

# HALLIBURTON

iCem<sup>®</sup> Service

## **LARAMIE ENERGY LLC EBUSINESS**

**For: Aaron Duncan**

Date: Wednesday, January 10, 2018

### **Bruton Federal 30-18W**

API #05-077-10481-00

Job Date: Wednesday, January 10, 2018

Sincerely,

**Grand Junction Cement Engineering**

## 2.0 Real-Time Job Summary

## 2.1 Job Event Log

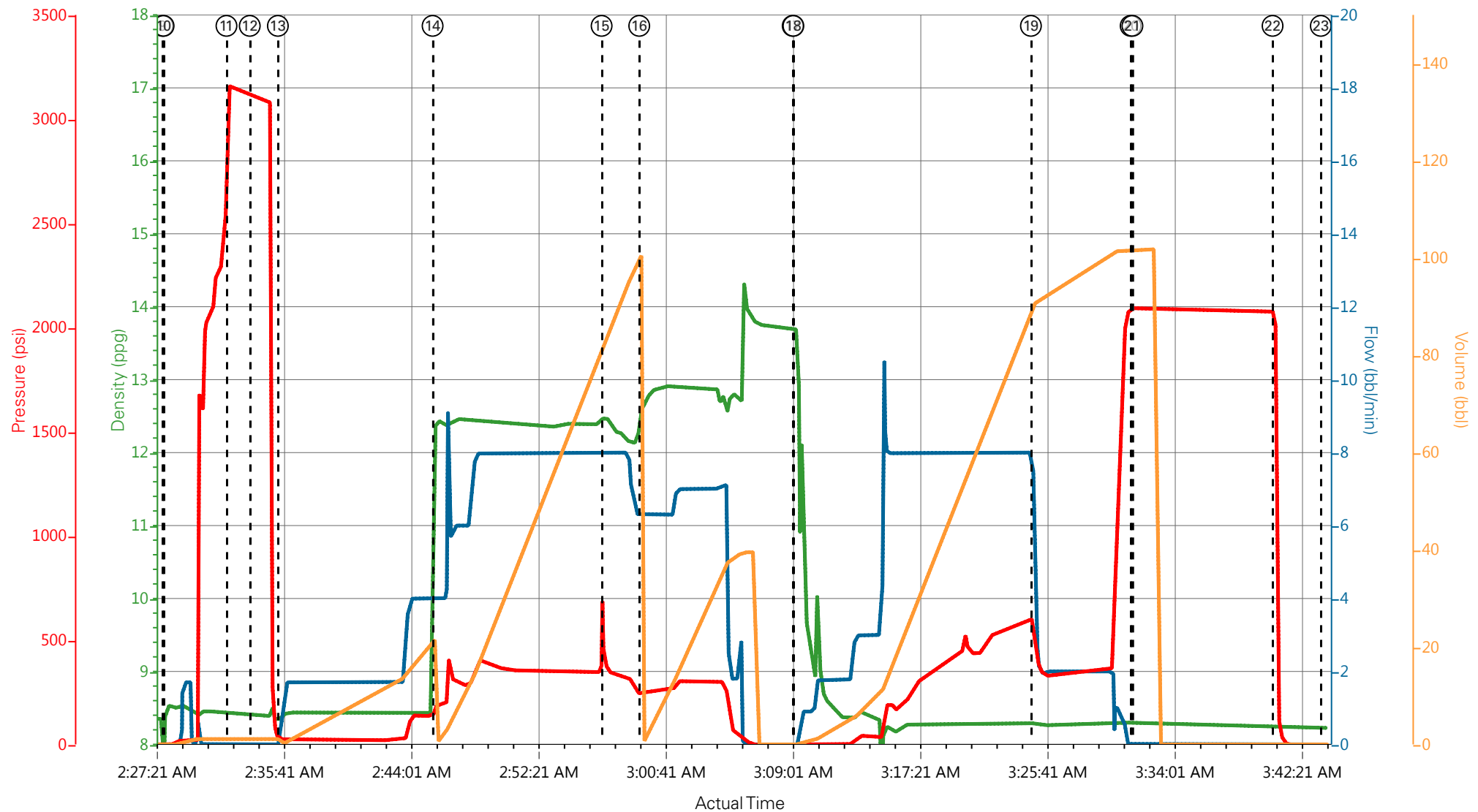
Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	1/9/2018	17:00:00	USER					REQUESTED ON LOCATION @ 01:00
Event	2	Pre-Convoy Safety Meeting	1/9/2018	21:00:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	1/9/2018	21:15:00	USER					1 HT 400 PUMP TRUCK E8, 1 660 BULK TRUCKS, 1 450 SERVICE PICKUP
Event	4	Arrive At Loc	1/10/2018	00:00:00	USER					RIG RUNNING CASING WHEN HES ARRIVED
Event	5	Assessment Of Location Safety Meeting	1/10/2018	00:15:00	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- 62F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Pre-Rig Up Safety Meeting	1/10/2018	00:30:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	1/10/2018	00:45:00	USER					HES RIGGED UP HT 400 PUMP, 660 BULK TRUCK, 2" DISCHARGE IRON AND 4" SUCTION HOSE WITHOUT ENTERING RED ZONE.

ALL HES EMPLOYEES AND  
RIG CREW PRESENT, RIG  
CIRCULATED @ 11.5 BPM  
FOR .5HR PRIOR TO JOB,  
PRESSURE @230 PSI

Event	8	Pre-Job Safety Meeting	1/10/2018	02:00:00	USER					
Event	9	Start Job	1/10/2018	02:27:56	COM6					TD-1551', TP-1541', SJ-43.4', CSG-8.625" 24# J55, OH- 11", MUD-9.1PPG
Event	10	Prime Lines	1/10/2018	02:28:00	COM6	8.33	2	24	2	8.33 PPG FRESH WATER
Event	11	Test Lines	1/10/2018	02:32:07	COM6	8.33	.5	3120	.5	ALL LINES HELD PRESSURE AT 3120 PSI
Event	12	Drop Bottom Plug	1/10/2018	02:33:39	COM6					VERIFIED BY FLAG INDICATOR
Event	13	Pump H2O Spacer	1/10/2018	02:35:29	COM6	8.33	4	130	20	FRESH WATER
Event	14	Pump Lead Cement	1/10/2018	02:45:37	COM6	12.3	8	410	86.3	197 SKS VARICEM GJ5 CMT 12.3 PPG, 2.46 FT3/SK, 14.17 GAL/SK
Event	15	Bottom Plug Ruture	1/10/2018	02:56:41	USER					PRESSURE SPIKED TO 750PSI TO RUTURE BOTTOM PLUG
Event	16	Pump Tail Cement	1/10/2018	02:59:09	COM6	12.8	7	330	42.3	109 SKS VARICEM GJ5 CMT 12.8 PPG, 2.18 FT3/SK, 12.11 GAL/SK
Event	17	Drop Top Plug	1/10/2018	03:09:12	COM6					VERIFIED BY FLAG INDICATOR
Event	18	Pump Displacement	1/10/2018	03:09:15	USER	8.33	8	600	95.3	FRESH WATER
Event	19	Slow Rate	1/10/2018	03:24:48	USER	8.33	2	345	85.3	SLOW RATE TO 2 BPM TO BUMP PLUG
Event	20	Bump Plug	1/10/2018	03:31:20	COM6	8.33	2	2100	95.3	LAND PLUG AT 380 PSI, BROUGHT UP TO 2100 PSI AND HELD FOR TEN MINS FOR CASING TEST
Event	21	Casing Test	1/10/2018	03:31:27	COM6					HELD 2100 PSI FOR TEN MINS

Event	22	Check Floats	1/10/2018	03:40:38	USER	FLOATS HELD, 1 BBL BACK TO TRUCK
Event	23	End Job	1/10/2018	03:43:47	COM6	RETURNS THROUGH OUT JOB, 35 BBLS CMT TO SURFACE, USED 40 POUNDS OF SUGAR
Event	24	Post-Job Safety Meeting (Pre Rig-Down)	1/10/2018	03:57:36	USER	ALL HES PRESENT
Event	25	Rig-Down Equipmen	1/10/2018	04:30:00	USER	ALL HES PRESENT
Event	26	Pre-Convoy Safety Meeting	1/10/2018	05:00:00	USER	ALL HES PRESENT
Event	27	Crew Leave Location	1/10/2018	05:15:00	USER	THANK YOU FOR CHOOSING HALLIBURTON CEMENT, SHAWN BLOSSOM AND CREW

# LARAMIE BRUTON 30-18W, 8 5/8" SURFACE



DH Density (ppg) 8.23 Comb Pump Rate (bbl/min) 0 PS Pump Press (psi) -8 Pump Stg Tot (bbl) 0

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

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Created: 2018-01-10 01:08:43, Version: 4.2.393

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Customer : LARAMIE ENERGY II LLC EBUSINESS

Job Date : 1/10/2018

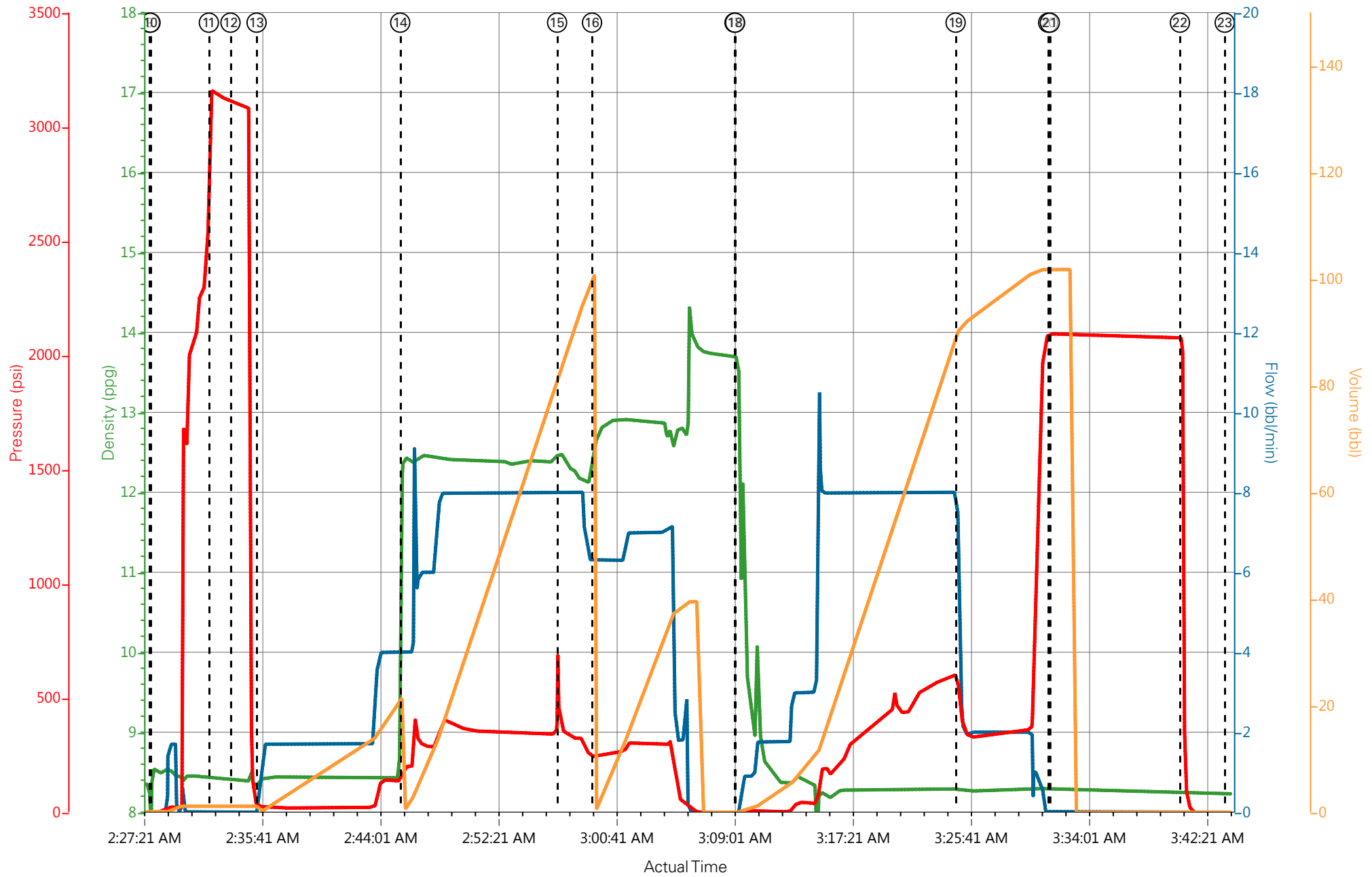
Well : BRUTON 30-18W

Representative : TYLER HALE

Sales Order # : 904556385

ELITE 8 : JAMES D.

# LARAMIE BRUTON 30-18W, 8 5/8" SURFACE



DH Density (ppg) 8.23 Comb Pump Rate (bbl/min) 0 PS Pump Press (psi) -8 Pump Stg Tot (bbl) 0

# HALLIBURTON

iCem<sup>®</sup> Service

## **LARAMIE ENERGY**

**For: Laramie Energy**

## **BRUTON Federal 30-18W**

Bruton Federal 30-18W Production  
API# 05-077-10481-00  
Job Date: Saturday, January 13, 2018

Sincerely,

**Grand Junction Cement Engineering**

## 1.0 Real-Time Job Summary

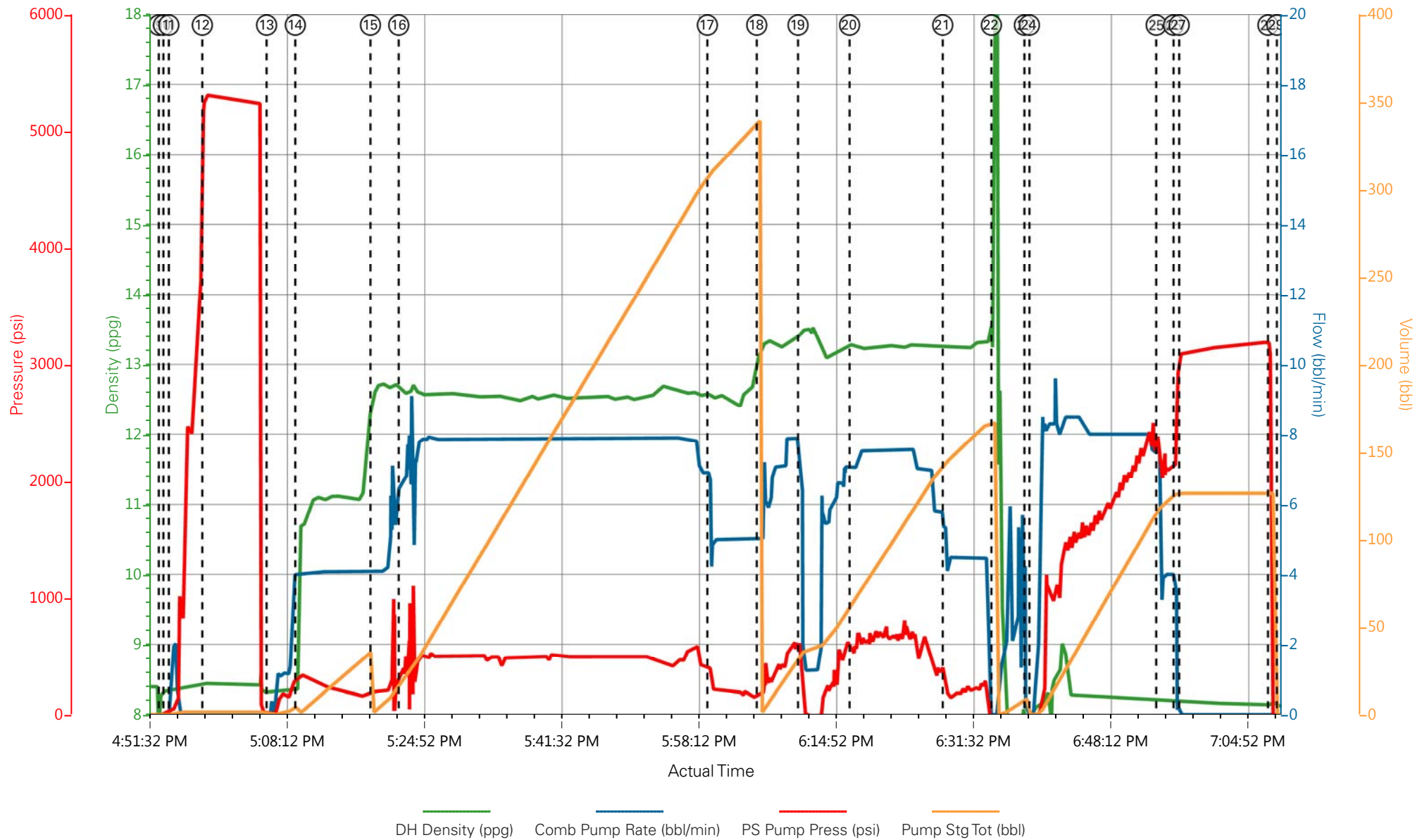
## 1.1 Job Event Log

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	1/13/2018	09:00:00	USER					REQUESTED ON LOCATION @ 15:00
Event	2	Pre-Convoy Safety Meeting	1/13/2018	11:00:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	1/13/2018	11:15:00	USER					1 HT 400 PUMP TRUCK E2, 1 660 BULK TRUCK, 1 450 SERVICE PICKUP
Event	4	Arrive At Loc	1/13/2018	14:30:00	USER					RIG RUNNING CASING WHEN HES ARRIVED AT LOCATION
Event	5	Assessment Of Location Safety Meeting	1/13/2018	14:45:00	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- 80F). COMP REP WAS OFFERED SDS FOR ALL CHEMICALS USED BY HES.
Event	6	Pre-Rig Up Safety Meeting	1/13/2018	14:50:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	1/13/2018	15:00:00	USER					HES RIGGED UP 1 HT400 PUMP TRUCK, 1 660 BULK TRUCK, 2 CEMENT SILOS, 2" DISCHARGE IRON, AND 4" SUCTION HOSE WITHOUT ENTERING RED ZONE.
Event	8	Pre-Job Safety Meeting	1/13/2018	16:30:00	USER					ALL HES EMPLOYEES AND RIG CREW PRESENT, RIG CIRCULATED @ 10 BPM PRIOR TO JOB PRESSURE @ 870 PSI.
Event	9	Start Job	1/13/2018	16:53:01	COM6					TD 8354', TP 8344' OF 4 ½" 11.6# CSG, SJ 76.41', SURFACE CSG 8 5/8" 24# J55 SET @ 1541', OH 7 7/8", MUD 9.1 PPG
Event	10	Drop Bottom Plug	1/13/2018	16:53:35	USER					VERIFIED VIA PLUG INDICATOR
Event	11	Prime Pumps	1/13/2018	16:54:14	COM6	8.33	2	80	2	8.33 PPG FRESH WATER
Event	12	Test Lines	1/13/2018	16:58:18	COM6			5310		ALL LINES HELD PRESSURE AT 5310 PSI



Event	13	Pump H2O Spacer	1/13/2018	17:06:06	COM6	8.33	4	310	5	ESTABLISH RETURNS
Event	14	Pump Tuned Spacer III	1/13/2018	17:09:35	COM6	11	4	240	40	40 BBL TUNED SPACER III, 11 PPG, 4.86 FT3/SK, 31.9 GAL/SK
Event	15	Pump Lead Cement	1/13/2018	17:18:42	COM6	12.5	8	500	313	906 SKS OF NEOCEM CMT 12.5 PPG, 1.94 FT3/SK, 9.6 GAL/SK.
Event	16	Check weight	1/13/2018	17:22:08	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	17	Slow Rate	1/13/2018	17:59:36	USER					SLOWED TO END LEAD SILO
Event	18	Pump Tail Cement	1/13/2018	18:05:35	COM6	13.3	7.5	700	142	461 SKS THERMACEM CMT 13.3 PPG, 1.73 FT3/SK, 7.81 GAL/SK.
Event	19	Slow Rate	1/13/2018	18:10:36	USER					SLOWED TO LINE OUT DENSITY
Event	20	Check weight	1/13/2018	18:16:51	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	21	Slow Rate	1/13/2018	18:28:10	USER					SLOWED TO END TAIL SILO
Event	22	Shutdown	1/13/2018	18:34:04	USER					END OF CEMENT. CLEAN PUMPS AND LINES TO CELLAR.
Event	23	Drop Top Plug	1/13/2018	18:38:04	COM6					VERIFIED VIA PLUG INDICATOR
Event	24	Pump Displacement	1/13/2018	18:38:41	USER	8.33	8	2450	128	1 GAL MMCR IN FIRST 10 BBLS, 5 GALS CLAY WEB THROUGHT DISPLACEMENT
Event	25	Slow Rate	1/13/2018	18:54:04	USER	8.33	4	2100	118	SLOW RATE TO 4 BPM TO BUMP PLUG
Event	26	Bump Plug	1/13/2018	18:56:10	COM6	8.33	4	2160	128	LANDED PLUG AT 2160 PSI, BROUGHT UP TO 3100 PSI
Event	27	Casing Test	1/13/2018	18:56:51	COM6					HELD 3100 PSI FOR TEN MINS.
Event	28	Check Floats	1/13/2018	19:07:37	USER					FLOATS HELD, 1.5 BBL BACK TO TRUCK
Event	29	End Job	1/13/2018	19:08:42	COM6					RETURNS THROUGHT JOB. USED 20 LBS SUGAR. 38BBLS OF TUNED SPACER TO SURFACE.
Event	30	Post-Job Safety Meeting (Pre Rig-Down)	1/13/2018	19:23:41	USER					ALL HES PRESENT
Event	31	Rig-Down Equipment	1/13/2018	19:40:00	USER					ALL HES PRESENT
Event	32	Pre-Convoy Safety Meeting	1/13/2018	21:00:00	USER					ALL HES PRESENT
Event	33	Crew Leave Location	1/13/2018	21:30:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENT, SHAWN BLOSSOM AND CREW

# LARAMIE BRUTON 30-18W, 4.5" PRODUCTION



① Call Out	⑤ Assessment Of Location Safety Meeting	⑨ Start Job	⑬ Pump H2O Spacer	⑰ Slow Rate	21 Slow Rate	25 Slow Rate	29 End Jo
② Pre-Convoy Safety Meeting	⑥ Pre-Rig Up Safety Meeting	⑩ Drop Bottom Plug	⑭ Pump Tuned Spacer III	⑱ Pump Tail Cement	22 Shutdown	26 Bump Plug	30 Post-Jo
③ Crew Leave Yard	⑦ Rig-Up Equipment	⑪ Prime Pumps	⑮ Pump Lead Cement	⑲ Slow Rate	23 Drop Top Plug	27 Casing Test	31 Rig-Do
④ Arrive At Loc	⑧ Pre-Job Safety Meeting	⑫ Test Lines	⑯ Check weight	20 Check weight	24 Pump Displacement	28 Check Floats	32 Pre-Co

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Created: 2018-01-13 14:42:23, Version: 4.2.393

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Customer : LARAMIE ENERGY II LLC EBUSINESS

Job Date : 1/13/2018

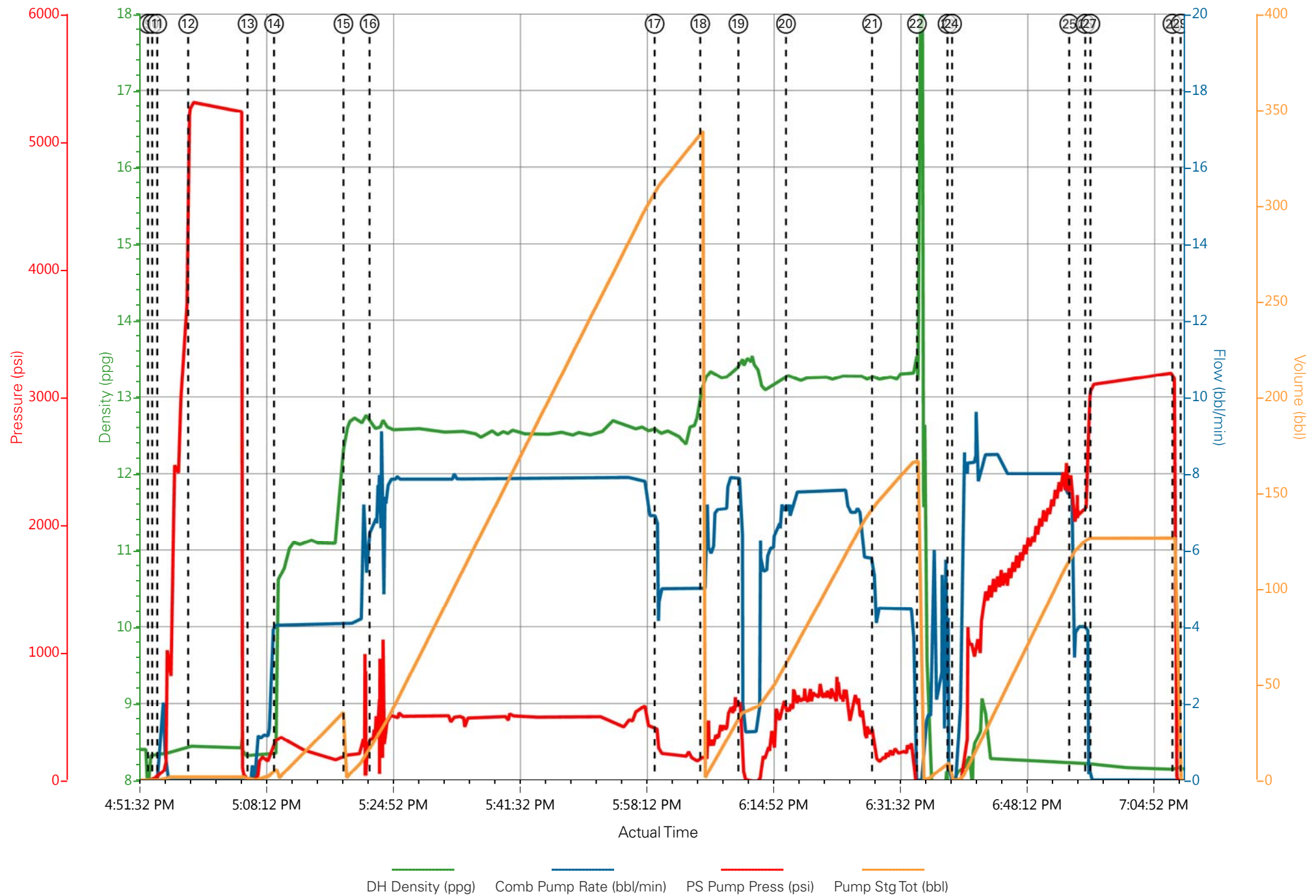
Well : BRUTON 30-18W

Representative : TYLER HALE

Sales Order # : 904564543

ELITE 2 : JAMES DIAMANTI

# LARAMIE BRUTON 30-18W, 4.5" PRODUCTION



# HALLIBURTON

## Rockies, Grand Junction

## Lab Results- Lead

### Job Information

<b>Request/Slurry</b>	2443820/1	<b>Rig Name</b>	H&P 522	<b>Date</b>	10/JAN/2018
<b>Submitted By</b>	Connor Matthews	<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 30-18W

### Well Information

<b>Casing/Liner Size</b>	4.5 in	<b>Depth MD</b>	8426 ft	<b>BHST</b>	114°C / 238°F
<b>Hole Size</b>	7.875 in	<b>Depth TVD</b>	7693 ft	<b>BHCT</b>	77°C / 171°F
<b>Pressure</b>	4685 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



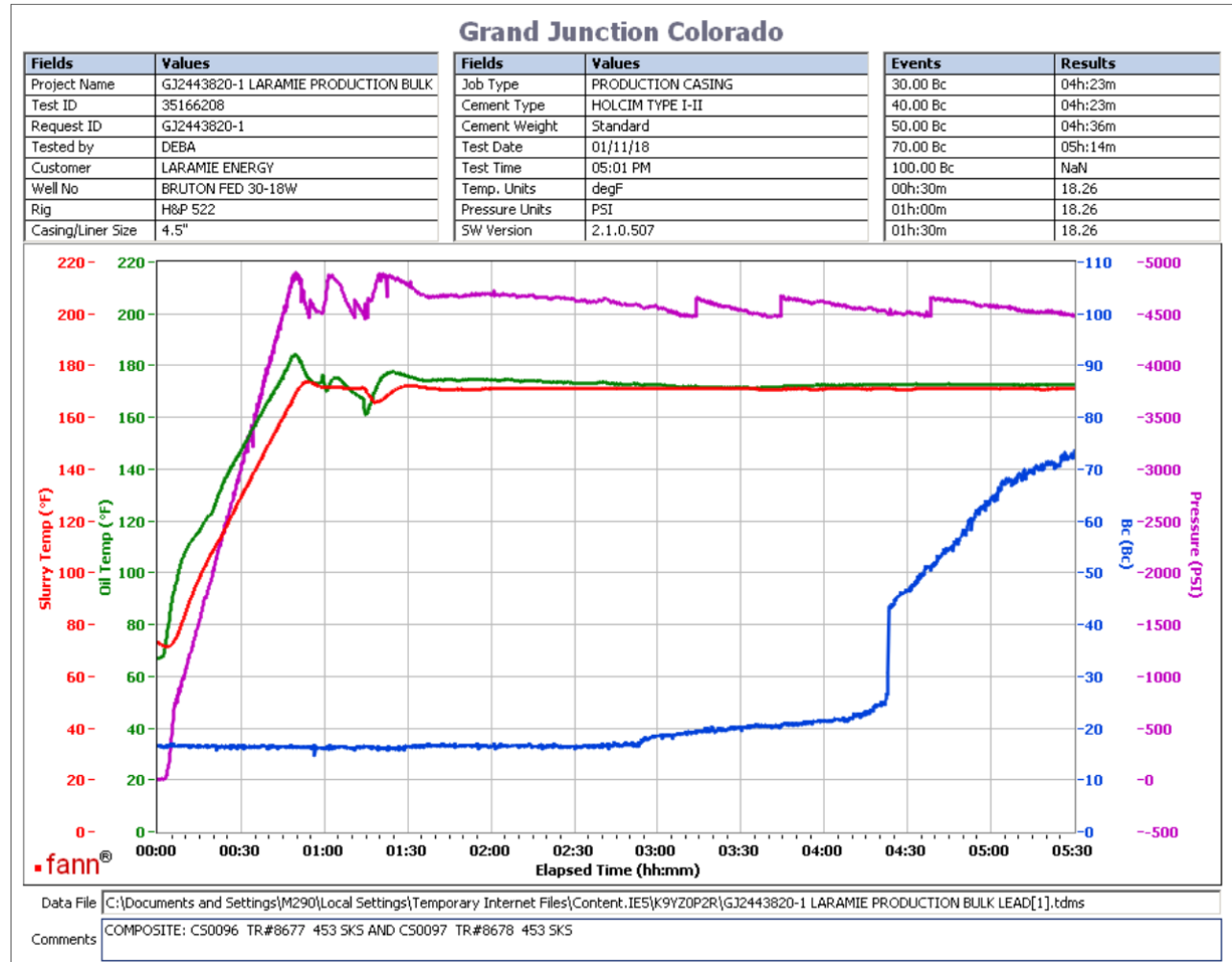
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	<b>Cement Properties</b>		
		NeoCem Lead				Slurry Density	12.5	lbm/gal
						Slurry Yield	1.941	ft3/sack
						Water Requirement	9.623	gal/sack
						Total Mix Fluid	9.623	gal/sack
						Water Source	Fresh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

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Thickening Time - ON-OFF-ON

12/JAN/2018

Test Temp (degF)	Pressure (psi)	Reached in (min)	30 Bc (hh:min)	50 Bc (hh:min)	70 Bc (hh:min)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)	Termination time (hh:min)	Termination Bc
171	4685	49	4:23	4:36	5:14	16	59	15	16	13:51	90



Total sks = 906

Composite:

CS0096 TR#8677 453 SKS

CS0097 TR#8678 453 SKS

Deflection: 16 - 16

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# HALLIBURTON

## Rockies, Grand Junction

## Lab Results- Tail

### Job Information

<b>Request/Slurry</b>	2443819/1	<b>Rig Name</b>	H&P 522	<b>Date</b>	10/JAN/2018
<b>Submitted By</b>	Connor Matthews	<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 30-18W

### Well Information

<b>Casing/Liner Size</b>	4.5 in	<b>Depth MD</b>	8426 ft	<b>BHST</b>	114°C / 238°F
<b>Hole Size</b>	7.875 in	<b>Depth TVD</b>	7693 ft	<b>BHCT</b>	77°C / 171°F
<b>Pressure</b>	4685 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



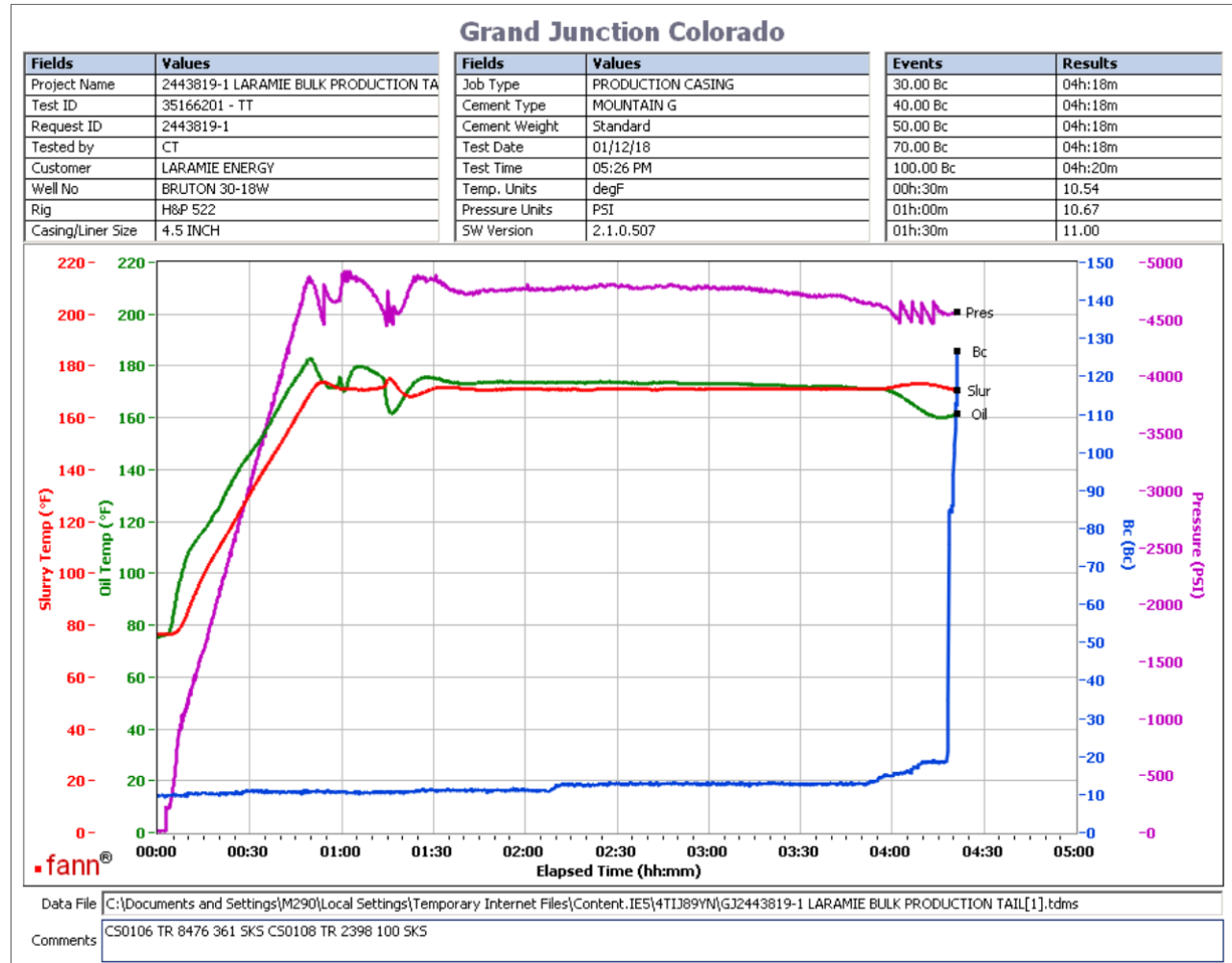
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	<b>Cement Properties</b>		
		ThermaCem Tail				Slurry Density	13.3	lbm/gal
						Slurry Yield	1.733	ft3/sack
						Water Requirement	7.799	gal/sack
						Total Mix Fluid	7.799	gal/sack
						Water Source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

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Thickening Time - ON-OFF-ON

13/JAN/2018

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)
171	4685	49	4:18	4:18	4:18	4:20	10	59	15	11



sks Total = 461

Composite:

CS0106 TR 8476 361 SKS

CS0108 TR 2398 100 SKS

Deflection: 11 - 11

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