

# HALLIBURTON

iCem<sup>®</sup> Service

## **LARAMIE ENERGY II LLC EBUSINESS**

**For: Laramie**

Date: Monday, January 22, 2018

**BRUTON 30-19W Surface**

API #05-077-10469-00

Sincerely,

**Grand Junction Cement Engineering**

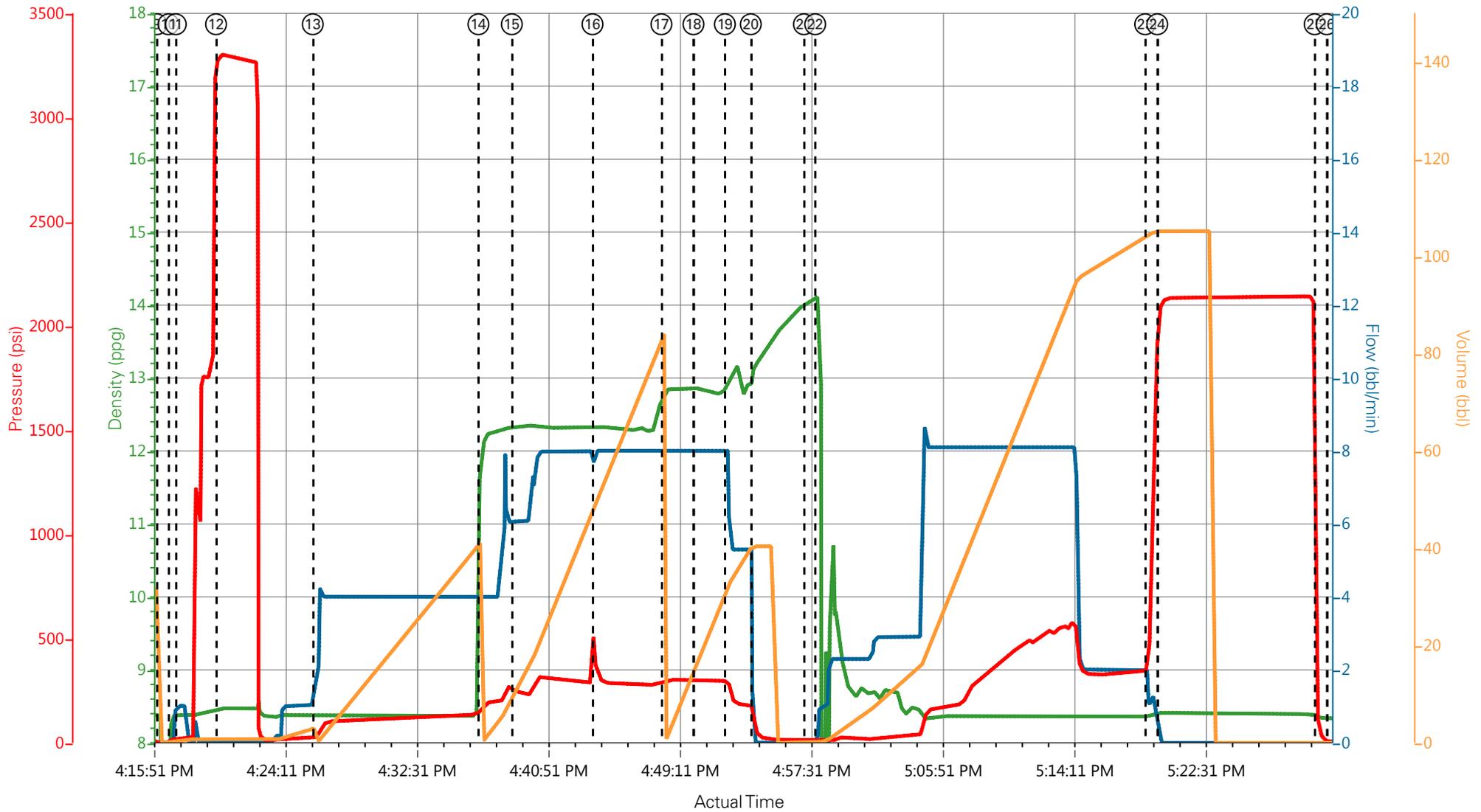
## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density <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	1/22/2018	10:00:00	USER					REQUESTED ON LOCATION @ 15:30
Event	2	Pre-Convoy Safety Meeting	1/22/2018	11:30:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	1/22/2018	11:45:00	USER					1 HT 400 PUMP TRUCK E4, 1 660 BULK TRUCKS, 1 450 SERVICE PICKUP
Event	4	Arrive At Loc	1/22/2018	14:00:00	USER					RIG RUNNING CASING WHEN HES ARRIVED
Event	5	Assessment Of Location Safety Meeting	1/22/2018	14:10:00	USER					MET WITH COMP REP, AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (PH- 7.0, CHLORIDES- 0, TEMP- 42F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Pre-Rig Up Safety Meeting	1/22/2018	14:20:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	1/22/2018	14:30:00	USER					HES RIGGED UP EQUIPMENT WITHOUT ENTERING RED ZONE.
Event	8	Pre-Job Safety Meeting	1/22/2018	16:05:09	USER	3.25	0.00	2.00	0.1	ALL HES EMPLOYEES AND RIG CREW PRESENT, RIG CIRCULATED @ 8 BPM FOR .5HR PRIOR TO JOB, PRESSURE @170 PSI
Event	9	Start Job	1/22/2018	16:16:13	COM6					TD-1578', TP-1568', SJ-41.6', CSG-8.625" 24# J55, OH-11", MUD-9.1PPG
Event	10	Prime Lines	1/22/2018	16:16:57	COM6	8.33	1	22	2	8.33 PPG FRESH WATER
Event	11	Drop Bottom Plug	1/22/2018	16:17:25	COM6					VERIFIED BY FLAG INDICATOR
Event	12	Test Lines	1/22/2018	16:19:58	COM6			3300		ALL LINES HELD PRESSURE AT 3300 PSI
Event	13	Pump H2O Spacer	1/22/2018	16:26:06	COM6	8.33	4	139	40	FRESH WATER
Event	14	Pump Lead Cement	1/22/2018	16:36:36	COM6	12.3	8	300	86.3	197 SKS VARICEM GJ5 CMT 12.3 PPG, 2.46 FT3/SK, 14.17 GAL/SK

Event	15	Check weight	1/22/2018	16:38:43	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	16	Bump Bottom Plug	1/22/2018	16:43:50	USER	12.3	8	361	50	RUPTURED BOTTOM PLUG
Event	17	Pump Tail Cement	1/22/2018	16:48:13	COM6	12.8	8	305	42.3	109 SKS VARICEM GJ5 CMT 12.8 PPG, 2.18 FT3/SK, 12.11 GAL/SK
Event	18	Check weight	1/22/2018	16:50:15	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	19	Slow Rate	1/22/2018	16:52:14	USER					SLOWED TO END CEMENT
Event	20	Shutdown	1/22/2018	16:53:52	USER					END OF CEMENT, WASH UP ON TOP OF PLUG.
Event	21	Drop Top Plug	1/22/2018	16:57:15	COM6					VERIFIED BY FLAG INDICATOR
Event	22	Pump Displacement	1/22/2018	16:57:58	COM6	8.4	8	576	97	FRESH WATER
Event		Slow Rate	1/22/2018	17:14:47	COM6	8.4	2	330	87	SLOWED TO BUMP PLUG
Event	23	Bump Plug	1/22/2018	17:18:53	COM6	8.4	2	345	97	LAND PLUG AT 345 PSI, BROUGHT UP TO 2100 PSI AND HELD FOR TEN MINS FOR CASING TEST
Event	24	Casing Test	1/22/2018	17:19:39	COM6					HELD 2100 PSI FOR TEN MINS
Event	25	Check Floats	1/22/2018	17:29:37	USER					FLOATS HELD, 1 BBL BACK TO TRUCK
Event	26	End Job	1/22/2018	17:30:23	COM6					RETURNS THROUGHOUT JOB, 38 BBLS CMT TO SURFACE, USED 40 POUNDS OF SUGAR
Event	27	Post-Job Safety Meeting (Pre Rig-Down)	1/22/2018	17:32:00	USER					ALL HES PRESENT
Event	28	Rig-Down Equipment	1/22/2018	17:36:00	USER					ALL HES PRESENT
Event	29	Pre-Convoy Safety Meeting	1/22/2018	18:00:00	USER					ALL HES PRESENT
Event	30	Crew Leave Location	1/22/2018	18:15:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENT, SHAWN BLOSSOM AND CREW

# LARAMIE BRUTON 30-19W, 8 5/8" SURFACE



DH Density (ppg) 5.35    Comb Pump Rate (bbl/min) 0    PS Pump Press (psi) -1    Pump Stg Tot (bbl) 0

- |   |                             |                    |                    |                      |   |
|---|-----------------------------|--------------------|--------------------|----------------------|---|
| ① Call Out                              | ⑥ Pre-Rig Up Safety Meeting | ⑪ Drop Bottom Plug | ⑯ Bump Bottom Plug | 21 Drop Top Plug     | 26 End Job                                |
| ② Pre-Convoy Safety Meeting             | ⑦ Rig-Up Equipment          | ⑫ Test Lines       | ⑰ Pump Tail Cement | 22 Pump Displacement | 27 Post-Job Safety Meeting (Pre Rig-Down) |
| ③ Crew Leave Yard                       | ⑧ Pre-Job Safety Meeting    | ⑬ Pump H2O Spacer  | ⑱ Check weight     | 23 Bump Plug         | 28 Rig-Down Equipment                     |
| ④ Arrive At Loc                         | ⑨ Start Job                 | ⑭ Pump Lead Cement | ⑲ Slow Rate        | 24 Casing Test       | 29 Pre-Convoy Safety Meeting              |
| ⑤ Assessment Of Location Safety Meeting | ⑩ Prime Lines               | ⑮ Check weight     | 20 Shutdown        | 25 Check Floats      | 30 Crew Leave Location                    |

▼ HALLIBURTON | iCem® Service

Created: 2018-01-22 15:00:13, Version: 4.2.393

Edit

Customer : LARAMIE ENERGY II LLC EBUSINESS

Job Date : 1/22/2018

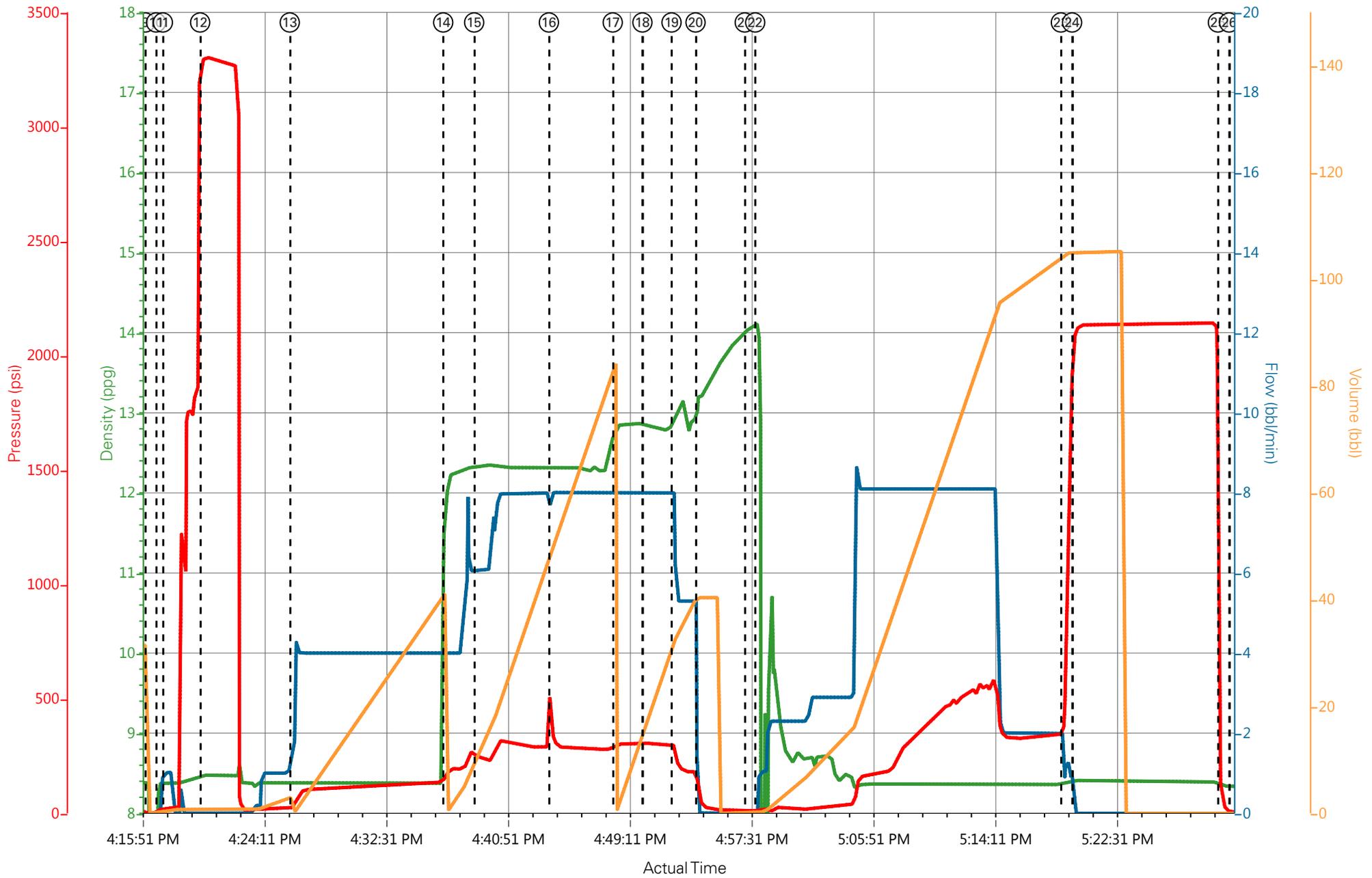
Well : BRUTON 30-19W

Representative : SHANE HEARD

Sales Order # : 904587024

ELITE 4 : ANDREW B. / SETH L.

# LARAMIE BRUTON 30-19W, 8 5/8" SURFACE



— DH Density (ppg) 5.35    
 — Comb Pump Rate (bbl/min) 0    
 — PS Pump Press (psi) -1    
 — Pump Stg Tot (bbl) 0

# HALLIBURTON

iCem<sup>®</sup> Service

## **LARAMIE ENERGY LLC**

**For: Laramie**

Date: Friday, January 26, 2018

## **Bruton Federal 30-19W Production**

API# 05-077-10469

Job Date: Thursday, January 25, 2018

Sincerely,

**Grand Junction Cement Engineering**

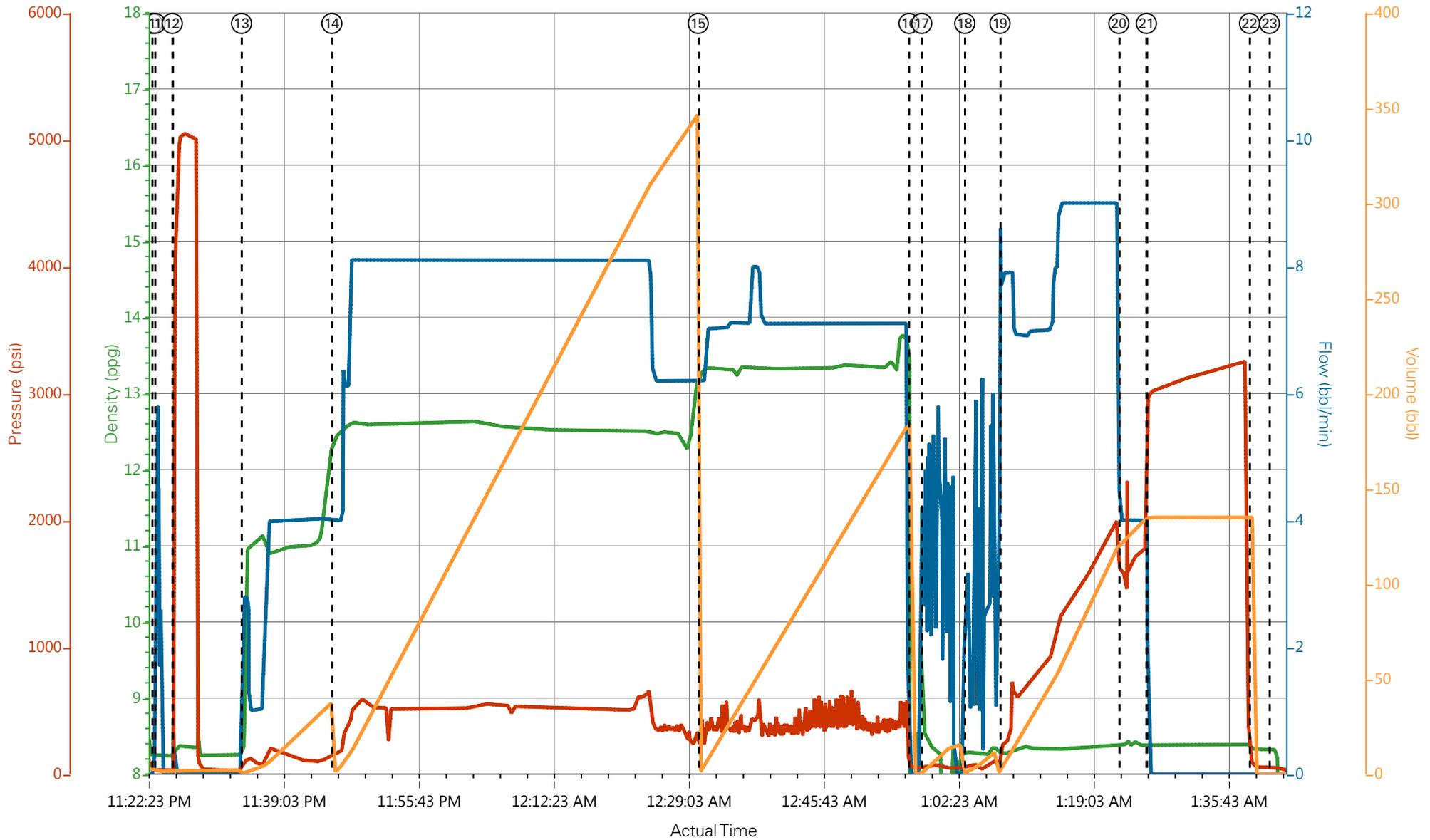
## 2.0 Real-Time Job Summary

### 2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	Downhole Density <i>(ppg)</i>	Combined Pump Rate <i>(bbl/min)</i>	Driv-Side Pump Pressure <i>(psi)</i>	Pump Stage Total <i>(bbl)</i>	Comments
Event	1	Call Out	1/25/2018	15:00:00						Requested on Location @ 21:00
Event	2	Pre-Convoy Safety Meeting	1/25/2018	17:30:00						
Event	3	Crew Leave Yard	1/25/2018	18:00:00						1 Elite, 1 660, 1 pickup
Event	4	Arrive At Loc	1/25/2018	21:00:00						Rig running casing
Event	5	Assessment Of Location Safety Meeting	1/25/2018	21:05:00						JSA completed - Customer offered/received SDS - water test pH 7.5, CI <200, temp 53 degrees
Event	6	Pre-Rig Up Safety Meeting	1/25/2018	21:29:32						
Event	7	Rig-Up Equipment	1/25/2018	21:29:40						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	1/25/2018	21:30:19						Rig Circulated 1 hr prior to cement job at 10 bpm 680 psi, Gas >500
Event	9	Pre-Job Safety Meeting	1/25/2018	21:42:46						All HES personnel, rig crew, and Company Rep
Event	10	Start Job	1/25/2018	23:23:11						
Event	11	Fill Lines	1/25/2018	23:23:32		8.33	2	160	3	Fresh water
Event	12	Test Lines	1/25/2018	23:25:39				5055		Held pressure 2 minutes no leaks
Event	13	Pump Tuned Spacer	1/25/2018	23:34:12		11.0	4	225	40	Tuned Spacer III @ 11 ppg, drop bottom plug ahead of spacer
Event	14	Pump Lead Cement	1/25/2018	23:45:21		12.5	8	610	317.2	918 sks 12.5 ppg 1.94 yield 9.6 gal/sk
Event	15	Pump Tail Cement	1/26/2018	00:30:34		13.3	7	580	142	461 Sks 13.3 ppg 1.73 yield 7.81 gal/sk
Event	16	Shutdown	1/26/2018	00:56:36						

Event	17	Clean Lines	1/26/2018	00:58:11						Wash lines to cellar
Event	18	Drop Top plug	1/26/2018	01:03:30						Driller Verify Plug Launched
Event	19	Pump Displacement	1/26/2018	01:07:50	8.33	9	1980			1 gal MMCR, 5 gals Clay-Web II
Event	20	Slow Rate	1/26/2018	01:22:31	8.33	4	1800	119		Slow Rate 10 bbls prior to Calculated Displacement
Event	21	Bump Plug	1/26/2018	01:25:55	8.33	4	3247	129.1		Plug Bumped at 1800 psi, Brought up to 3247 psi, and Held For 10 Min.
Event	22	Check Floats	1/26/2018	01:38:39						Floats held 1 1/2 bbl Back To Truck
Event	23	End Job	1/26/2018	01:41:06						Good Returns Throughout job. No Tuned Spacer to surface
Event	24	Pre-Rig Down Safety Meeting	1/26/2018	02:03:19						50 # sugar, No add hours
Event	25	Rig-Down Equipment	1/26/2018	02:07:40						
Event	26	Pre-Convoy Safety Meeting	1/26/2018	02:14:30						
Event	27	Crew Leave Location	1/26/2018	02:16:21						Thanks For Using Halliburton Cement. Chris Martinez And Crew

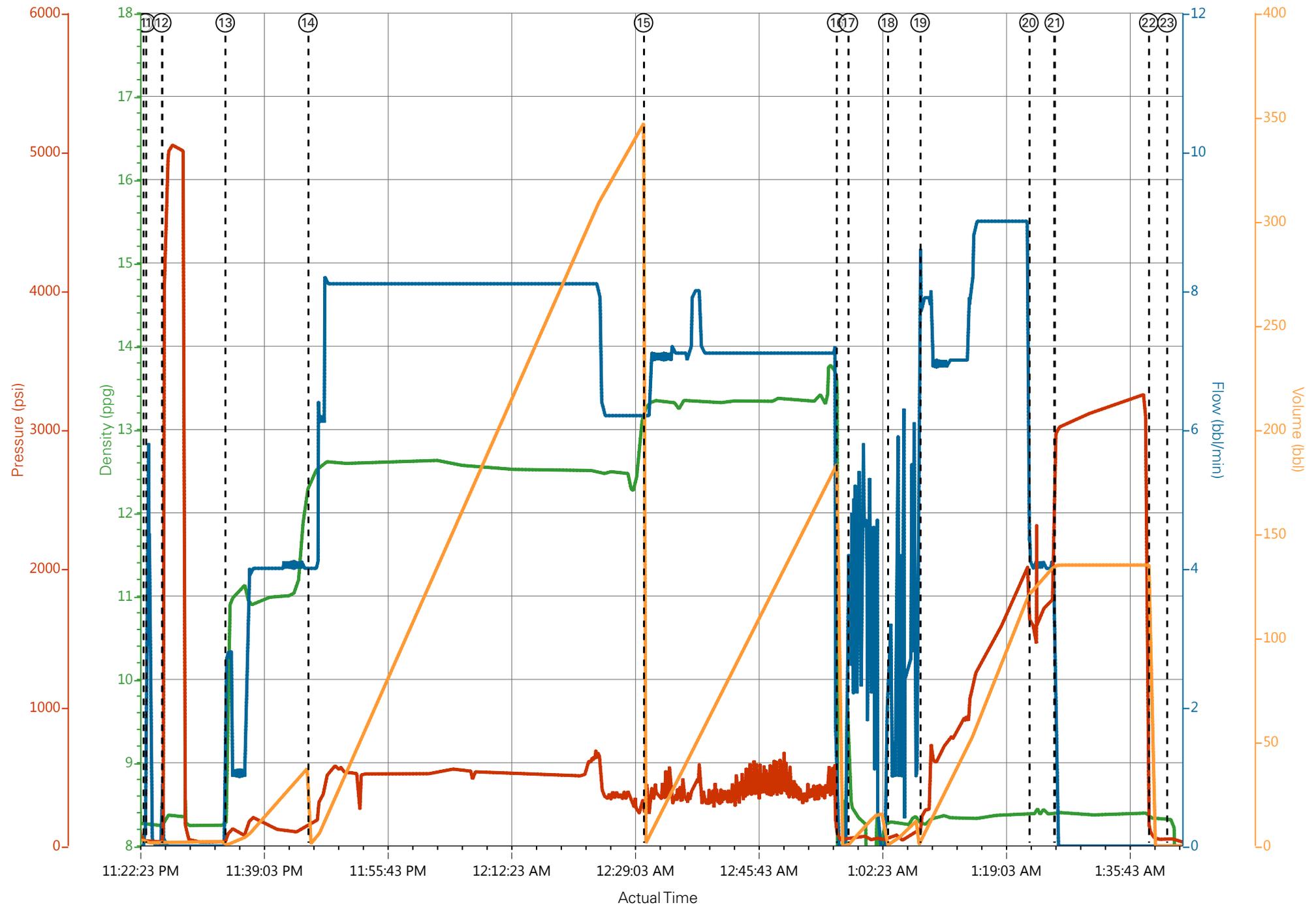
# Custom Results



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

- |   |   |  |                                      |                                |
|---|---|--|--------------------------------------|--------------------------------|
| ① Call Out n/a;n/a;n/a;n/a                  | ⑤ Assessment Of Location Safety Meeting n/a;n/a;n/a;n/a | ⑨ Pre-Job Safety Meeting -0.01;0;105;0 | ⑬ Pump Tuned Spacer 9.74;2.8;96;1    | ⑰ Clean Lines 8.5;0;0;0        |
| ② Pre-Convoy Safety Meeting n/a;n/a;n/a;n/a | ⑥ Pre-Rig Up Safety Meeting -0.01;0;105;0               | ⑩ Start Job 8.26;2;32;2.9              | ⑭ Pump Lead Cement 12.42;4;174;1.2   | ⑱ Drop Top plug 8.37;0;0;0     |
| ③ Crew Leave Yard n/a;n/a;n/a;n/a           | ⑦ Rig-Up Equipment -0.01;0;105;0                        | ⑪ Fill Lines 8.26;4.5;31;1             | ⑮ Pump Tail Cement 13.26;6.2;457;2.2 | ⑲ Pump Displacement 8.37;0;0;0 |
| ④ Arrive At Loc n/a;n/a;n/a;n/a             | ⑧ Other -0.01;0;104;0                                   | ⑫ Test Lines 8.37;0;4644;2.2           | ⑯ Shutdown 0.15;0;42;0               | ⑳ 20 Slow Rate 8.39;0;0;0      |

# Custom Results



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

### Job Information

<b>Request/Slurry</b>	2448360/1	<b>Rig Name</b>	H&P 522	<b>Date</b>	22/JAN/2018
<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 Federal 30-19W

### Well Information

<b>Casing/Liner Size</b>	4.5 in	<b>Depth MD</b>	8502 ft	<b>BHST</b>	114°C / 238°F
<b>Hole Size</b>	7.875 in	<b>Depth TVD</b>	7677 ft	<b>BHCT</b>	77°C / 171°F
<b>Pressure</b>	4674 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 - Lead Design

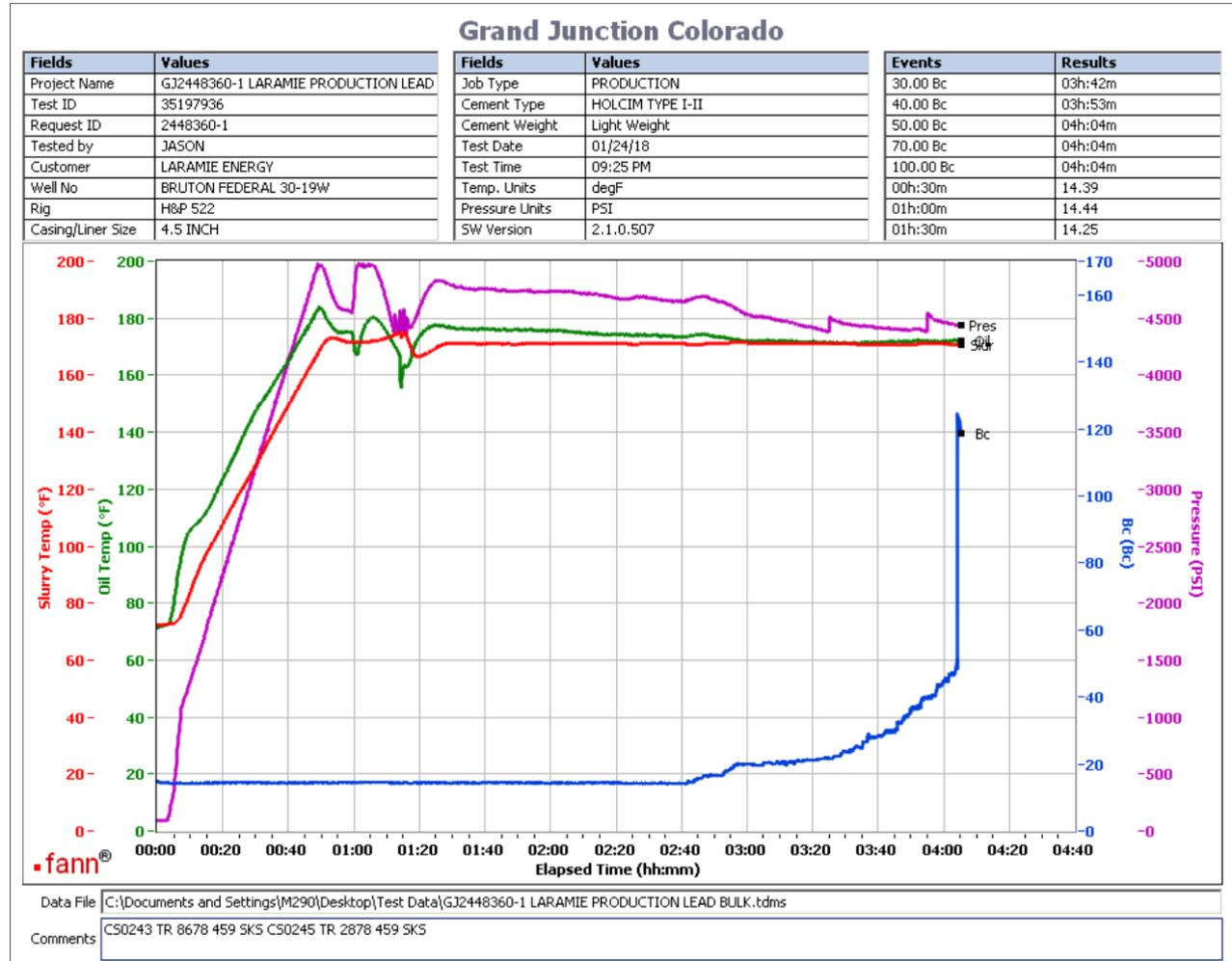
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	<b>Cement Properties</b>		
		NeoCem Lead				Slurry Density	12.5	lbm/gal
						Slurry Yield	1.941	ft <sup>3</sup> /sack
						Water Requirement	9.623	gal/sack
						Total Mix Fluid	9.623	gal/sack
						Water Source	Fresh Water	
						Water Chloride		

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Thickening Time - ON-OFF-ON

24/JAN/2018

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)
171	4674	49	3:42	4:04	4:04	4:04	15	59	15	15



Total sks = 918  
 Composite:  
 CS0243 TR 8678 459 SKS  
 CS0245 TR 2878 459 SKS  
 Deflection: 15 - 15

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### Job Information

<b>Request/Slurry</b>	2448361/1	<b>Rig Name</b>	H&P 522	<b>Date</b>	22/JAN/2018
<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 Federal 30-19W

### Well Information

<b>Casing/Liner Size</b>	4.5 in	<b>Depth MD</b>	8502 ft	<b>BHST</b>	114°C / 238°F
<b>Hole Size</b>	7.875 in	<b>Depth TVD</b>	7677 ft	<b>BHCT</b>	77°C / 171°F
<b>Pressure</b>	4674 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

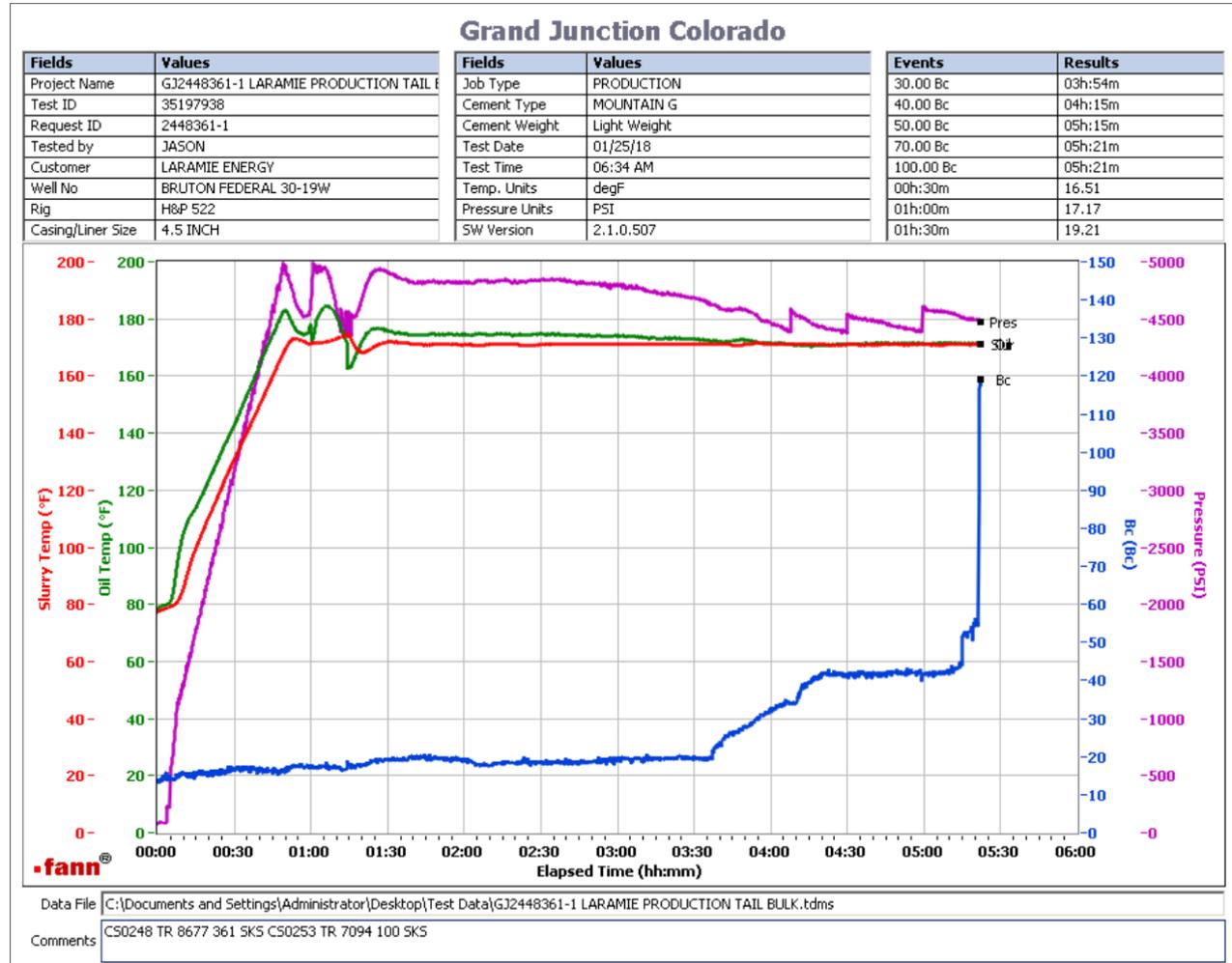
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	<b>Cement Properties</b>		
		ThermaCem Tail				Slurry Density	13.3	lbm/gal
						Slurry Yield	1.733	ft <sup>3</sup> /sack
						Water Requirement	7.799	gal/sack
						Total Mix Fluid	7.799	gal/sack
						Water Source	Fresh Water	
						Water Chloride		

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Thickening Time - ON-OFF-ON

25/JAN/2018

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)
171	4674	49	3:54	5:15	5:21	5:21	14	59	15	18



Total sks = 461  
 Composite:  
 CS0248 TR 8677 361 SKS  
 CS0253 TR 7094 100 SKS  
 Deflected 16-- > 18

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