

HALLIBURTON

iCem[®] Service

LARAMIE ENERGY II LLC EBUSINESS

For: Laramie

Date: Sunday, February 04, 2018

BRUTON 31-01E Surface

API# 05-077-10475-00

Job Date: Sunday, February 04, 2018

Sincerely,

Grand Junction Cement Engineering

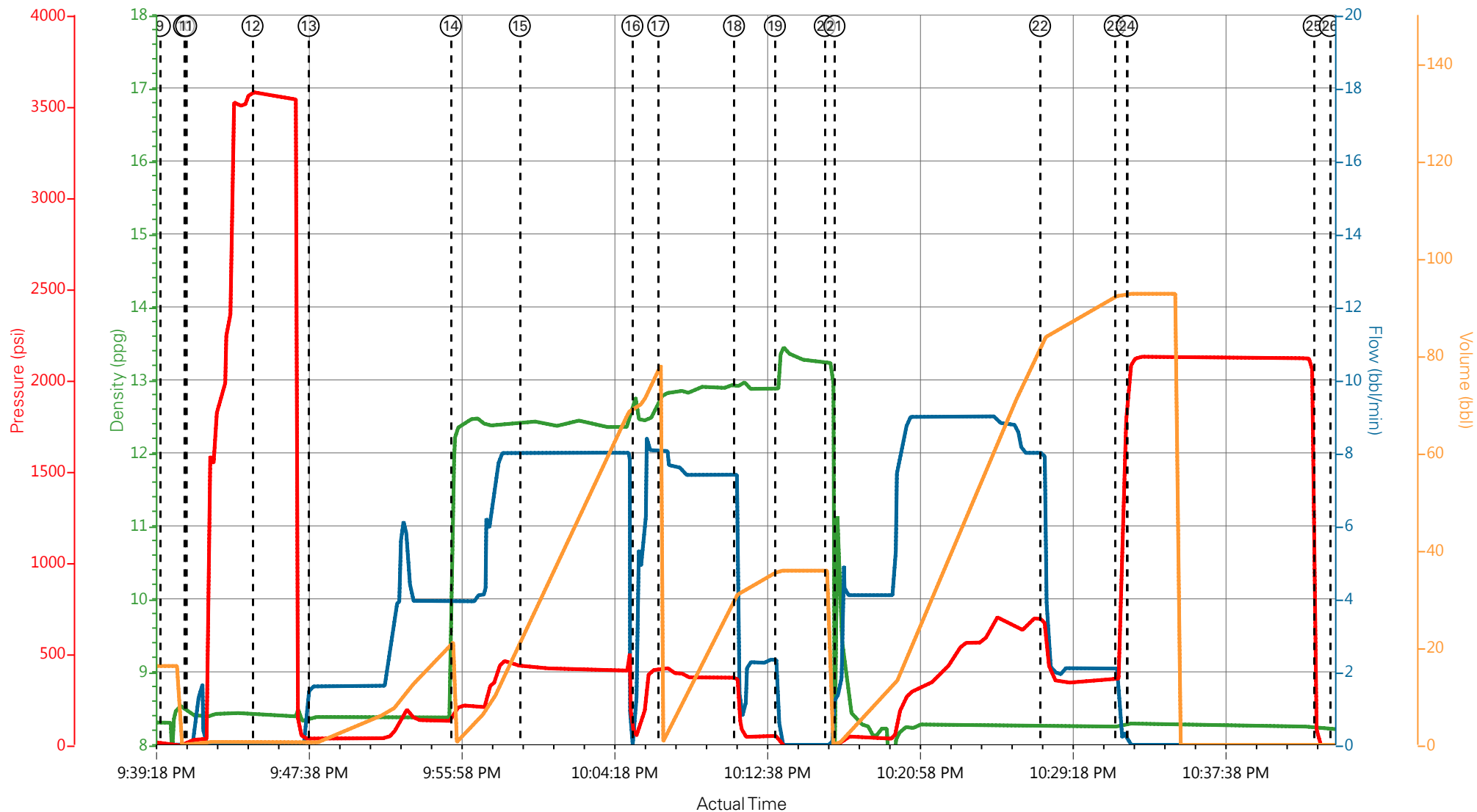
2.0 Real-Time Job Summary

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	2/4/2018	15:00:00	USER					REQUESTED ON LOCATION @ 21:00
Event	2	Pre-Convoy Safety Meeting	2/4/2018	17:45:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	2/4/2018	18:00:00	USER					1 HT 400 PUMP TRUCK E2, 1 660 BULK TRUCKS, 1 550 SERVICE PICKUP
Event	4	Arrive At Loc	2/4/2018	20:00:00	USER					RIG RUNNING CASING WHEN HES ARRIVED
Event	5	Assessment Of Location Safety Meeting	2/4/2018	20:10:00	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- 65F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Pre-Rig Up Safety Meeting	2/4/2018	20:15:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	2/4/2018	20:30:00	USER					HES RIGGED UP EQUIPMENT WITHOUT ENTERING RED ZONE.
Event	8	Pre-Job Safety Meeting	2/4/2018	21:20:00	USER					ALL HES EMPLOYEES AND RIG CREW PRESENT, RIG CIRCULATED @ 10 BPM FOR .5HR PRIOR TO JOB, PRESSURE @190 PSI
Event	9	Start Job	2/4/2018	21:39:40	COM6					TD-1540', TP-1530', SJ-43.4', CSG-8.625" 24# J55, OH-11", MUD-9.1PPG
Event	10	Prime Llines	2/4/2018	21:40:59	COM6	8.33	2	36	2	8.33 PPG FRESH WATER
Event	11	Drop Bottom Plug	2/4/2018	21:41:06	COM6					VERIFIED BY FLAG INDICATOR
Event	12	Test Lines	2/4/2018	21:44:44	COM6			3577		ALL LINES HELD PRESSURE AT 3577 PSI
Event	13	Pump H2O Spacer	2/4/2018	21:47:47	COM6	8.33	4	130	20	FRESH WATER
Event	14	Pump Lead Cement	2/4/2018	21:55:32	COM6	12.3	8	460	76.3	174 SKS VARICEM GJ5 CMT 12.3 PPG, 2.46 FT3/SK, 14.17 GAL/SK

Event	15	Check weight	2/4/2018	21:59:18	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	16	Bump Bottom Plug	2/4/2018	22:05:27	USER					RUPTURE BOTTOM PLUG
Event	17	Pump Tail Cement	2/4/2018	22:06:51	COM6	12.8	8	430	42.3	109 SKS VARICEM GJ5 CMT 12.8 PPG, 2.18 FT3/SK, 12.11 GAL/SK
Event	18	Slow Rate	2/4/2018	22:10:59	USER					SLOWED TO END CEMENT
Event	19	Shutdown	2/4/2018	22:13:13	USER					END OF CEMENT, WASH UP ON TOP OF PLUG.
Event	20	Drop Top Plug	2/4/2018	22:15:56	COM6					VERIFIED BY FLAG INDICATOR
Event	21	Pump Displacement	2/4/2018	22:16:28	COM6	8.4	9	710	94.5	FRESH WATER
Event	22	Slow Rate	2/4/2018	22:27:41	USER	8.4	9	710	84.5	SLOW RATE TO 2 BPM TO BUMP PLUG
Event	23	Bump Plug	2/4/2018	22:31:45	COM6	8.4	2	360	94.5	LAND PLUG AT 360 PSI, BROUGHT UP TO 2100 PSI AND HELD FOR TEN MINS FOR CASING TEST
Event	24	Casing Test	2/4/2018	22:32:25	COM6					HELD 2100 PSI FOR TEN MINS.
Event	25	Check Floats	2/4/2018	22:42:37	USER					FLOATS HELD, 1 BBL BACK TO TRUCK
Event	26	End Job	2/4/2018	22:43:29	COM6					RETURNS THROUGHOUT JOB, 30 BBLs CMT TO SURFACE, USED 40 POUNDS OF SUGAR
Event	27	Post-Job Safety Meeting (Pre Rig-Down)	2/4/2018	22:50:00	USER					ALL HES PRESENT
Event	28	Rig-Down Equipment	2/4/2018	23:00:00	USER					ALL HES PRESENT
Event	29	Pre-Convoy Safety Meeting	2/4/2018	23:50:00	USER					ALL HES PRESENT
Event	30	Crew Leave Location	2/4/2018	23:55:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENT, SHAWN BLOSSOM AND CREW

LARAMIE BRUTON 31-01E, 8 5/8" SURFACE



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

▼ **HALLIBURTON** | iCem® Service

Created: 2018-02-04 20:56:26, Version: 4.2.393

Edit

Customer : LARAMIE ENERGY II LLC EBUSINESS

Job Date : 2/4/2018

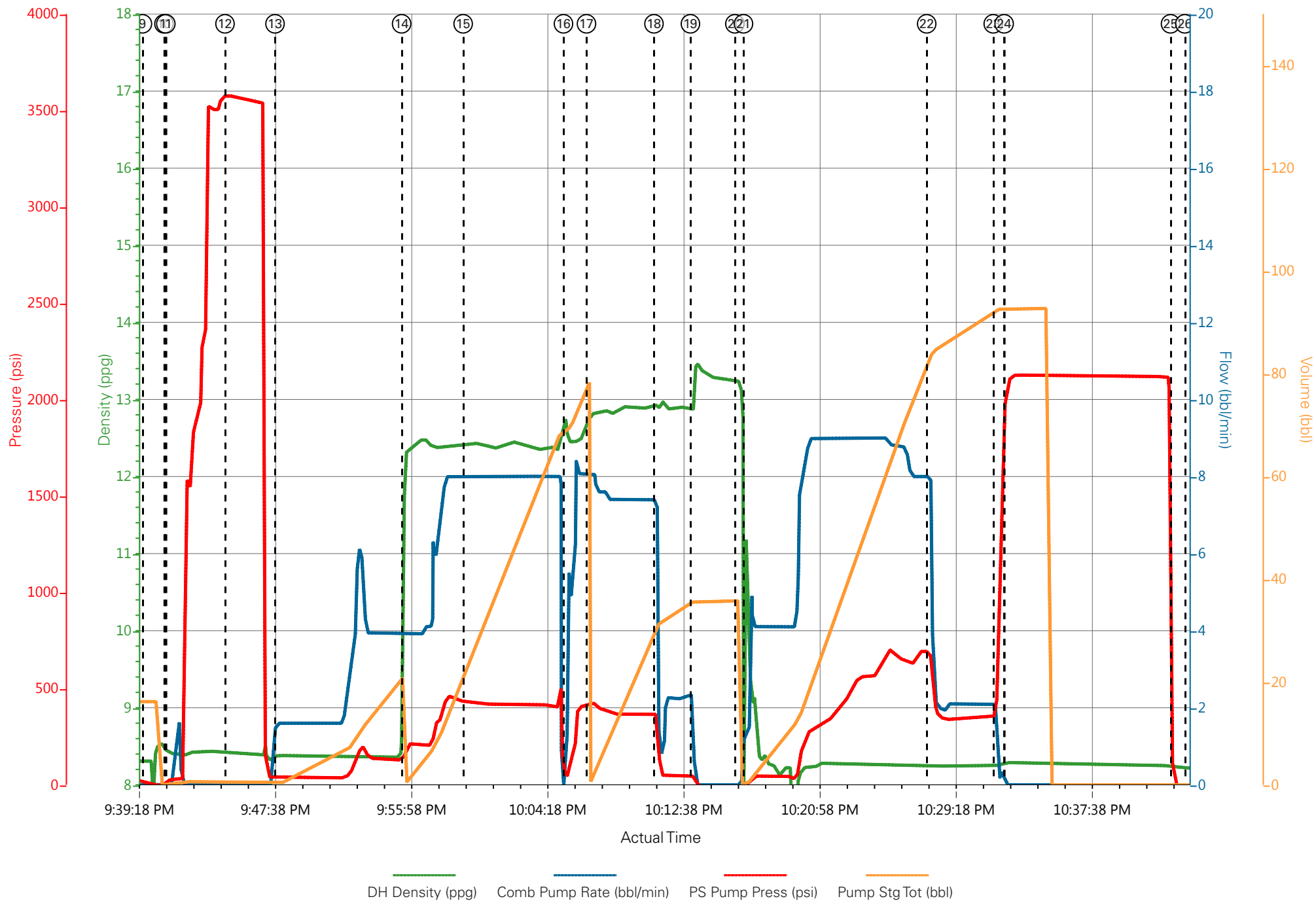
Well : BRUTON 31-01E

Representative : TYLER HALE

Sales Order # : 904622435

ELITE 2 : JAMES DIAMANTI

LARAMIE BRUTON 31-01E, 8 5/8" SURFACE



HALLIBURTON

iCem[®] Service

LARAMIE ENERGY II LLC

For: Laramie

Date: Thursday, February 08, 2018

BRUTON 31-01E Production

API# 05-077-10475

Job Date: Thursday, February 08, 2018

Sincerely,

Grand Junction Cement Engineering

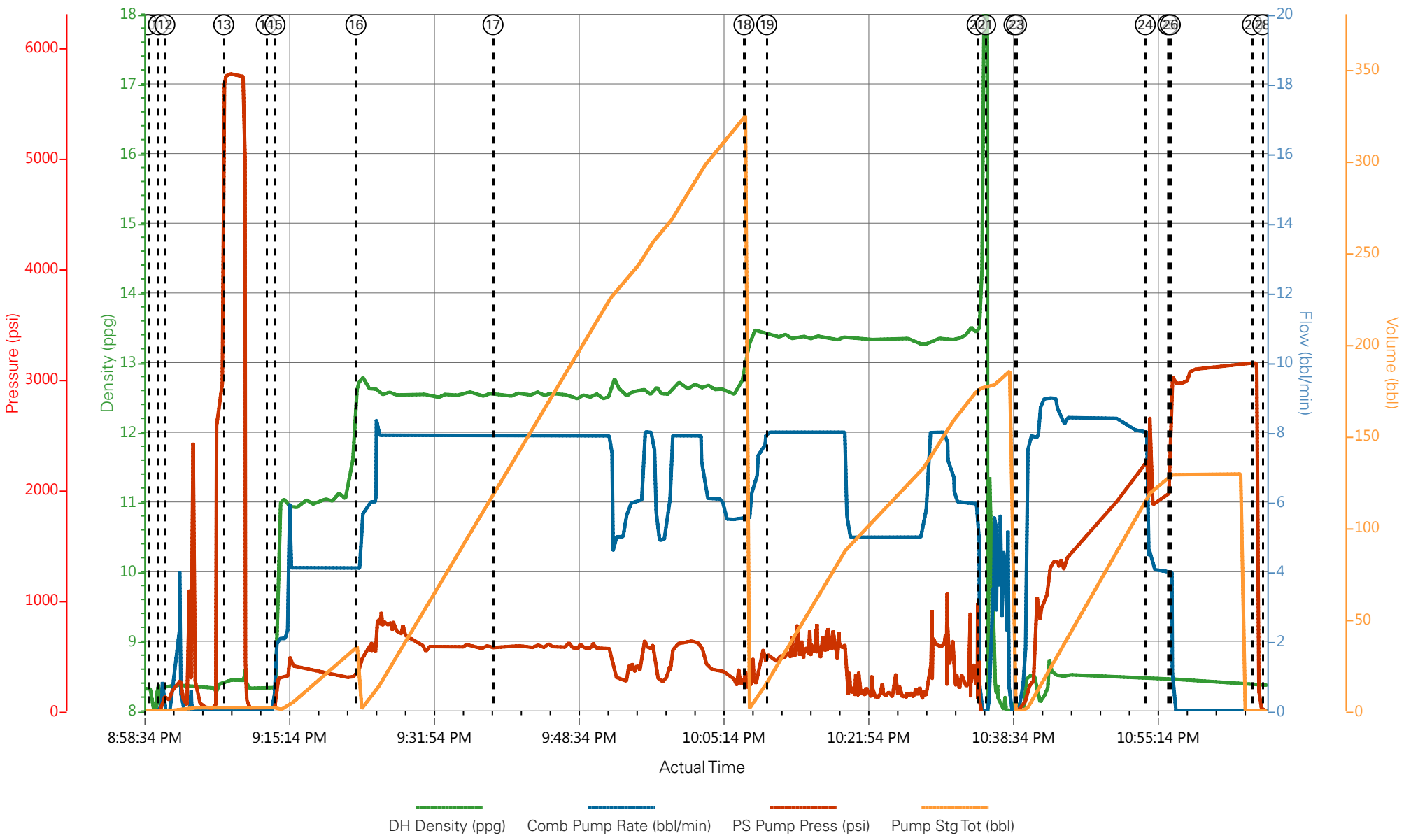
2.0 Real-Time Job Summary

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	2/8/2018	13:00:00	USER					ON LOCATION REQUESTED 19:00
Event	2	Pre-Convoy Safety Meeting	2/8/2018	15:15:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	2/8/2018	15:30:00	USER					
Event	4	Arrive at Location from Service Center	2/8/2018	17:00:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	2/8/2018	17:05:00	USER					MET WITH COMPANY REP DISCUSSED PROCEDURE, SDS OFFERED
Event	6	Pre-Rig Up Safety Meeting	2/8/2018	17:30:00	USER					ALL HES PRESENT
Event	7	Rig-Up Completed	2/8/2018	19:30:00	USER					1-ELITE, 1-660 BULK TRAILER, 2-FIELD SILO, 4.5" QL, 2" PUMP IRON, 4" SUCTION HOSE
Event	8	Pre-Job Safety Meeting	2/8/2018	19:45:00	USER					ALL HES AND RIG CREW PRESENT
Event	9	Other	2/8/2018	19:45:01	USER					RIG CIRCULATED 1.5 BOTTOMS UP 450 GPM 860PSI.WATER:TEMP-55, CL-0,PH-7
Event	10	Start Job	2/8/2018	20:59:20	USER	8.32	0.00	1.00	0.0	TD-8424', TP-8419', SJ-86.81', OH-7.875", CSG-4.5" 11.6# P110, SCSG-8.625" 24# J55 SHOE @ 1530', MUD-9.3PPG
Event	11	Prime Lines	2/8/2018	21:00:31	COM5	8.31	2.00	304.00	3.0	FRESH WATER
Event	12	Drop Bottom Plug	2/8/2018	21:01:16	COM5					PLUG AWAY
Event	13	Test Lines	2/8/2018	21:08:02	COM5	8.45	0.00	5763.00	3.2	PRESSURE HELD ON LINES
Event	14	Check weight	2/8/2018	21:12:57	COM5					WEIGHT VERIFIED BY PRESSURIZED MUD SCALES
Event	15	Pump Tuned Spacer	2/8/2018	21:13:57	COM5	11.00	4.00	412.00	40.0	TUNED SPACER III, 40 BBLS, 4.86CF/SK, 31.9GAL/SK
Event	16	Pump Lead Cement	2/8/2018	21:23:16	COM5	12.50	8.00	919.00	315.1	NEOCEM 912SKS, 12.5PPG, 1.94CF/SK, 9.6GAL/SK

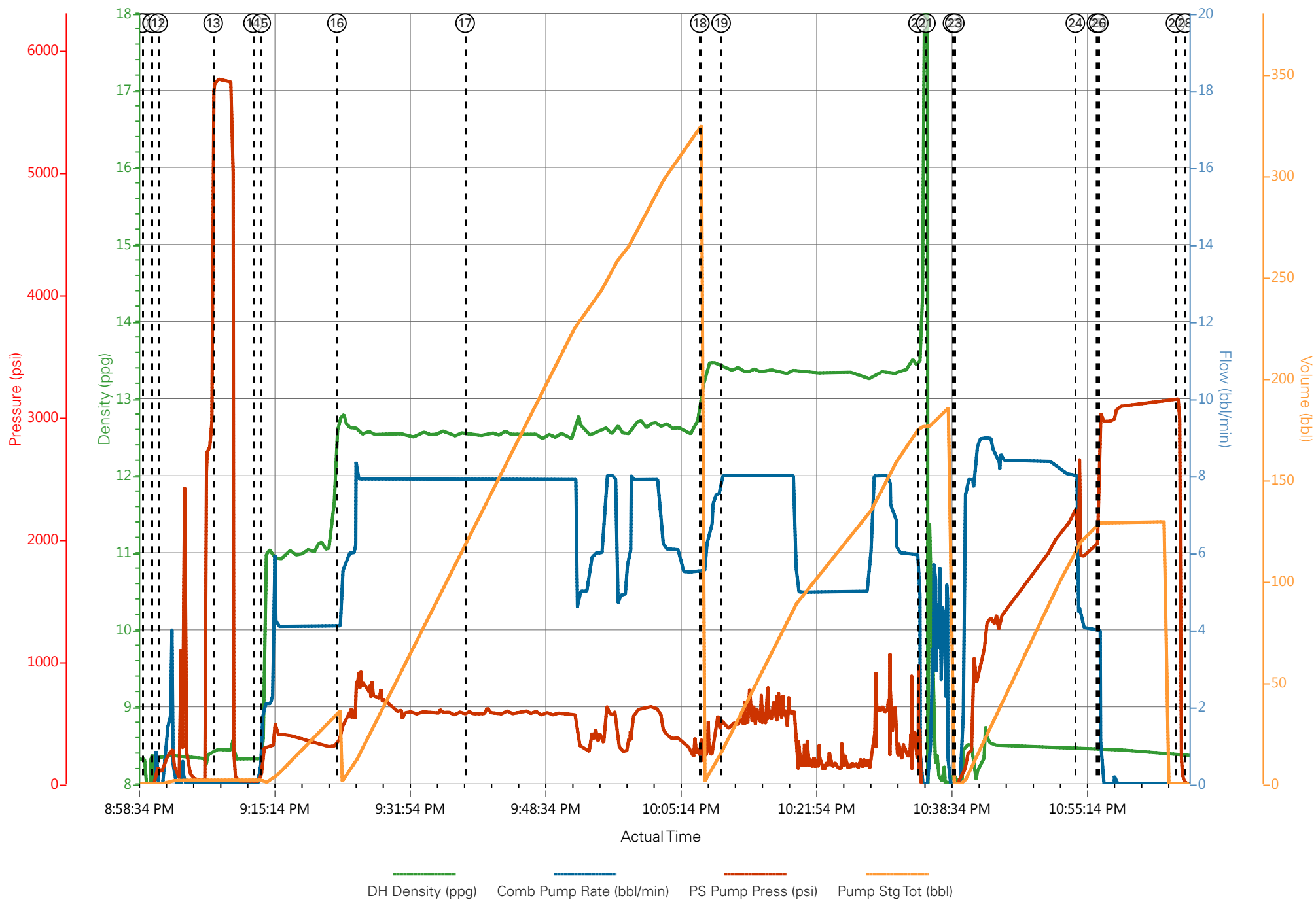
Event	17	Check weight	2/8/2018	21:39:03	COM5					WEIGHT VERIFIED BY PRESSURIZED MUD SCALES
Event	18	Pump Tail Cement	2/8/2018	22:07:56	COM5	13.30	8.00	786.00	142.00	THERMACEM 461SKS, 13.3PPG, 1.73CF/SK, 7.81GAL/SK
Event	19	Check weight	2/8/2018	22:10:33	COM5					WEIGHT VERIFIED BY PRESSURIZED MUD SCALES
Event	20	Shutdown	2/8/2018	22:34:46	USER					END OF CEMENT
Event	21	Clean Lines	2/8/2018	22:35:45	USER					CLEANED PUMPS AND LINES TO CELLAR
Event	22	Drop Top Plug	2/8/2018	22:39:01	COM5					PLUG AWAY
Event	23	Pump Displacement	2/8/2018	22:39:18	COM5	8.42	9.00	2290.00	129.2	FRESH WATER. 5 GAL CLA WEB AND 1 GAL MMCR ADDED
Event	24	Slow Rate	2/8/2018	22:54:08	USER	8.46	4.00	1934.00	118.1	SLOW RATE LAST 10 BBLS
Event	25	Bump Plug	2/8/2018	22:56:44	COM5	8.45	4.00	1976.00	128.7	PLUG BUMPED 1976 PSI
Event	26	Casing Test	2/8/2018	22:57:01	USER	8.46	0.00	3040.00	129.2	10 MINUTE CASING TEST
Event	27	Check Floats	2/8/2018	23:06:28	USER	8.40	0.00	3149.00	0.0	FLOATS HELD 2 BBLS BACK
Event	28	End Job	2/8/2018	23:07:38	COM5					GOOD RETURNS THROUGH OUT JOB, 3 BBLS TUNED SPACER TO SURFACE
Event	29	Post-Job Safety Meeting (Pre Rig-Down)	2/8/2018	23:10:23	USER					ALL HES PRESENT
Event	30	Rig-Down Completed	2/9/2018	00:15:00	USER					
Event	31	Pre-Convoy Safety Meeting	2/9/2018	00:30:00	USER					ALL HES PRESENT
Event	32	Crew Leave Location	2/9/2018	00:45:00	USER					THANK YOU FOR CHOOSING HALLIBURTON, ANDREW BRENNECKE AND CREW

LARAMIE - BRUTON 31-01E - 4.5" PRODUCTION



① Call Out	⑤ Assessment Of Location Safety Meeting	⑨ Other	⑬ Test Lines	⑰ Check weight	21 Clean Lines	25 Bump Plug	2
② Pre-Convoy Safety Meeting	⑥ Pre-Rig Up Safety Meeting	⑩ Start Job	⑭ Check weight	⑱ Pump Tail Cement	22 Drop Top Plug	26 Casing Test	3
③ Crew Leave Yard	⑦ Rig-Up Completed	⑪ Prime Lines	⑮ Pump Tuned Spacer	⑲ Check weight	23 Pump Displacement	27 Check Floats	3
④ Arrive at Location from Service Center	⑧ Pre-Job Safety Meeting	⑫ Drop Bottom Plug	⑯ Pump Lead Cement	20 Shutdown	24 Slow Rate	28 End Job	3

LARAMIE - BRUTON 31-01E - 4.5" PRODUCTION



Job Information

Request/Slurry	2451180/1	Rig Name	H&P 522	Date	05/FEB/2018
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Bruton Federal 31-01E

Well Information

Casing/Liner Size	4.5 in	Depth MD	8452 ft	BHST	114°C / 238°F
Hole Size	7.875 in	Depth TVD	7668 ft	BHCT	77°C / 170°F
Pressure	4666 psi				

Drilling Fluid Information

Mud Supplier Name		Mud Trade Name		Density	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>	Cement Properties		
		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		

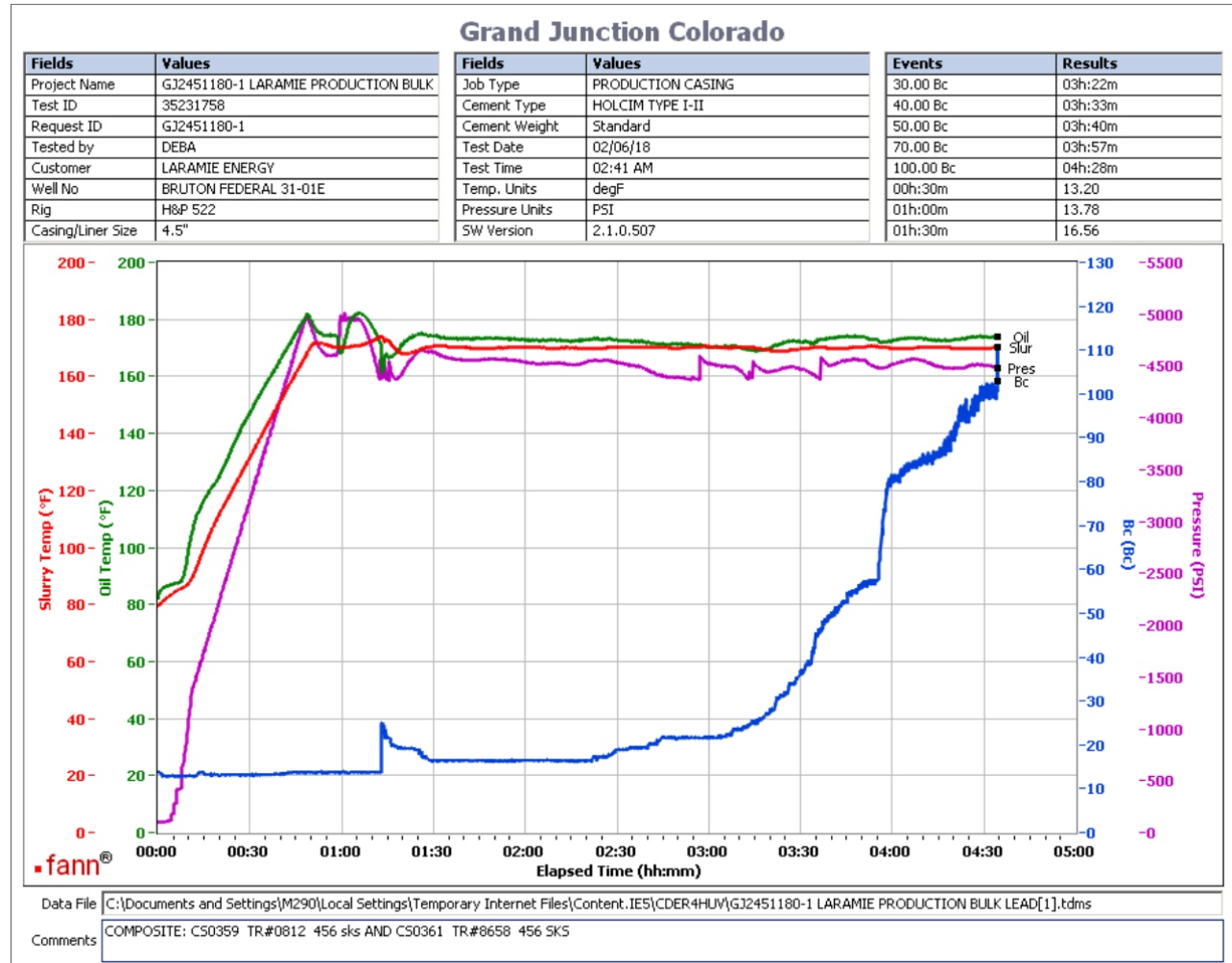
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Operation Test Results Request ID 2451180/1

Thickening Time - ON-OFF-ON

05/FEB/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)
170	4666	48	3:22	3:40	3:57	4:28	14	58	15	26



Total sks = 912

Composite:

CS0359 TR#0812 456 SKS

CS0361 TR#8658 456 SKS

deflected from 14Bc--- > 26Bc--- > 21 within one minute

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HALLIBURTON

Rockies, Grand Junction

Lab Results- Tail

Job Information

Request/Slurry	2451181/1	Rig Name	H&P 522	Date	05/FEB/2018
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Bruton Federal 31-01E

Well Information

Casing/Liner Size	4.5 in	Depth MD	8452 ft	BHST	114°C / 238°F
Hole Size	7.875 in	Depth TVD	7668 ft	BHCT	77°C / 170°F
Pressure	4666 psi				

Drilling Fluid Information

Mud Supplier Name		Mud Trade Name		Density	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>	Cement Properties		
		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		

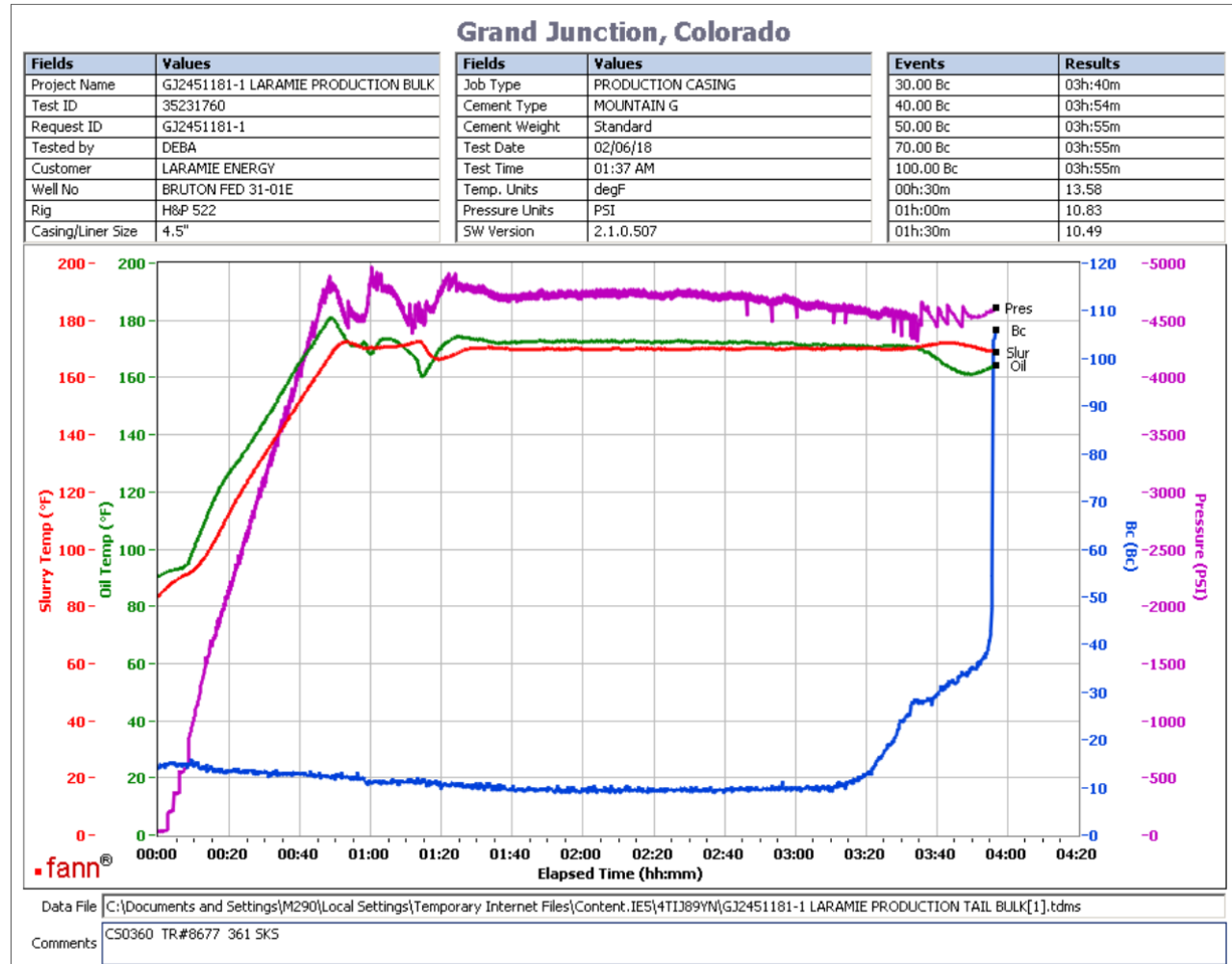
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Operation Test Results Request ID 2451181/1

Thickening Time - ON-OFF-ON

05/FEB/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)
170	4666	48	3:40	3:55	3:55	3:55	14	58	15	10



Total sks = 461

CS0360 TR#8677 361 SKS

no deflection was observed. 10Bc---10Bc

heat of hydration at 3:33

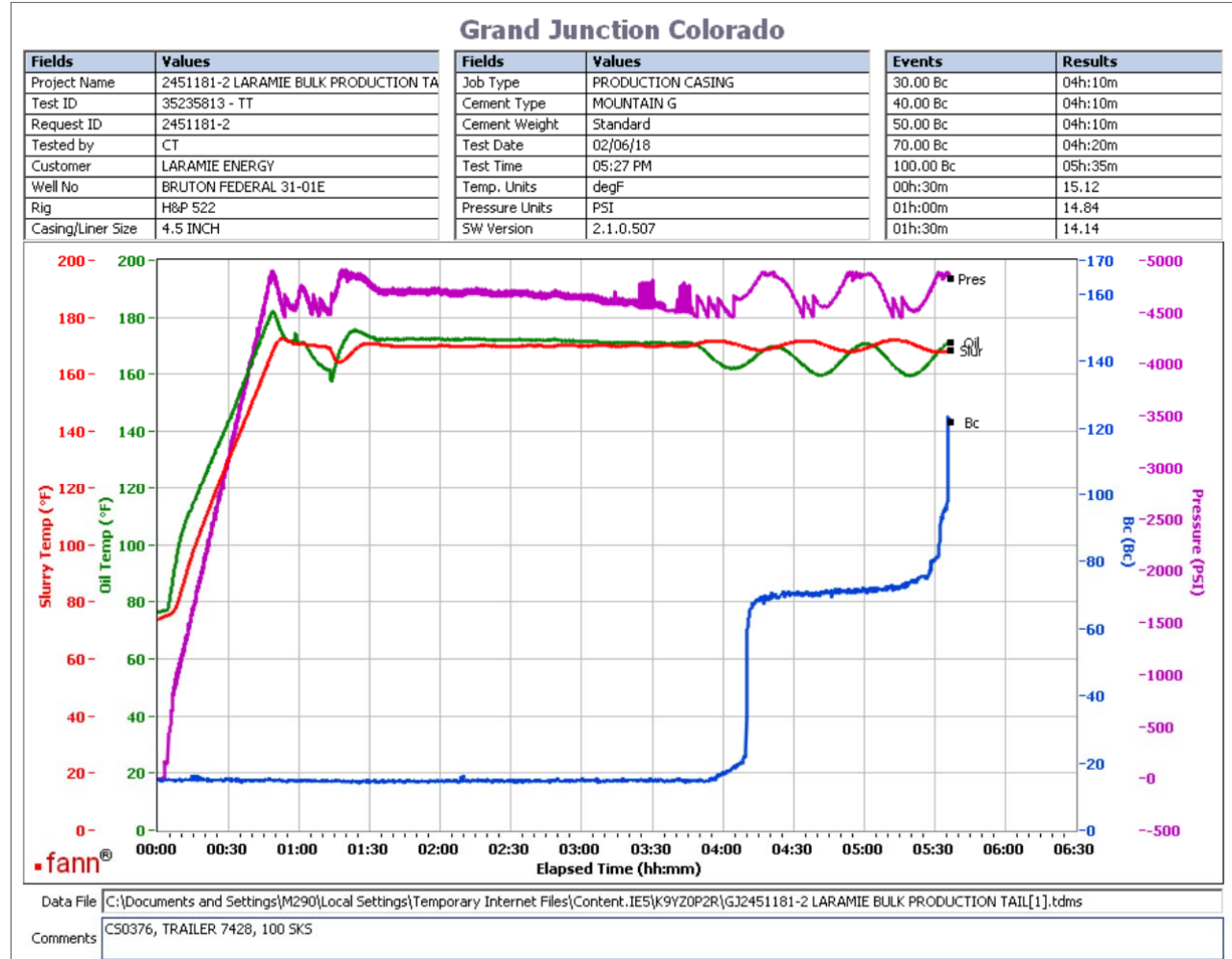
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Operation Test Results Request ID 2451181/2

Thickening Time - ON-OFF-ON

07/FEB/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)
170	4666	48	4:10	4:10	4:20	5:35	15	58	15	15



Total sks = 461

CS0376, Trailer 7428, 100 sks

No deflection. Please note that heat of hydration started around 3:48.

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