

HALLIBURTON

iCem[®] Service

LARAMIE ENERGY LLC

Date: Thursday, March 29, 2018

GUNDERSON 994-14-11 E

API # 05-077010538-00

Laramie Gunderson 994-14-11E Surface

Job Date: Tuesday, March 27, 2018

Sincerely,

Grand Junction Cement Engineering

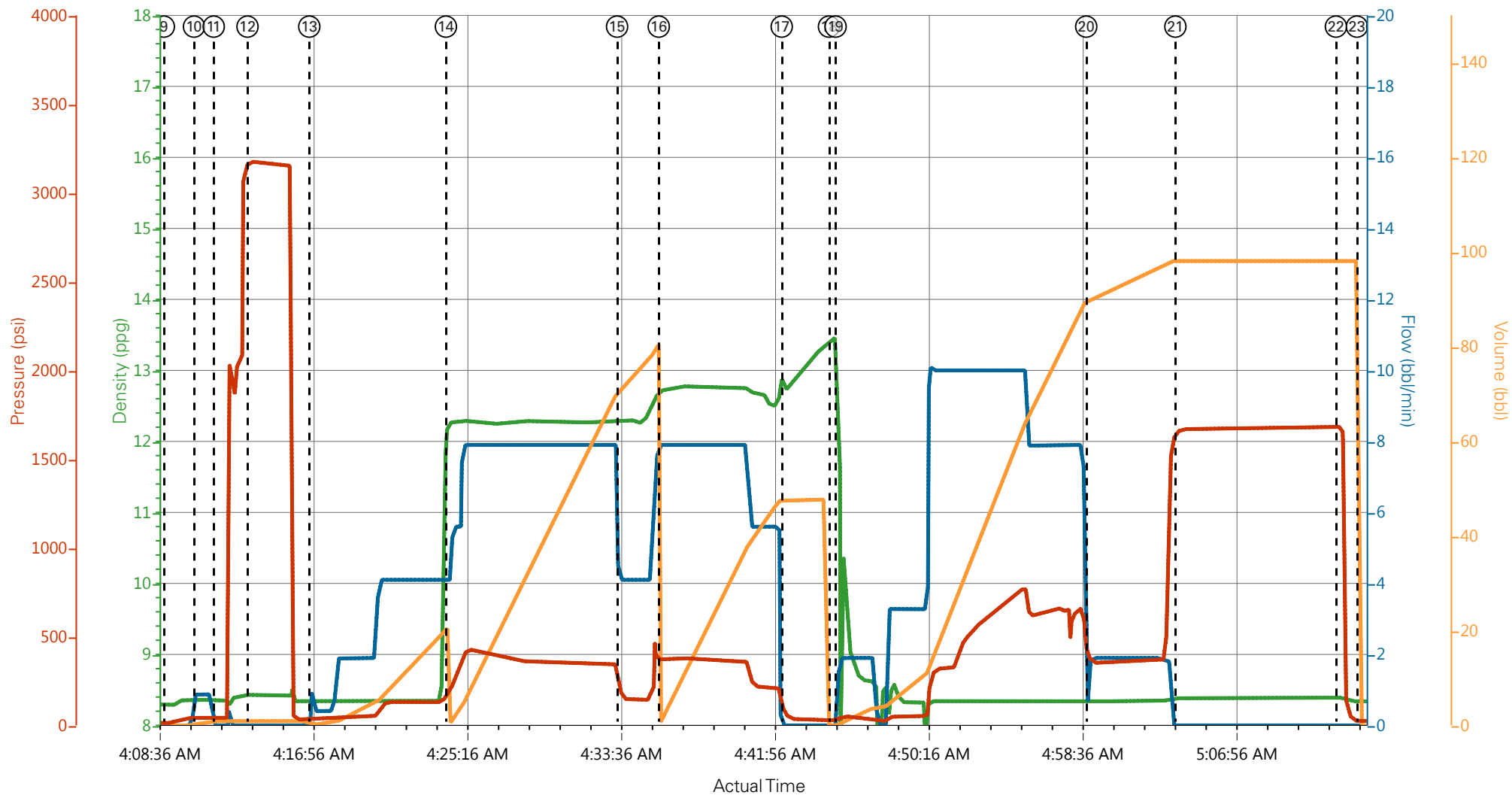
1.0 Real-Time Job Summary

1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	Pass-Side Pump Pressure (psi)	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Pump Stage Total (bbl)	Comments
Event	1	Call Out	3/26/2018	21:00:00	USER					REQUESTED ON LOCATION @ 0300
Event	2	Pre-Convoy Safety Meeting	3/26/2018	22:30:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	3/26/2018	22:40:00	USER					1 F550, 1 PUMP TRUCK & 1 660 BULK TURCK
Event	4	Arrive At Loc	3/27/2018	02:00:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	3/27/2018	02:15:00	USER					MET WITH COMP REP, SHANE, AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (PH- 7, CHLORIDES- 0, TEMP- 73F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Pre-Rig Up Safety Meeting	3/27/2018	02:20:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	3/27/2018	02:30:00	USER					HES RIGGED UP EQUIPMENT WITHOUT ENTERING RED ZONE.
Event	8	Pre-Job Safety Meeting	3/27/2018	03:45:00	USER					ALL HES AND RIG CREW PRESENT
Event	9	Start Job	3/27/2018	04:09:00	COM3					TD 1571', TP 1561', SJ 47', OH 11'', CSG 8.625" 24#, MUD 9.5 PPG.
Event	10	Prime Pumps	3/27/2018	04:10:38	COM3	40.00	8.36	0.90	2.0	8.33 PPG FRESH WATER (2 BBL)
Event	11	Drop Bottom Plug	3/27/2018	04:11:42	USER					PLUG WENT, VERIFIED OB CO REP
Event	12	Test Lines	3/27/2018	04:13:31	COM3	3176.00	8.33	0.50	0.5	ALL LINES HELD PRESSURE AT 3174 PSI
Event	13	Pump Spacer 1	3/27/2018	04:16:52	COM3	202.00	8.33	4.00	20.1	8.33 PPG FRESH WATER (20 BBL)

Event	14	Pump Lead Cement	3/27/2018	04:24:16	COM3	402.00	12.30	8.00	78.0	VARICEM CEMENT 178 SKS (78 BBLS), 12.3 PPG, 2.46 FT3/SK, 14.17 GAL/SK
Event	15	Slow Rate	3/27/2018	04:33:33	USER	193.00	12.3	4.00		SLOW RATE TO 2 BPM PER CO REP TO RUPTURE BOTTOM PLUG
Event	16	Pump Tail Cement	3/27/2018	04:35:48	COM3	376.00	12.80	7.90	42.0	VARICEM CEMENT 109 SKS (42 BBLS), 12.8 PPG, 2.18 FT3/SK, 12.11 GAL/SK.
Event	17	Shutdown	3/27/2018	04:42:28	USER					END OF CEMENT
Event	18	Drop Top Plug	3/27/2018	04:45:02	USER					PLUG WENT, VERIFIED BY CO REP
Event	19	Pump Displacement	3/27/2018	04:45:23	COM3	775.00	8.33	10.0	86.5	8.34 PPG FRESH WATER (96.5 BBLS)
Event	20	Slow Rate	3/27/2018	04:58:58	USER	384.00	8.33	2.00	10.0	SLOWED RATE DUE TO WATER DELIVERY
Event	21	Bump Plug	3/27/2018	05:03:48	USER	1661.00	8.33	2.00	96.9	LAND PLUG AT 384 PSI, BROUGHT UP TO 1661 PSI FOR CASING TEST
Event	22	Check Floats	3/27/2018	05:12:29	USER	1682.00	8.33	0.00	96.9	FLOATS HELD, 1 BBL BACK TO TRUCK
Event	23	End Job	3/27/2018	05:13:38	COM3					RETURNS THROUGHOUT JOB, PIPE WAS NOT RECIPROCATED, 30 BBL OF CEMENT BACK TO SURFACE
Event	24	Post-Job Safety Meeting (Pre Rig-Down)	3/27/2018	05:14:44	USER					ALL HES PRESENT
Event	25	Rig-Down Equipment	3/27/2018	05:17:31	USER					ALL HES PRESENT
Event	26	Pre-Convoy Safety Meeting	3/27/2018	06:00:00	USER					ALL HES PRESENT
Event	27	Crew Leave Location	3/27/2018	06:05:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENT, CHRIS SMITH AND CREW

LARAMIE - GUNDERSON 994-14-11 E - 8.625" SURFACE



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

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

▼ **HALLIBURTON** | iCem® Service

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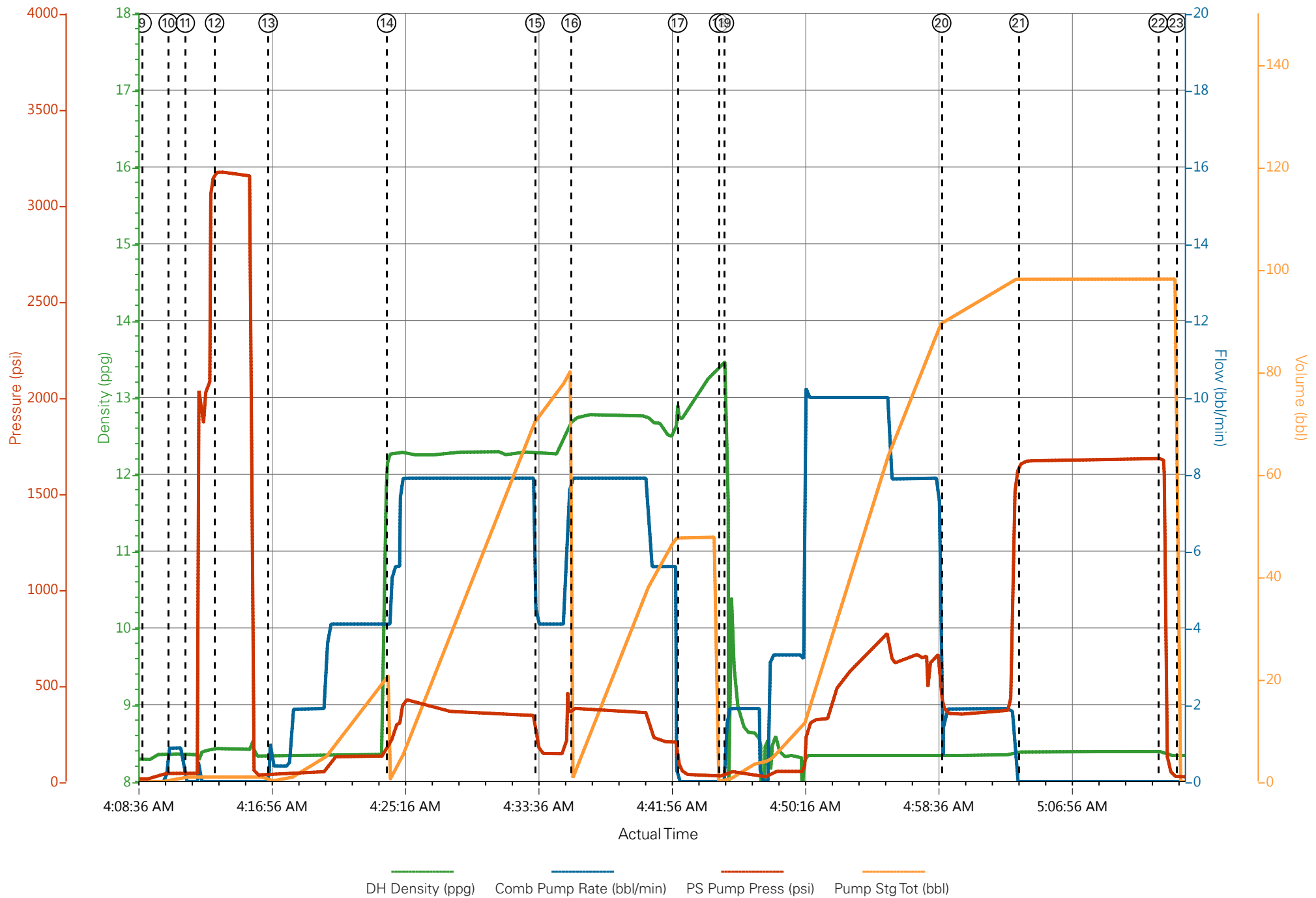
Edit

Customer : LARAMIE ENERGY II LLC EBUSINESS
Representative : T.HALE

Job Date : 3/27/2018
Sales Order # : 904737654

Well : GUNDERSON 994-14-11 E
ELITE 4 : C.SMITH/ D.PORTER

LARAMIE - GUNDERSON 994-14-11 E - 8.625" SURFACE



HALLIBURTON

iCem[®] Service

LARAMIE ENERGY LLC-EBUS

For: Laramie

Date: Friday, March 30, 2018

GUNDERSON 994-14-11E Production PJR

API #: 05-077-10538

Sincerely,

Grand Junction Cement Engineering

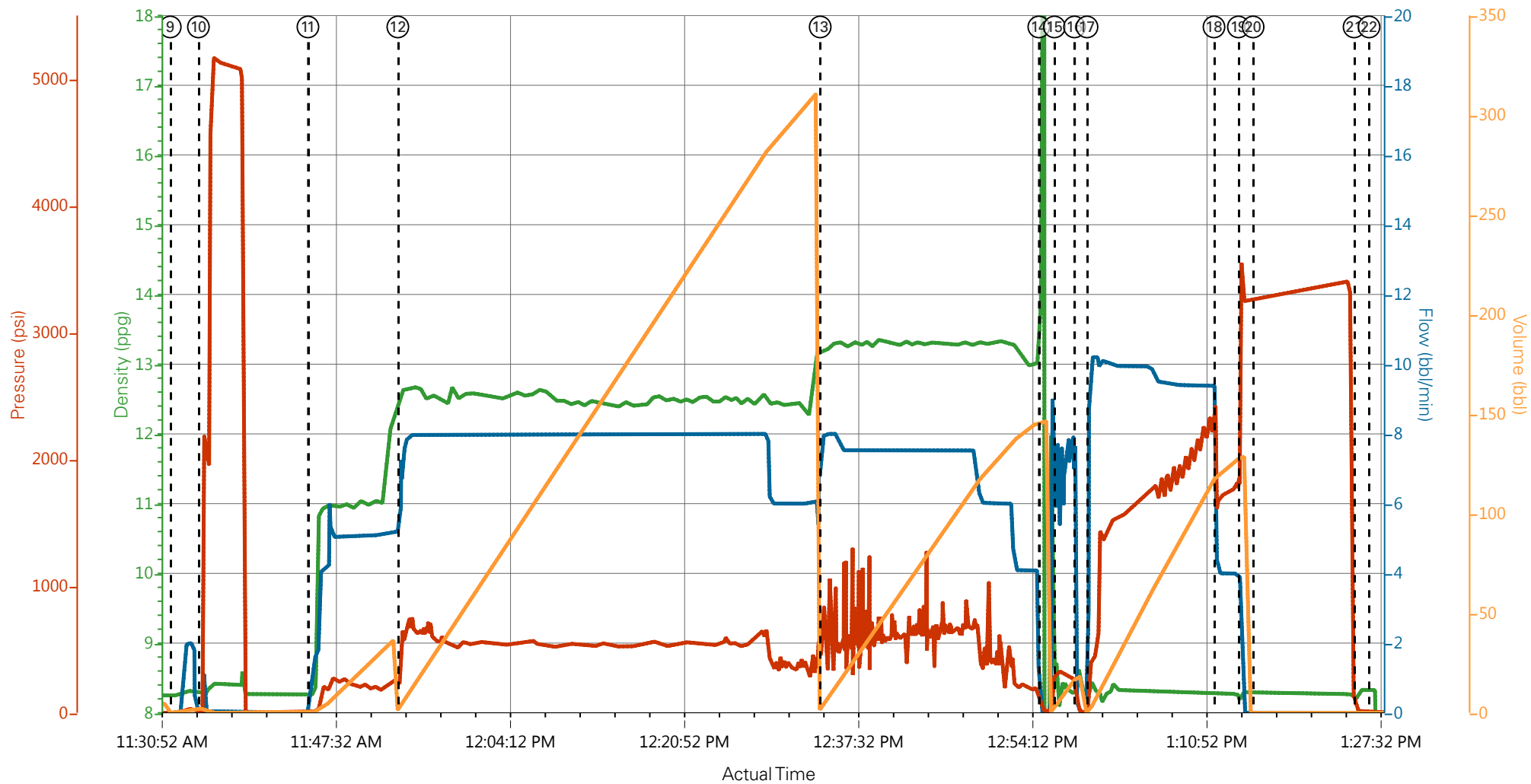
2.0 Real-Time Job Summary

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	3/30/2018	00:00:00	USER					
Event	2	Pre-Convoy Safety Meeting	3/30/2018	02:00:24	USER					
Event	3	Crew Leave Yard	3/30/2018	02:05:00	USER					
Event	4	Arrive At Loc	3/30/2018	03:30:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	3/30/2018	03:35:00	USER					
Event	6	Pre-Rig Up Safety Meeting	3/30/2018	07:25:00	USER					
Event	7	Rig-Up Equipment	3/30/2018	07:30:00	USER					
Event	8	Pre-Job Safety Meeting	3/30/2018	08:00:00	USER					
Event	9	Start Job	3/30/2018	11:32:00	COM5					TD 8322', TP 8317', SJ 85.5', OH 7 7/8, MUD 9.2 PPG, WATER TEST PH 7, CHLORIDES 0, TEMP 65
Event	10	Test Lines	3/30/2018	11:34:41	COM5	8.33	0.00	5000.00	2.0	KICK OUTS FUNCTIONAL, TEST LINES TO 5000 PSI
Event	11	Pump Spacer 1	3/30/2018	11:45:10	COM5	11.00	4.00	280.00	40.0	40 BBLS TUNED SPACER @ 11PPG, 4.86 YLD, 31.9 GAL/SK H2O REQ
Event	12	Pump Lead Cement	3/30/2018	11:53:47	COM5	12.50	8.00	560.00	301.0	301 BBLS LEAD @ 12.5PPG, 1.94 YLD, 9.6 GAL/SK H2O REQ
Event	13	Pump Tail Cement	3/30/2018	12:34:12	COM5	13.30	8.00	620.00	122.0	122 BBLS TAIL @13.3 PPG, 1.73 YLD, 7.81 GAL/SK H2O

REQ										
Event	14	Shutdown	3/30/2018	12:55:08	COM5					
Event	15	Clean Lines	3/30/2018	12:56:37	COM5					CLEAN LINES TO PIT
Event	16	Drop Top Plug	3/30/2018	12:58:33	COM5					PLUG AWAY
Event	17	Pump Displacement	3/30/2018	12:59:45	USER	8.40	10.00	1850.00	127.5	PUMP 127.5 BBL H2O DISPLACEMENT WITH 5 GALCLA-WEB, 1 GAL MMCR, 5 GAL 3RD PARTY BIOCID.
Event	18	Other	3/30/2018	13:11:54	COM5	8.40	4.00	1660.00	117.0	SLOW RATE FROM 10 BBL/MIN TO 4 BBL/MIN AT 117 BBL AWAY
Event	19	Bump Plug	3/30/2018	13:14:14	COM5	8.40	4.00	1820.00	127.5	PLUG BUMPED AT CALCULATED, FINAL CIRCULATING PRESSURE 1820 PSI
Event	20	Pressure Test	3/30/2018	13:15:39	USER					10 MIN. CASING TEST @ 3000 PSI
Event	21	Check Floats	3/30/2018	13:25:18	COM5					FLOATS HELD, 1.5 BBL BACK TO TRUCK
Event	22	End Job	3/30/2018	13:26:45	COM5					GOOD CIRCULATION THROUGHOUT, PIPE LEFT STATIC, 2 BBLS SPACER TO SURFACE, 20 LBS SUGAR USED, NO ADD HOURS CHARGED
Event	23	Pre-Rig Down Safety Meeting	3/30/2018	14:05:00	USER					
Event	24	Rig-Down Equipment	3/30/2018	14:10:00	USER					
Event	25	Pre-Convoy Safety Meeting	3/30/2018	14:55:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENTING OF GRAND JUNCTION, CO - RYAN MARTIN AND CREW
Event	26	Crew Leave Location	3/30/2018	15:00:00	USER					

LARAMIE - GUNDERSON 994-14-11E - 4 1/2" PRODUCTION



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

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

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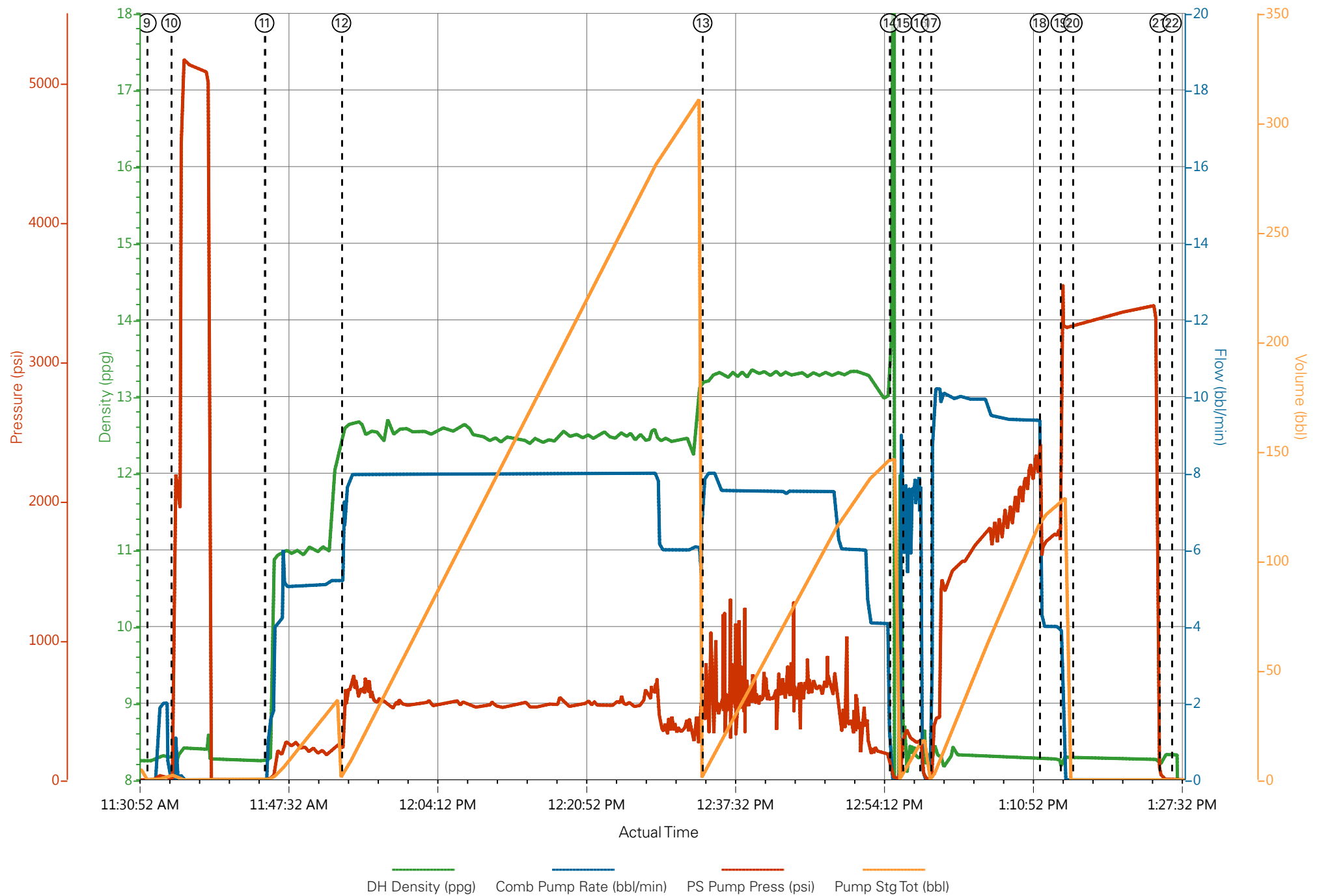
Edit

Customer : LARAMIE ENERGY LLC-EBUS
Representative : TYLER HALE

Job Date : 3/30/2018 9:03:17 AM
Sales Order # : 904737292

Well : GUNDERSON 994-14-11E
ELITE #1 : RYAN MARTIN / WES GOWEN

LARAMIE - GUNDERSON 994-14-11E - 4 1/2" PRODUCTION



Job Information

Request/Slurry	2462798/2	Rig Name	H&P 522	Date	25/MAR/2018
Submitted By	Connor Matthews	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Gunderson 994-14-11E

Well Information

Casing/Liner Size	4.5 in	Depth MD	8328 ft	BHST	112°C / 234°F
Hole Size	7.875 in	Depth TVD	7487 ft	BHCT	75°C / 167°F
Pressure	4541 psi				

Drilling Fluid Information

Mud Supplier Name	Baroid	Mud Trade Name	BARADRIL-N	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		

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Operation Test Results Request ID 2462798/2

Thickening Time - ON-OFF-ON

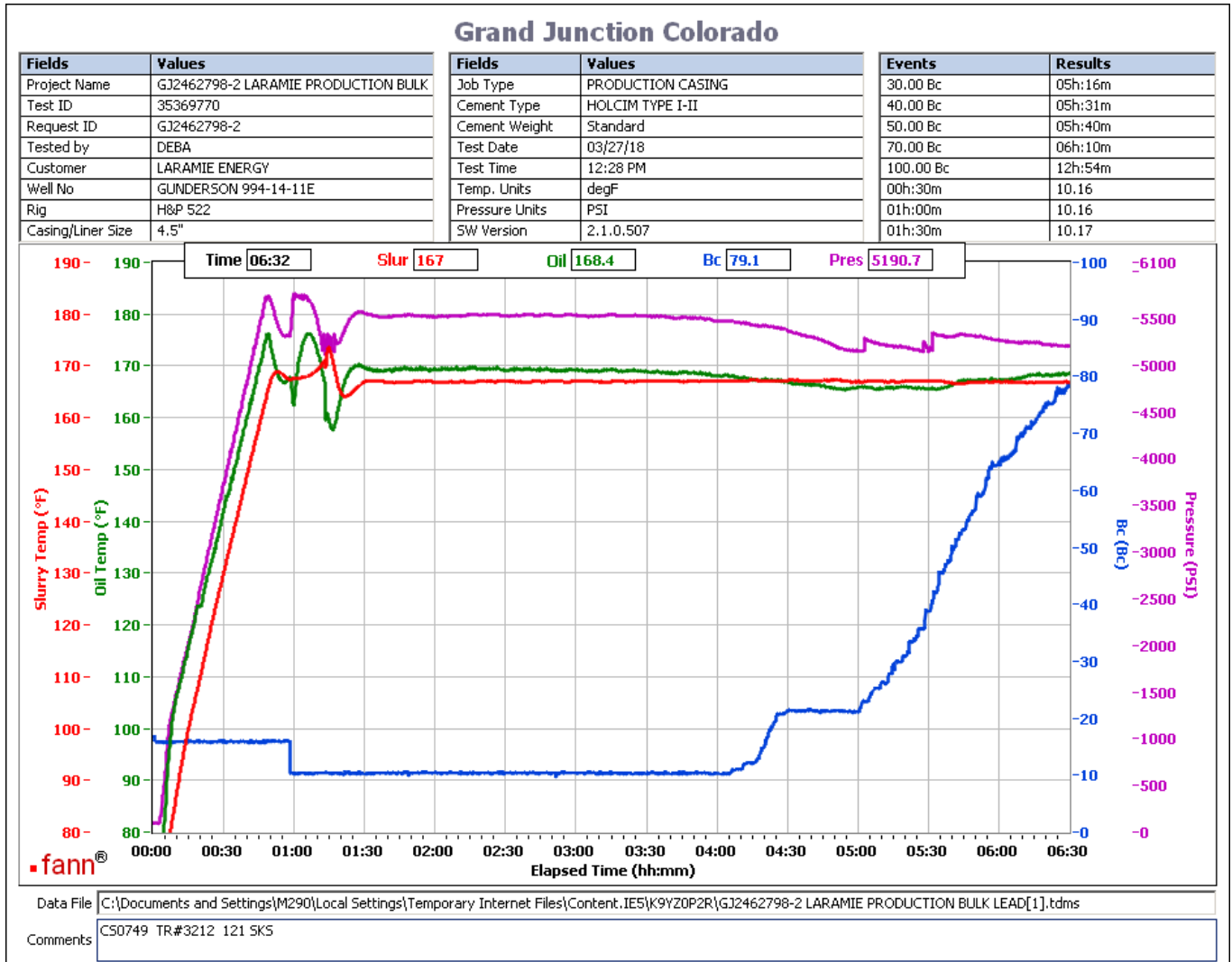
28/MAR/2018

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)
167	4541	48	5:16	5:40	6:10	12:54	16	58	15	10

Total sks = 871

CS0749 TR#3212 121 SkS

Deflection: 16 - 10



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Operation Test Results Request ID 2462798/1

Thickening Time - ON-OFF-ON

27/MAR/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)
167	4841	48	3:45	4:25	4:42	5:21	9	58	15	15

Total sks = 871

CS0745 TR#1656 375 sks

CS0746 TR#8476 375 sks

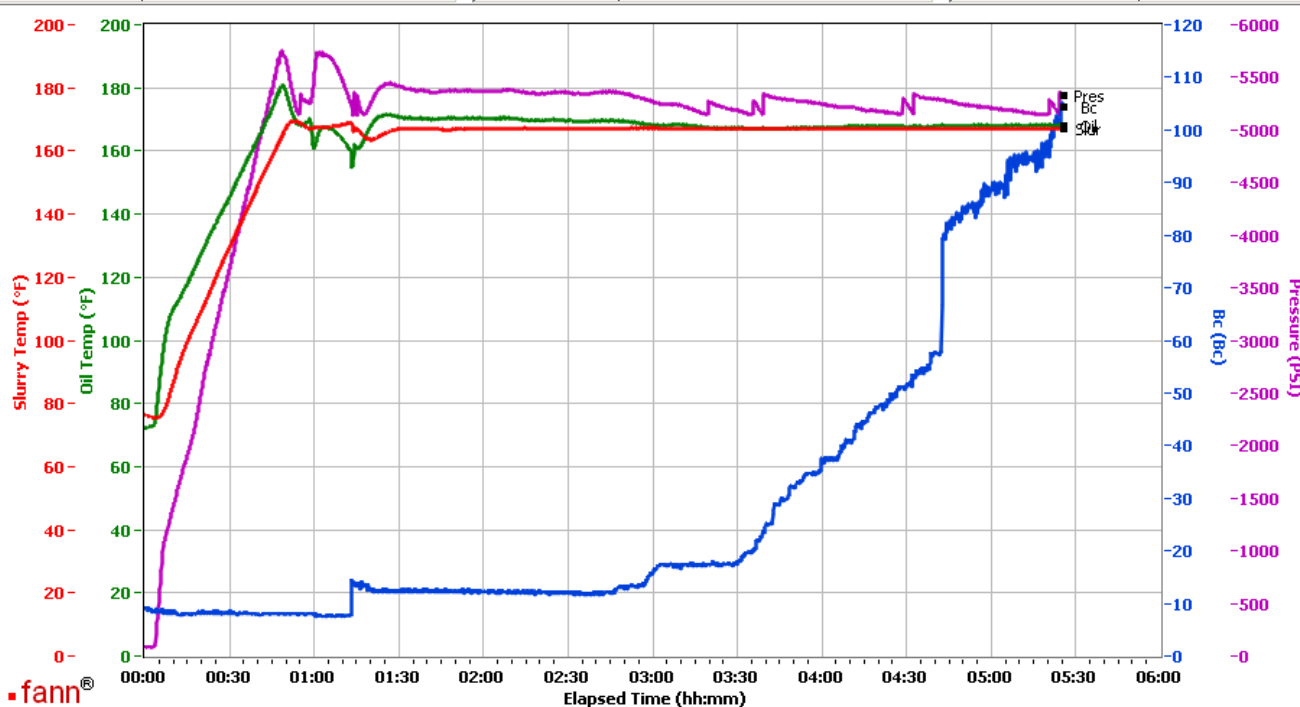
deflected from 9Bc---> 15Bc

Grand Junction Colorado

Fields	Values
Project Name	GJ2462798-1 LARAMIE PRODUCTION BULK
Test ID	35363181
Request ID	GJ2462798-1
Tested by	DEBA
Customer	LARAMIE ENERGY
Well No	GUNDERSON 994-14-11E
Rig	H&P 522
Casing/Liner Size	4.5"

Fields	Values
Job Type	PRODUCTION CASING
Cement Type	TYPE I-II
Cement Weight	Standard
Test Date	03/26/18
Test Time	5:018 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	03h:45m
40.00 Bc	04h:07m
50.00 Bc	04h:25m
70.00 Bc	04h:42m
100.00 Bc	05h:21m
00h:30m	8.71
01h:00m	8.06
01h:30m	12.38



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Comments COMPOSITE: CS0745 TR#1656 375 SKS AND CS0746 8476 375 SKS

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HALLIBURTON

Rockies, Grand Junction

Lab Results- Tail

Job Information

Request/Slurry	2462799/1	Rig Name	H&P 522	Date	25/MAR/2018
Submitted By	Connor Matthews	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Gunderson 994-14-11E

Well Information

Casing/Liner Size	4.5 in	Depth MD	8328 ft	BHST	112°C / 234°F
Hole Size	7.875 in	Depth TVD	7487 ft	BHCT	75°C / 167°F
Pressure	4541 psi				

Drilling Fluid Information

Mud Supplier Name	Baroid	Mud Trade Name	BARADRIL-N	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		

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Operation Test Results Request ID 2462799/1

Thickening Time - ON-OFF-ON

27/MAR/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)
167	4541	48	3:31	3:31	3:31	3:33	17	58	15	17

Total sks = 396

CS0747 TR#8677 396 sks

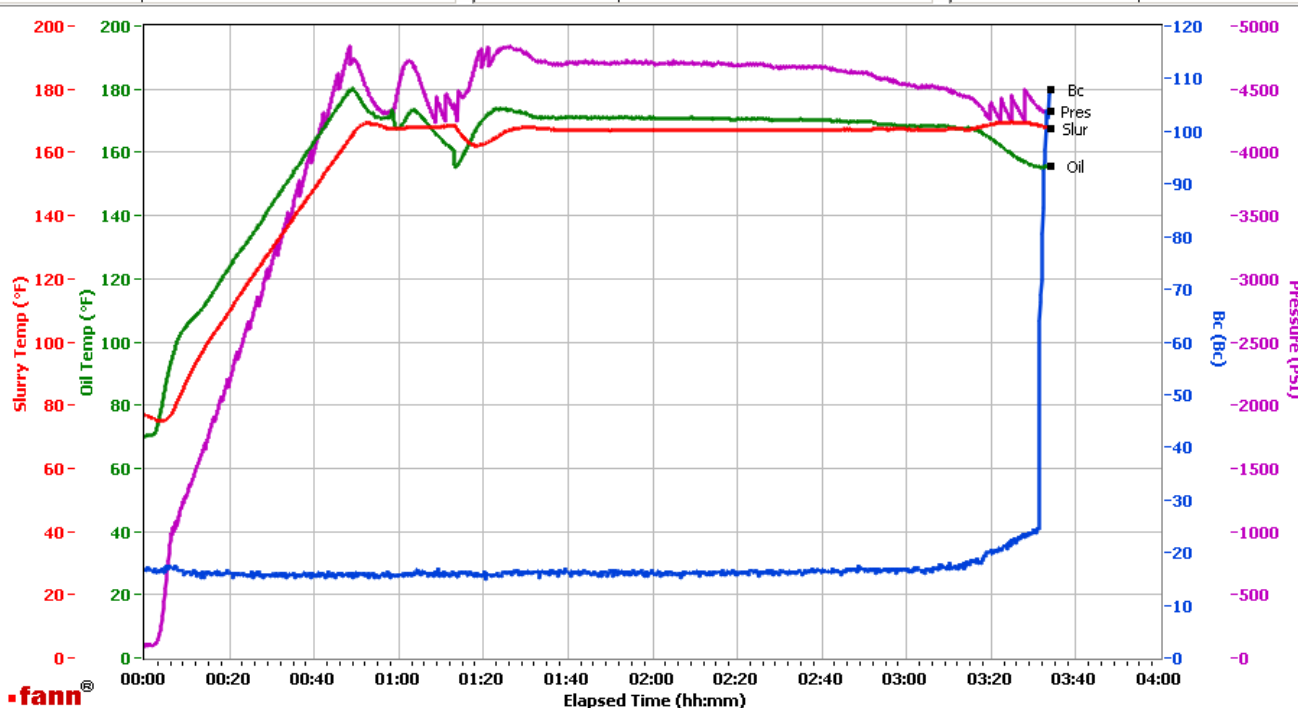
no deflection, 17Bc---- > 17Bc please note heat of hydration at 3:16

Grand Junction Colorado

Fields	Values
Project Name	GJ2462799-1 LARAMIE PRODUCTION BULK
Test ID	35363183
Request ID	GJ2462799-1
Tested by	DEBA
Customer	LARAMIE ENERGY
Well No	GUNDERSON 994-14-11E
Rig	H8P 522
Casing/Liner Size	4.5"

Fields	Values
Job Type	PRODUCTION CASING
Cement Type	MOUNTAIN G
Cement Weight	Standard
Test Date	03/27/18
Test Time	05:49 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	03h:31m
40.00 Bc	03h:31m
50.00 Bc	03h:31m
70.00 Bc	03h:31m
100.00 Bc	03h:33m
00h:30m	16.05
01h:00m	15.76
01h:30m	16.21



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Comments CS0747 TR#8677 396 SKS

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