

# HALLIBURTON

iCem<sup>®</sup> Service

## **LARAMIE ENERGY LLC-EBUS**

**For: Laramie**

Date: Thursday, December 28, 2017

**BRUTON 30 -16E Surface**

API# 05-077-10479

Sincerely,

**Grand Junction Cement Engineering**

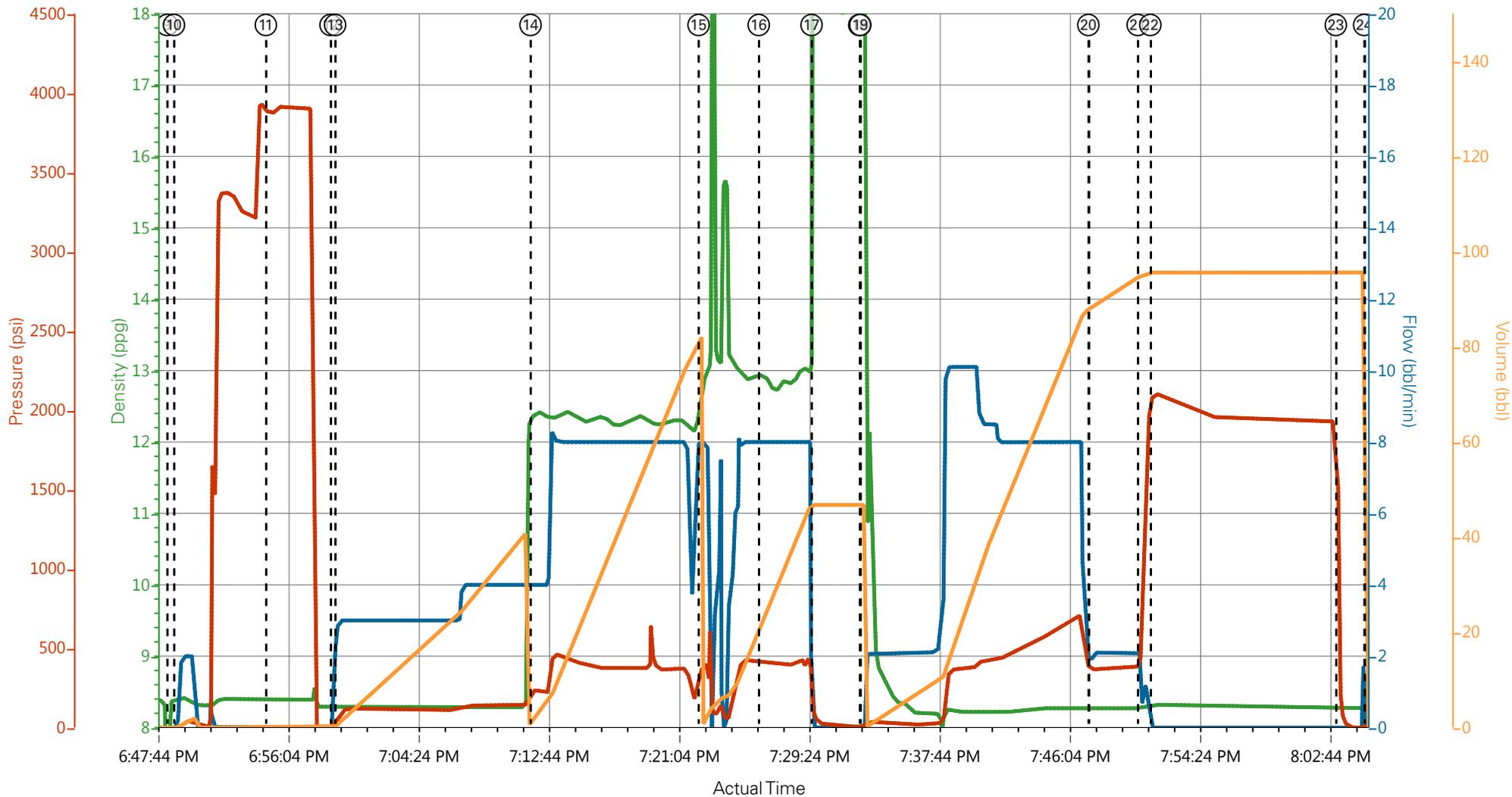
## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	12/28/2017	12:30:00	USER					
Event	2	Pre-Convoy Safety Meeting	12/28/2017	15:00:00	USER					JSA COMPLETE
Event	3	Crew Leave Yard	12/28/2017	15:10:00	USER					
Event	4	Arrive at Loc	12/28/2017	17:00:00	USER					RIG FINISHING UP RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	12/28/2017	17:10:00	USER					JSA COMPLETE
Event	6	Pre-Rig Up Safety Meeting	12/28/2017	17:20:00	USER					
Event	7	Rig-Up Equipment	12/28/2017	17:30:00	USER					1 ELITE, 1 660
Event	8	Pre-Job Safety Meeting	12/28/2017	18:30:00	USER					JSA COMPLETE
Event	9	Start Job	12/28/2017	18:48:30	COM5					8 5/8 24# J-55, TP-1556, TD-1567, S.J.-43.83, HOLE-11
Event	10	Prime Pumps	12/28/2017	18:48:56	COM5					FRESH WATER
Event	11	Pressure Test	12/28/2017	18:54:49	USER	8.33	0.00	3951	0.0	TESTED TO 3951 PSI, TEST GOOD
Event	12	Pump Spacer 1	12/28/2017	18:58:57	COM5	8.33	4.0	110	40	FRESH WATER
Event	13	Drop Bottom Plug	12/28/2017	18:59:15	USER					AWAY
Event	14	Pump Lead Cement	12/28/2017	19:11:45	COM5	12.30	8.00	370	86.6	197 SKS, 12.3 PPG, 2.46 FT3/SK, 14.17 GAL/SK
Event	15	Pump Tail Cement	12/28/2017	19:22:31	COM5	12.80	8.00	410	42.3	109 SKS, 12.8 PPG, 2.18 FT3/SK, 12.11 GAL/SK, KICK OUT HIT TOWARDS THE END OF TAIL CMT, PSI WAS ONLY AT 600, RESET KICKOUTS TO 1300 PSI.
Event	16	Check weight	12/28/2017	19:26:22	COM5	12.80				GOOD

Event	17	Shutdown	12/28/2017	19:29:44	COM5					TO DROP TOP PLUG
Event	18	Drop Top Plug	12/28/2017	19:32:48	COM5					AWAY
Event	19	Pump Displacement	12/28/2017	19:32:52	COM5	8.33	8.5	710	96.1	FRESH WATER, 34 BBLS CMT TO SURFACE, GOOD CIRCULATION THROUGH OUT JOB, NO PIPE MOVEMENT
Event	20	SLOW RATE	12/28/2017	19:47:27	COM5	8.33	2.00	366.00	86	SLOW RATE TO BUMP PLUG
Event	21	Bump Plug	12/28/2017	19:50:37	COM5	8.33	2.00	380	96.1	PLUG BUMPED
Event	22	CASING TEST	12/28/2017	19:51:25	USER			2104		TESTED CASING TO 2104 PSI FOR 10 MIN
Event	23	Check Floats	12/28/2017	20:03:17	USER					FLOATS HELD 0.5 BBLS BACK TO TRUCK
Event	24	End Job	12/28/2017	20:05:06	COM5					
Event	25	Post-Job Safety Meeting (Pre Rig-Down)	12/28/2017	20:15:00	USER					JSA COMPLETE
Event	26	Rig Down Lines	12/28/2017	20:40:00	USER					
Event	27	Pre-Convoy Safety Meeting	12/28/2017	21:40:00	USER					
Event	28	Crew Leave Location	12/28/2017	21:45:00	USER					THANK YOU FOR USING HALLIBURTON CEMENT, JAMES LEIST AND CREW

# LARAMIE - BRUTON 30-16E - 8 5/8 SURFACE



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

- |   |                          |                    |                     |   |
|---|--------------------------|--------------------|---------------------|---|
| ① Call Out                              | ⑦ Rig-Up Equipment       | ⑬ Drop Bottom Plug | ⑰ Pump Displacement | 25 Post-Job Safety Meeting (Pre Rig-Down) |
| ② Pre-Convoy Safety Meeting             | ⑧ Pre-Job Safety Meeting | ⑭ Pump Lead Cement | 20 SLOW RATE        | 26 Rig Down Lines                         |
| ③ Crew Leave Yard                       | ⑨ Start Job              | ⑮ Pump Tail Cement | 21 Bump Plug        | 27 Pre-Convoy Safety Meeting              |
| ④ Arrive at Loc                         | ⑩ Prime Pumps            | ⑯ Check weight     | 22 CASING TEST      | 28 Crew Leave Location                    |
| ⑤ Assessment Of Location Safety Meeting | ⑪ Pressure Test          | ⑱ Shutdown         | 23 Check Floats     |   |
| ⑥ Pre-Rig Up Safety Meeting             | ⑫ Pump Spacer 1          | ⑲ Drop Top Plug    | 24 End Job          |   |

▼ HALLIBURTON | iCem® Service

Created: 2017-12-28 17:49:54, Version: 4.2.393

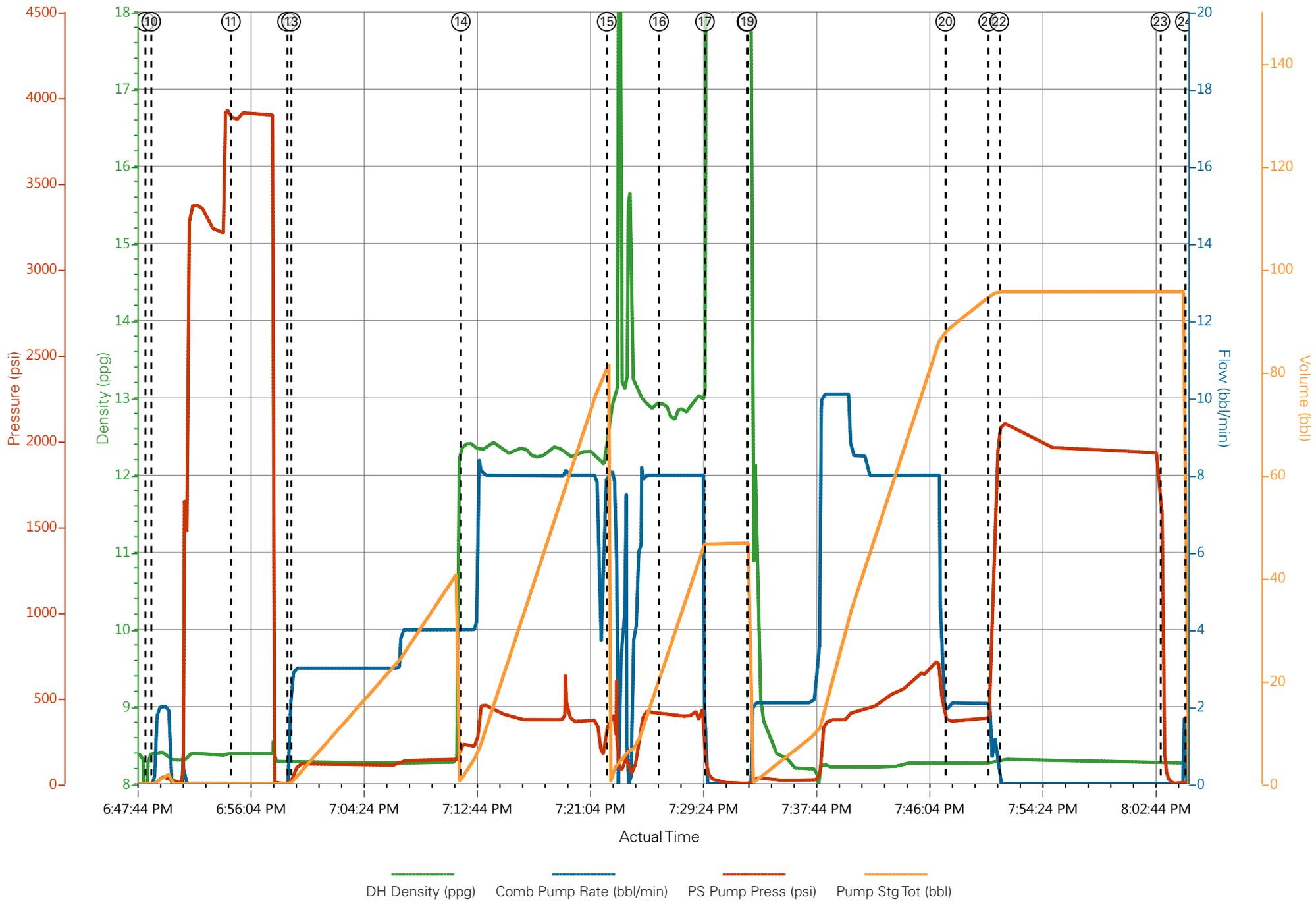
Edit

Customer : LARAMIE ENERGY LLC-EBUS  
 Representative : SHANE HEARD

Job Date : 12/28/2017 5:53:30 PM  
 Sales Order # : 904530026

Well : BRUTON 30 -16E  
 ELITE 1 : WES GOWEN/ LEIST

# LARAMIE - BRUTON 30-16E - 8 5/8 SURFACE



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

# HALLIBURTON

iCem<sup>®</sup> Service

## **LARAMIE ENERGY LLC-EBUS**

**For: Laramie**

Date: Sunday, December 31, 2017

## **BRUTON 30-16E Production**

API# 05-077-10479

Sincerely,

**Grand Junction Cement Engineering**

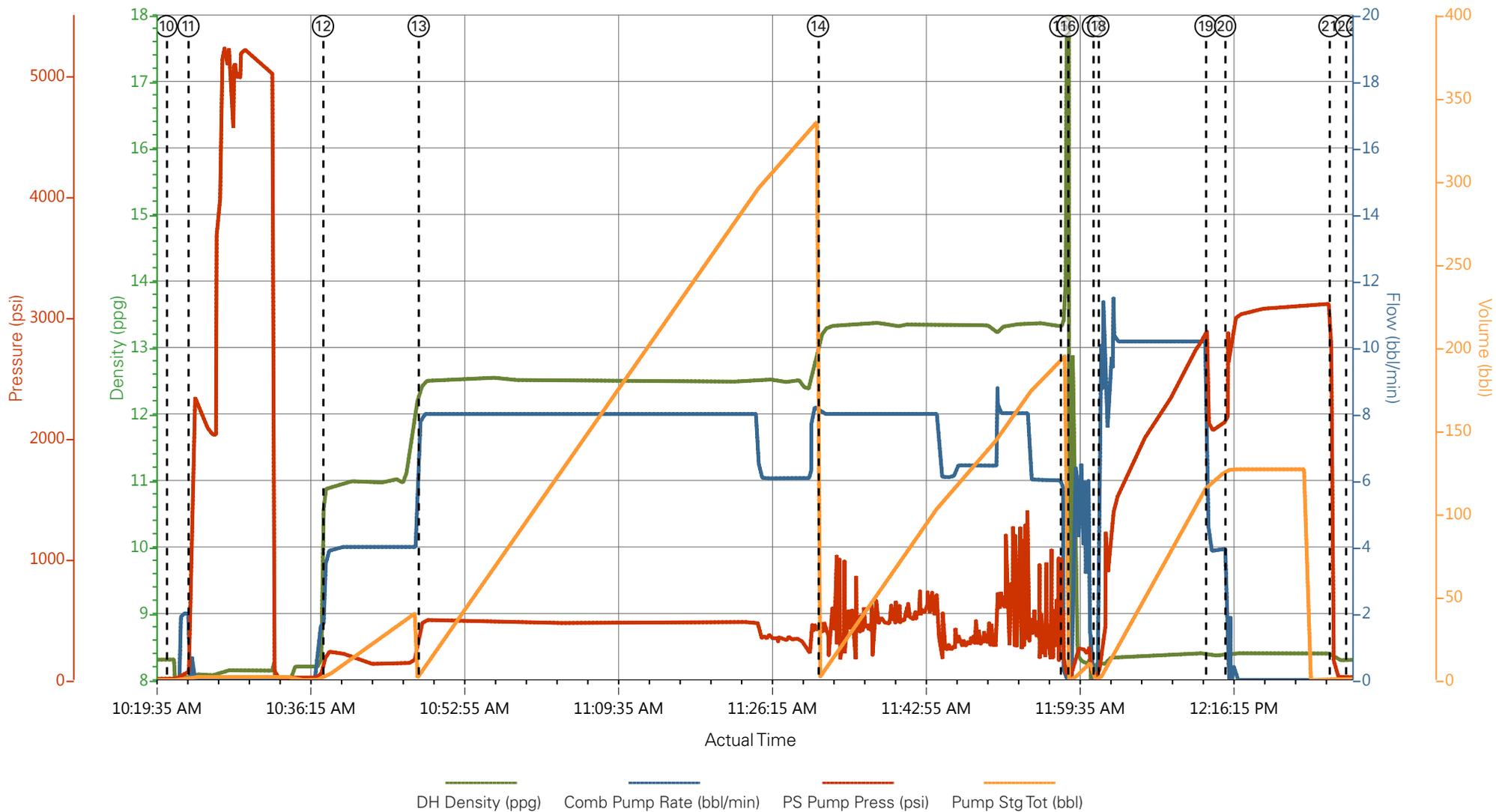
## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	12/31/2017	03:30:00	USER					
Event	2	Pre-Convoy Safety Meeting	12/31/2017	06:15:00	USER					
Event	3	Crew Leave Yard	12/31/2017	06:30:00	USER					
Event	4	Arrive At Loc	12/31/2017	08:30:00	USER					CREW ARRIVED 1 HOUR EARLY, RIG WAS ALMOST ON BOTTOM WITH CASING
Event	5	Assessment Of Location Safety Meeting	12/31/2017	08:35:00	USER					
Event	6	Other	12/31/2017	08:40:00	USER					
Event	7	Pre-Rig Up Safety Meeting	12/31/2017	08:45:00	USER					
Event	8	Rig-Up Equipment	12/31/2017	08:50:00	USER					
Event	9	Pre-Job Safety Meeting	12/31/2017	09:50:00	USER					
Event	10	Start Job	12/31/2017	10:21:00	COM5					TD: 7939 TP: 7929 SJ: 78.6 MW: 9.3PPG 4 1/2" 11.6#/FT CSG IN 7 7/8" OH WATER TEST: PH: 7 POTASSIUM: 700 CHLORIDES: 0 SULFATES: <200 TEMP: 58 DEGREES
Event	11	Test Lines	12/31/2017	10:23:23	COM5	8.33	0.00	5000.00	2.0	5000 PSI TEST
Event	12	Pump Spacer 1	12/31/2017	10:37:58	COM5	11.00	4.00	230.00	4.0	TUNED SPACER III @ 11.0 PPG
Event	13	Pump Lead Cement	12/31/2017	10:48:20	COM5	12.50	8.00	479.00	283.7	821 SKS @ 12.5PPG 1.94 YLD 9.6 GAL/SK H2O
Event	14	Pump Tail Cement	12/31/2017	11:31:35	COM5	13.30	8.00	463.00	142.0	461 SKS @ 13.3PPG 1.73 YLD 7.81 GAL/SK H2O
Event	15	Shutdown	12/31/2017	11:57:50	COM5					
Event	16	Clean Lines	12/31/2017	11:58:39	COM5					

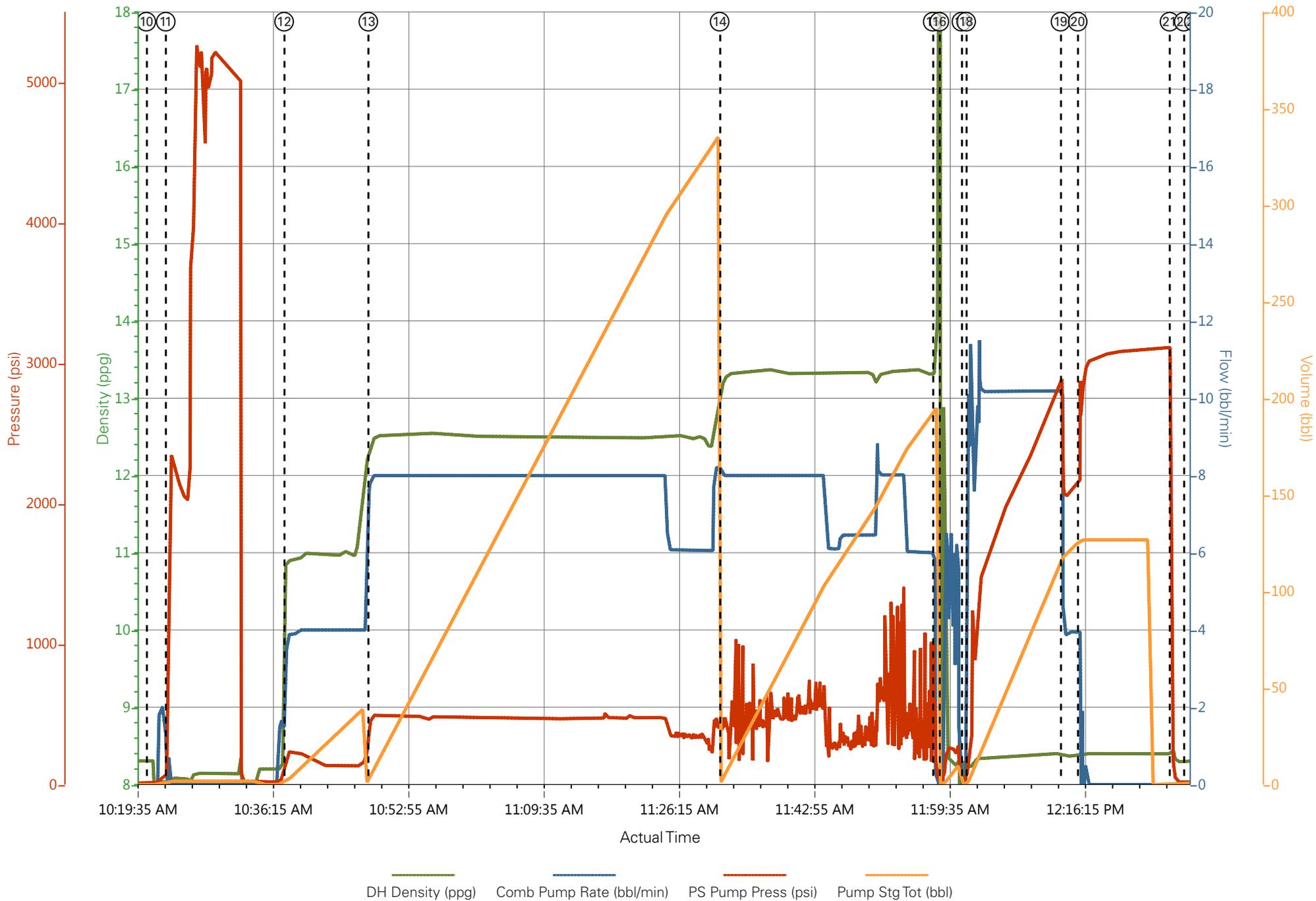
Event	17	Drop Top Plug	12/31/2017	12:01:22	USER					PLUG AWAY
Event	18	Pump Displacement	12/31/2017	12:01:57	COM5	8.33	10.00	1740.00	121.7	FRESH H2O DISPLACEMENT W/ CLAY-WEB, MMCR
Event	19	Slow Rate	12/31/2017	12:13:34	USER	8.33	4.00	2102.00	111.0	
Event	20	Bump Plug	12/31/2017	12:15:41	COM5	8.33	4.00	3020.00	121.7	PLUG BUMPED AT CALCULATED DISPLACEMENT, FINAL CIRCULATING PRESSURE WAS 2150 PSI. UPON BUMPING, PRESSURED UP TO 3000 PSI FOR A 10 MINUTE CASING TEST.
Event	21	Release Casing Pressure	12/31/2017	12:27:00	USER					RELEASE PRESSURE/ CHECK FLOATS. FLOATS HELD, GAINED 1 1/2 BBL BACK TO PUMP.
Event	22	End Job	12/31/2017	12:28:45	COM5					
Event	23	Post-Job Safety Meeting (Pre Rig-Down)	12/31/2017	12:30:00	USER					GOOD CIRCULATION THROUGHOUT JOB. PIPE WAS LEFT STATIC THROUGHOUT JOB. NO ADD HOURS CHARGED. 20# SUGAR USED. CIRCULATED 40 BBL SPACER TO SURFACE.
Event	24	Rig-Down Equipment	12/31/2017	12:45:00	USER					
Event	25	Pre-Convoy Safety Meeting	12/31/2017	13:15:00	USER					
Event	26	Crew Leave Location	12/31/2017	13:30:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENTING OF GRAND JCT, CO ANTHONY ANDREWS AND CREW

# LARAMIE ENERGY - BRUTON 30-16E - 4 1/2" PRODUCTION



- |   |                          |                            |   |
|---|--------------------------|----------------------------|---|
| 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          | 20 Bump Plug               | 26 Crew Leave Location                    |
| ⑥ Other                                 | ⑬ Pump Lead Cement       |                            |   |
| ⑦ Pre-Rig Up Safety Meeting             | ⑭ Pump Tail Cement       | 21 Release Casing Pressure |   |

# LARAMIE ENERGY - BRUTON 30-16E - 4 1/2" PRODUCTION



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

### Job Information

<b>Request/Slurry</b>	2441050/1	<b>Rig Name</b>	H&P 522	<b>Date</b>	27/DEC/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 30-16E

### Well Information

<b>Casing/Liner Size</b>	4.5 in	<b>Depth MD</b>	7964 ft	<b>BHST</b>	116°C / 240°F
<b>Hole Size</b>	7.875 in	<b>Depth TVD</b>	7738 ft	<b>BHCT</b>	78°C / 172°F
<b>Pressure</b>	4717 psi				

### Drilling Fluid Information

<b>Mud Supplier Name</b>		<b>Mud Trade Name</b>		<b>Density</b>	9.5 lbm/gal
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### Cement Information - Lead Design

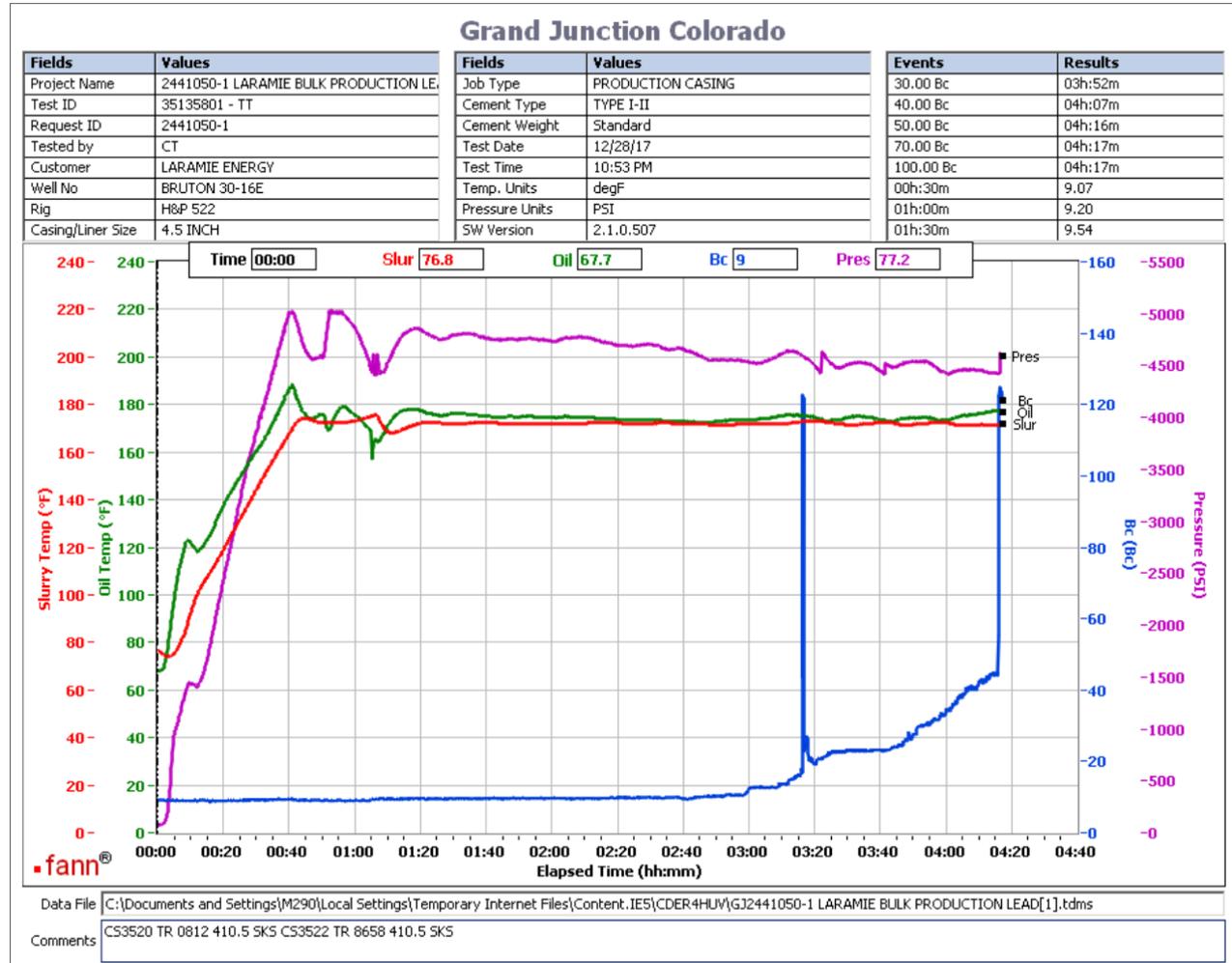
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	<b>Cement Properties</b>		
		NeoCem Lead				Slurry Density	12.5	lbm/gal
						Slurry Yield	1.941	ft3/sack
						Water Requirement	9.623	gal/sack
						Total Mix Fluid	9.623	gal/sack
						Water Source	Fresh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

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Thickening Time - ON-OFF-ON

28/DEC/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)
172	4717	40	3:52	4:16	4:17	4:17	9	50	15	9



Total sks = 821  
 Composite:  
 CS3520 TR 0812 410.5 SKS  
 CS3522 TR 8658 410.5 SKS  
 Deflection: 9 - 9

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### Job Information

<b>Request/Slurry</b>	2441051/1	<b>Rig Name</b>	H&P 522	<b>Date</b>	27/DEC/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 30-16E

### Well Information

<b>Casing/Liner Size</b>	4.5 in	<b>Depth MD</b>	7964 ft	<b>BHST</b>	116°C / 240°F
<b>Hole Size</b>	7.875 in	<b>Depth TVD</b>	7738 ft	<b>BHCT</b>	78°C / 172°F
<b>Pressure</b>	4717 psi				

### Drilling Fluid Information

<b>Mud Supplier Name</b>		<b>Mud Trade Name</b>		<b>Density</b>	9.5 lbm/gal
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### Cement Information - Tail Design

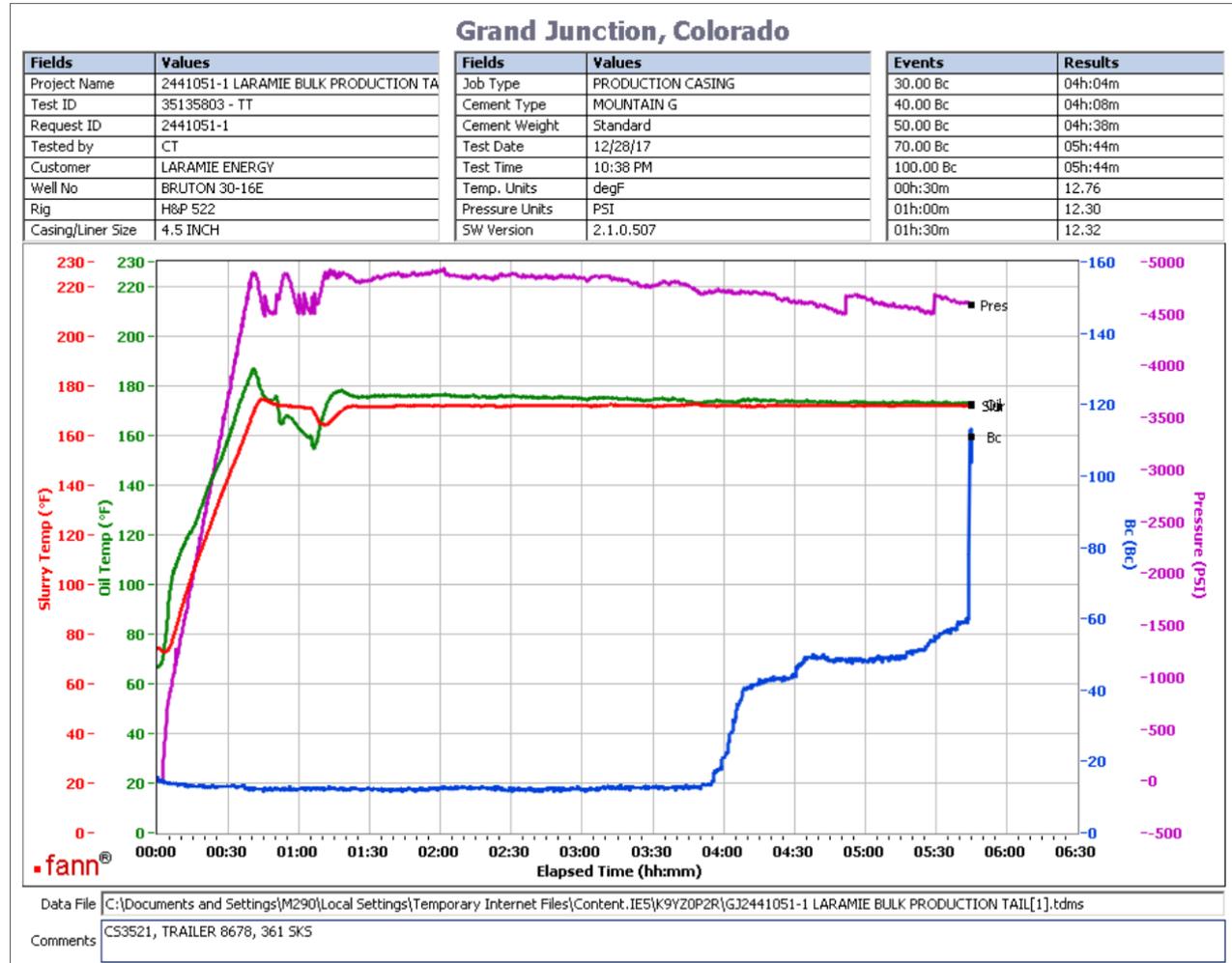
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	<u>Cement Properties</u>		
		ThermaCem Tail				Slurry Density	13.3	lbm/gal
						Slurry Yield	1.733	ft3/sack
						Water Requirement	7.799	gal/sack
						Total Mix Fluid	7.799	gal/sack
						Water Source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

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Thickening Time - ON-OFF-ON

28/DEC/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)
172	4717	40	4:04	4:38	5:44	5:44	16	50	15	12



Total sks = 461  
 CS3521, Trailer 8678, 361 sks  
 Deflection; 12 – 12

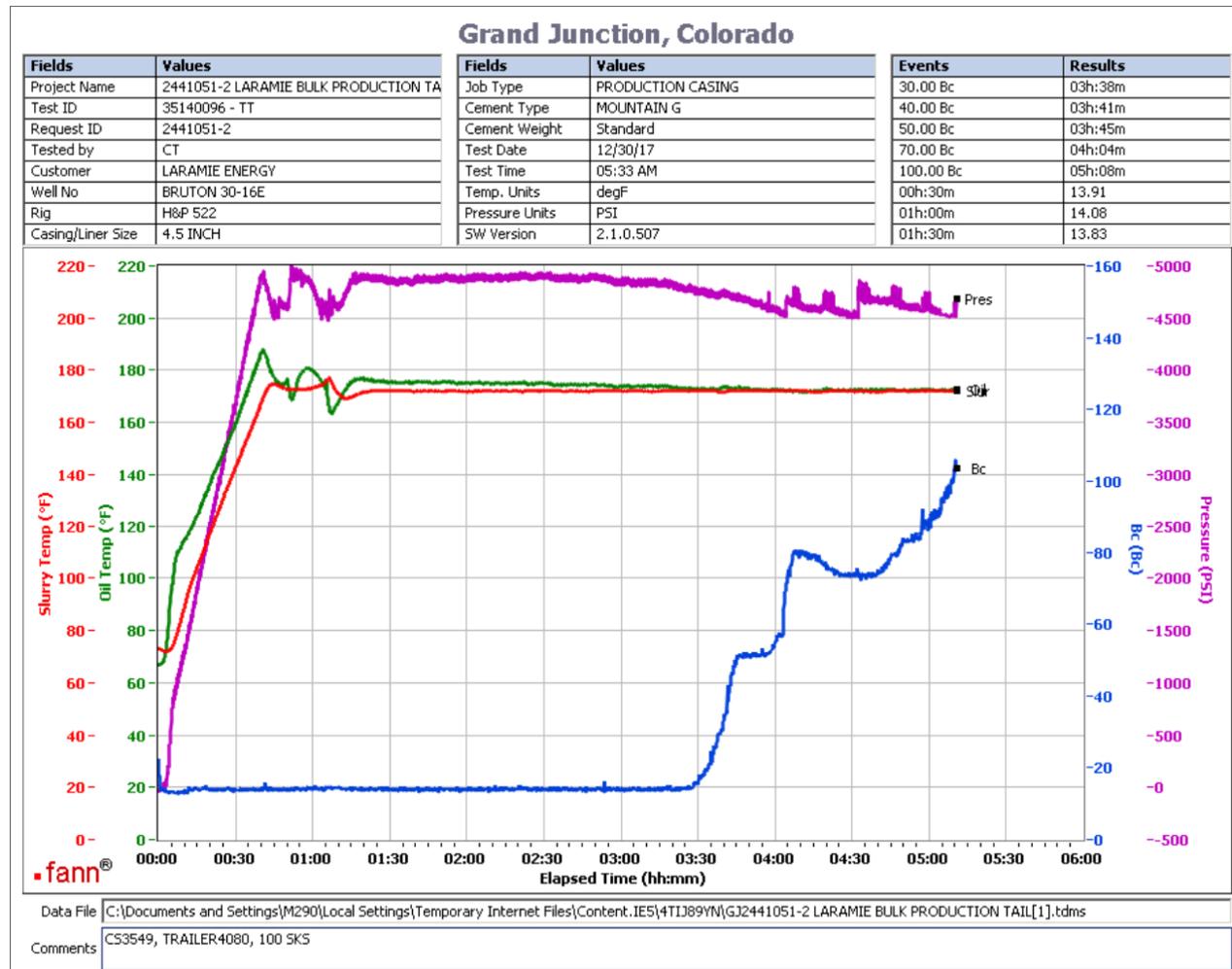
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**Operation Test Results Request ID 2441051/2**

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

**30/DEC/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)
172	4717	40	3:38	3:45	4:04	5:08	22	50	15	17



Total sks = 461  
 CS3549, Trailer 4080, 100 sks  
 Deflection: 17 - 17

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