

HALLIBURTON

iCem[®] Service

LARAMIE ENERGY LLC

For: Laramie

Date: Friday, December 15, 2017

BRUTON 30-15E Surface

API# 05-077-10470

Sincerely,
Grand Junction Cement Engineering

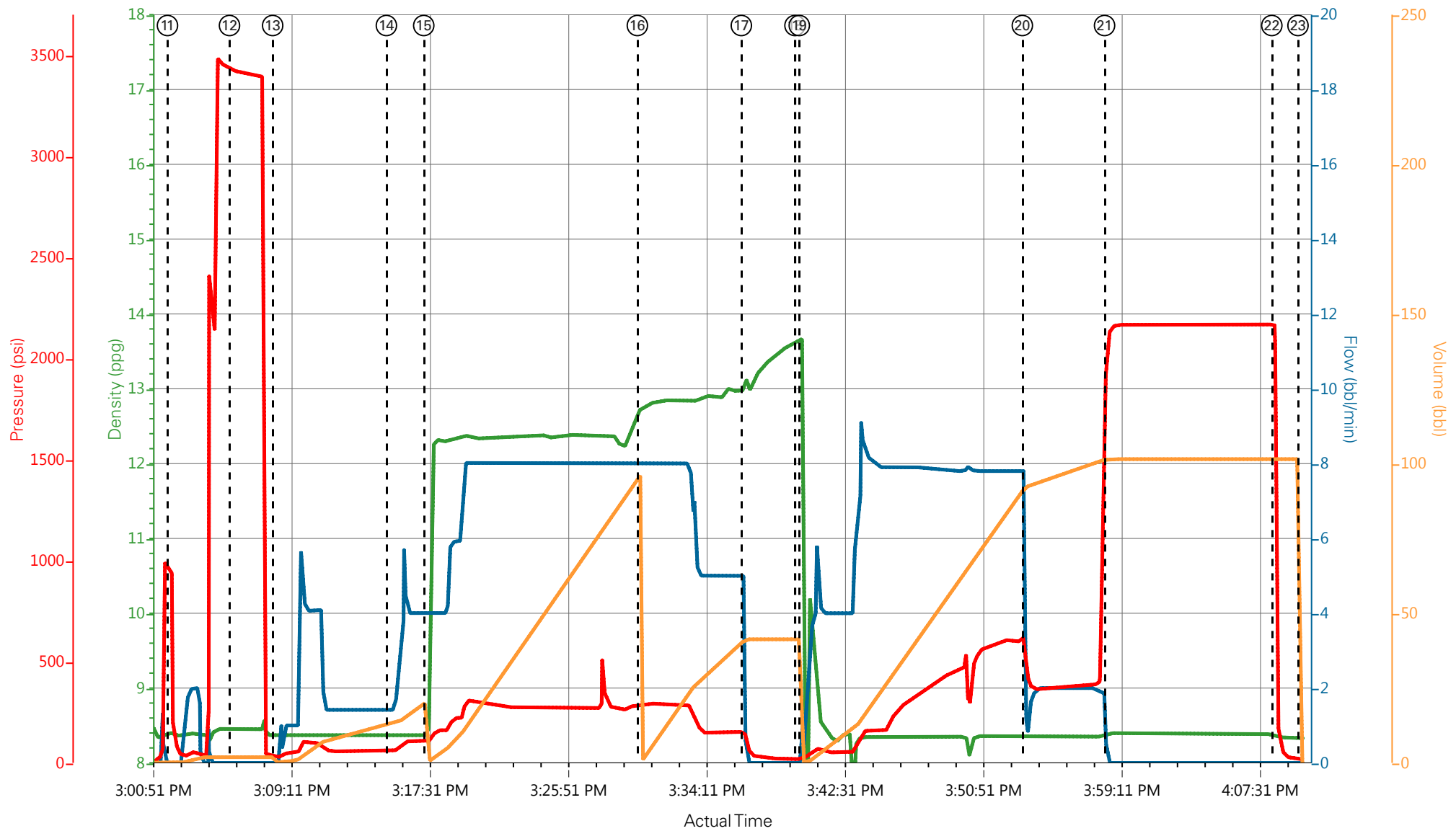
2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Driv-Side Pump Pressure (psi)	Pump Stage Total (bbl)	Comments
Event	1	Call Out	12/15/2017	07:00:00	USER					ON LOCATION 13:00
Event	2	Pre-Convoy Safety Meeting	12/15/2017	10:30:00	USER					JOURNEY CREATED - ALL HES INVOLVED IN SAFETY MEETING
Event	3	Crew Leave Yard	12/15/2017	10:45:00	USER					1-F-550 PICKUP, 1-ELITE PUMP TRUCK, 1-660 BULK TRUCK
Event	4	Arrive At Loc	12/15/2017	12:00:00	USER					HES ARRIVED 1 HOUR EARLY
Event	5	Assessment Of Location Safety Meeting	12/15/2017	12:15:00	USER					RIG WAS RUNNING CASING - HES REP SPOKE WITH COMPANY REP
Event	6	Pre-Rig Up Safety Meeting	12/15/2017	13:30:00	USER					JSA FILLED OUT AND REVIEWED - ALL HES IN ATTENDANCE FOR SAFETY MEETING
Event	7	Rig-Up Equipment	12/15/2017	13:45:00	USER					RIG-UP IRON TO THE STAND PIPE, WATER HOSES TO RIG UPRIGHT, BULK TRUCK TO PUMP TRUCK
Event	8	Rig-Up Completed	12/15/2017	14:00:00	USER					COMPLETED SAFELY
Event	9	Pre-Job Safety Meeting	12/15/2017	14:30:00	USER					ALL HES, RIG CREW AND COMPANY REP IN ATTENDANCE
Event	10	Well Information	12/15/2017	14:30:01	USER					TD: 1560FT TP: 1549.1FT SJ: 44.64FT OH: 11" CSG: 8.625 24# J-55 MUD WT: 9.1 - WATER TEST: TEMP- 65 PH- 7 CHLOR- 0
Event	11	Start Job	12/15/2017	15:01:54	COM5					START JOB
Event	12	Test Lines	12/15/2017	15:05:38	COM5			3383		PRESSURE TEST LINES TO 3383 PSI, PRESSURE TEST GOOD
Event	13	Fresh Water	12/15/2017	15:08:14	COM5	8.34	4	118	20	20 BBL FRESH WATER SPACER AHEAD PUMPED AT 4BPM PRESSURE WAS 118 PSI
Event	14	Check weight	12/15/2017	15:15:05	COM5	12.3				VERIFIED WEIGHT OF FIRST TUB OF CEMENT
Event	15	Pump Lead Cement	12/15/2017	15:17:20	COM5	12.3	8	345	86.3	197SKS OF VARICEM CEMENT (86.3BBLs) 12.3PPG 2.46YIELD 14.17GAL/SK WEIGHT OF CEMENT VERIFIED VIA PRESSURIZED MUD SCALES THROUGHOUT LEAD

CEMENT										
Event	16	Pump Tail Cement	12/15/2017	15:30:12	COM5	12.8	8	330	42.3	109SKS OF VARICEM CEMENT (42.3BBLS) 12.8PPG 2.18YIELD 12.11GAL/SK WEIGHT OF CEMENT VERIFIED VIA PRESSURIZED MUD SCALES THROUGHOUT TAIL CEMENT
Event	17	Shutdown	12/15/2017	15:36:27	USER					SHUTDOWN END OF CEMENT - HES WASHED UP ON TOP OF THE PLUG
Event	18	Drop Top Plug	12/15/2017	15:39:41	USER					TOP PLUG AWAY NO PROBLEMS
Event	19	Pump Displacement	12/15/2017	15:39:57	COM5	8.34	8	682	85.7	FRESH WATER DISPLACEMENT
Event	20	Slow Rate	12/15/2017	15:53:23	USER	8.34	2	360	10	SLOW RATE TO BUMP THE PLUG - PRESSURE PRIOR TO SLOWING WAS 682 PSI AT 8 BPM
Event	21	Bump Plug	12/15/2017	15:58:20	COM5	8.34	2	380	95.7	PLUG BUMPED AT CALCULATED DISPLACEMENT - PLUG BUMPED AT 380 PSI TOOK TO 2125 PSI FOR 10 MIN CASING TEST PER CUSTOMER
Event	22	Check Floats	12/15/2017	16:08:25	USER			2135		FLOATS HELD 1 BBL BACK TO TANKS - 30BBLS OF CEMENT TO SURFACE - RIG USED 40 POUNDS OF SUGAR
Event	23	End Job	12/15/2017	16:09:59	COM5					THANK YOU FOR CHOOSING HALLIBURTON CEMENT CARL KUKUS AND CREW
Event	24	Pre-Rig Down Safety Meeting	12/15/2017	16:15:00	USER					JSA REVIEWED, ALL HES INVOLVED IN SAFETY MEETING
Event	25	Rig-Down Equipment	12/15/2017	16:20:00	USER					WASH UP AND BLOW DOWN PUMP TRUCK, RIG DOWN ALL LINES AND EQUIPMENT
Event	26	Rig-Down Completed	12/15/2017	17:00:00	USER					COMPLETED SAFELY
Event	27	Pre-Convoy Safety Meeting	12/15/2017	17:15:00	USER					JOURNEY CREATED, ALL HES INVOLVED IN SAFETY MEETING
Event	28	Crew Leave Location	12/15/2017	17:20:00	USER					1-F-550 PICKUP, 1-ELITE PUMP TRUCK, 1-660 BULK TRUCK

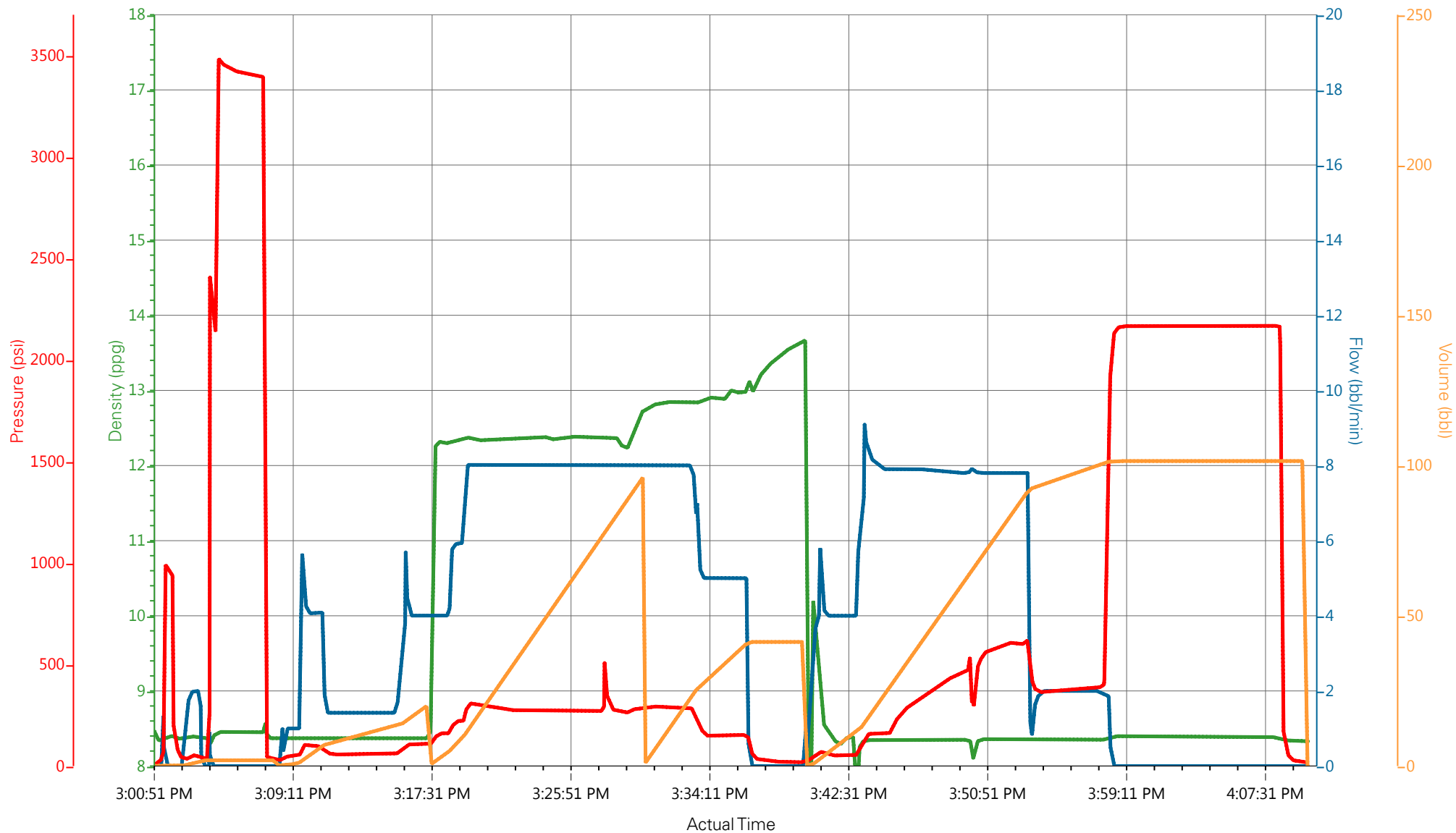
LARAMIE - BRUTON 30-15E - 904506512 - 8 5/8" SURFACE



DH Density (ppg) 8.33 Comb Pump Rate (bbl/min) 0 DS Pump Press (psi) 17 Pump Stg Tot (bbl) 0

- ① Call Out
- ② Pre-Convoy Safety Meeting
- ③ Crew Leave Yard
- ④ Arrive At Loc
- ⑤ Assessment Of Location Safety Meeting
- ⑥ Pre-Rig Up Safety Meeting
- ⑦ Rig-Up Equipment
- ⑧ Rig-Up Completed
- ⑨ Pre-Job Safety Meeting
- ⑩ Well Information
- ⑪ Start Job
- ⑫ Test Lines
- ⑬ Pump Spacer 1
- ⑭ Check weight
- ⑮ Pump Lead Ce
- ⑯ Pump Tail Cem

LARAMIE - BRUTON 30-15E - 904506512 - 8 5/8" SURFACE



DH Density (ppg) 8.33 Comb Pump Rate (bbl/min) 0 DS Pump Press (psi) 17 Pump Stg Tot (bbl) 0

HALLIBURTON

iCem[®] Service

LARAMIE ENERGY LLC EBUSINESS

For: Laramie

Date: Monday, December 18, 2017

BRUTON 30-15E Production

API#05-077-10470

Sincerely,

Grand Junction Cement Engineering

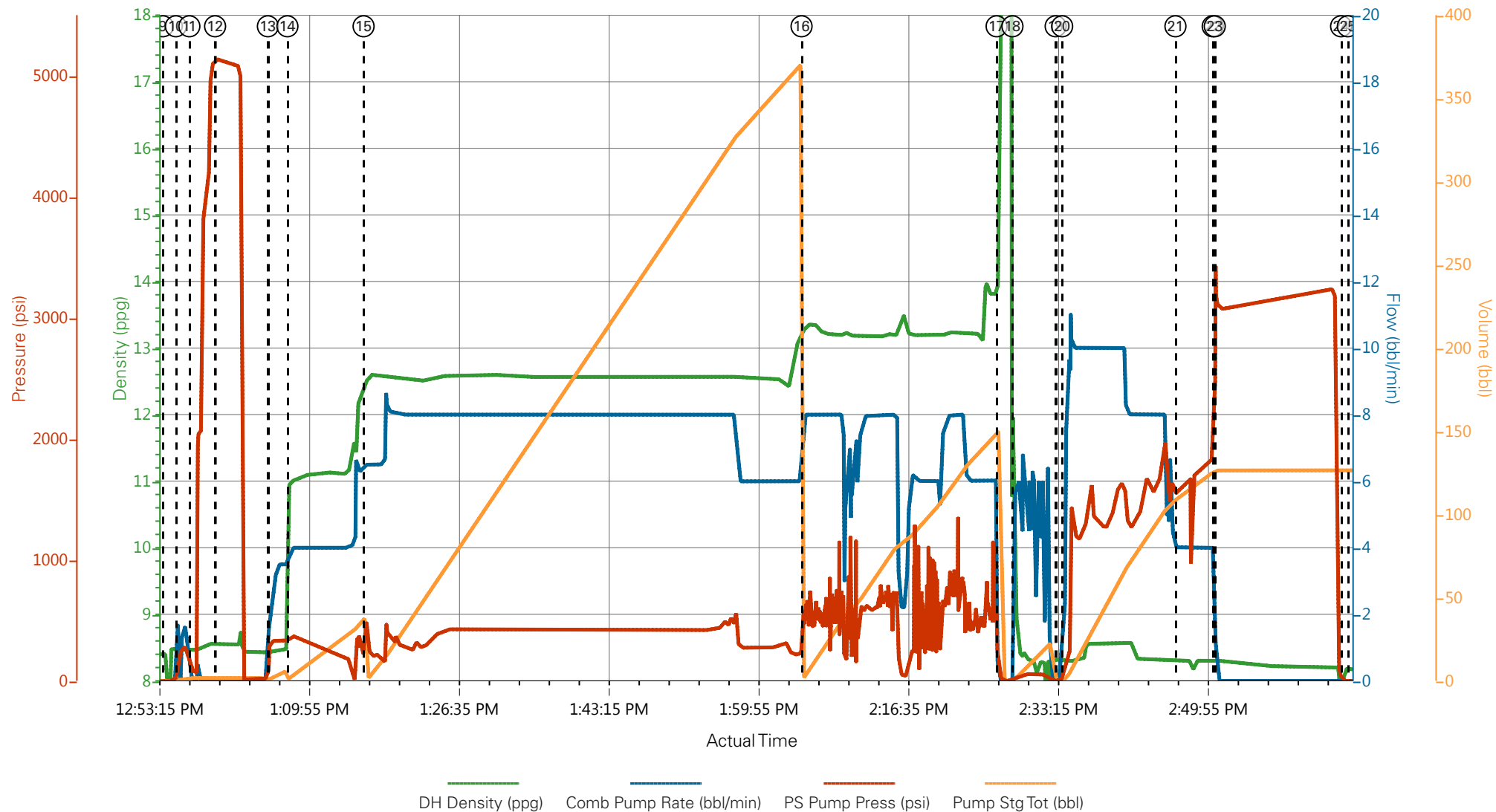
1.0 Real-Time Job Summary

1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	Pass-Side Pump Pressure (psi)	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Pump Stage Total (bbl)	Comments
Event	1	Call Out	12/18/2017	06:00:00	USER					REQUESTED ON LOCATION @ 12:00
Event	2	Pre-Convoy Safety Meeting	12/18/2017	08:45:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	12/18/2017	09:00:00	USER					1 F550, 1 PUMP TRUCK & 1 660 BULK TURCK
Event	4	Arrive At Loc	12/18/2017	10:45:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	12/18/2017	11:00:00	USER					MET WITH COMP REP AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (PH- 7, CHLORIDES- 0, TEMP- 61F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Pre-Rig Up Safety Meeting	12/18/2017	11:05:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	12/18/2017	11:10:00	USER					HES RIGGED UP EQUIPMENT WITHOUT ENTERING RED ZONE.
Event	8	Pre-Job Safety Meeting	12/18/2017	12:30:00	USER					ALL HES AND RIG CREW PRESENT
Event	9	Start Job	12/18/2017	12:54:00	COM3					TD 7873', TP 7863', SJ 88.5', OH 7.875'', CSG 4.5'' 11.6#, MUD 9.7 PPG.
Event	10	Prime Pumps	12/18/2017	12:55:26	COM3	282.00	8.36	1.00	1.5	8.33 PPG FRESH WATER
Event	11	Drop Bottom Plug	12/18/2017	12:56:56	USER					PLUG WENT, VERIFIED BY CO REP.
Event	12	Test Lines	12/18/2017	12:59:48	COM3	5135.00	8.36	0.50	0.5	ALL LINES HELD PRESSURE AT 5130 PSI
Event	13	Pump Spacer 1	12/18/2017	13:05:41	COM3	353.00	8.36	4.10	4.8	FRESH WATER (5 BBL), 8.33 PPG
Event	14	Pump Spacer 2	12/18/2017	13:07:51	COM3	374.00	11.03	8.00	40.3	TUNED SPACER III (40 BBL), 11 PPG
Event	15	Pump Lead Cement	12/18/2017	13:16:20	COM3	423.00	12.52	8.00	280.8	NEOCEM CEMENT 813 SKS (281 BBLs), 12.5 PPG, 1.94 FT3/SK, 9.6 GAL/SK

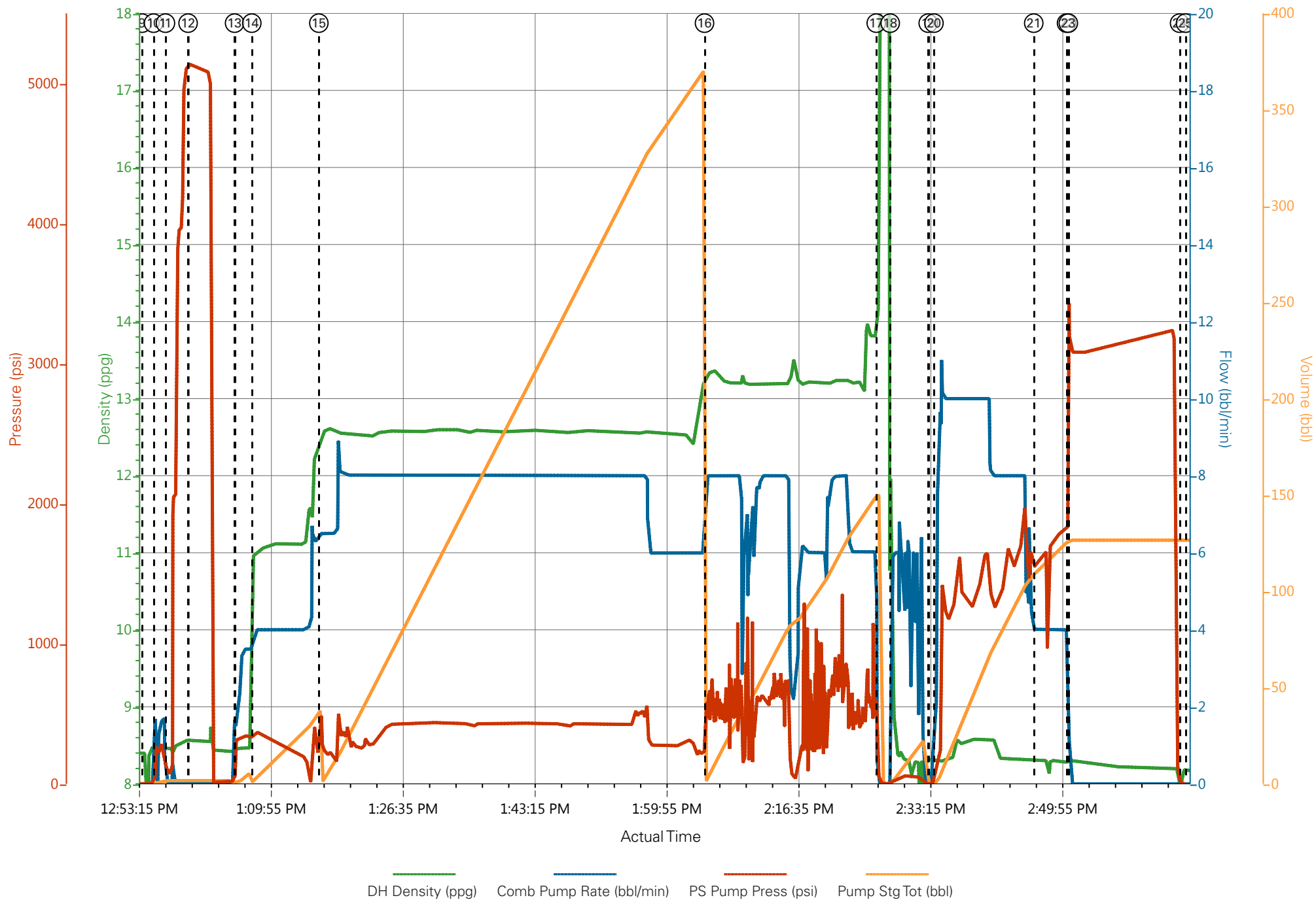
Event	16	Pump Tail Cement	12/18/2017	14:05:03	COM3	503.00	13.31	8.00	142.0	THERMACEM CEMENT 461 SKS (142 BBLS), 13.3 PPG, 1.73 FT3/SK, 7.81 GAL/SK.
Event	17	Shutdown	12/18/2017	14:26:46	USER					END OF CEMENT
Event	18	Clean Lines	12/18/2017	14:28:31	USER					WASH UP PUMPS AND LINES
Event	19	Drop Top Plug	12/18/2017	14:33:20	USER					PLUG WENT, VERIFIED BY CO REP.
Event	20	Pump Displacement	12/18/2017	14:34:03	COM3	1700.00	8.29	10.00	100.0	8.34 PPG CLAY WEB (120.5 BBLS) & 1 GAL MMCR, LOST RETURNS 60 BBLS INTO DISPLACEMENT. NO RETURNS FOR THE REMAINDER OF THE JOB.
Event	21	Slow Rate	12/18/2017	14:46:40	USER	1882.00	8.30	4.00	20.0	SLOW RATE TO 4 BPM PER CO REP TO LAND PLUG
Event	22	Bump Plug	12/18/2017	14:50:48	USER	3139.00	8.31	0.00	120.5	LAND PLUG AT 1980 PSI, BROUGHT UP TO 3201 PSI
Event	23	Test Lines	12/18/2017	14:51:02	USER	3139.00	8.31	0.00	120.5	PRESSURE TEST CASING FOR 10 MIN.
Event	24	Check Floats	12/18/2017	15:05:05	USER					FLOATS HELD, 1 BBL BACK TO TRUCK
Event	25	End Job	12/18/2017	15:05:50	USER					PIPE WAS NOT RECIPROCATED DURING THE JOB, 20 BBL OF SPACER BACK TO SURFACE
Event	26	Post-Job Safety Meeting (Pre Rig-Down)	12/18/2017	15:08:14	USER					ALL HES PRESENT
Event	27	Rig Down Lines	12/18/2017	15:10:05	USER					ALL HES PRESENT
Event	28	Crew Leave Location	12/18/2017	16:00:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENT, CHRIS SMITH AND CREW

LARAMIE - BRUTON 30-15E - 4.5" PRODUCTION



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

LARAMIE - BRUTON 30-15E - 4.5" PRODUCTION



Job Information

Request/Slurry	2438761/1	Rig Name	H&P 522	Date	16/DEC/2017
Submitted By	Aaron Woolsey	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Bruton 30-15E

Well Information

Casing/Liner Size	4.5 in	Depth MD	7928 ft	BHST	116°C / 240°F
Hole Size	7.875 in	Depth TVD	7755 ft	BHCT	81°C / 178°F
Pressure	4850 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	Field (Fresh) Water	
						Water Chloride		

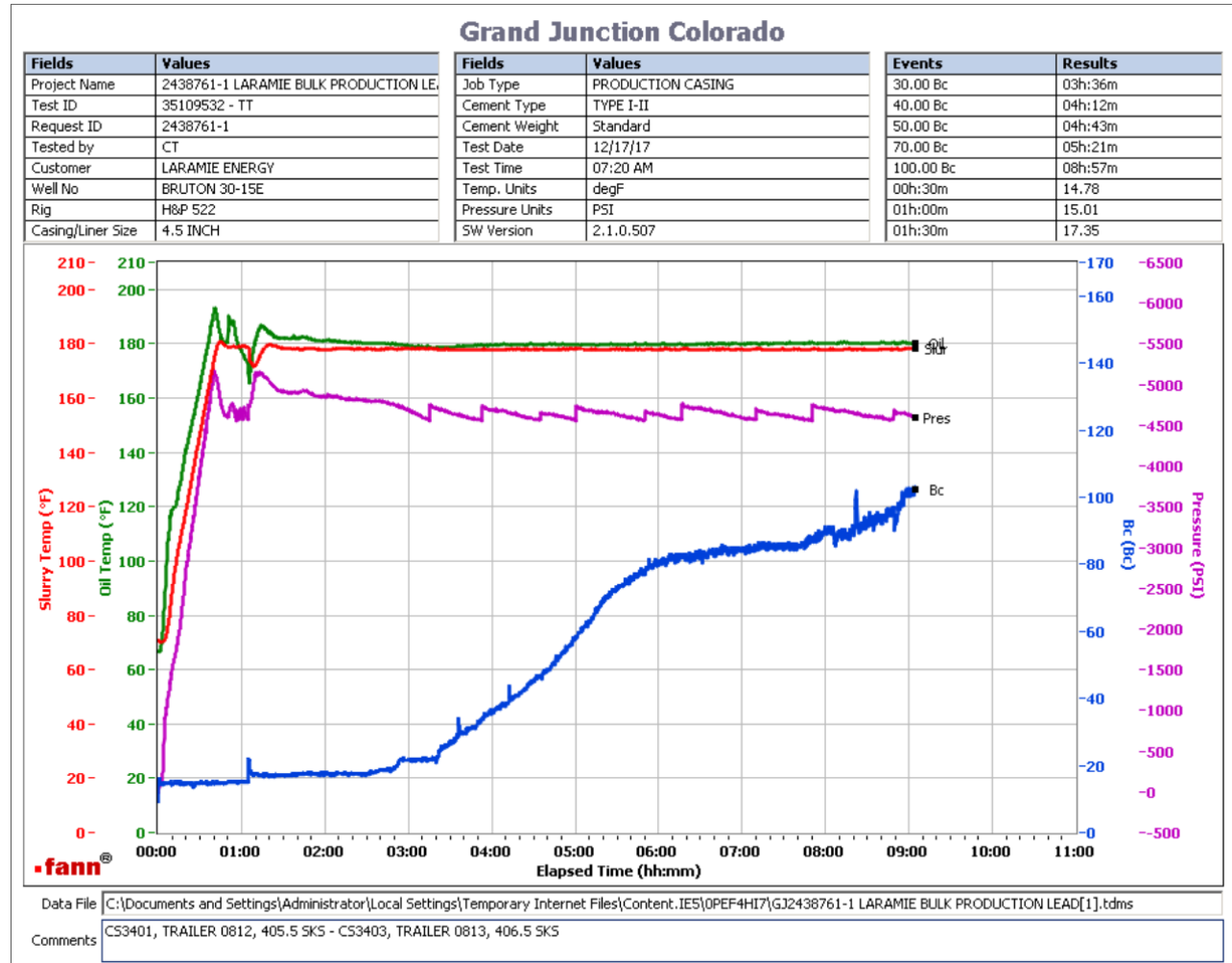
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Operation Test Results Request ID 2438761/1

Thickening Time - ON-OFF-ON

17/DEC/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)
178	4850	40	3:36	4:43	5:21	8:57	9	50	15	23



813 sks Total

CS3401, Trailer 0812, 406.5 sks

CS3403, Trailer 0813, 406.5 sks

Deflected 15--> 23--> 21 after 1 minute.

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HALLIBURTON

Rockies, Grand Junction

Lab Results- Tail

Job Information

Request/Slurry	2438760/1	Rig Name	H&P 522	Date	16/DEC/2017
Submitted By	Aaron Woolsey	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Bruton 30-15E

Well Information

Casing/Liner Size	4.5 in	Depth MD	7928 ft	BHST	116°C / 240°F
Hole Size	7.875 in	Depth TVD	7755 ft	BHCT	81°C / 178°F
Pressure	4850 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	Field (Fresh) Water	
						Water Chloride		

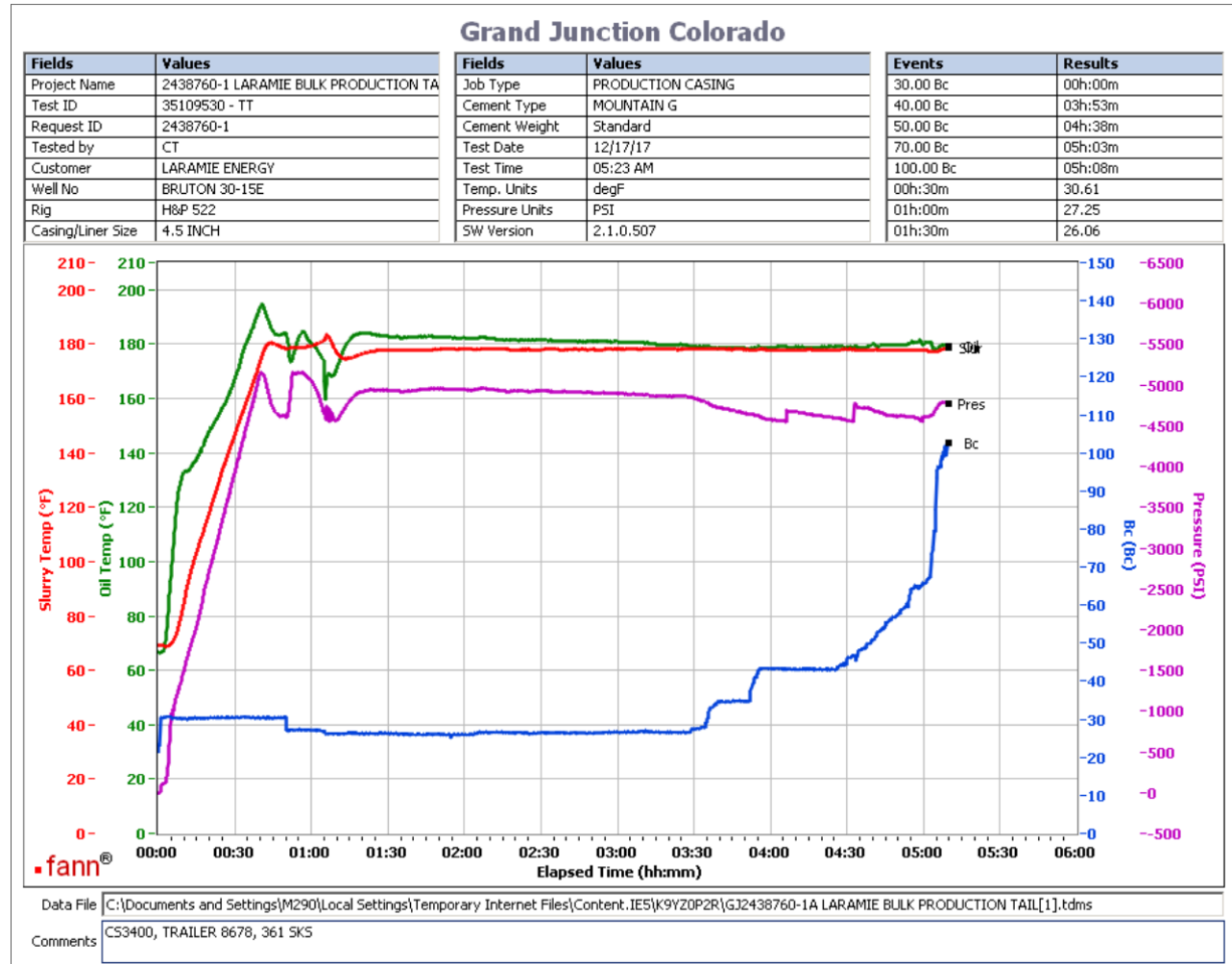
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Operation Test Results Request ID 2438760/1

Thickening Time - ON-OFF-ON

17/DEC/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)
178	4850	40	0:00	4:38	5:03	5:08	21	50	15	26



Total sks 461
CS3400, Trailer 8678, 361 sks
Deflected 30-- > 26

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Operation Test Results Request ID 2438760/2

Thickening Time - ON-OFF-ON

18/DEC/2017

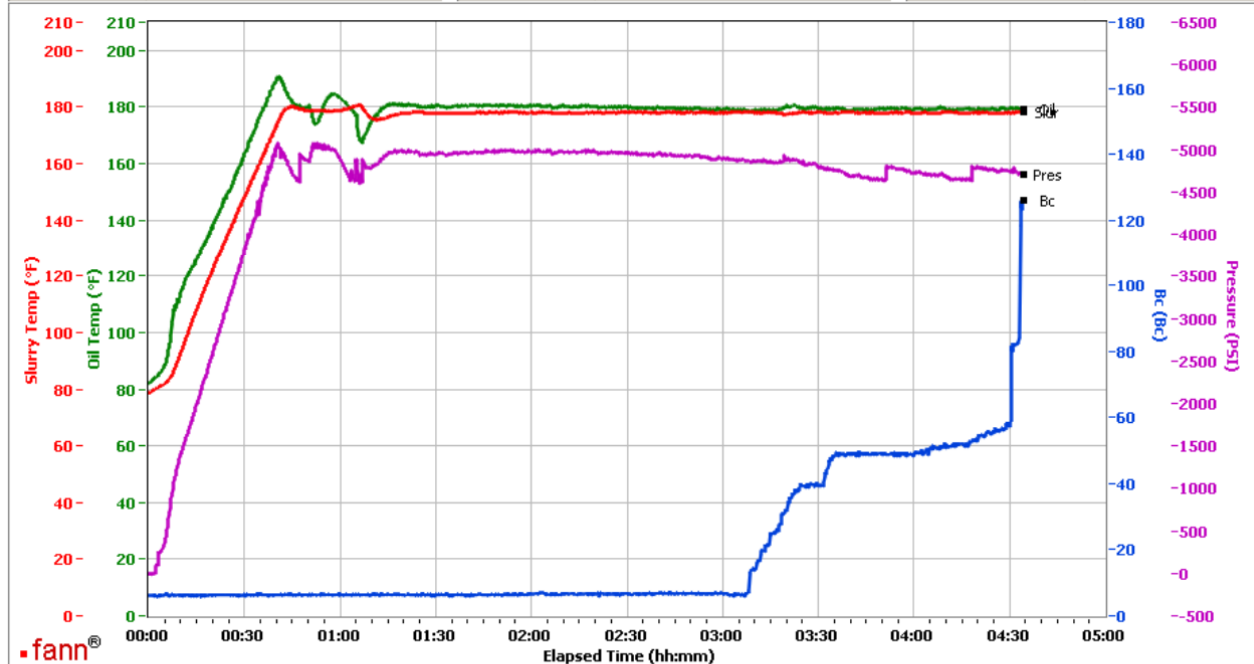
Test Temp (degF)	Pressure (psi)	Reached in (min)	30 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
178	4850	40	3:18	4:02	4:30	4:33	7	50	15	7

Grand Junction, Colorado

Fields	Values
Project Name	GJ2438760-2 LARAMIE PRODUCTION TAIL
Test ID	35111545
Request ID	2438760-2
Tested by	JASON
Customer	LARAMIE ENERGY
Well No	BRUTON 30-15E
Rig	H&P 522
Casing/Liner Size	4.5"

Fields	Values
Job Type	PRODUCTION
Cement Type	MOUNTAIN G
Cement Weight	Light Weight
Test Date	12/18/17
Test Time	05:53 AM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	03h:18m
40.00 Bc	03h:24m
50.00 Bc	04h:02m
70.00 Bc	04h:30m
100.00 Bc	04h:33m
00h:30m	6.39
01h:00m	6.24
01h:30m	6.29



Data File C:\Documents and Settings\M290\Local Settings\Temporary Internet Files\Content.IE5\CDER4HUV\GJ2438760-2 LARAMIE PRODUCTION TAIL BULK[1].tdms

Comments CS4311 TR 7304 100 SKS

CS3411 TR 7304 (Rear) 100 SKS

No deflection

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