

HALLIBURTON

iCem[®] Service

LARAMIE ENERGY LLC

For: Aaron Duncan

Date: Saturday, December 23, 2017

Bruton 30-16W Surface PJR

API# 05-077-10472-00

Sincerely,

Grand Junction Cement Engineering

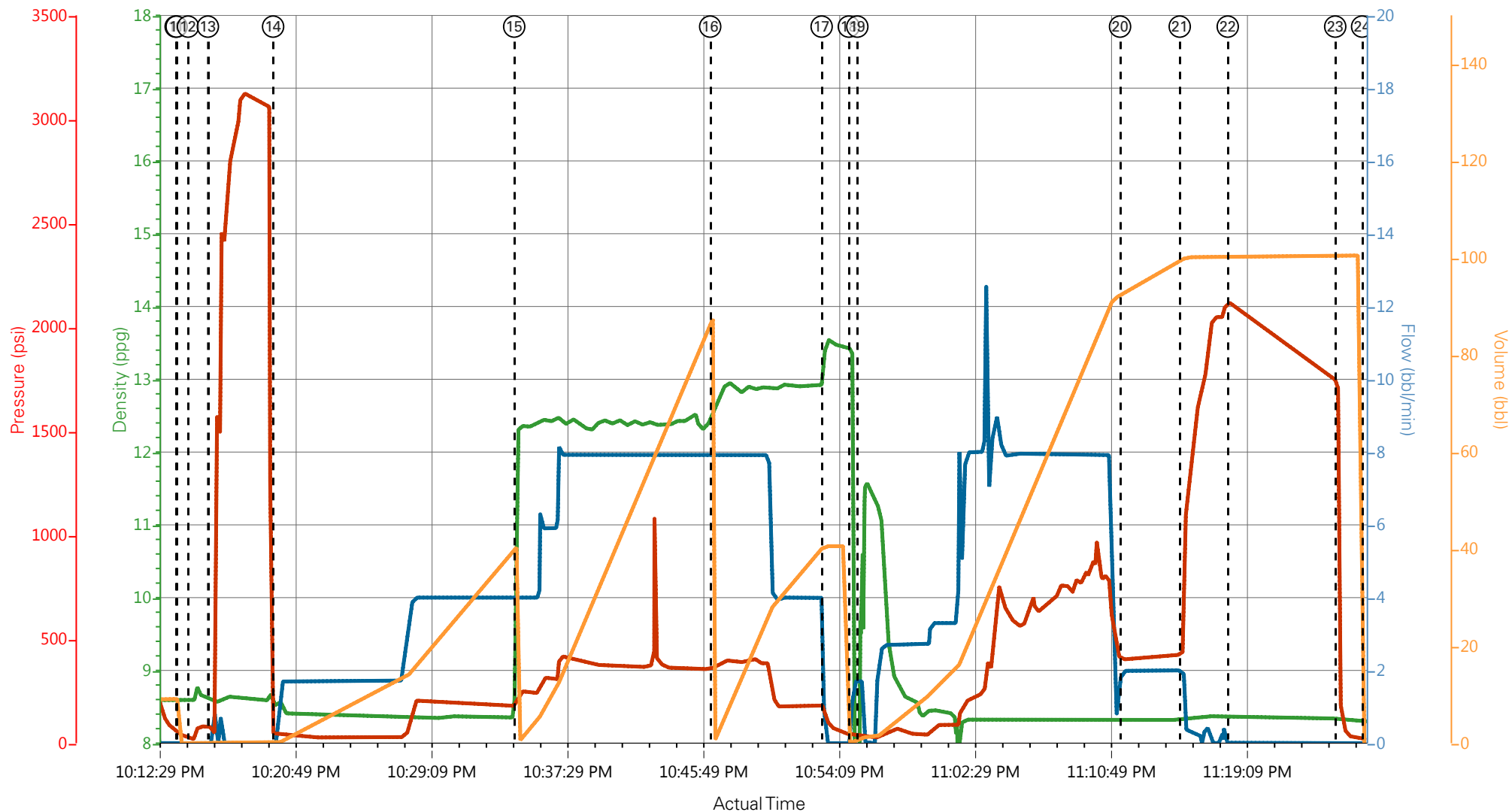
2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	12/23/2017	15:00:00	USER					ON LOCATION REQUESTED 21:30
Event	2	Pre-Convoy Safety Meeting	12/23/2017	18:45:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	12/23/2017	19:00:00	USER					
Event	4	Arrive at Location from Service Center	12/23/2017	21:30:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	12/23/2017	21:35:00	USER					MET WITH COMPANY REP, DISCUSSED JOB PROCEDURES SDS OFFERED
Event	6	Pre-Rig Up Safety Meeting	12/23/2017	21:40:00	USER					ALL HES PRESENT
Event	7	Rig-Up Completed	12/23/2017	21:55:00	USER					1-ELITE, 1-660 BULK TRAILER, 8.625"QL, 2" IRON, 4" SUCTION HOSE
Event	8	Pre-Job Safety Meeting	12/23/2017	22:00:00	USER					ALL HES AND RIG CREW PRESENT
Event	9	Other	12/23/2017	22:10:00	USER					WATER:TEMP-42, CL-0, PH-7. RIG CIRCULATED 1 HOUR 20 MINS 400 GPM 200 PSI
Event	10	Start Job	12/23/2017	22:13:40	COM5	8.41	0.00	7.00	0.0	TD-1567', TP-1557', SJ-44.21', OH-11", CSG-8 5/8 24# J55, MUD-9.5PPG, 32 VISC
Event	11	Drop Bottom Plug	12/23/2017	22:13:43	COM5	8.40	0.00	43.00	0.0	PLUG AWAY
Event	12	Prime Pumps	12/23/2017	22:14:25	COM5	8.40	0.00	83.00	2.0	FRESH WATER
Event	13	Test Lines	12/23/2017	22:17:43	COM5	8.62	0.00	3128.00	2.1	PRESSURE HELD NO LEAKS
Event	14	Pump Spacer 1	12/23/2017	22:19:38	COM5	8.43	4.00	200.00	40.0	FRESH WATER
Event	15	Pump Lead Cement	12/23/2017	22:34:25	COM5	12.30	8.00	410.00	86.3	VARICEM 197 SKS, 12.3PPG, 2.46CF/SK, 14.17GAL/SK BOTTOM PLUG RUPTURED 60 BBLs INTO CEMENT AT 1010PSI

Event	16	Pump Tail Cement	12/23/2017	22:46:26	COM5	12.80	8.00	413.00	42.3	VARICEM 109SKS, 12.8PPG, 2.18CF/SK, 12.11GAL/SK
Event	17	Shutdown	12/23/2017	22:53:16	USER					END OF CEMENT WASHED PUMPS AND LINES ON TOP OF PLUG
Event	18	Pump Displacement	12/23/2017	22:54:56	COM5	8.34	8.00	910.00	96.5	FRESH WATER
Event	19	Drop Top Plug	12/23/2017	22:55:28	COM5					PLUG AWAY
Event	20	Slow Rate	12/23/2017	23:11:34	USER	8.32	2.00	400.00	86.5	SLOW RATE LAST 10 BBLs
Event	21	Bump Plug	12/23/2017	23:15:14	COM5	8.32	1.90	423.00	96.5	PLUG BUMPED 423 PSI
Event	22	CASING TEST	12/23/2017	23:18:10	COM5	8.37	0.00	2116.00	97.0	LANDING JOINT LEAKING ON TEST
Event	23	Check Floats	12/23/2017	23:24:46	USER	8.33	0.00	1745.00	97.0	FLOATS HELD 1 BBL BACK
Event	24	End Job	12/23/2017	23:26:25	COM5					GOOD RETURNS THROUGH OUT JOB, 33 BBLs CEMENT TO SURFACE
Event	25	Post-Job Safety Meeting (Pre Rig-Down)	12/23/2017	23:35:00	USER					ALL HES PRESENT
Event	26	Rig-Down Completed	12/24/2017	00:15:02	USER					
Event	27	Pre-Convoy Safety Meeting	12/24/2017	00:30:00	USER					ALL HES PRESENT
Event	28	Crew Leave Location	12/24/2017	01:00:00	USER					THANK YOU FOR CHOOSING HALLIBURTON, ANDREW BRENNECKE AND CREW

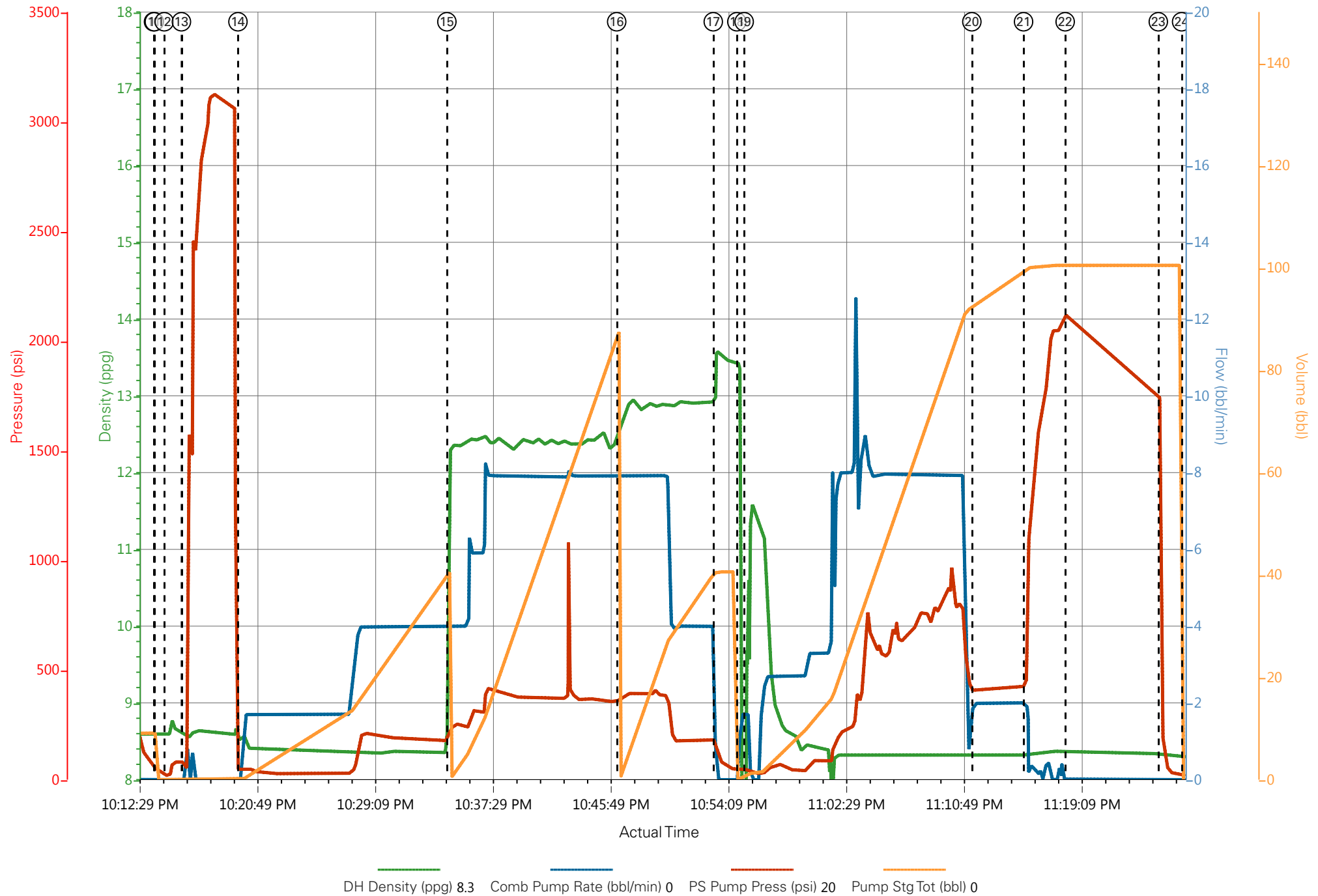
LARAMIE - BRUTON 30-16W - 8.625" SURFACE



DH Density (ppg) 8.3 Comb Pump Rate (bbl/min) 0 PS Pump Press (psi) 20 Pump Stg Tot (bbl) 0

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

LARAMIE - BRUTON 30-16W - 8.625" SURFACE



HALLIBURTON

iCem[®] Service

LARAMIE ENERGY LLC-EBUS

For: Aaron Duncan

Date: Wednesday, December 27, 2017

Bruton 30-16W Production PJR

API# 05-077-10472-00

Sincerely,

Grand Junction Cement Engineering

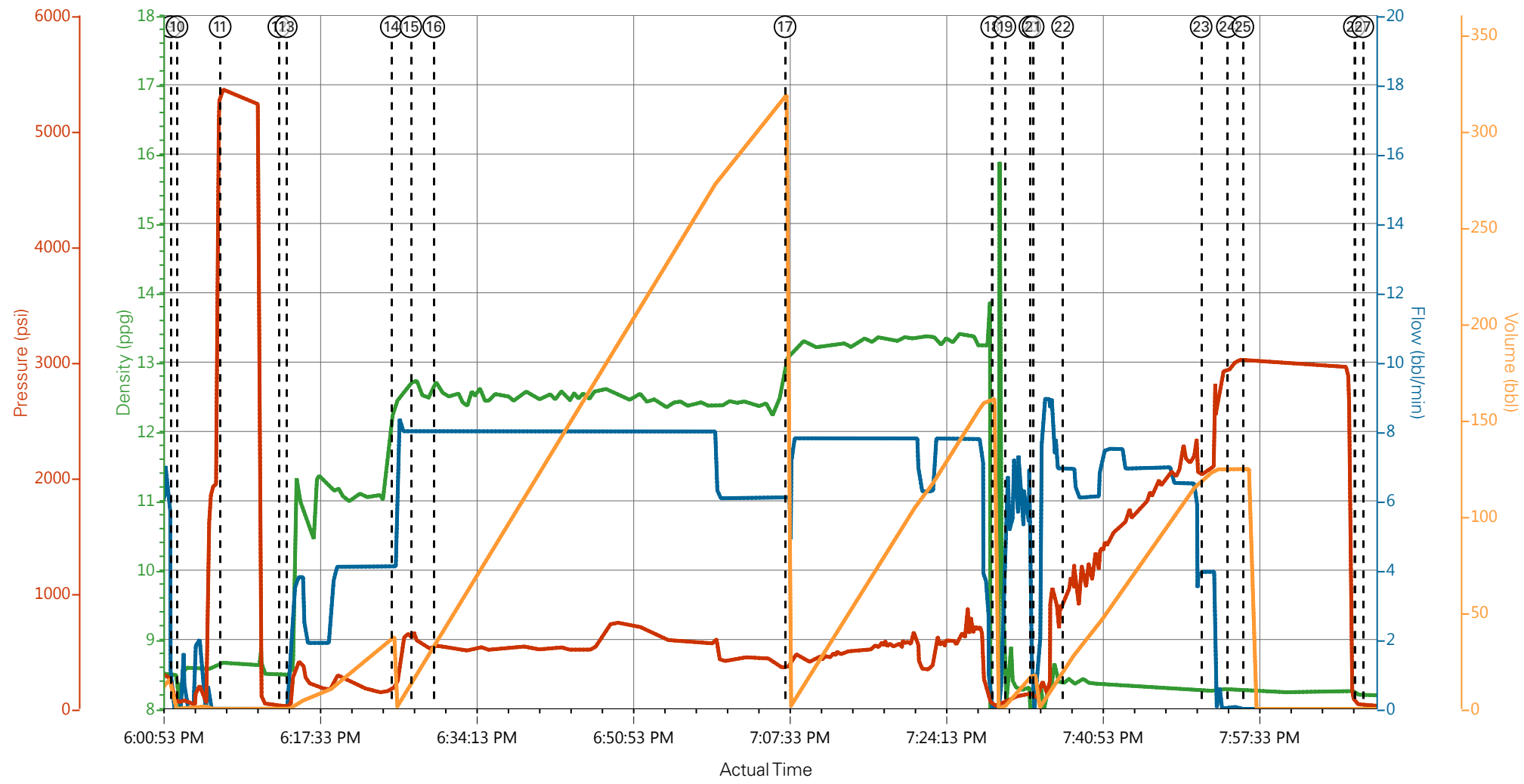
2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	12/27/2017	11:30:00	USER					
Event	2	Pre-Convoy Safety Meeting	12/27/2017	13:00:00	USER					JSA COMPLETED
Event	3	Crew Leave Yard	12/27/2017	13:10:00	USER					
Event	4	Arrive At Loc	12/27/2017	15:30:00	USER					RIG RUNNING CASING
Event	5	Other	12/27/2017	15:39:16	USER					WATER TEST, PH-7, CL-0, TEMP-100
Event	6	Assessment Of Location Safety Meeting	12/27/2017	15:45:00	USER					JSA COMPLETED
Event	7	Pre-Rig Up Safety Meeting	12/27/2017	16:00:00	USER					JSA COMPLETED
Event	8	Rig-Up Equipment	12/27/2017	16:20:00	USER					1 ELITE PUMP, 2 SILOS, 1 660, 550 PICKUP
Event	9	Start Job	12/27/2017	18:01:59	COM5					4.5 11.6#, TP- 8184, TD-8195, S.J.-91.68, HOLE- 7 7/8, MUD# - 9.3, VIS- 35
Event	10	Prime Pumps	12/27/2017	18:02:39	COM5					FRESH WATER
Event	11	Test Lines	12/27/2017	18:07:15	COM5					5367 PSI
Event	12	Drop Bottom Plug	12/27/2017	18:13:30	USER					AWAY
Event	13	Pump Spacer 1	12/27/2017	18:14:17	COM5	11.00	4.00	420	40.0	TUNED SPACER 11 PPG, 4.86 FT3/SK, 31.8 GAL/SK
Event	14	Pump Lead Cement	12/27/2017	18:25:28	COM5	12.5	8.00	540	305	883 SKS NEOCEM, 12.5 PPG, 1.94 FT3/SK, 9.5 GAL/SK
Event	15	Check weight	12/27/2017	18:27:32	COM5	12.5	8.00	589.00	15.3	GOOD

Event	17	Pump Tail Cement	12/27/2017	19:07:24	COM5	13.30	8.00	520	142	461 SKS THERMACEM, 13.3 PPG, 1.73 FT3/SK, 7.81 GAL/SK
Event	18	Shutdown	12/27/2017	19:29:24	COM5					TO WASH UP PUMPS AND LINES TO CELLER
Event	19	Clean Lines	12/27/2017	19:30:48	COM5					
Event	20	Drop Top Plug	12/27/2017	19:33:28	COM5					AWAY
Event	21	Pump Displacement	12/27/2017	19:33:49	COM5	8.33	7.00	2120	125.4	
Event	22	Other	12/27/2017	19:36:57	USER					35 BBLS TUNED SPACER TO SURFACE, FULL RETURNS THRUOUGHOUT JOB, NO PIPE MOVEMENT
Event	23	Slow Rate	12/27/2017	19:51:42	USER	8.33	4.00	2036.00	115.00	TO BUMP PLUG
Event	24	Bump Plug	12/27/2017	19:54:29	COM5	8.33	4.00	2080	125.4	PLUG BUMPED
Event	25	Other	12/27/2017	19:56:08	USER			3013.00		TEST CASING TO 3000 PSI FOR 10 MINS
Event	26	Check Floats	12/27/2017	20:08:00	USER			2960		FLOATS HELD 1.5 BBLS BACK TO PUMP
Event	27	End Job	12/27/2017	20:08:55	COM5					
Event	28	Post-Job Safety Meeting (Pre Rig-Down)	12/27/2017	20:15:00	USER					JSA COMPLETE
Event	29	Rig Down Lines	12/27/2017	20:45:00	USER					
Event	30	Pre-Convoy Safety Meeting	12/27/2017	21:00:00	USER					ALL HES PERSONNEL
Event	31	Crew Leave Location	12/27/2017	21:30:00	USER					THANK YOU FOR USING HALLIBURTON CEMENT, JAMES LEIST AND CREW

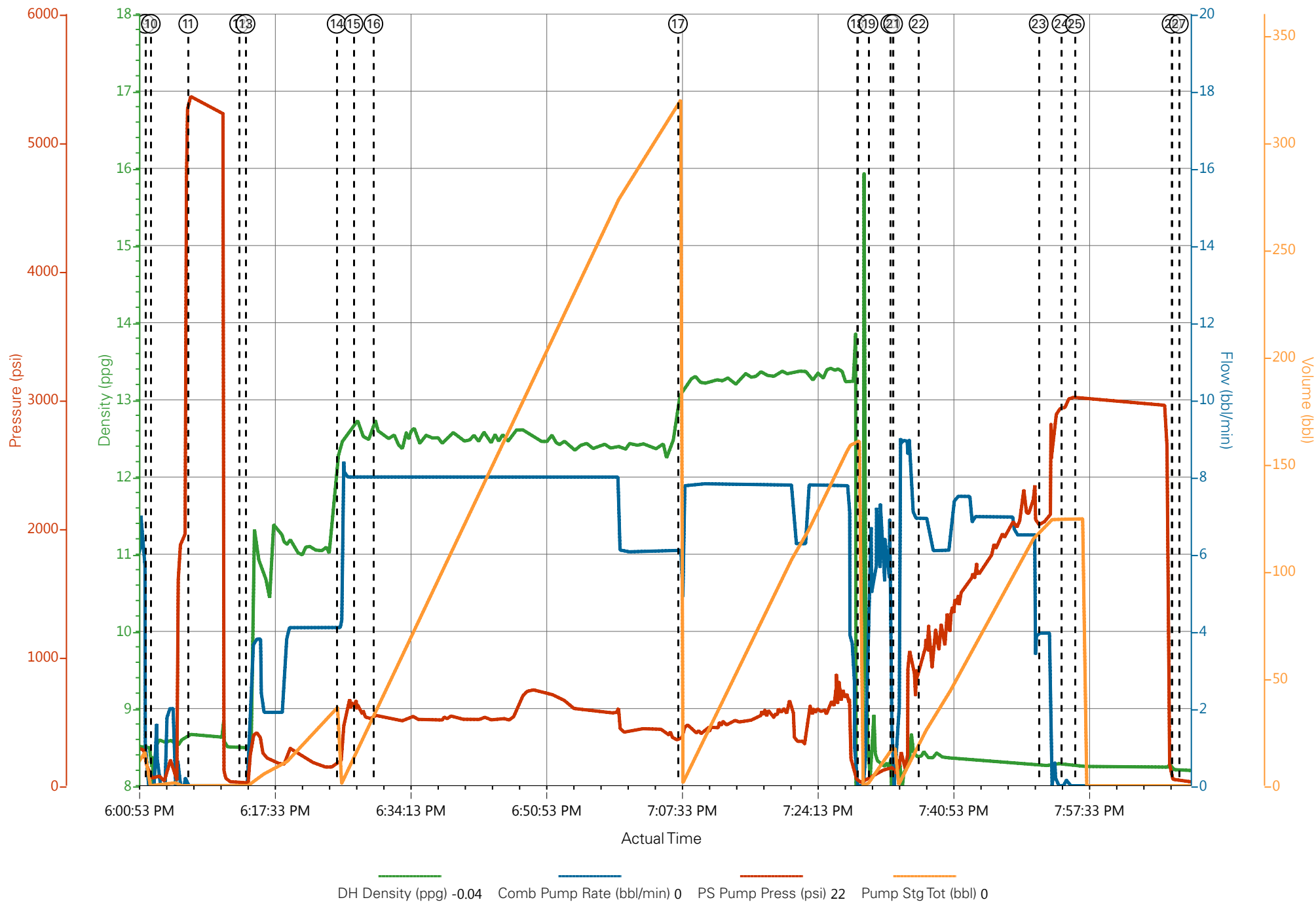
LARAMIE - BRUTON 30-16W - 4.5 PRODUCTION CASING



DH Density (ppg) -0.04 Comb Pump Rate (bbl/min) 0 PS Pump Press (psi) 22 Pump Stg Tot (bbl) 0

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

LARAMIE - BRUTON 30-16W - 4.5 PRODUCTION CASING



Job Information

Request/Slurry	2440321/1	Rig Name	H&P 522	Date	23/DEC/2017
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Bruton 30-16W

Well Information

Casing/Liner Size	4.5 in	Depth MD	8294 ft	BHST	116°C / 240°F
Hole Size	7.875 in	Depth TVD	7715 ft	BHCT	78°C / 172°F
Pressure	4720 psi				

Drilling Fluid Information

Mud Supplier Name	Mud Trade Name	Density	9.9 lbm/gal
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Cement Information - Lead Design



Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
		NeoCem				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	N/A	

Operation Test Results Request ID 2440321/1

Thickening Time - ON-OFF-ON									24/DEC/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)
172	4720	49	4:20	5:31	5:52	6:54	20	59	15	18
Total sks = 883										
CS3477, Trailer 0813, 441.5 sks										
CS3476, Trailer 0812, 441.5 sks										
No deflection										

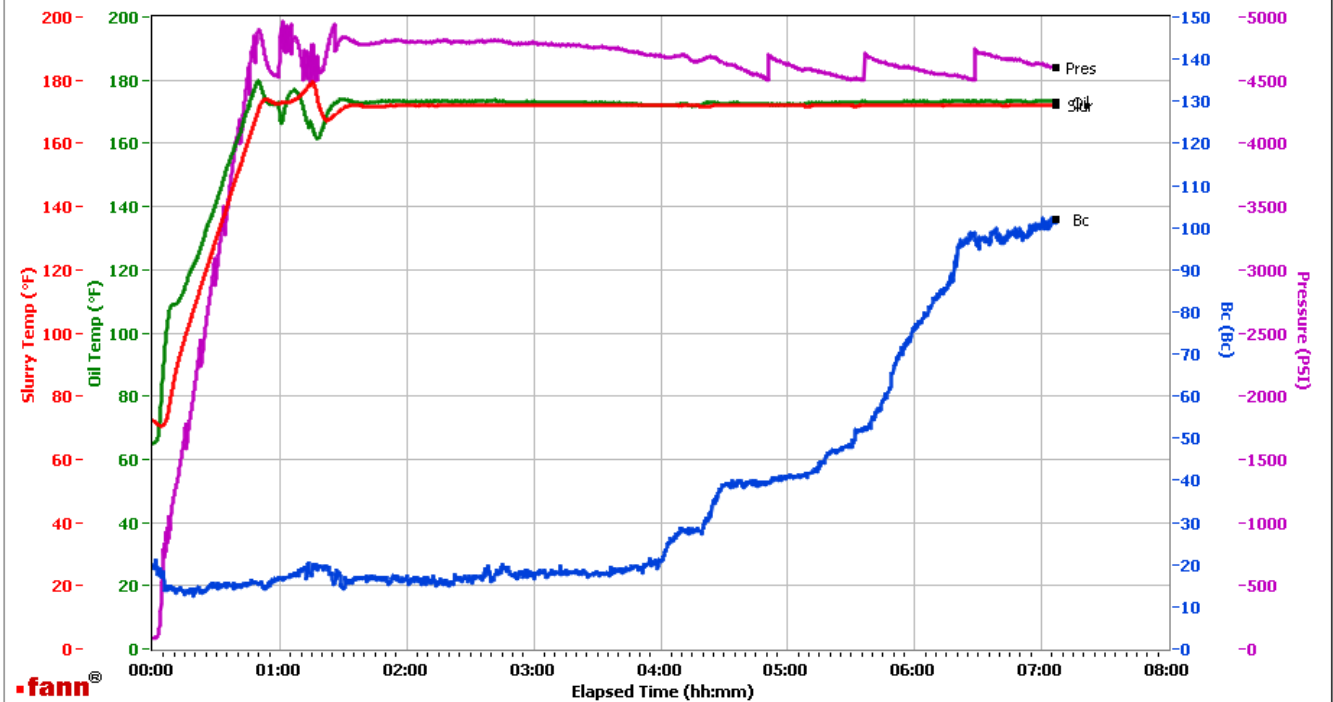
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Grand Junction Colorado

Fields	Values
Project Name	2440321-1 LARAMIE BULK PRODUCTION LE
Test ID	35127881 - TT
Request ID	2440321-1
Tested by	CT
Customer	LARAMIE ENERGY
Well No	BRUTON 30-16W
Rig	H8P 522
Casing/Liner Size	4.5 INCH

Fields	Values
Job Type	PRODUCTION CASING
Cement Type	TYPE I-II
Cement Weight	Standard
Test Date	01/30/11
Test Time	06:35 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.1219

Events	Results
30.00 Bc	04h:20m
40.00 Bc	04h:33m
50.00 Bc	05h:31m
70.00 Bc	05h:52m
100.00 Bc	06h:54m
00h:30m	14.35
01h:00m	16.78
01h:30m	14.36



Data File	C:\Documents and Settings\HPHT\Desktop\Test Data\GJ2440321-1 LARAMIE BULK PRODUCTION LEAD.tdms
Comments	CS3477, TRAILER 0813, 441.5 SKS - CS3476, TRAILER 0812, 441.5 SKS

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Job Information

Request/Slurry	2440322/2	Rig Name	H&P 522	Date	23/DEC/2017
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Bruton 30-16W

Well Information

Casing/Liner Size	4.5 in	Depth MD	8294 ft	BHST	116°C / 240°F
Hole Size	7.875 in	Depth TVD	7715 ft	BHCT	78°C / 172°F
Pressure	4720 psi				

Drilling Fluid Information

Mud Supplier Name		Mud Trade Name		Density	9.9 lbm/gal
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Cement Information - Tail Design



Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
		ThermaCem				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		

Operation Test Results Request ID 2440322/2

Thickening Time - ON-OFF-ON 27/DEC/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)
172	4720	49	4:10	4:10	4:14	5:39	15	59	15	14

Total sks = 461

CS3502, Trailer 4080 - Front Pod, 100 sks

No deflection. Heat of hydration started around 3:50 and slurry was balled up around paddle when test was taken off.

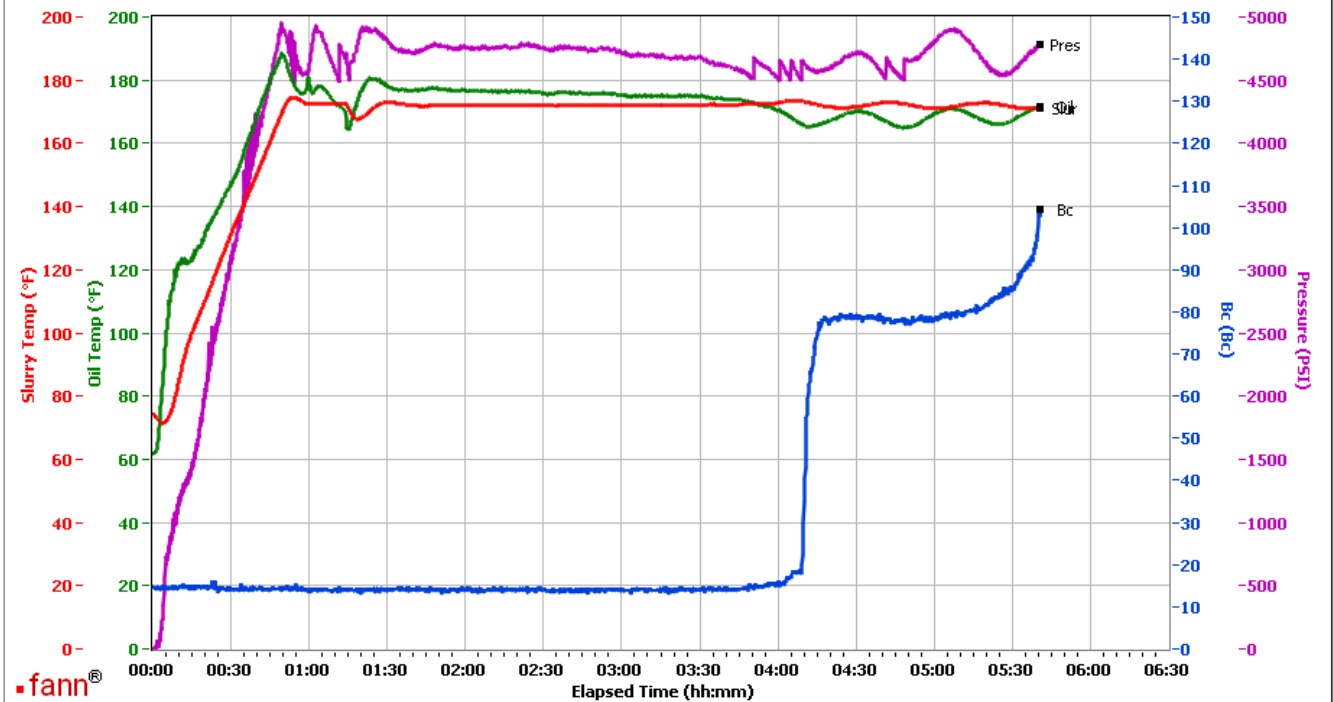
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Grand Junction Colorado

Fields	Values
Project Name	2440322-2 LARAMIE BULK PRODUCTION TA
Test ID	35132948 - TT
Request ID	2440322-2
Tested by	CT
Customer	LARAMIE ENERGY
Well No	BRUTON 30-16W
Rig	H8P 522
Casing/Liner Size	4.5 INCH

Fields	Values
Job Type	PRODUCTION CASING
Cement Type	MOUNTAIN G
Cement Weight	Standard
Test Date	12/26/17
Test Time	05:00 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	04h:10m
40.00 Bc	04h:10m
50.00 Bc	04h:10m
70.00 Bc	04h:14m
100.00 Bc	05h:39m
00h:30m	14.57
01h:00m	13.36
01h:30m	13.84



Data File	C:\Documents and Settings\M290\Local Settings\Temporary Internet Files\Content.IE5\CDER4HUV\GJ2440322-2 LARAMIE BULK PRODUCTION TAIL[1].tdms
Comments	CS3502, TRAILER 4080 - FRONT POD, 100 SKS

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Operation Test Results Request ID 2440322/1

Thickening Time - ON-OFF-ON

24/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)
172	4720	49	3:10	3:30	4:27	4:35	19	59	15	19

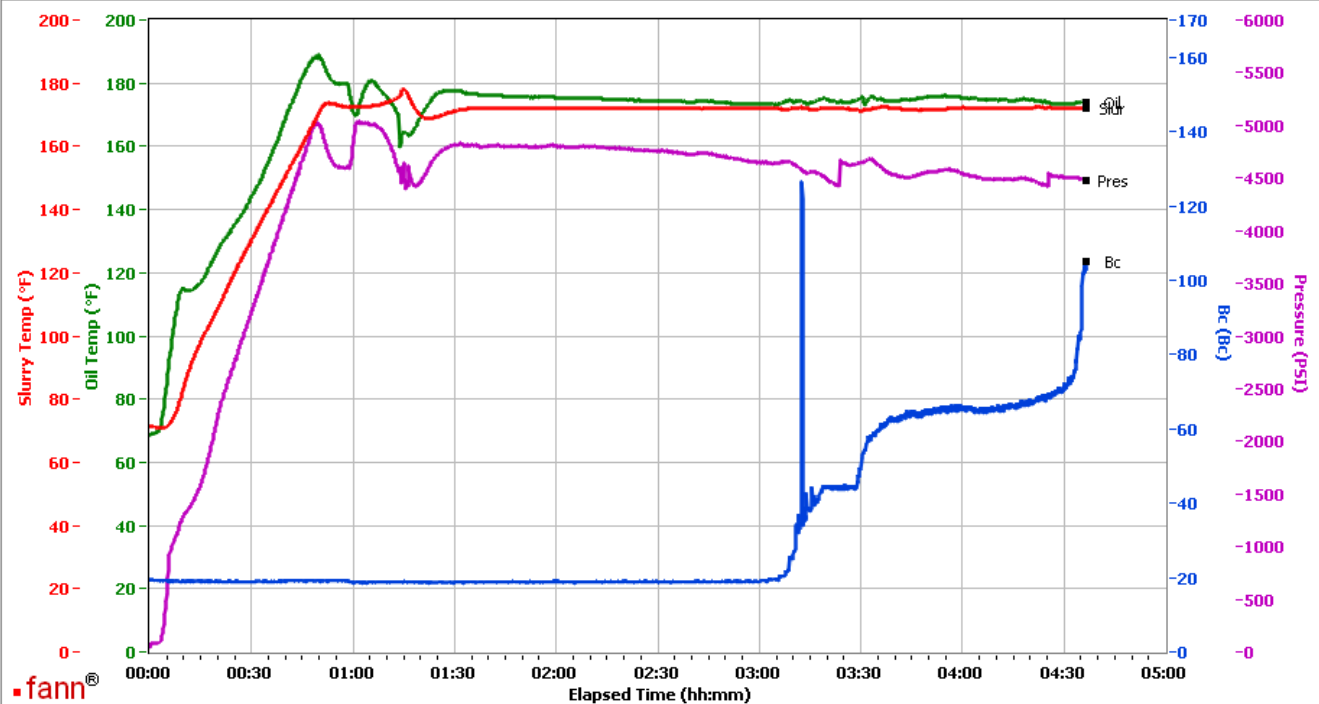
total sks=461

CS3479, Trailer 8476, 361 sks

No deflection. Results taken from graph due to spike.

Grand Junction Colorado

Fields	Values	Fields	Values	Events	Results
Project Name	2440322-1 LARAMIE BULK PRODUCTION TA	Job Type	PRODUCTION CASING	30.00 Bc	03h:10m
Test ID	35127883 - TT	Cement Type	MOUNTAIN G	40.00 Bc	03h:14m
Request ID	2440322-1	Cement Weight	Standard	50.00 Bc	03h:30m
Tested by	CT	Test Date	12/24/17	70.00 Bc	04h:27m
Customer	LARAMIE ENERGY	Test Time	05:04 AM	100.00 Bc	04h:35m
Well No	BRUTON 30-16W	Temp. Units	degF	00h:30m	18.75
Rig	H&P 522	Pressure Units	PSI	01h:00m	18.46
Casing/Liner Size	4.5 INCH	SW Version	2.1.0.507	01h:30m	18.50



Data File C:\Documents and Settings\M290\Desktop\Test Data\G32440322-1 LARAMIE BULK PRODUCTION TAIL.tdms

Comments CS3479, TRAILER 8476, 361 SKS

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