

# HALLIBURTON

iCem<sup>®</sup> Service

## **LARAMIE ENERGY LLC-EBUS**

**For: Laramie**

Date: Tuesday, November 14, 2017

## **Bruton 30-12W Surface PJR**

API# 05-077-10461-00

Sincerely,

**Grand Junction Cement Engineering**

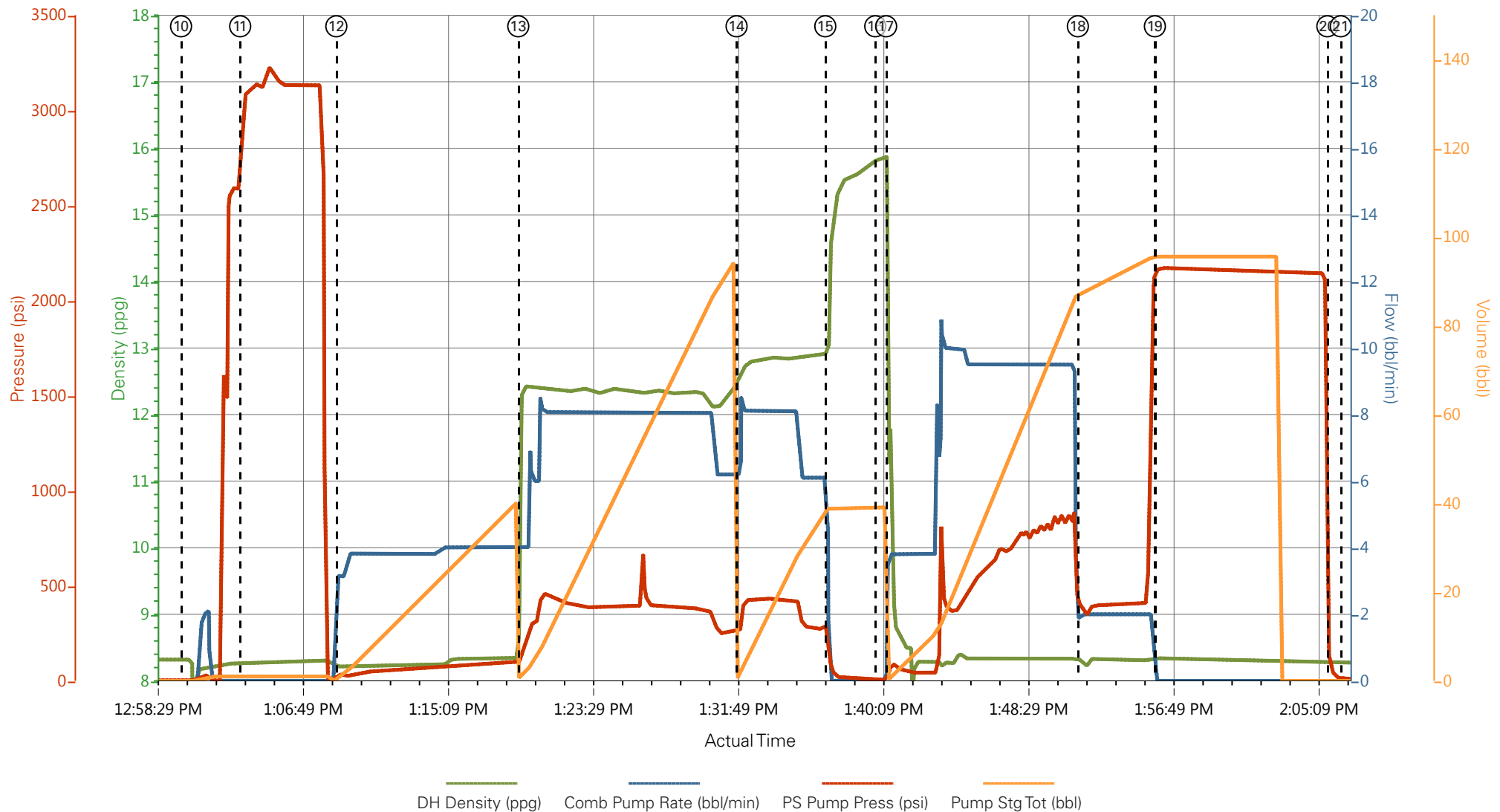
## 1.0 Real-Time Job Summary

## 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	11/14/2017	06:00:00	USER					
Event	2	Pre-Convoy Safety Meeting	11/14/2017	08:45:00	USER					
Event	3	Crew Leave Yard	11/14/2017	09:00:00	USER					
Event	4	Arrive At Loc	11/14/2017	10:15:00	USER					
Event	5	Assessment Of Location Safety Meeting	11/14/2017	10:20:00	USER					
Event	6	Spot Equipment	11/14/2017	10:25:00	USER					
Event	7	Pre-Rig Up Safety Meeting	11/14/2017	10:30:00	USER					
Event	8	Rig-Up Equipment	11/14/2017	10:35:00	USER					
Event	9	Pre-Job Safety Meeting	11/14/2017	12:30:00	USER					
Event	10	Start Job	11/14/2017	13:00:00	COM5					TD: 1568 TP: 1558 SJ: 44.67 MW: 9.1 8 5/8" 24#/FT CSG IN 11" OH WATER TEST: PH: 6.5 POTASSIUM: 700 CHLORIDES: 0 SULFATES: <200 TEMP: 58 DEG
Event	11	Test Lines	11/14/2017	13:03:23	COM5	8.33	0.00	3033.00	2.0	3000 PSI TEST
Event	12	Pump Spacer 1	11/14/2017	13:08:55	COM5	8.33	4.00	78.00	40.0	FRESH H2O SPACER
Event	13	Pump Lead Cement	11/14/2017	13:19:22	COM5	12.30	8.00	410.00	85.4	197 SKS @ 12.3 PPG 2.46 YLD 14.17 GAL/SK H2O
Event	14	Pump Tail Cement	11/14/2017	13:31:54	COM5	12.80	8.00	475.00	1.6	109 SKS @ 12.8 PPG 2.18 YLD 12.11 GAL/SK H2O

Event	15	Shutdown	11/14/2017	13:37:00	USER					
Event	16	Drop Top Plug	11/14/2017	13:39:52	COM5					PLUG AWAY
Event	17	Pump Displacement	11/14/2017	13:40:29	COM5	8.33	10.00	775.00	96.2	FRESH H2O DISPLACEMENT
Event	18	Slow Rate	11/14/2017	13:51:30	USER	8.33	2.00	392.00	86.0	
Event	19	Bump Plug	11/14/2017	13:55:55	COM5	8.34	2.00	2167.00	96.2	PLUG BUMPED AT CALCULATED DISPLACEMENT, PRESSURE UP TO 2170 PSI FOR A 10 MIN CASING TEST.
Event	20	Check Floats	11/14/2017	14:05:50	COM5					FLOATS HELD, GAINED 1 BBL BACK TO PUMP TRUCK.
Event	21	End Job	11/14/2017	14:06:36	COM5					
Event	22	Post-Job Safety Meeting (Pre Rig-Down)	11/14/2017	14:10:00	USER					GOOD CIRCULATION THROUGHOUT JOB. PIPE WAS LEFT STATIC THROUGHOUT JOB. CIRCULATED 36 BBL CEMENT TO SURFACE. 40# SUGAR USED, NO ADD HOURS CHARGED.
Event	23	Rig-Down Equipment	11/14/2017	14:20:00	USER					
Event	24	Pre-Convoy Safety Meeting	11/14/2017	15:15:00	USER					
Event	25	Crew Leave Location	11/14/2017	15:30:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENTING OF GRAND JUNCTION, CO ANTHONY ANDREWS AND CREW

# LARAMIE ENERGY - BRUTON 30-12W - 8 5/8" SURFACE



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

▼ **HALLIBURTON** | iCem® Service

Created: 2017-11-14 11:18:56, Version: 4.2.393

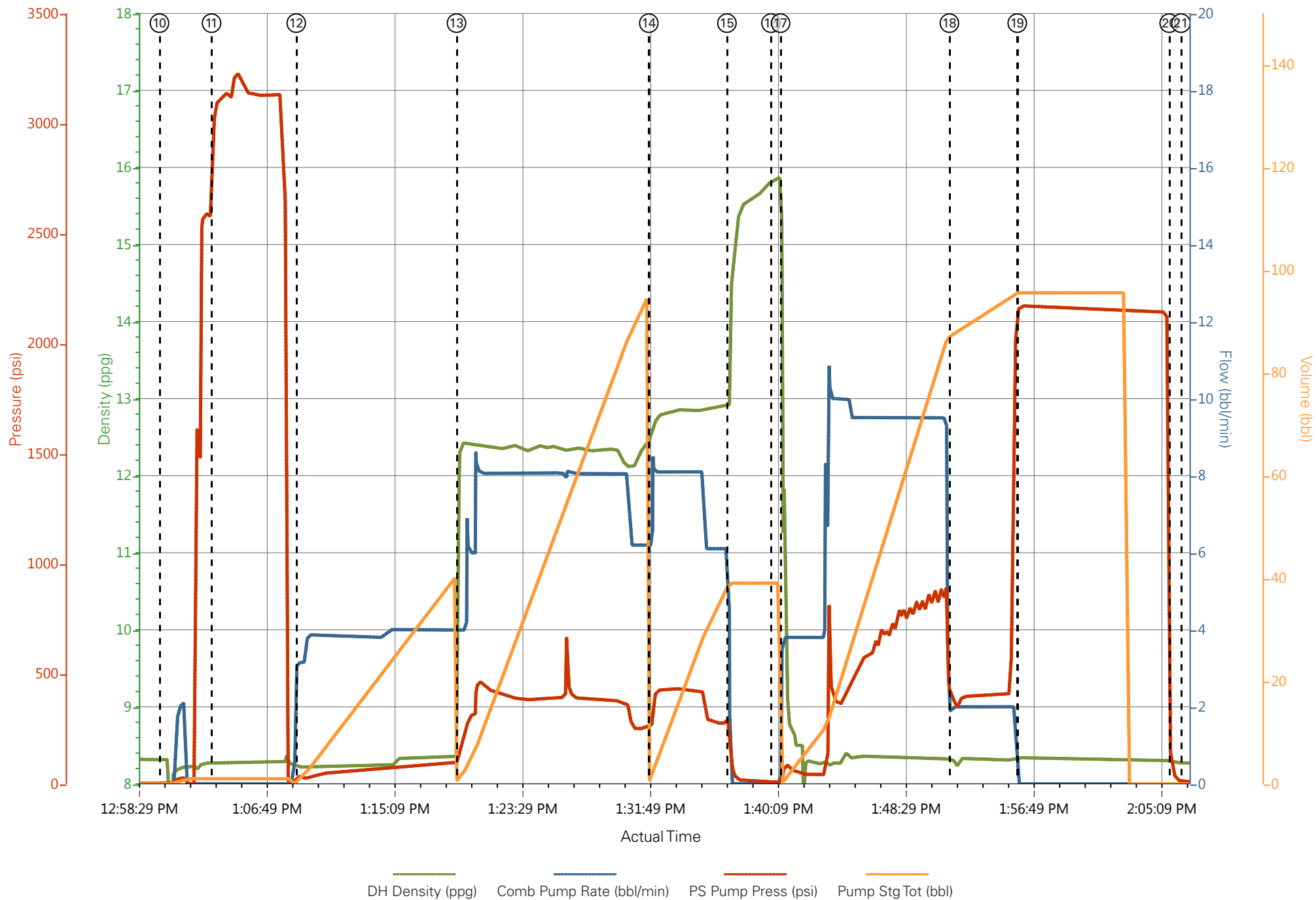
Edit

Customer : LARAMIE ENERGY LLC-EBUS  
Representative : TYLER HALE

Job Date : 11/14/2017 11:20:28 AM  
Sales Order # : 904436782

Well : BRUTON 30-12W  
ELITE 2 : RYAN MARTIN/ ANTHONY ANDREWS

# LARAMIE ENERGY - BRUTON 30-12W - 8 5/8" SURFACE



# HALLIBURTON

iCem<sup>®</sup> Service

## **LARAMIE ENERGY LLC**

**For: Laramie**

Date: Friday, November 17, 2017

## **BRUTON 30-12W Production**

API #05-077-10461-00

Sincerely,

**Grand Junction Cement Engineering**

## 1.0 Real-Time Job Summary

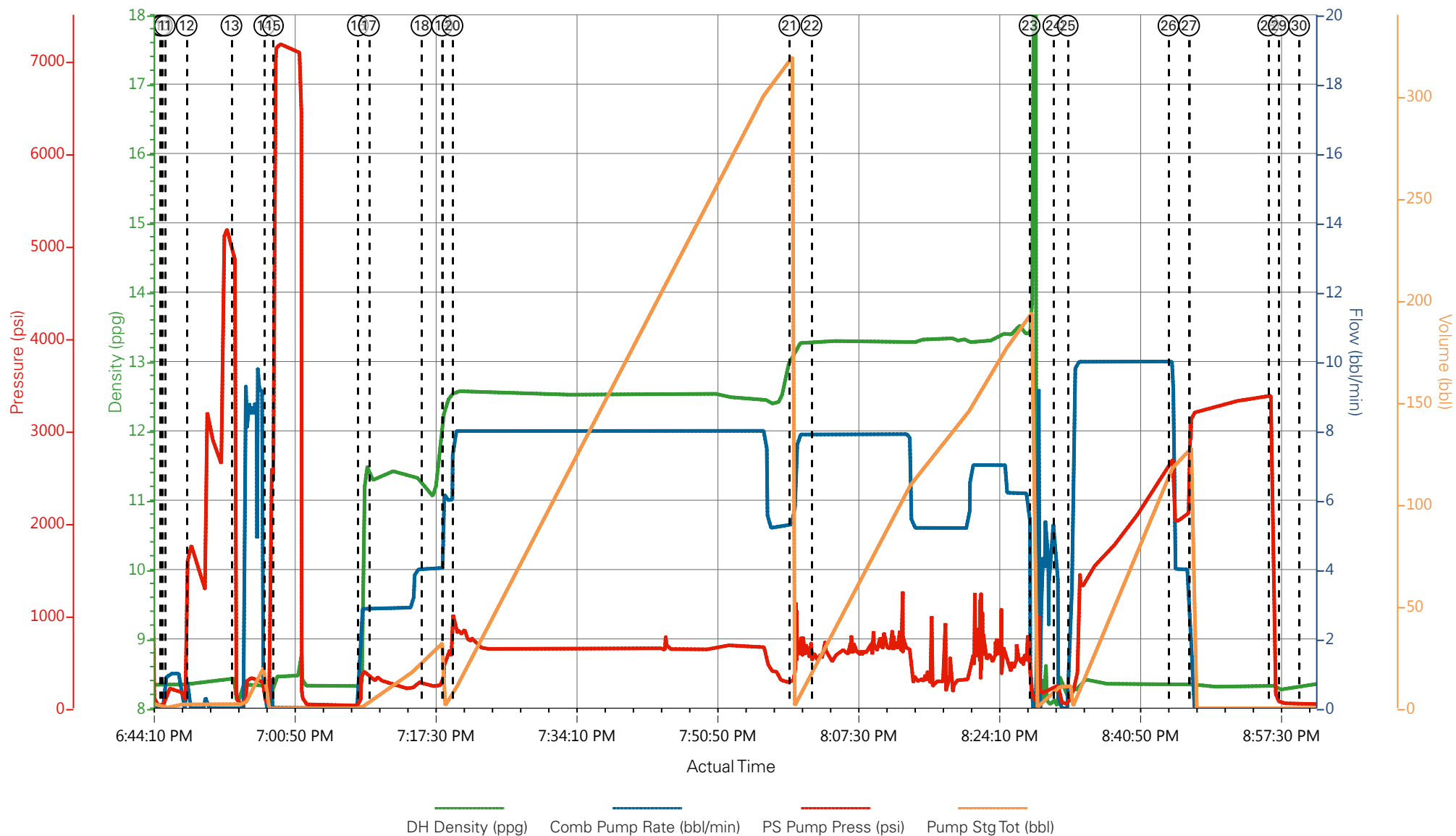
### 1.1 Job Event Log

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	11/17/2017	11:00:00	USER					REQUESTED ON LOCATION @ 17:00
Event	2	Pre-Convoy Safety Meeting	11/17/2017	13:45:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	11/17/2017	14:00:00	USER					1 HT 400 PUMP TRUCK E4, 1 660 BULK TRUCK, 1 550 SERVICE PICKUP
Event	4	Arrive At Loc	11/17/2017	16:00:00	USER					ARRIVED TO LOCATION 1 HR EARLY. RIG RUNNING CASING UPON HES ARRIVAL
Event	5	Assessment Of Location Safety Meeting	11/17/2017	16:15:00	USER					MET WITH COMP REP, AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE. COMP REP WAS OFFERED SDS FOR ALL CHEMICALS USED BY HES.
Event	6	Spot Equipment	11/17/2017	16:30:00	USER					1 HT 400 PUMP TRUCK E4, 1 660 BULK TRUCK, 1 550 SERVICE PICKUP
Event	7	Pre-Rig Up Safety Meeting	11/17/2017	16:45:00	USER					ALL HES PRESENT
Event	8	Pre-Job Safety Meeting	11/17/2017	18:00:00	USER					ALL HES EMPLOYEES AND RIG CREW PRESENT, RIG CIRCULATED @ 10 BPM PRIOR TO JOB PRESSURE @ 1050 PSI.
Event	9	Start Job	11/17/2017	18:45:16	USER					TD 7991', TP 7981' OF 4 ½" 11.6# Nexteel 80 CSG, SJ 91', SURFACE CSG 8 5/8" 24# J55 SET @ 1552', OH 7 7/8", MUD 9.2 PPG
Event	10	Drop Bottom Plug	11/17/2017	18:45:30	USER					VERIFIED BY CO. REP
Event	11	Prime Lines	11/17/2017	18:45:50	USER	8.33	1.8	265	2	FRESH WATER
Event	12	Test Lines	11/17/2017	18:48:24	COM5					PRESSURE TEST NOT WORTHY

Event	13	Other	11/17/2017	18:53:43	USER					bled off pressure to rattle inside of truck.
Event	14	Prime Lines	11/17/2017	18:57:36	USER	8.33	1.8	300	3	FRESH WATER
Event	15	Test Lines	11/17/2017	18:58:37	COM5			7000		PRESSURE HELD
Event	16	Pump Tuned Spacer III	11/17/2017	19:08:40	COM5	11.0	4.0	280	40	40 BBL TUNED SPACER III, 11 PPG, 4.86 FT3/SK, 31.9 GAL/SK
Event	17	Check weight	11/17/2017	19:09:59	COM5					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	18	Check weight	11/17/2017	19:16:11	COM5					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	19	Pump Lead Cement	11/17/2017	19:18:37	COM5	12.5	8.0	860	287	831 SKS OF NEOCEM CMT 12.5 PPG, 1.94 FT3/SK, 9.6 GAL/SK.
Event	20	Check weight	11/17/2017	19:19:51	COM5					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	21	Pump Tail Cement	11/17/2017	19:59:42	COM5	13.3	8.0	570		461 SKS THERMACEM CMT 13.3 PPG, 1.73 FT3/SK, 7.81 GAL/SK.
Event	22	Check weight	11/17/2017	20:02:19	COM5					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	23	Shutdown	11/17/2017	20:28:07	COM5					END OF CEMENT. CLEANED PUMP AND LINES TO CELLUR
Event	24	Drop Top Plug	11/17/2017	20:30:56	USER					VERIFIED BY FLAG INDICATOR
Event	25	Pump Displacement	11/17/2017	20:32:37	COM5	8.4	10.0	2600	112.3	1 GAL MMCR IN FIRST 10 BBLS, 5 GALS CLAY WEB THROUGHT DISPLACEMENT
Event	26	Slow Rate	11/17/2017	20:44:33	USER	8.4	4.0	1980	10	SLOWED TO BUMP PLUG
Event	27	Bump Plug	11/17/2017	20:46:59	COM5	8.4	4.0	2100	122.3	BLUG BUMPED. BROGHT PSI UP FOR A 10 MIN. CASING TEST
Event	28	Check Floats	11/17/2017	20:56:20	USER			3383		FLOATS HELD 1.5 BBL FLOW BACK TO TRUCK
Event	29	End Job	11/17/2017	20:57:35	USER					22 BBLS OF TUNED SPACER III TO SURFACE. RIG TOOK 40 LBS OF SUGAR
Event	30	Post-Job Safety Meeting (Pre Rig-Down)	11/17/2017	21:00:00	USER					ALL HES PRESENT
Event	31	Pre-Convoy Safety Meeting	11/17/2017	22:45:00	USER					LEFT BAIL BASKET ON FLOOR FOR SURFACE
Event	32	Crew Leave Location	11/17/2017	23:00:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENT,



# LARAMIE - BRUTON 30-12W - 4 1/2" PRODUCTION



① Call Out	⑥ Spot Equipment	⑪ Prime Lines	⑮ Pump Tuned Spacer III	21 Pump Tail Cement	26 Slow Rate	31 Pre-Conv
② Pre-Convoy Safety Meeting	⑦ Pre-Rig Up Safety Meeting	⑫ Test Lines	⑰ Check weight	22 Check weight	27 Bump Plug	32 Crew Lea
③ Crew Leave Yard	⑧ Pre-Job Safety Meeting	⑬ Other	⑱ Check weight	23 Shutdown	28 Check Floats	
④ Arrive At Loc	⑨ Start Job	⑭ Prime Lines	⑲ Pump Lead Cement	24 Drop Top Plug	29 End Job	
⑤ Assessment Of Location Safety Meeting	⑩ Drop Bottom Plug	⑯ Test Lines	20 Check weight	25 Pump Displacement	30 Post-Job Safety Meeting (Pre Rig-Down)	

▼ HALLIBURTON | iCem® Service

Created: 2017-11-17 17:05:24, Version: 4.2.393

Edit

Customer : LARAMIE ENERGY II LLC

Job Date : 11/17/2017

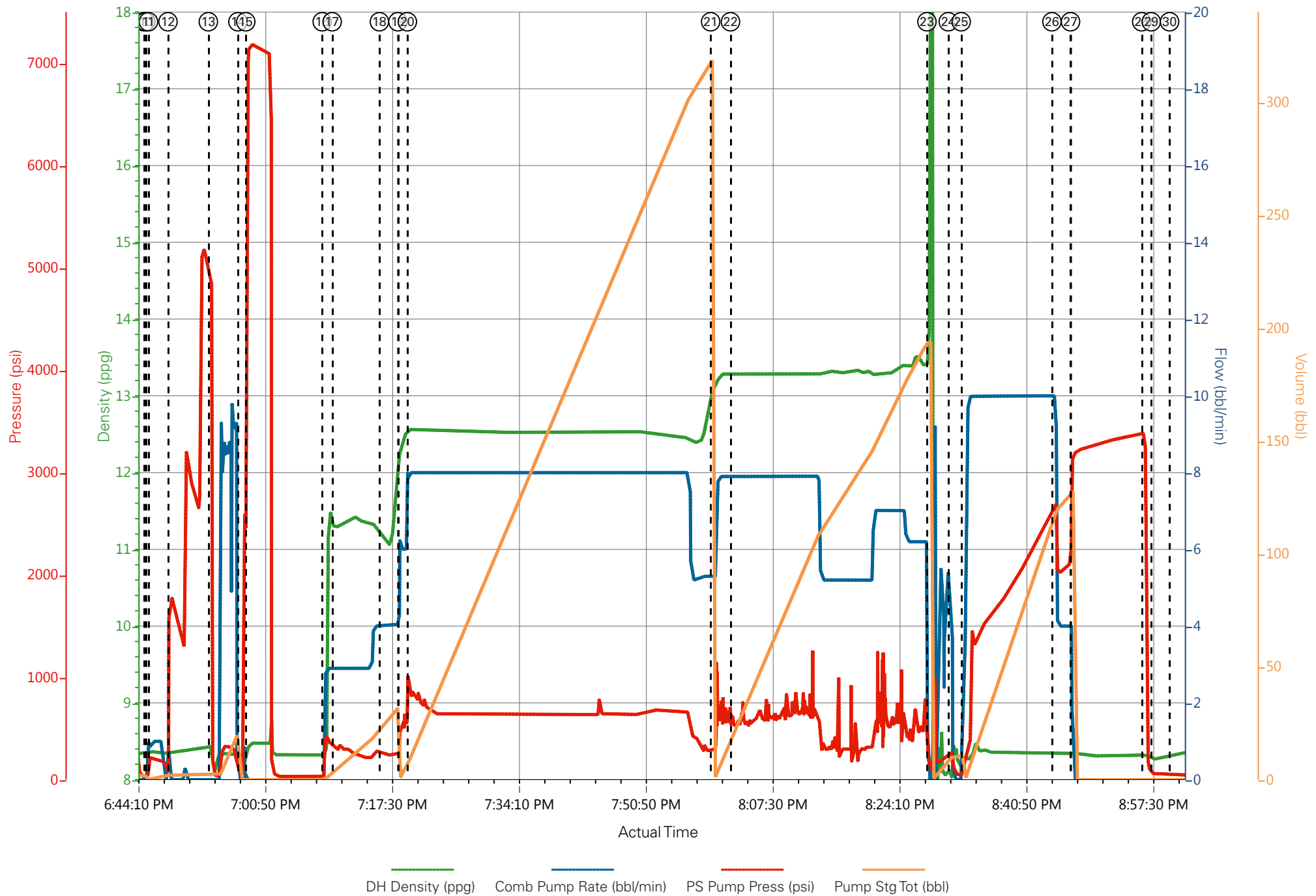
Well : BRUTON 30-12W

Representative : TYLER HALE

Sales Order # : 904440608

ELITE 4 : HYDE / ANGELO

# LARAMIE - BRUTON 30-12W - 4 1/2" PRODUCTION



### Job Information

<b>Request/Slurry</b>	2430171/1	<b>Rig Name</b>	H&P 522	<b>Date</b>	13/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 30-12W

### Well Information

<b>Casing/Liner Size</b>	4.5 in	<b>Depth MD</b>	8020 ft	<b>BHST</b>	114°C / 237°F
<b>Hole Size</b>	7.875 in	<b>Depth TVD</b>	7632 ft	<b>BHCT</b>	77°C / 170°F
<b>Pressure</b>	4642 psi				

### Drilling Fluid Information

<b>Mud Supplier Name</b>		<b>Mud Trade Name</b>		<b>Density</b>	9.9 lbm/gal
--------------------------	--	-----------------------	--	----------------	-------------

### Cement Information - Lead Design



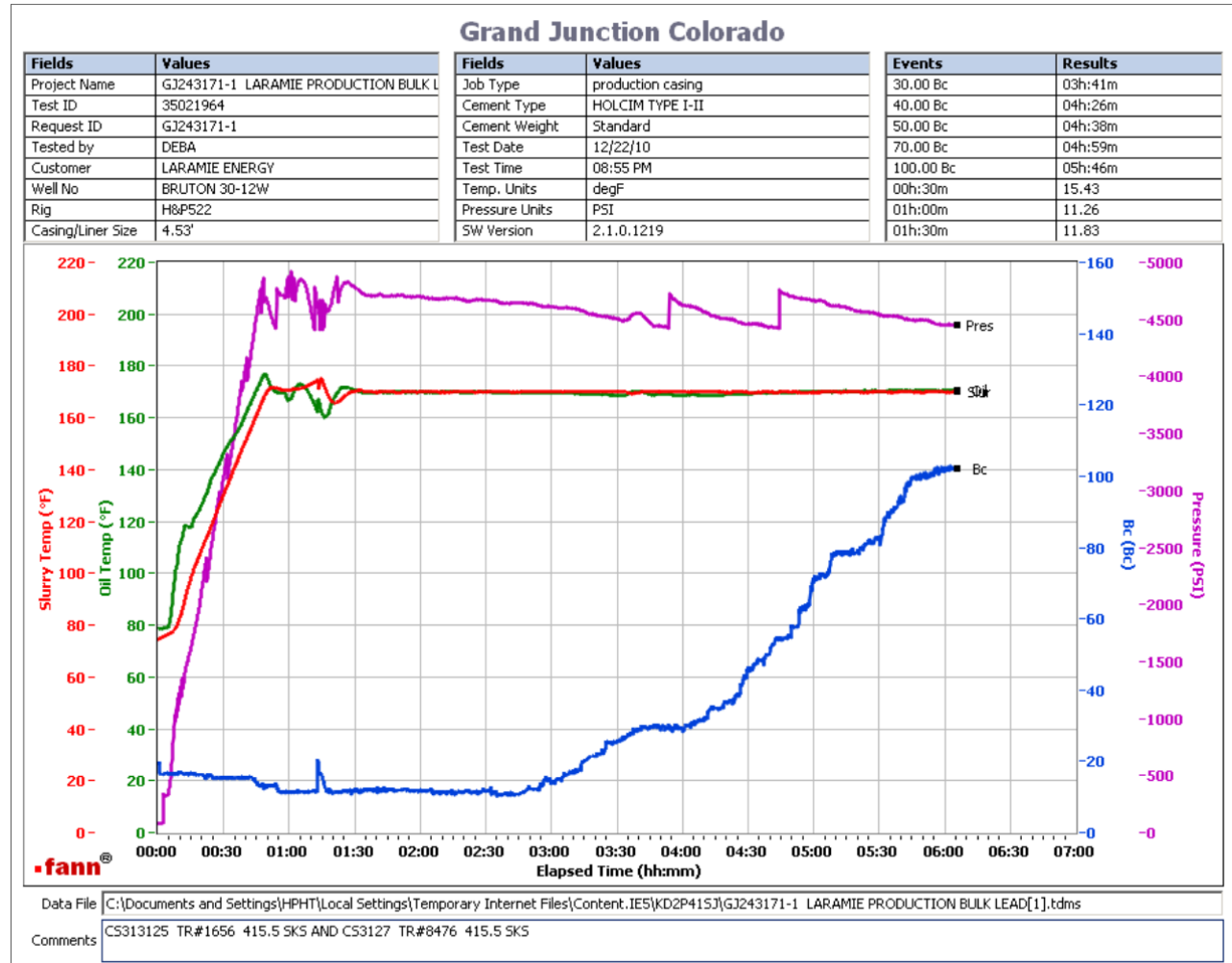
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	<b>Cement Properties</b>		
		NeoCem Lead				Slurry Density	12.5	lbm/gal
						Slurry Yield	1.941	ft3/sack
						Water Requirement	9.623	gal/sack
						Total Mix Fluid	9.623	gal/sack
						Water Source	Field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

This report is the property of Halliburton Energy Services and neither it nor any part thereof, nor a copy thereof, is to be published or disclosed without first securing the expressed written approval of Halliburton. It may however be used in the course of regular business operations by any person or concern receiving such report from Halliburton. This report is for information purposes only and the content is limited to the sample described. Halliburton makes no warranties, expressed or implied, as to the accuracy of the contents or results. Any user of this report agrees Halliburton shall not be liable for any loss or damage regardless of cause, including any act or omission of Halliburton, resulting from the use hereof.

Thickening Time - ON-OFF-ON

15/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	4642	48	3:41	4:38	4:59	5:46	19	58	15	21



Total sks = 831

Composite:

CS3125 TR#1656 415.5 SKs

CS3127 TR#8476 415.5 SKS

Deflection: 13 - 21

This report is the property of Halliburton Energy Services and neither it nor any part thereof, nor a copy thereof, is to be published or disclosed without first securing the expressed written approval of Halliburton. It may however be used in the course of regular business operations by any person or concern receiving such report from Halliburton. This report is for information purposes only and the content is limited to the sample described. Halliburton makes no warranties, expressed or implied, as to the accuracy of the contents or results. Any user of this report agrees Halliburton shall not be liable for any loss or damage regardless of cause, including any act or omission of Halliburton, resulting from the use hereof.

# HALLIBURTON

## Rockies, Grand Junction

### Lab Results- Tail

#### Job Information

<b>Request/Slurry</b>	2430172/1	<b>Rig Name</b>	H&P 522	<b>Date</b>	13/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 30-12W

#### Well Information

<b>Casing/Liner Size</b>	4.5 in	<b>Depth MD</b>	8020 ft	<b>BHST</b>	114°C / 237°F
<b>Hole Size</b>	7.875 in	<b>Depth TVD</b>	7632 ft	<b>BHCT</b>	77°C / 170°F
<b>Pressure</b>	4642 psi				

#### Drilling Fluid Information

<b>Mud Supplier Name</b>		<b>Mud Trade Name</b>		<b>Density</b>	9.9 lbm/gal
--------------------------	--	-----------------------	--	----------------	-------------

#### Cement Information - Tail Design



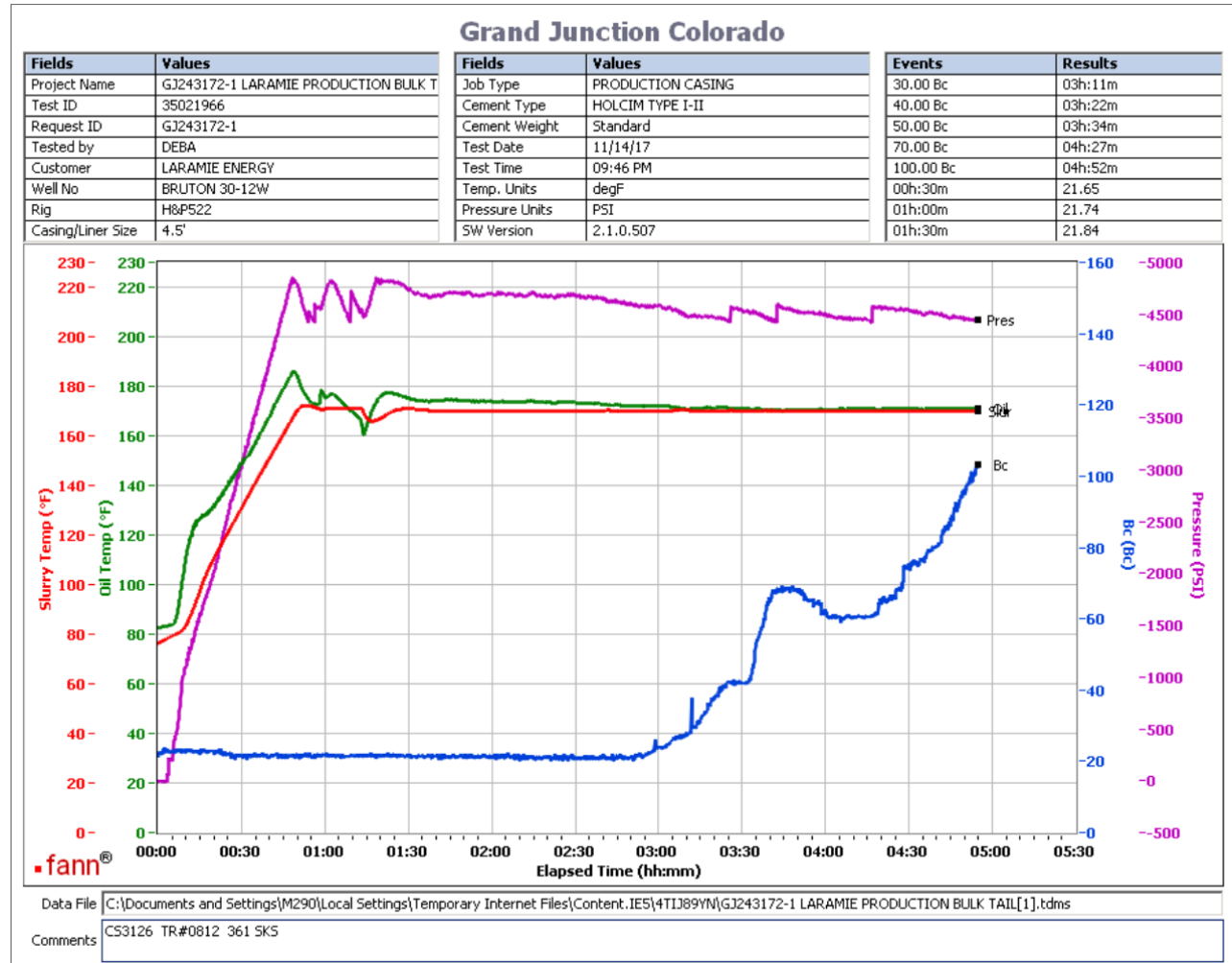
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	<b>Cement Properties</b>		
		ThermaCem Tail				Slurry Density	13.3	lbm/gal
						Slurry Yield	1.733	ft3/sack
						Water Requirement	7.799	gal/sack
						Total Mix Fluid	7.799	gal/sack
						Water Source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

This report is the property of Halliburton Energy Services and neither it nor any part thereof, nor a copy thereof, is to be published or disclosed without first securing the expressed written approval of Halliburton. It may however be used in the course of regular business operations by any person or concern receiving such report from Halliburton. This report is for information purposes only and the content is limited to the sample described. Halliburton makes no warranties, expressed or implied, as to the accuracy of the contents or results. Any user of this report agrees Halliburton shall not be liable for any loss or damage regardless of cause, including any act or omission of Halliburton, resulting from the use hereof.

Thickening Time - ON-OFF-ON

15/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	4642	48	3:11	3:34	4:27	4:52	20	58	15	21



Total sks = 461  
 CS3126 TR#0812 361 sks  
 Deflection: 21 – 21

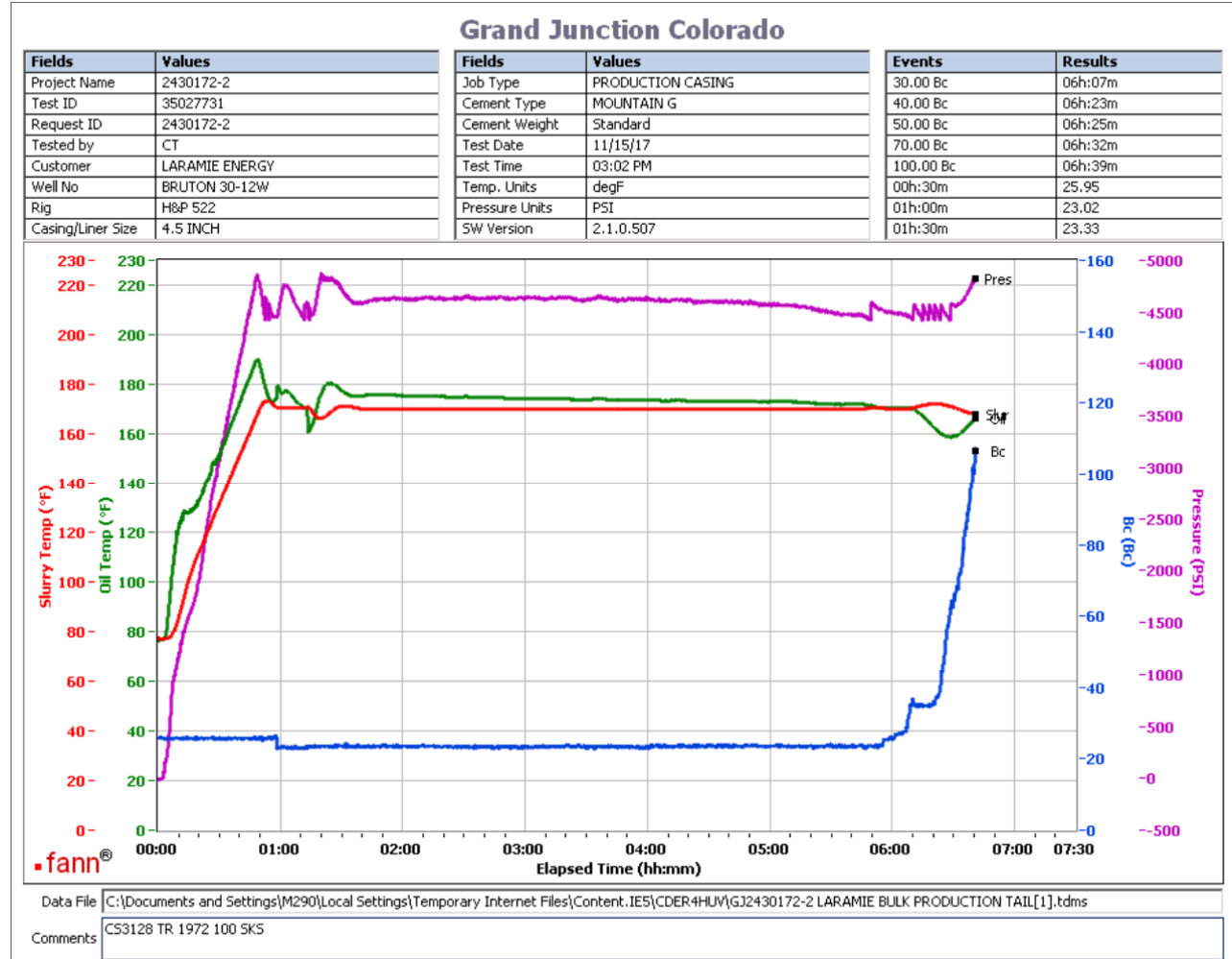
This report is the property of Halliburton Energy Services and neither it nor any part thereof, nor a copy thereof, is to be published or disclosed without first securing the expressed written approval of Halliburton. It may however be used in the course of regular business operations by any person or concern receiving such report from Halliburton. This report is for information purposes only and the content is limited to the sample described. Halliburton makes no warranties, expressed or implied, as to the accuracy of the contents or results. Any user of this report agrees Halliburton shall not be liable for any loss or damage regardless of cause, including any act or omission of Halliburton, resulting from the use hereof.

## Operation Test Results Request ID 2430172/2

### Thickening Time - ON-OFF-ON

16/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	4642	48	6:07	6:25	6:32	6:39	26	58	15	23



CS3128 TR 1972 100 SKS

Deflection: 23 - 23

This report is the property of Halliburton Energy Services and neither it nor any part thereof, nor a copy thereof, is to be published or disclosed without first securing the expressed written approval of Halliburton. It may however be used in the course of regular business operations by any person or concern receiving such report from Halliburton. This report is for information purposes only and the content is limited to the sample described. Halliburton makes no warranties, expressed or implied, as to the accuracy of the contents or results. Any user of this report agrees Halliburton shall not be liable for any loss or damage regardless of cause, including any act or omission of Halliburton, resulting from the use hereof.