

HALLIBURTON

iCem[®] Service

LARAMIE ENERGY LLC

For: Laramie

Date: Sunday, July 09, 2017

Gunderson 20-07W Surface

API # : 05-077-10341

Sincerely,

Grand Junction Cement Engineering

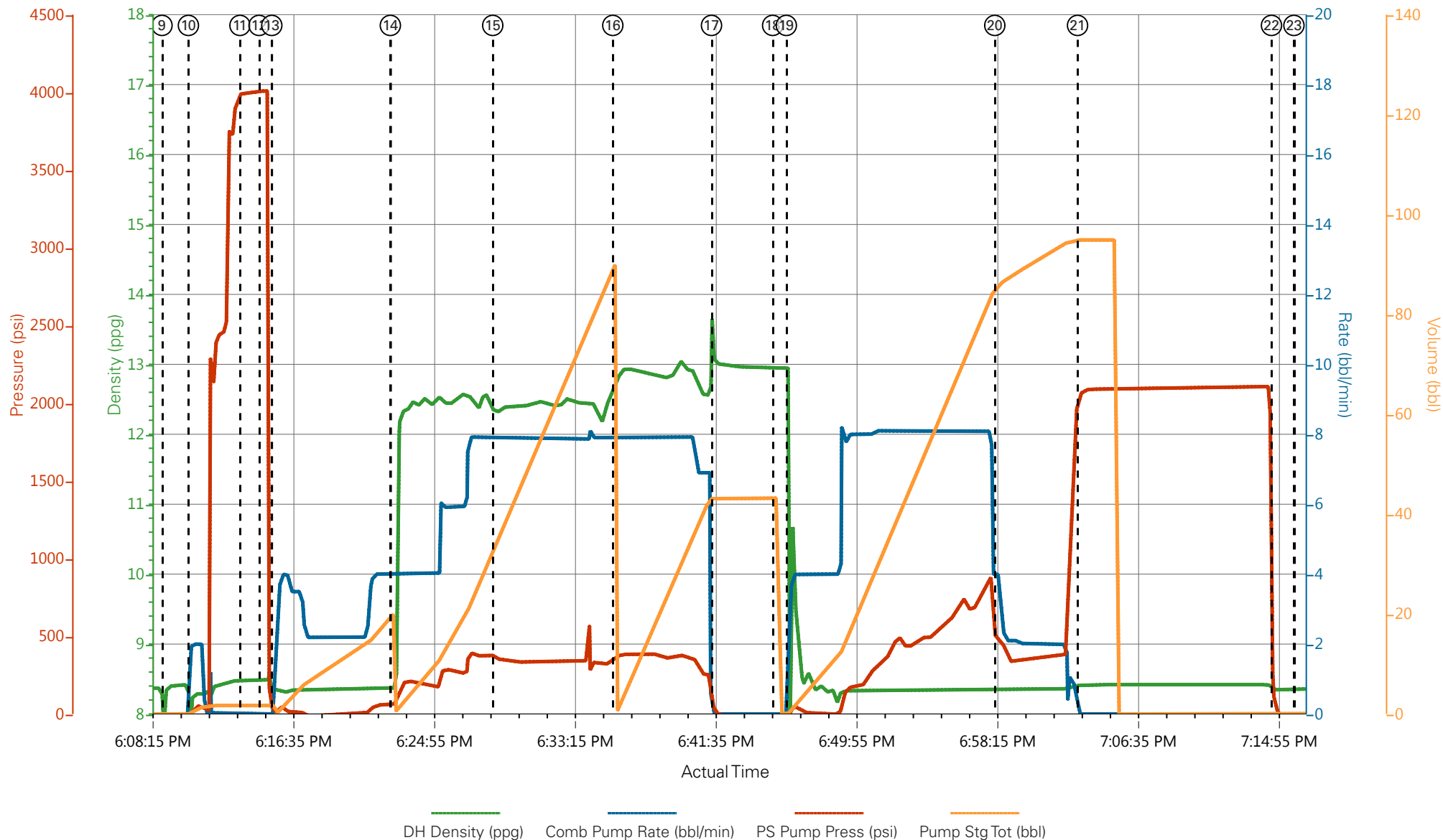
1.0 Real-Time Job Summary

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	7/9/2017	11:30:00	USER					O/L time 1730 - crew already in field
Event	2	Pre-Convoy Safety Meeting	7/9/2017	11:45:00	USER					
Event	3	Crew Leave Yard	7/9/2017	14:00:00	USER					1 Elite, 1 660, 1 pickup
Event	4	Arrive at Location	7/9/2017	15:30:00	USER					Rig running casing
Event	5	Assessment Of Location Safety Meeting	7/9/2017	15:45:00	USER					JSA completed - customer offered/received SDS - water test pH 7.5, Cl 0, temp 67 degrees
Event	6	Pre-Rig Up Safety Meeting	7/9/2017	16:00:00	USER					
Event	7	Rig-Up Equipment	7/9/2017	16:15:00	USER					Hard line to standpipe, water hose to upright, bulk hose to 660
Event	8	Pre-Job Safety Meeting	7/9/2017	17:45:00	USER					All HES personnel, rig crew, and company rep - Rig circulating @
Event	9	Start Job	7/9/2017	18:09:00	USER					TD 1561', TP 1551', SJ 1507', Mud 9.3 ppg, 11" OH, 8 5/8" 24# J55 casing
Event	10	Prime Lines	7/9/2017	18:10:33	USER	8.33	2.0	70	2.0	Fresh water
Event	11	Test Lines	7/9/2017	18:13:36	COM5			4011		Pressure held well
Event	12	Drop Bottom Plug	7/9/2017	18:14:44	USER					Plug Launched
Event	13	Pump H2O Spacer	7/9/2017	18:15:29	COM5	8.33	4.0	80	20.0	Fresh water – returns established
Event	14	Pump Lead Cement	7/9/2017	18:22:30	COM5	12.3	8.0	360	86.3	197 sks, 12.3 ppg, 2.46 yield, 14.17 gal/sk
Event	15	Check weight	7/9/2017	18:28:34	COM5	12.3				Recirc matched mud scales
Event	16	Pump Tail Cement	7/9/2017	18:35:40	COM5	12.8	8.0	370	42.3	109 sks, 12.8 ppg, 2.18 yield, 12.11 gal/sk
Event	17	Shutdown	7/9/2017	18:41:31	USER					Wash up on top of plug
Event	18	Drop Top Plug	7/9/2017	18:45:08	USER					Plug launched – verified by driller

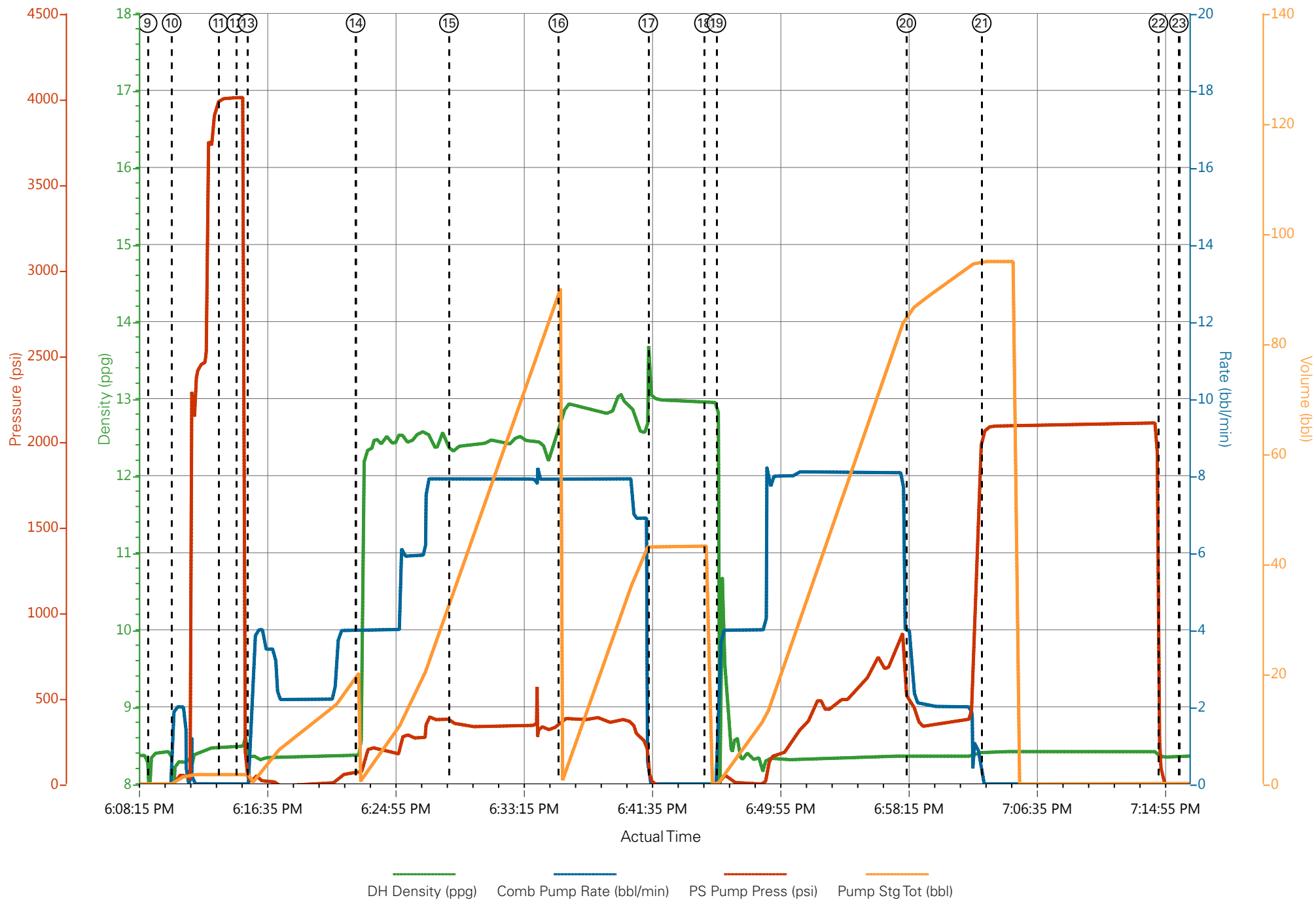
Event	19	Pump Displacement	7/9/2017	18:45:57	COM5	8.33	8.0	880	95.8	Fresh water
Event	20	Slow Rate	7/9/2017	18:58:17	USER	8.33	2.0	340	@ 85	Good returns throughout job
Event	21	Bump Plug	7/9/2017	19:03:11	COM5			398		Approx 30 bbls cement to surface – Casing test 2100 psi for 10 minutes
Event	22	Check Floats	7/9/2017	19:14:40	USER			2130		Floats held – 1 bbl flow back
Event	23	End Job	7/9/2017	19:16:00	COM5					40 lbs sugar used
Event	24	Pre-Rig Down Safety Meeting	7/9/2017	19:45:00	USER					
Event	25	Rig-Down Equipment	7/9/2017	20:00:00	USER					
Event	26	Pre-Convoy Safety Meeting	7/9/2017	20:15:00	USER					
Event	27	Crew Leave Location	7/9/2017	20:30:00	USER					Thank you for using Halliburton - Ed Deussen and crew

LARAMIE ENERGY - Gunderson 20-07W - 8 5/8" Surface



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

LARAMIE ENERGY - Gunderson 20-07W - 8 5/8" Surface



HALLIBURTON

iCem[®] Service

LARAMIE ENERGY LLC

For: Laramie

Date: Wednesday, July 12, 2017

GUNDERSON 20-07W Production

API # : 05-077-10341

Sincerely,

Grand Junction Cement Engineering

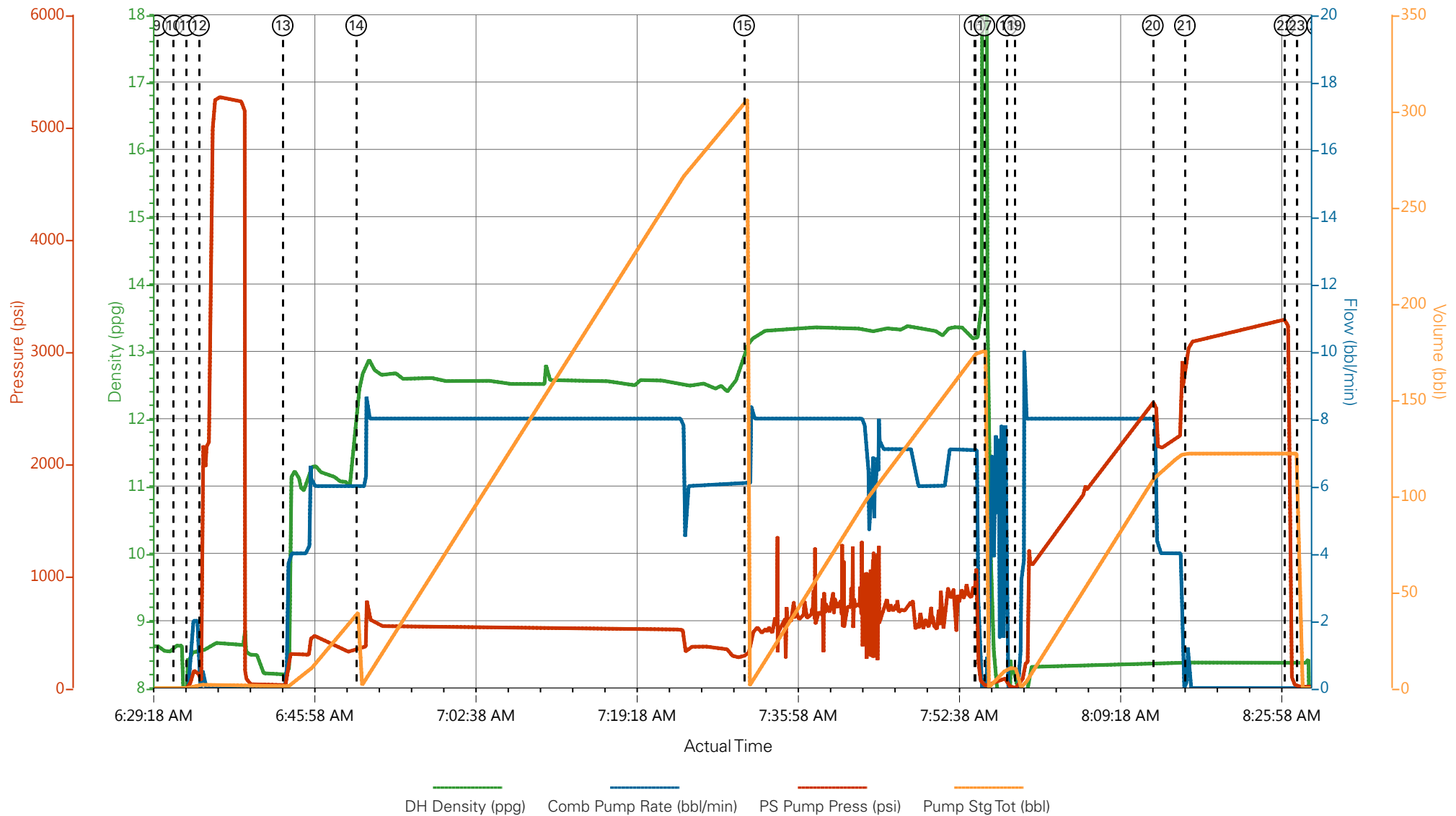
2.0 Real-Time Job Summary

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	7/11/2017	22:00:00	USER					ELITE #4
Event	2	Pre-Convoy Safety Meeting	7/11/2017	23:00:00	USER					ALL HES EMPLOYEES
Event	3	Arrive At Loc	7/12/2017	04:30:00	USER					ARRIVED ON LOCATION 1/2 HOUR EARLY RIG RUNNING CASING
Event	4	Meet With Company Rep	7/12/2017	04:45:00	USER					COMPANY REP OFFERED SDS WATER TEST: TEMP: 61 PH: 7 CHLORIDES:0
Event	5	Assessment Of Location Safety Meeting	7/12/2017	05:00:00	USER					ALL HES EMPLOYEES
Event	6	Pre-Rig Up Safety Meeting	7/12/2017	05:10:00	USER					ALL HES EMPLOYEES
Event	7	Rig-Up Equipment	7/12/2017	05:30:00	USER					1 HT-400 PUMP TRUCK 2 SILOS 1 660 BULK TRUCK 1 F-550 PICKUP
Event	8	Pre-Job Safety Meeting	7/12/2017	06:20:00	USER					ALL HES EMPLOYEES AND RIG RIG CIRCULATED FOR 1 1/2 HOURS @ 9.6 BPM @ 680 PSI PRIOR TO THE JOB
Event	9	Start Job	7/12/2017	06:30:00	COM5					TD: 7605 TP: 7594.35 SJ: 90.8 CSG: 4 1/2# N-80 OHI 7 7/8 SURFACE SHOE @ 1561 8 5/8 23# J-55 MUD WT: 9.3 PPG 35 VIS
Event	10	Drop Bottom Plug	7/12/2017	06:31:41	USER					PLUG AWAY NO PROBLEMS
Event	11	Prime Lines	7/12/2017	06:33:00	USER	8.33	2.0	180	2.0	PRIME LINES WITH 2 BBLs FRESH WATER
Event	12	Test Lines	7/12/2017	06:34:21	COM5	8.33	0.0	5269	2.0	PRESSURE TEST OK
Event	13	Pump Tuned Spacer III	7/12/2017	06:43:00	COM5	11.0	6.0	400	40	PUMP 40 BBL TUNED SPACER 11.0 PPG 4.86 YIELD 31.9 GAL/SK TUNED SPACER WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	14	Pump Lead Cement	7/12/2017	06:50:36	COM5	12.5	8.0	630	269	778 SKS 12.5 PPG 1.94 YIELD 9.6 GAL/SK LEAD CEMENT

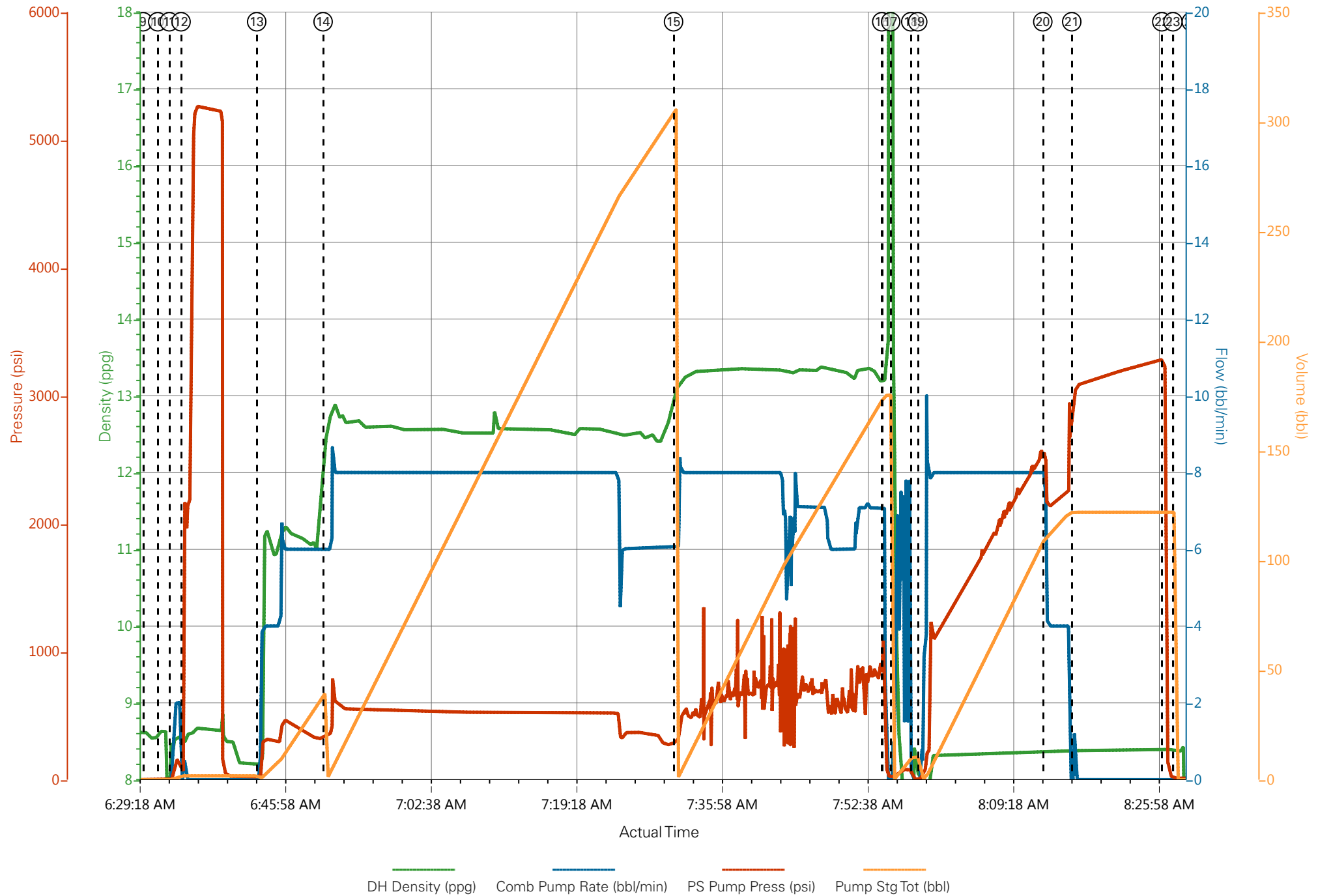
WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES										
Event	15	Pump Tail Cement	7/12/2017	07:30:43	COM5	13.3	8.0	780	135.6	440 SKS 13.3 PPG 1.73 YIELD 7.81 GAL/SK TAIL CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	16	Shutdown	7/12/2017	07:54:34	USER					SHUTDOWN TO CLEAN PUMPS AND LINES
Event	17	Clean Lines	7/12/2017	07:55:35	COM5	8.33			10	CLEAN PUMPS AND LINES TO CELLAR
Event	18	Drop Top Plug	7/12/2017	07:57:53	COM5					PLUG AWAY NO PROBLEMS
Event	19	Pump Displacement	7/12/2017	07:58:40	COM5	8.4	8.0	2560	116.3	5 GAL CLA-WEB 1 GAL MMCR FRESH WATER DISPLACEMENT
Event	20	Slow Rate	7/12/2017	08:13:00	USER	8.4	4.0	2270	106	SLOW RATE TO BUMP PLUG
Event	21	Bump Plug	7/12/2017	08:16:18	COM5	8.4	4.0	3000	116	PSI BEFORE BUMPING PLUG @ 2270 BUMPED PLUG UP TO 3000 PSI FOR 10 MINUTES CASING TEST
Event	22	Check Floats	7/12/2017	08:26:37	USER	8.4	0.0	3287	116	PRESSURE @ 3287 AT END OF 10 MINUTE CASING TEST FLOATS HELD 1 1/2 BBLS BACK TO DISPLACEMENT TANKS
Event	23	End Job	7/12/2017	08:27:54	COM5					GOOD RETURNS THROUGHOUT JOB PIPE STATIC THROUGHOUT JOB 40 BBLS TUNED SPACER TO SURFACE
Event	24	Pre-Rig Down Safety Meeting	7/12/2017	08:30:00	USER					ALL HES EMPLOYEES
Event	25	Rig-Down Equipment	7/12/2017	08:45:00	USER					
Event	26	Pre-Convoy Safety Meeting	7/12/2017	09:45:00	USER					ALL HES EMPLOYEES
Event	27	Crew Leave Location	7/12/2017	10:00:00	USER					THANK YOU FOR USING HALLIBURTON CEMENT, DUSTIN SMITH AND CREW

LARAMIE - GUNDERSON BCU 20-07W - 4 1/2 PRODUCTION



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|---|--------------------------|-------------------------|--------------------------------|------------------------------|
| ① Call Out | ⑦ Rig-Up Equipment | ⑬ Pump Tuned Spacer III | ⑲ 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 Arrive At Loc | ⑨ Start Job | ⑮ Pump Tail Cement | 21 Bump Plug | 27 Crew Leave Location |
| ④ Meet With Company Rep | ⑩ Drop Bottom Plug | ⑯ Shutdown | 22 Check Floats | |
| ⑤ Assessment Of Location Safety Meeting | ⑪ Prime Lines | ⑰ Clean Lines | 23 End Job | |
| ⑥ Pre-Rig Up Safety Meeting | ⑫ Test Lines | ⑱ Drop Top Plug | 24 Pre-Rig Down Safety Meeting | |

LARAMIE - GUNDERSON BCU 20-07W - 4 1/2 PRODUCTION



Job Information

Request/Slurry	2400497/1	Rig Name	H&P 522	Date	11/JUL/2017
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Gunderson BCU 20-07W

Well Information

Casing/Liner Size	4.5 in	Depth MD	7625 ft	BHST	113°C / 235°F
Hole Size	7.875 in	Depth TVD	7534 ft	BHCT	76°C / 168°F
Pressure	4574 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



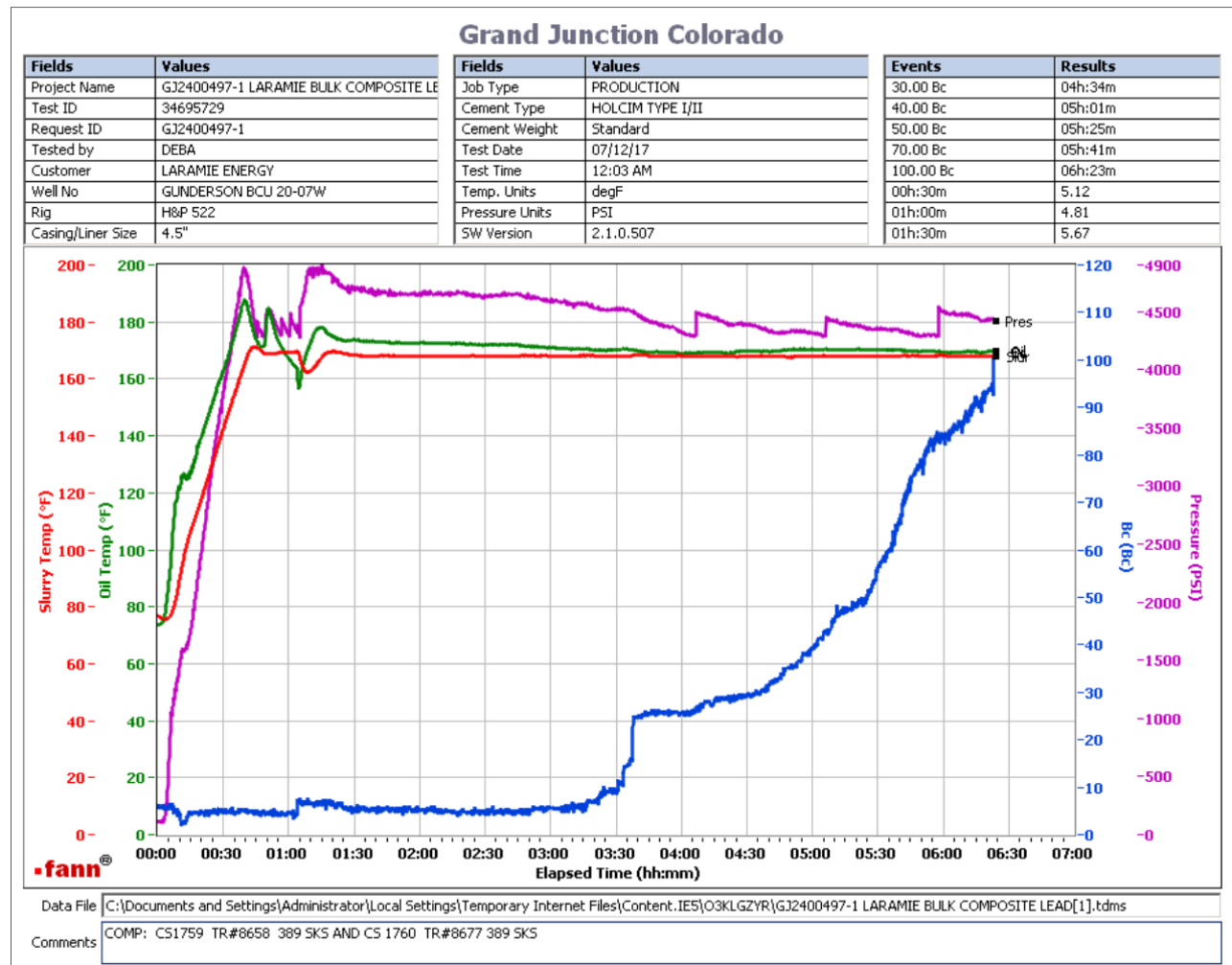
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		NeoCem Lead				Slurry Density	12.5	lbm/gal
						Slurry Yield	1.941	ft3/sack
						Water Requirement	9.623	gal/sack
						Total Mix Fluid	9.623	gal/sack
						Water Source	Field (Fresh)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

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Thickening Time - ON-OFF-ON

11/JUL/2017

Test Temp (°F)	Pressure (psi)	Reached in (min)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
168	4574	39	5:25	5:41	6:23	6	50	15	8



Total sks = 778

Composite:

CS1759 TR#8658 389 sks

CS1760 TR#8677 389 sks

deflected from 5Bc to 8Bc

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HALLIBURTON

Rockies, Grand Junction

Lab Results- Tail

Job Information

Request/Slurry	2400498/1	Rig Name	H&P 522	Date	11/JUL/2017
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Gunderson BCU 20-06W

Well Information

Casing/Liner Size	4.5 in	Depth MD	7625 ft	BHST	113°C / 235°F
Hole Size	7.875 in	Depth TVD	7534 ft	BHCT	76°C / 168°F
Pressure	4574 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



<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		

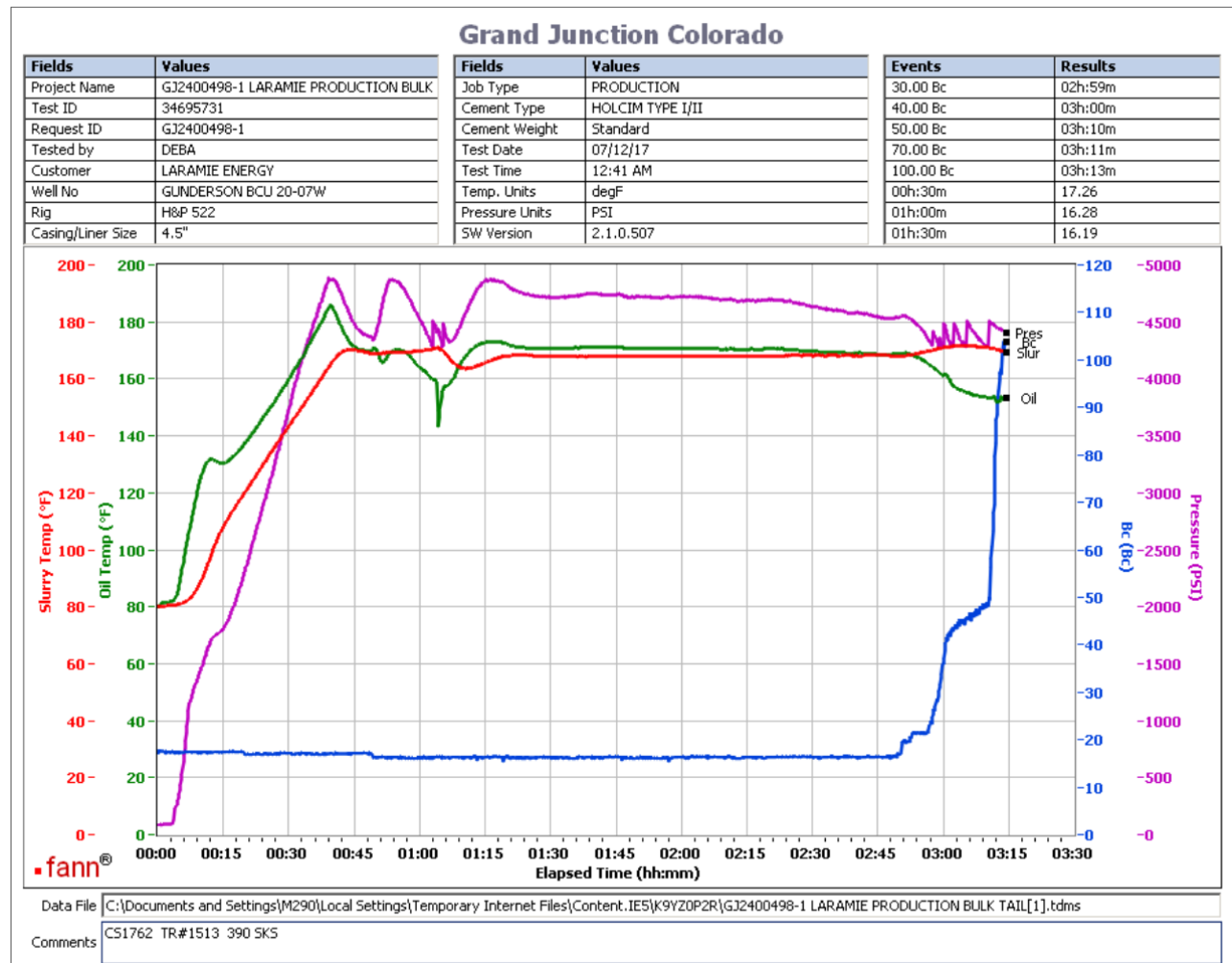
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Operation Test Results Request ID 2400498/1

Thickening Time - ON-OFF-ON

11/JUL/2017

Test Temp (°F)	Pressure (psi)	Reached in (min)	30 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
168	4574	39	2:59	3:11	3:13	17	49	15	16



Total sks = 440
CS1762 TR#1513 390 SKS
no deflection

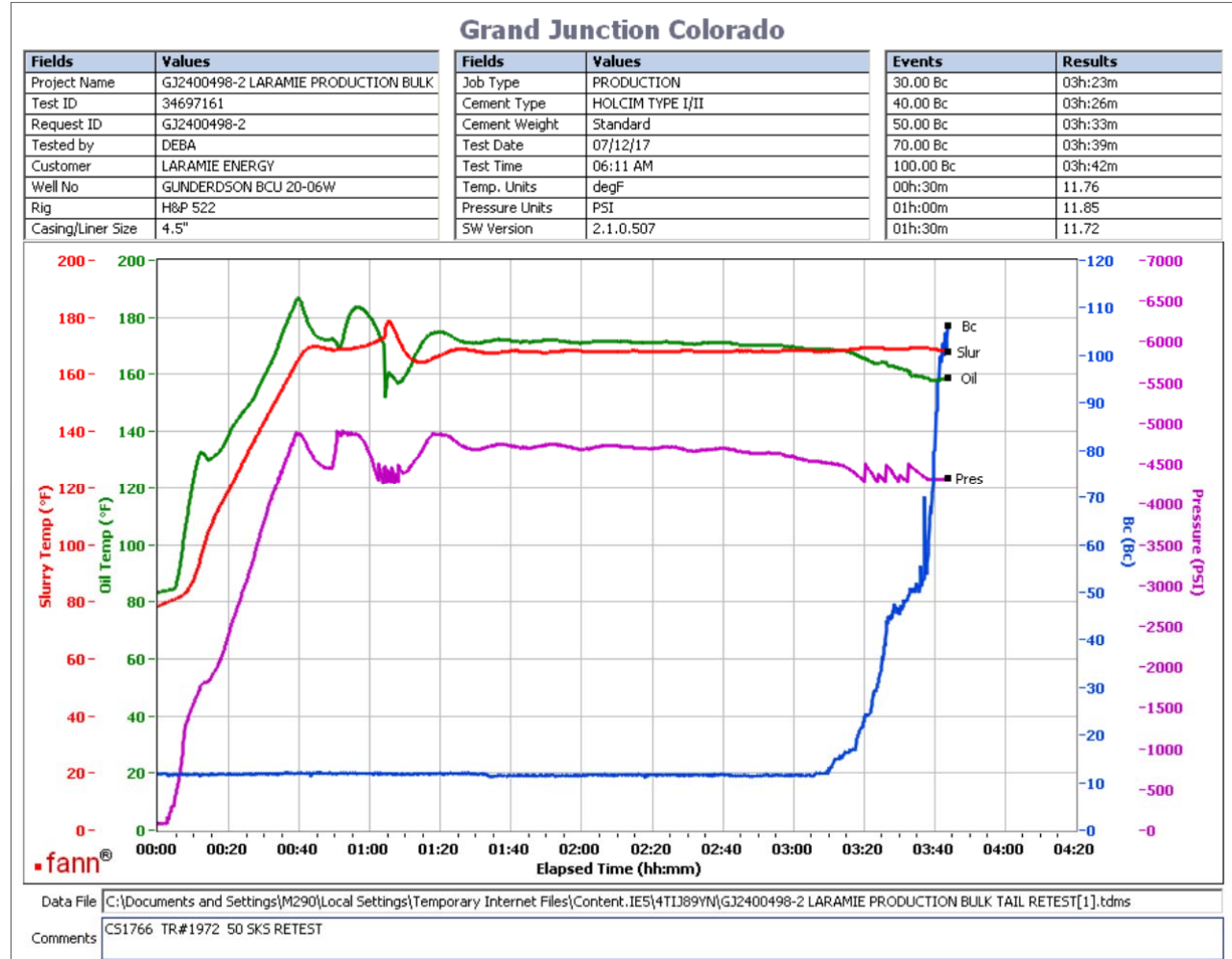
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Operation Test Results Request ID 2400498/2

Thickening Time - ON-OFF-ON

12/JUL/2017

Test Temp (°F)	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)
168	4574	39	3:23	3:33	3:39	3:42	11	49	15	12



Total sks = 440

CS1766 TR# 1972 50 SKS *RETEST*

Deflection: 12 - 12

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