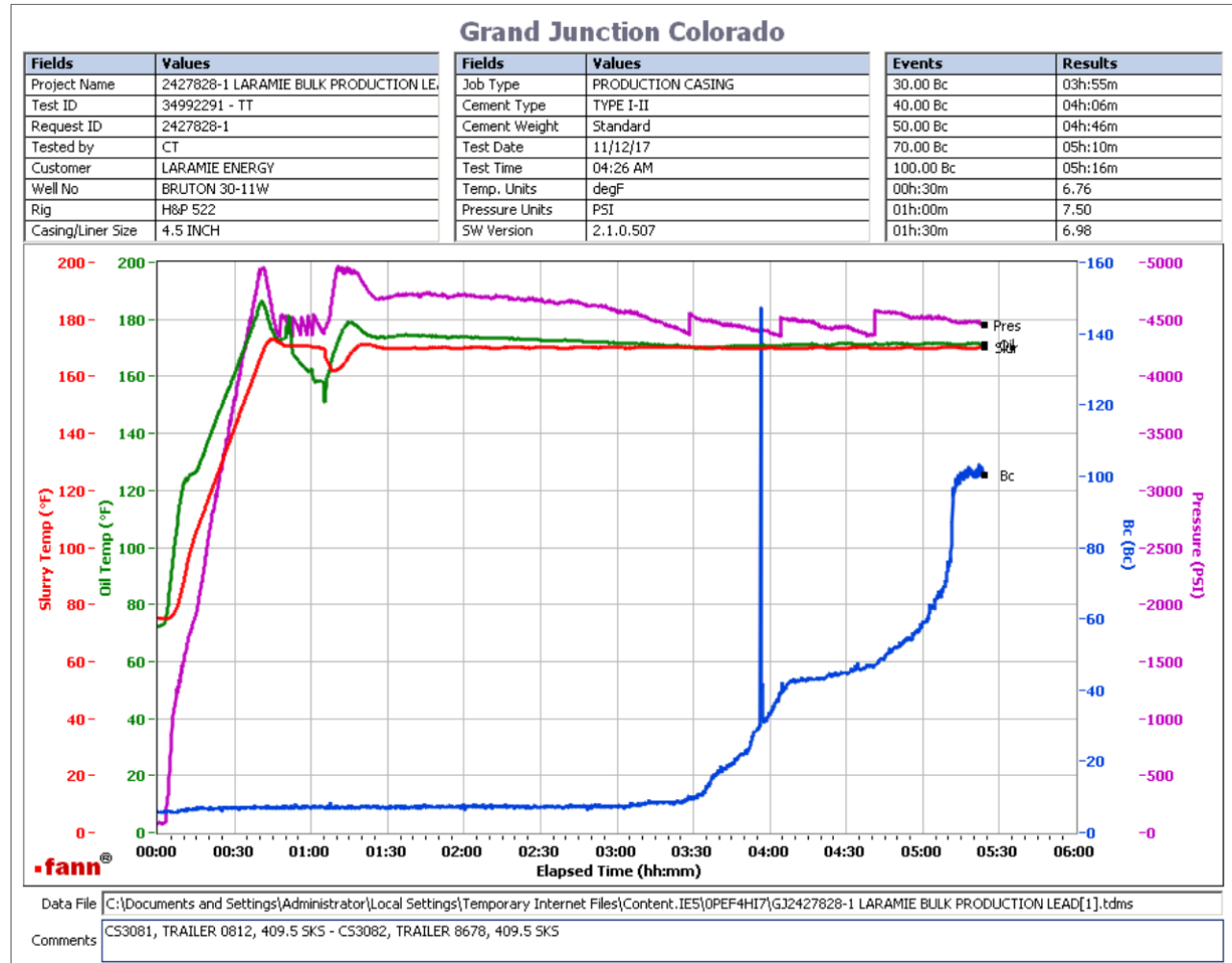
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# **Operation Test Results Request ID 2427828/1**

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

**12/NOV/2017**

Test Temp (degF)	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	4651	40	3:55	4:46	5:10	5:16	6	50	15	7



Total sks = 819

CS3081, Trailer 0812, 409.5 sks

CS3082, Trailer 8678, 409.5 sks

no deflection was recorded on the graph. 7Bc--- > 7Bc

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# HALLIBURTON

## Rockies, Grand Junction

## Lab Results- Tail

### Job Information

<b>Request/Slurry</b>	2427829/1	<b>Rig Name</b>	H&P 522	<b>Date</b>	01/NOV/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 30-11W

### Well Information

<b>Casing/Liner Size</b>	4.5 in	<b>Depth MD</b>	7947 ft	<b>BHST</b>	114°C / 237°F
<b>Hole Size</b>	7.875 in	<b>Depth TVD</b>	7644 ft	<b>BHCT</b>	77°C / 170°F
<b>Pressure</b>	4651 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		

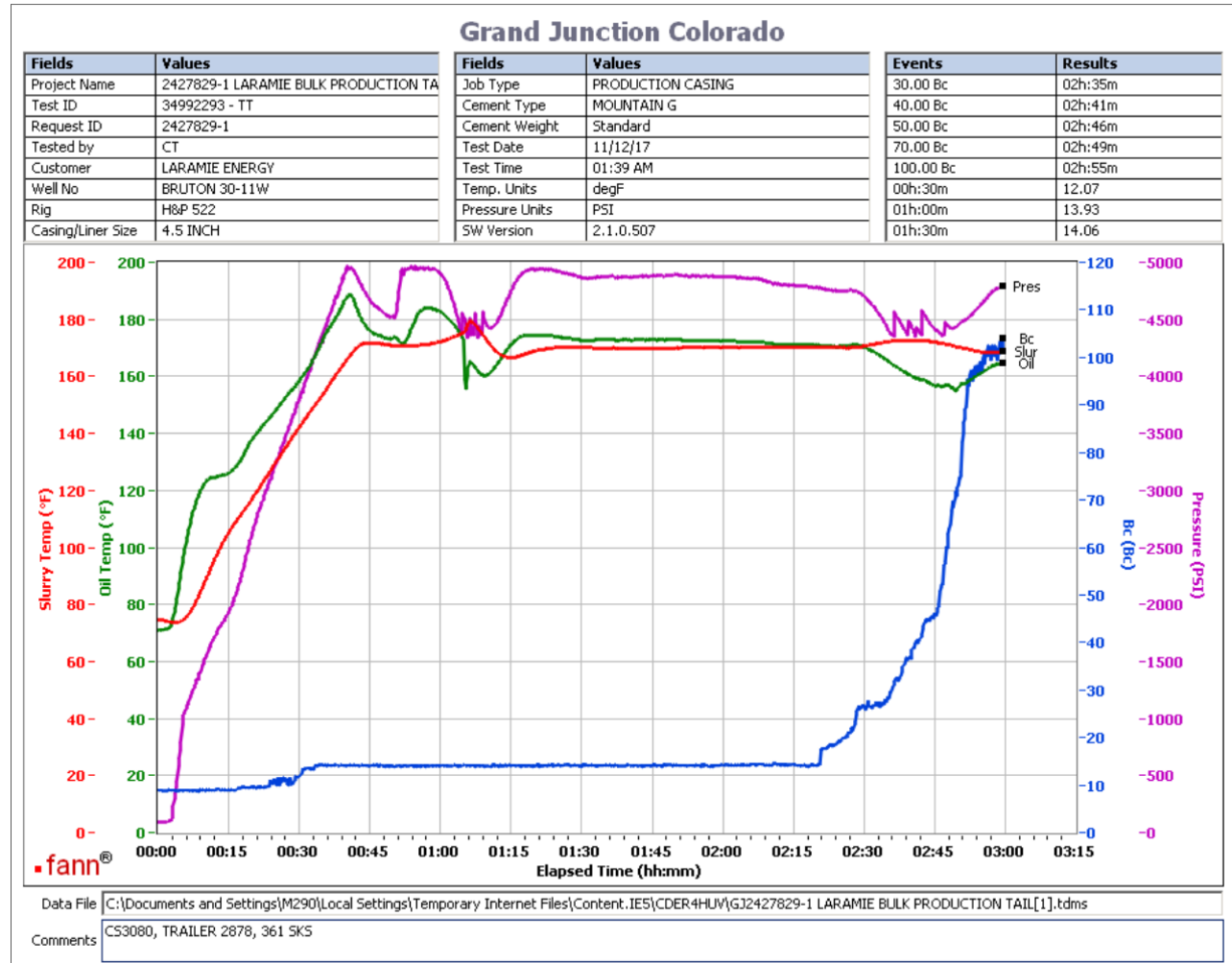
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# Operation Test Results Request ID 2427829/1

## Thickening Time - ON-OFF-ON

12/NOV/2017

Test Temp (degF)	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	4651	40	2:35	2:46	2:49	2:55	9	50	15	14



Total sks = 461

CS3080, Trailer 2878, 361 sks

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

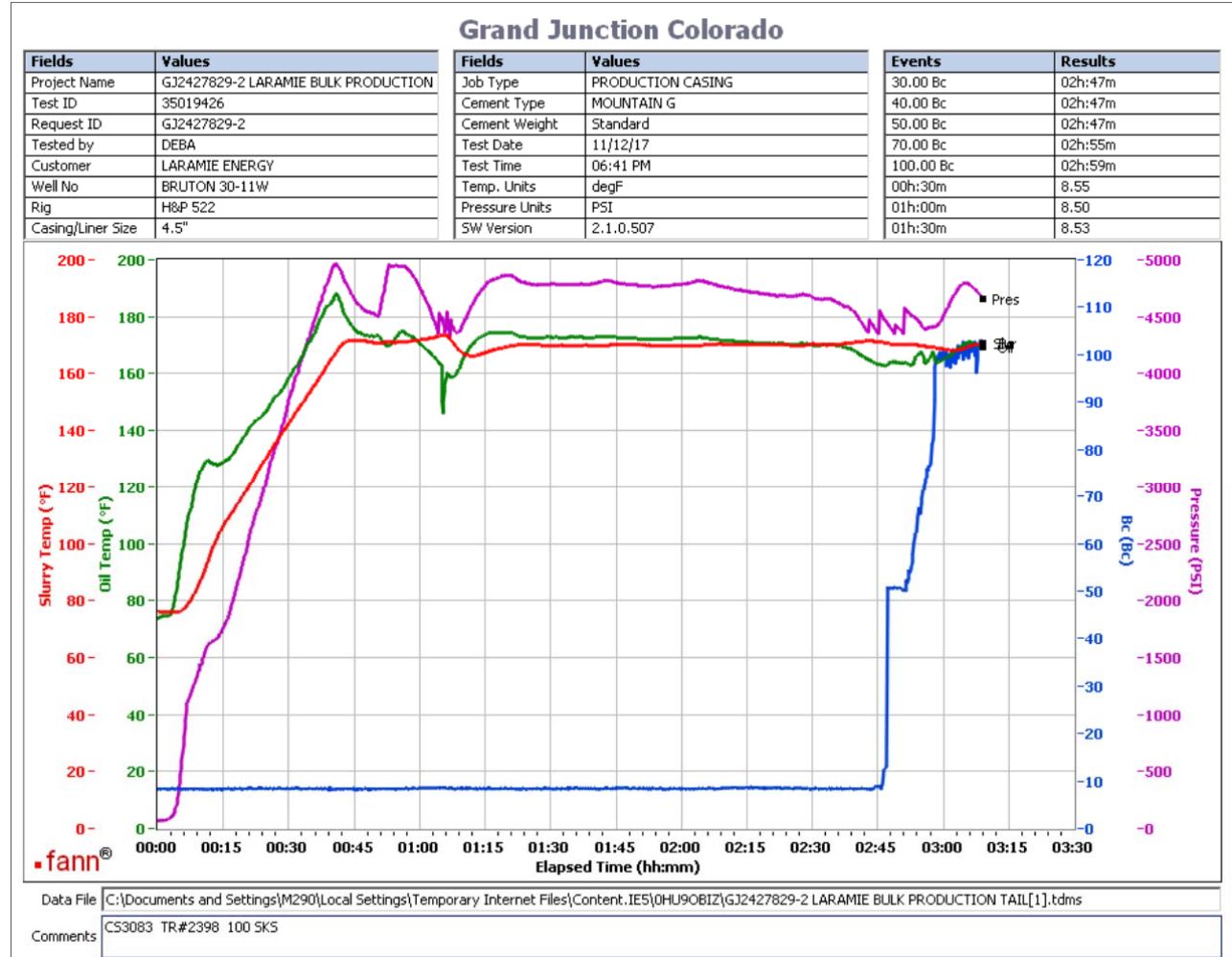
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# **Operation Test Results Request ID 2427829/2**

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

**12/NOV/2017**

Test Temp (degF)	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	4651	40	2:47	2:47	2:55	2:59	8	50	15	8



Total sks = 461

CS3083 TR#2398 100 SKS

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

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