

HALLIBURTON

iCem[®] Service

LARAMIE ENERGY LLC

For: Chuck Mallery

Date: Sunday, October 01, 2017

HG Federal 35-01W Surface PJR

API# 05-077-09306-00

Sincerely,

Grand Junction Cement Engineering

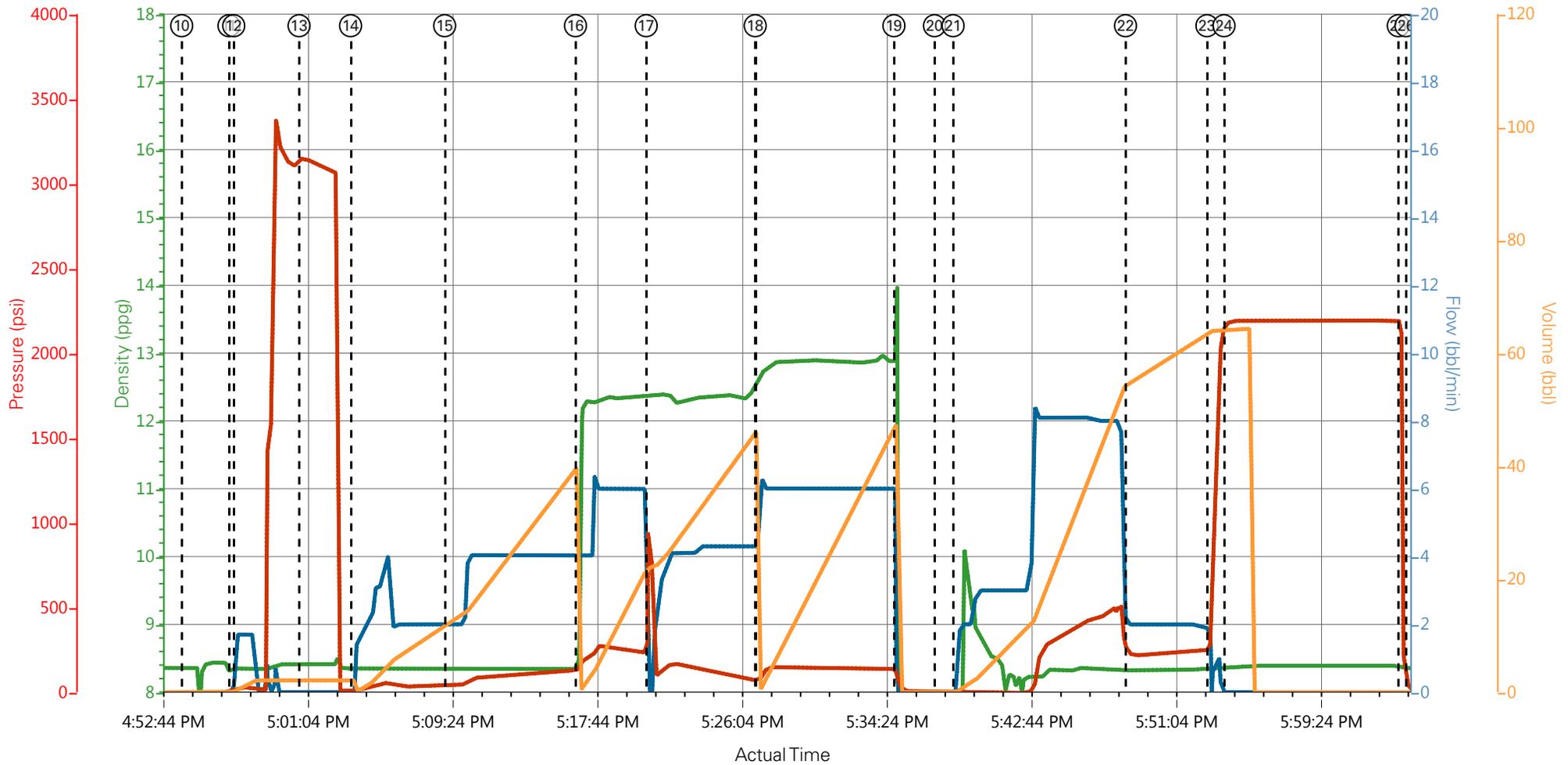
2.0 Real-Time Job Summary

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	10/1/2017	06:00:00	USER					ON LOCATION REQUESTED 11:00
Event	2	Pre-Convoy Safety Meeting	10/1/2017	08:45:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	10/1/2017	09:00:00	USER					
Event	4	Arrive at Location from Service Center	10/1/2017	11:15:00	USER					RIG PULLING DP
Event	5	Assessment Of Location Safety Meeting	10/1/2017	11:30:00	USER					MET WITH COMPANY REP, DISCUSSED JOB PROCEDURE, SDS OFFERED
Event	6	Pre-Rig Up Safety Meeting	10/1/2017	13:30:00	USER					ALL HES PRESENT
Event	7	Rig-Up Completed	10/1/2017	15:54:41	USER					1-ELITE,1-660 BULK TRAILER, 8.625" QL, 2" PUMP IRON, 4" SUCTION HOSE
Event	8	Other	10/1/2017	15:57:39	USER					WATER: TEMP-50, CL-<500, PH-7
Event	9	Pre-Job Safety Meeting	10/1/2017	16:45:00	USER					ALL HES AND RIG CREW PRESENT
Event	10	Start Job	10/1/2017	16:54:00	USER	8.36	0.00	2.00	0.0	TD-1024', TP-1014', SJ-42.12', CSG-8.625" 24# J55, OH-11, MUD-10.1PPG
Event	11	Prime Pumps	10/1/2017	16:56:43	USER	8.35	0.00	11.00	32.0	FRESH WATER
Event	12	Drop Bottom Plug	10/1/2017	16:56:59	USER					PLUG AWAY
Event	13	Test Lines	10/1/2017	17:00:45	COM5	8.41	0.00	3150.00	2.1	PRESSURE HELD

Event	14	Pump Water Spacer	10/1/2017	17:03:43	COM5	8.35	4.00	125.00	0.0	FRESH WATER
Event	15	Check weight	10/1/2017	17:09:08	COM5					WEIGHT VERIFIED BY PRESSURIZED MUD SCALES
Event	16	Pump Lead Cement	10/1/2017	17:16:40	COM5	12.30	6.00	270.00	45.1	VARICEM LEAD 103SKS, 12.3PPG, 2.46CF/SK, 14.17GAL/SK
Event	17	Bottom Plug Landed	10/1/2017	17:20:44	USER					RUPTURED 950 PSI
Event	18	Pump Tail Cement	10/1/2017	17:27:01	COM5	12.80	6.00	148.00	42.3	VARICEM TAIL 109SKS, 12.8PPG, 2.18CF/SK, 12.11GAL/SK
Event	19	Shutdown	10/1/2017	17:35:00	USER					END OF CEMENT
Event	20	Drop Top Plug	10/1/2017	17:37:20	USER					CLEANED PUMPS AND LINES ON TOP OF PLUG
Event	21	Pump Displacement	10/1/2017	17:38:25	USER	8.34	8.00	522.00	61.8	FRESH WATER
Event	22	Slow Rate	10/1/2017	17:48:20	USER	8.32	2.00	229.00	51.8	SLOW RATE LAST 10 BBLS
Event	23	Bump Plug	10/1/2017	17:53:02	USER	8.34	2.00	250.00	61.8	PLUG BUMPED 250 PSI
Event	24	Casing Test	10/1/2017	17:54:01	USER	8.38	0.00	2191.00	62.3	2191PSI 10 MINUTE CASING TEST
Event	25	Check Floats	10/1/2017	18:04:03	USER	8.39	0.00	0.00	0.0	FLOATS HELD .5 BBL BACK
Event	26	End Job	10/1/2017	18:04:29	COM5					GOOD RETURNS THROUGH OUT JOB. 20 BBLS CEMENT TO SURFACE
Event	27	Post-Job Safety Meeting (Pre Rig-Down)	10/1/2017	18:06:00	USER					ALL HES PRESENT
Event	28	Rig-Down Completed	10/1/2017	18:30:00	USER					
Event	29	Pre-Convoy Safety Meeting	10/1/2017	18:45:00	USER					ALL HES PRESENT
Event	30	Crew Leave Location	10/1/2017	19:00:00	USER					THANK YOU FOR CHOOSING HALLIBURTON, ANDREW BRENNECKE AND CREW

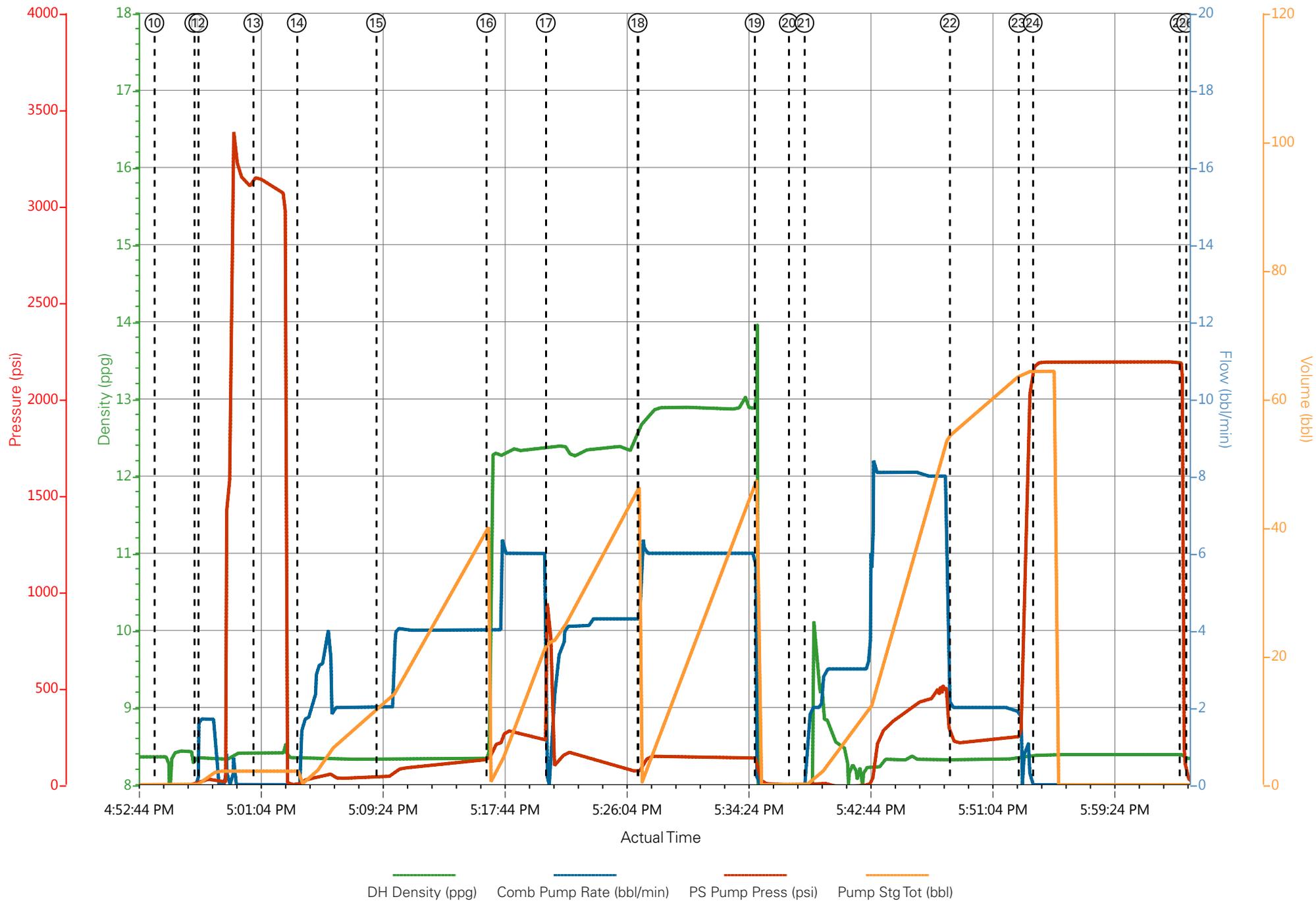
LARAMIE - HG FED 35-01W - 8.625" SURFACE



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

- | | | | |
|----------------------------------------------------------|--------------------------------------|---------------------------------------|----------------------------------------------------------|
| ① Call Out n/a;n/a;n/a;n/a | ⑨ Pre-Job Safety Meeting 8.36;0;-2;0 | ⑰ Bottom Plug Landed 12.37;0;803;22.1 | ⑲ Check Floats 8.39;0;1695;0 |
| ② Pre-Convoy Safety Meeting n/a;n/a;n/a;n/a | ⑩ Start Job 8.36;0;-2;0 | ⑱ Pump Tail Cement 12.65;4.3;73;0 | ⑳ End Job 8.34;0;25.04;0 |
| ③ Crew Leave Yard n/a;n/a;n/a;n/a | ⑪ Prime Pumps 8.35;0;11;0 | ⑳ Shutdown 12.74;0;79.02;47.5 | ㉑ Post-Job Safety Meeting (Pre Rig-Down) n/a;n/a;n/a;n/a |
| ④ Arrive at Location from Service Center n/a;n/a;n/a;n/a | ⑫ Drop Bottom Plug 8.35;1.7;24;0.4 | ㉒ Drop Top Plug -0.01;0;-2;0 | ㉒ Rig-Down Completed n/a;n/a;n/a;n/a |
| ⑤ Assessment Of Location Safety Meeting n/a;n/a;n/a;n/a | ⑬ Test Lines 8.41;0;3150;2.1 | ㉓ Pump Displacement 0.4;0.9;2;0.1 | ㉓ Pre-Convoy Safety Meeting n/a;n/a;n/a;n/a |
| ⑥ Pre-Rig Up Safety Meeting n/a;n/a;n/a;n/a | ⑭ Pump Water Spacer 8.35;0;5;0 | ㉔ Slow Rate 8.32;2;229;54.7 | ㉔ Crew Leave Location n/a;n/a;n/a;n/a |
| ⑦ Rig-Up Completed 0.04;0;-1;3.6 | ⑮ Check weight 8.33;2;41;11.9 | ㉕ Bump Plug 8.34;0.9;447;63.9 | |
| ⑧ Other 0.04;0;-1;3.6 | ⑯ Pump Lead Cement 8.72;4;134;0 | ㉖ Casing Test 8.38;0;2180;64.3 | |

LARAMIE - HG FED 35-01W - 8.625" SURFACE



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

HALLIBURTON

iCem[®] Service

LARAMIE ENERGY II LLC EBUSINESS

For: Laramie

Date: Tuesday, November 28, 2017

HELLS GULTCH FED 35-01W Production

Job Date: Monday, November 27, 2017

Sincerely,
Grand Junction Cement Engineering

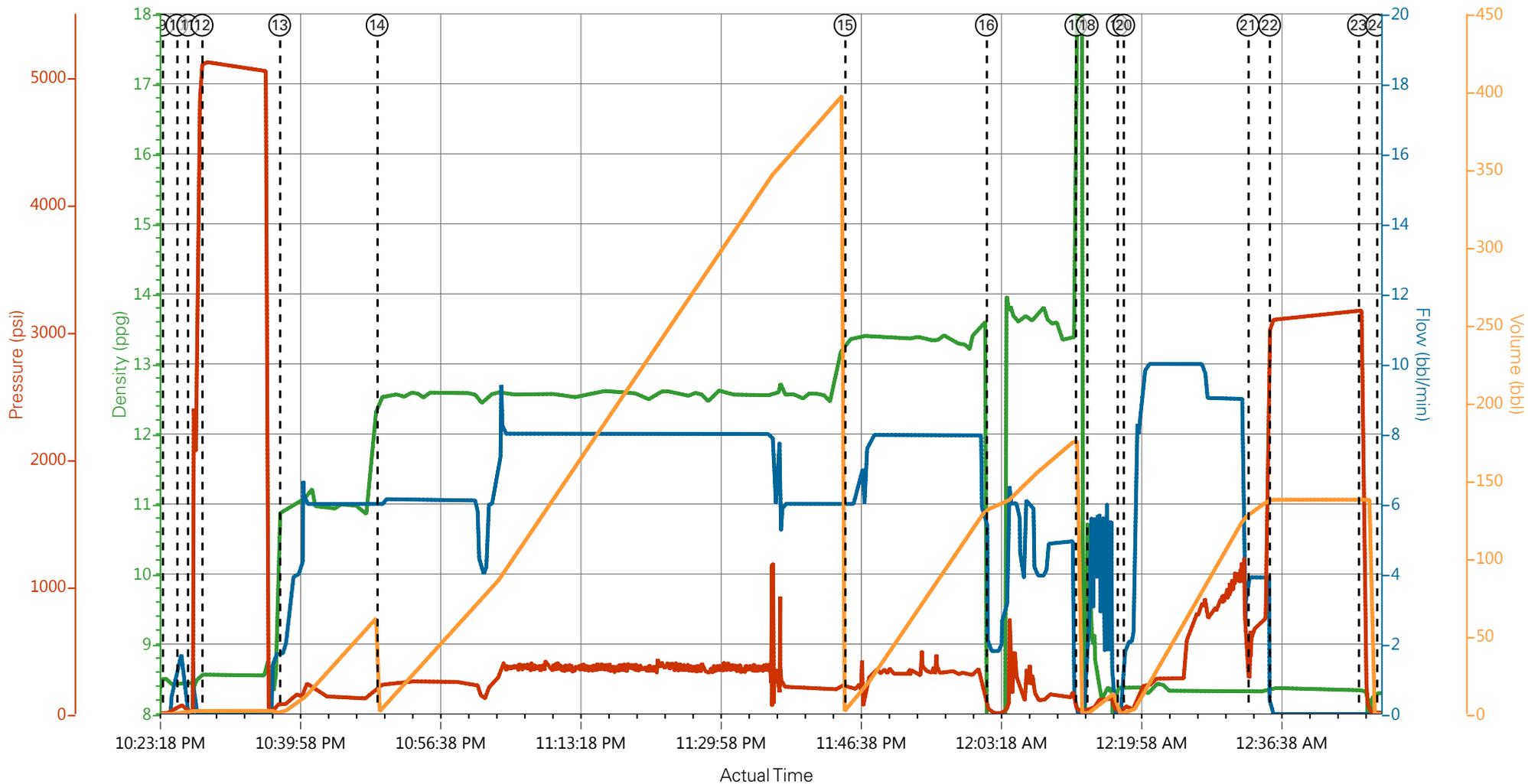
1.0 Real-Time Job Summary

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	11/27/2017	14:00:00	USER					REQUESTED ON LOCATION @ 2000
Event	2	Pre-Convoy Safety Meeting	11/27/2017	16:20:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	11/27/2017	16:30:00	USER					1 F550, 1 PUMP TRUCK & 2 660 BULK TURCK
Event	4	Arrive At Loc	11/27/2017	19:00:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	11/27/2017	19:10:00	USER					MET WITH COMP REP, MATT, AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (PH- 7, CHLORIDES- 0, TEMP- 54F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Pre-Rig Up Safety Meeting	11/27/2017	19:15:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	11/27/2017	19:25:00	USER					HES RIGGED UP EQUIPMENT WITHOUT ENTERING RED ZONE.
Event	8	Pre-Job Safety Meeting	11/27/2017	22:08:05	USER					ALL HES AND RIG CREW PRESENT
Event	9	Start Job	11/27/2017	22:24:00	COM6					TD 8688', TP 8678', SJ 78.8', OH 7.875'', CSG 4.5'' 11.6#, MUD 8.6 PPG.
Event	10	Prime Pumps	11/27/2017	22:25:42	COM6	72.00	8.35	1.00	2.0	8.33 PPG FRESH WATER
Event	11	Drop Bottom Plug	11/27/2017	22:26:59	USER					PLUG WENT, VERIFIED BY CO REP.
Event	12	Test Lines	11/27/2017	22:28:42	COM6	5122.00	8.57	0.00	2.0	ALL LINES HELD PRESSURE AT 5120 PSI
Event	13	Pump Spacer 1	11/27/2017	22:37:55	COM6	71.00	10.93	6.00	60.0	TUNED SPACER (60 BBL), 11 PPG
Event	14	Pump Lead Cement	11/27/2017	22:49:30	COM6	227.00	12.50	8.00	363.0	NEOCEM CEMENT 1045 SKS (363 BBLS), 12.5 PPG, 1.94 FT3/SK, 9.6 GAL/SK

Event	15	Pump Tail Cement	11/27/2017	23:45:08	COM6	216.00	13.35	8.00	142.0	THERMACEM CEMENT 461 SKS (142 BBLS), 13.3 PPG, 1.73 FT3/SK, 7.81 GAL/SK.
Event	16	Slow Rate	11/28/2017	00:01:56	USER					SLOWED RATE TO RE-PRIME DAY TANK WATER HOSE
Event	17	Shutdown	11/28/2017	00:12:35	USER					END OF CMT
Event	18	Clean Lines	11/28/2017	00:13:55	USER					WASH UP PUMPS AND LINES
Event	19	Drop Top Plug	11/28/2017	00:17:30	USER					PLUG WENT, VERIFIED BY CO REP.
Event	20	Pump Displacement	11/28/2017	00:18:16	COM6	1202.00	8.37	10.00	123.3	8.34 PPG CLA- WEB II WATER (133.3 BBLS) & 1 GAL MMCR
Event	21	Slow Rate	11/28/2017	00:33:02	USER	660.00	8.33	3.90	10.0	SLOW RATE TO 4 BPM PER CO REP TO LAND PLUG
Event	22	Bump Plug	11/28/2017	00:35:37	USER	3099.00	8.38	3.90	133.3	LAND PLUG AT 800 PSI, BROUGHT UP TO 3100 PSI
Event	23	Check Floats	11/28/2017	00:46:11	USER	3174.00	8.34	0.00	133.3	FLOATS HELD, 1 BBL BACK TO TRUCK
Event	24	End Job	11/28/2017	00:48:21	USER					PIPE WAS NOT RECIPROCATED DURING THE JOB, 0 BBL OF SPACER OR CEMENT BACK TO SURFACE, PARTIAL RETURNS DURING CEMENT AND NO RETURNS DURING DISPLACEMENT.
Event	25	Post-Job Safety Meeting (Pre Rig-Down)	11/28/2017	01:00:00	USER					ALL HES PRESENT
Event	26	Rig-Down Equipment	11/28/2017	01:15:00	USER					ALL HES PRESENT
Event	27	Pre-Convoy Safety Meeting	11/28/2017	01:20:00	USER					ALL HES PRESENT
Event	28	Crew Leave Location	11/28/2017	01:30:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENT, CHRIS SMITH AND CREW

LARAMIE - H.G. FED 35-01W - 4.5" PRODUCTION



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

- | | | | |
|---------------------------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------------------------------|
| ① Call Out n/a;n/a;n/a;n/a | ⑧ Pre-Job Safety Meeting 8.43;0;2;0 | ⑮ Pump Tail Cement 13.35;6;213;5 | ⑳ Bump Plug 8.38;0;3095;137.7 |
| ② Pre-Convoy Safety Meeting n/a;n/a;n/a;n/a | ⑨ Start Job 8.51;0;-1;0 | ⑯ Slow Rate 0.48;1.8;23;132.2 | ㉑ Check Floats 8.34;0;3171;137.7 |
| ③ Crew Leave Yard n/a;n/a;n/a;n/a | ⑩ Prime Pumps 8.45;1.7;72;1.1 | ⑰ Shutdown 20.82;0;17;0 | ㉒ End Job 8.3;0;0;0 |
| ④ Arrive At Loc n/a;n/a;n/a;n/a | ⑪ Drop Bottom Plug 8.45;0;18;2 | ⑱ Clean Lines 9.54;3.1;28;1.5 | ㉓ Post-Job Safety Meeting (Pre Rig-Down) 0.02;4.3;11;42.9 |
| ⑤ Assessment Of Location Safety Meeting n/a;n/a;n/a;n/a | ⑫ Test Lines 8.57;0;5122;2 | ⑲ Drop Top Plug 8.38;0;11;0 | ㉔ Rig-Down Equipment n/a;n/a;n/a;n/a |
| ⑥ Pre-Rig Up Safety Meeting n/a;n/a;n/a;n/a | ⑬ Pump Spacer 1 10.93;1.7;71;1.7 | ㉚ Pump Displacement 8.37;1.8;53;1.1 | ㉕ Pre-Convoy Safety Meeting n/a;n/a;n/a;n/a |
| ⑦ Rig-Up Equipment n/a;n/a;n/a;n/a | ⑭ Pump Lead Cement 12.5;6;227;2.7 | ㉛ Slow Rate 8.33;3.9;662;129.5 | ㉖ Crew Leave Location n/a;n/a;n/a;n/a |

▼ **HALLIBURTON** | iCem[®] Service

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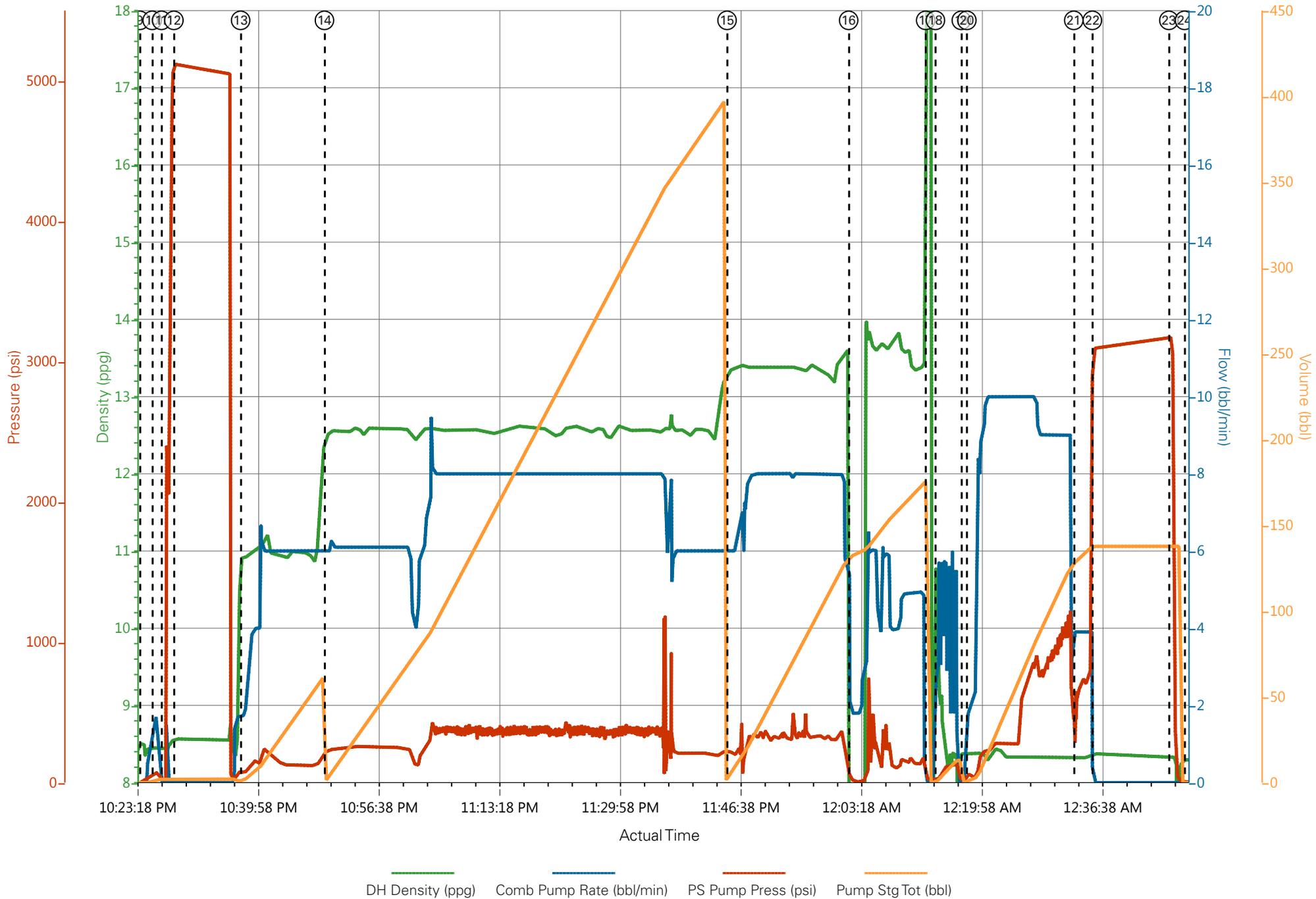
Edit

Customer : LARAMIE ENERGY II LLC EBUSINESS
 Representative : MATT SETTLES

Job Date : 11/27/2017
 Sales Order # : 90445753

Well : HELLS GULTCH FED 35-01W
 ELITE 8 : C.SMITH/ D.PORTER

LARAMIE - H.G. FED 35-01W - 4.5" PRODUCTION



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

Job Information

Request/Slurry	2430876/1	Rig Name	H&P 522	Date	16/NOV/2017
Submitted By	Patrick Ealey	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Hells Gulch Federal 35-01W

Well Information

Casing/Liner Size	4.5 in	Depth MD	8694 ft	BHST	119°C / 247°F
Hole Size	7.875 in	Depth TVD	8048 ft	BHCT	81°C / 177°F
Pressure	4934 psi				

Drilling Fluid Information

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

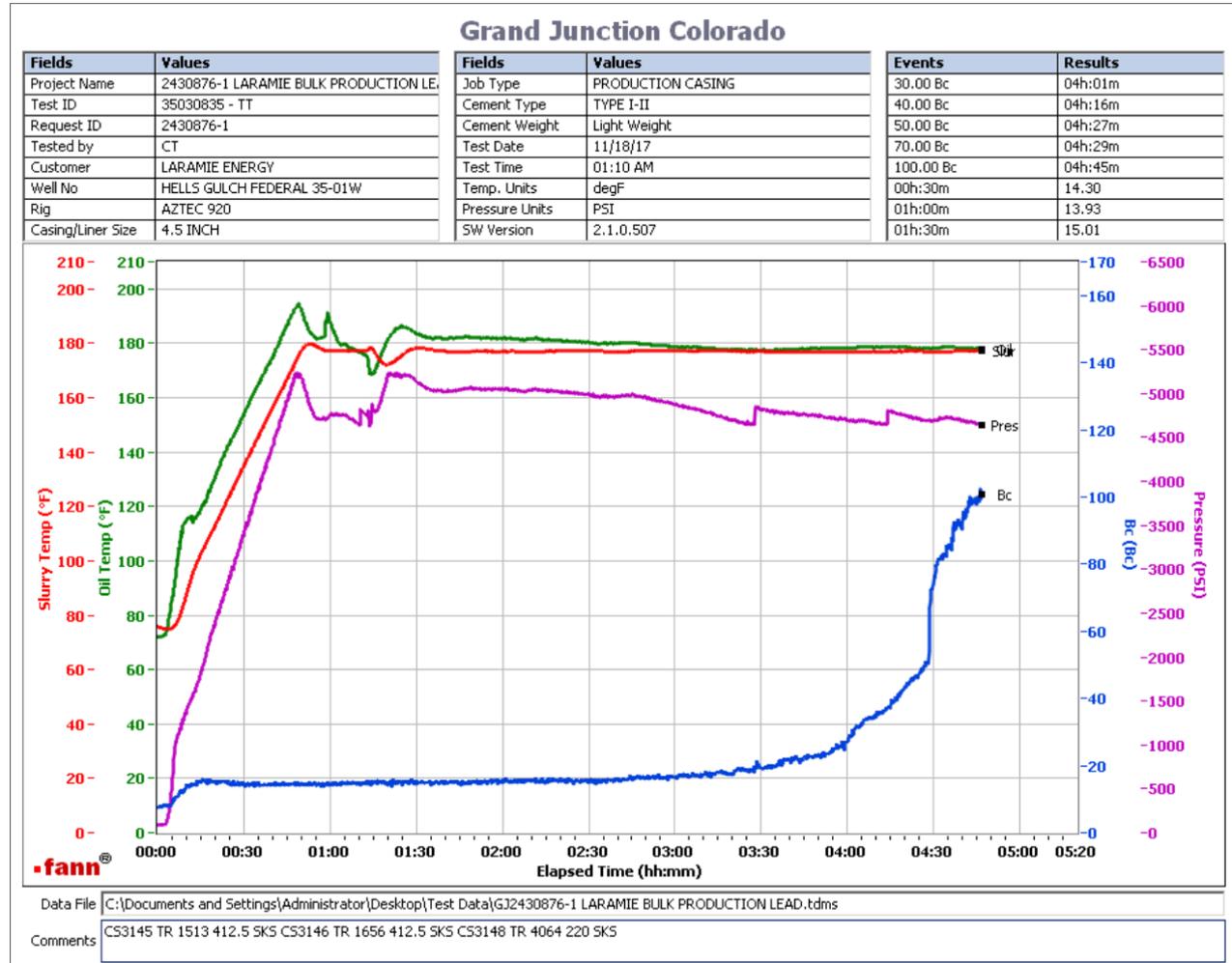
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		NeoCem Lead				Slurry Density	12.5	lbm/gal
						Slurry Yield	1.95	ft3/sack
						Water Requirement	9.606	gal/sack
						Total Mix Fluid	9.606	gal/sack
						Water Source	Field (Fresh) Water	
						Water Chloride		

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Thickening Time - ON-OFF-ON

17/NOV/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)
177	4934	48	4:01	4:27	4:29	4:45	7	58	15	16



Total sks = 1045
 Composite:
 CS3145 TR 1513 412.5 SKS
 CS3146 TR 1656 412.5 SKS
 CS3148 TR 4064 220 SKS
 Deflected 15-- > 16

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Job Information

Request/Slurry	2430877/1	Rig Name	H&P 522	Date	16/NOV/2017
Submitted By	Patrick Ealey	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Hells Gulch Federal 35-01W

Well Information

Casing/Liner Size	4.5 in	Depth MD	8694 ft	BHST	119°C / 247°F
Hole Size	7.875 in	Depth TVD	8048 ft	BHCT	81°C / 177°F
Pressure	4934 psi				

Drilling Fluid Information

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

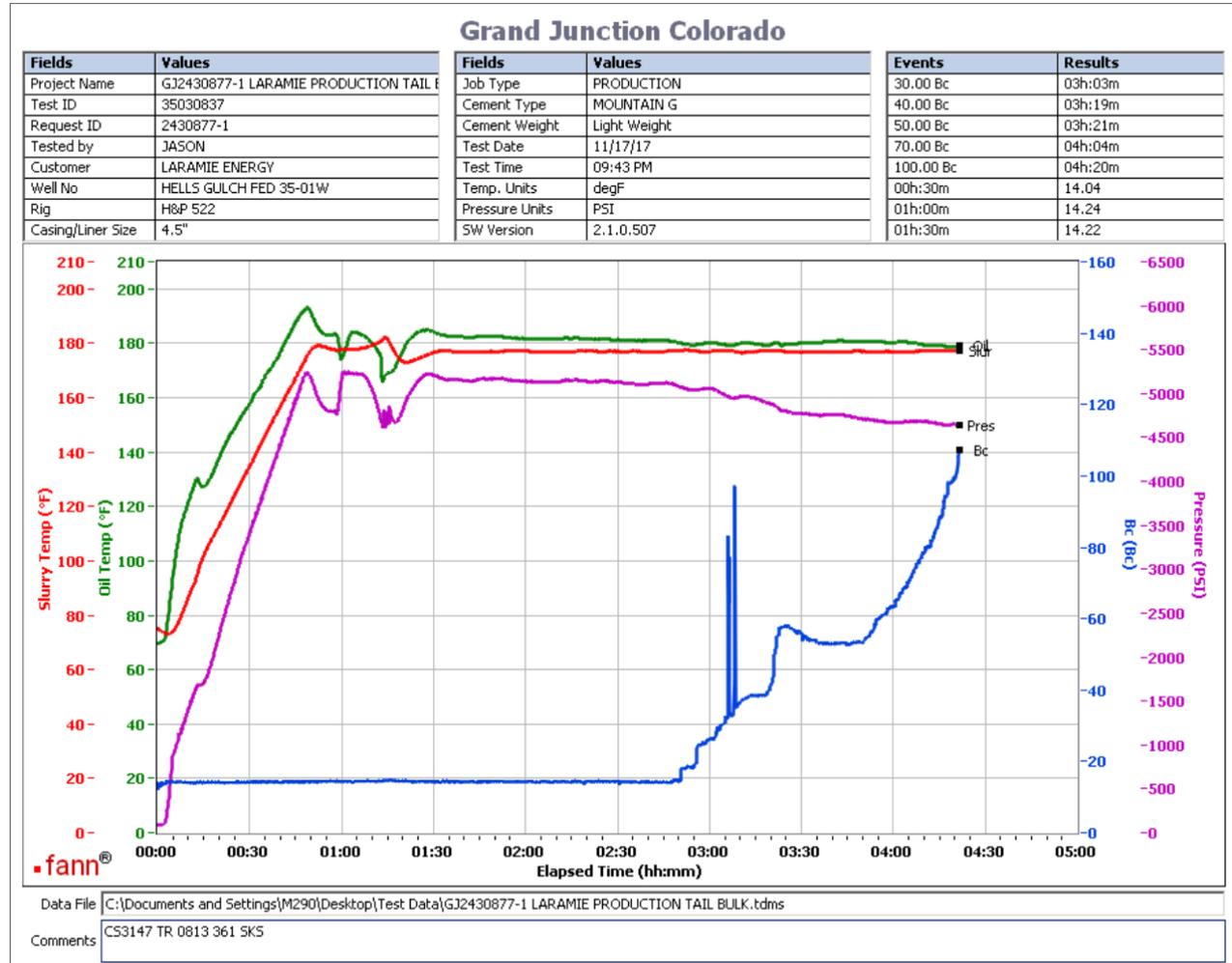
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		ThermaCem Tail				Slurry Density	13.3	lbm/gal
						Slurry Yield	1.733	ft3/sack
						Water Requirement	7.799	gal/sack
						Total Mix Fluid	7.799	gal/sack
						Water Source	Field (Fresh) Water	
						Water Chloride		

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Thickening Time - ON-OFF-ON

17/NOV/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)
177	4934	48	3:03	3:21	4:04	4:20	12	58	15	14



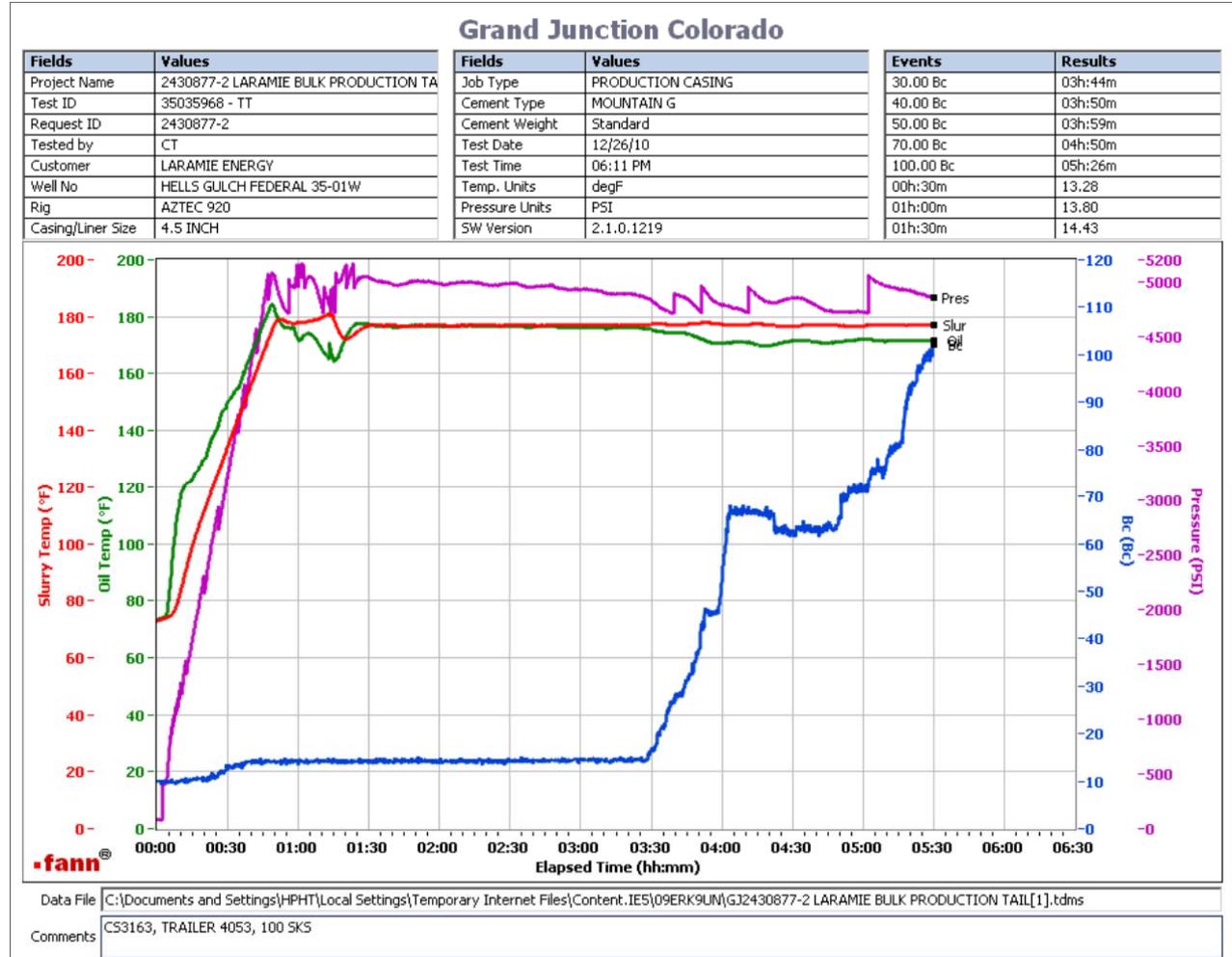
Total sks = 461
 CS3147 TR 0813 361 SKS
 No deflection. Results were taken from graph due to mechanical spike.

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Operation Test Results Request ID 2430877/2

Thickening Time - ON-OFF-ON 19/NOV/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)
177	4934	48	3:44	3:59	4:50	5:26	10	58	15	10



Total sks = 461
 CS3163, Trailer 4053, 100 sks
 no deflection was observed. 10Bc--- > 10Bc
 heat of hydration at 3:34hr

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