

HALLIBURTON

iCem[®] Service

LARAMIE ENERGY LLC

Date: Sunday, March 04, 2018

GUNDERSON 994-13-06W

Laramie Gunderson 994-13-06W Surface

API # 05-077-10541-00

Job Date: Sunday, March 04, 2018

Sincerely,

Grand Junction Cement Engineering

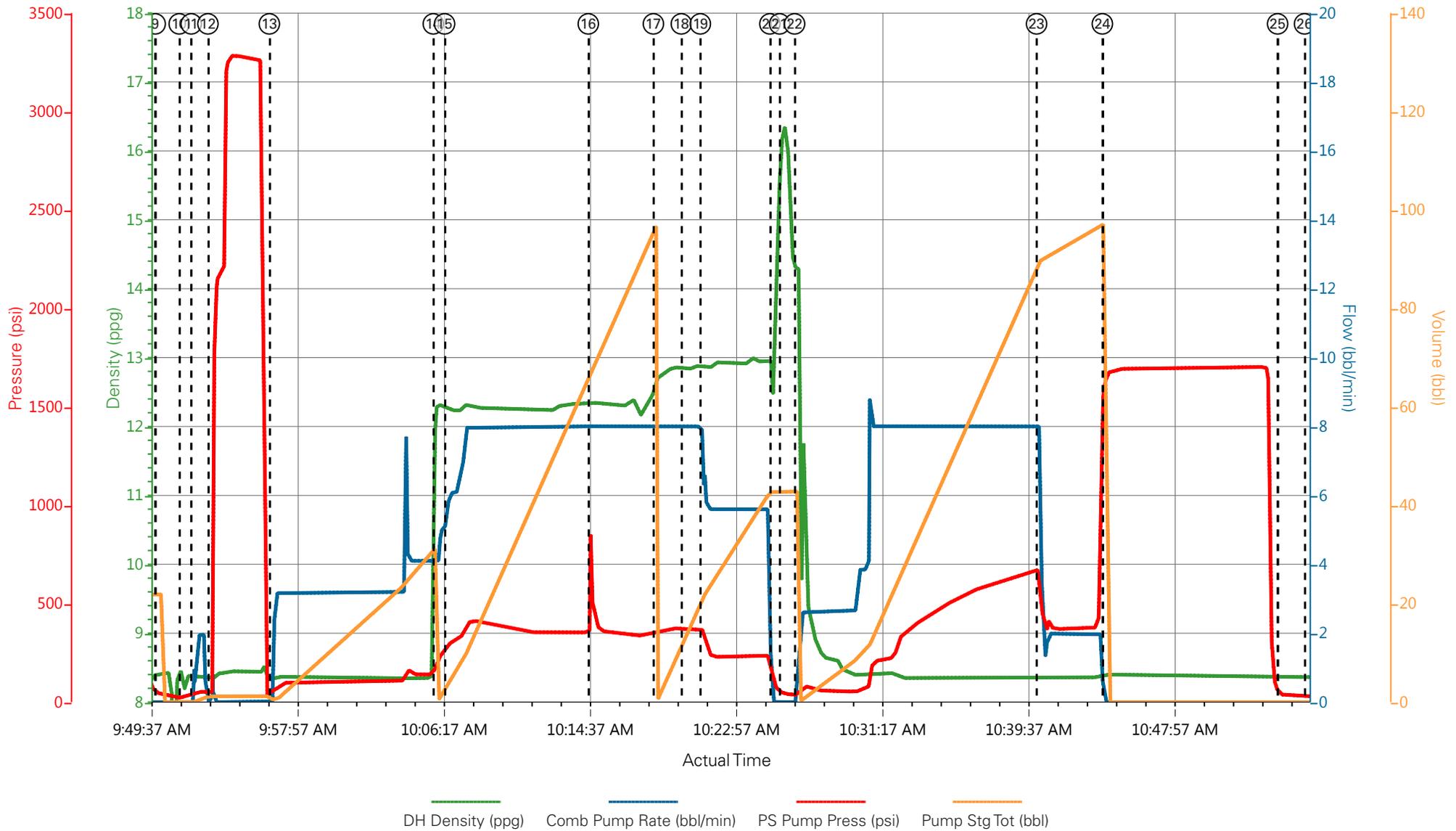
1.0 Real-Time Job Summary

1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	3/4/2018	03:00:00	USER					REQUESTED ON LOCATION @ 09:00
Event	2	Pre-Convoy Safety Meeting	3/4/2018	05:15:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	3/4/2018	05:30:00	USER					1 HT 400 PUMP TRUCK E4, 1 660 BULK TRUCKS, 1 550 SERVICE PICKUP
Event	4	Arrive At Loc	3/4/2018	07:00:00	USER					RIG RUNNING CASING WHEN HES ARRIVED
Event	5	Assessment Of Location Safety Meeting	3/4/2018	07:15:00	USER					MET WITH COMP REP, AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (PH- 7.0, CHLORIDES- 0, TEMP- 50F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Pre-Rig Up Safety Meeting	3/4/2018	07:20:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	3/4/2018	07:30:00	USER					HES RIGGED UP EQUIPMENT WITHOUT ENTERING RED ZONE.
Event	8	Pre-Job Safety Meeting	3/4/2018	09:30:00	USER					ALL HES EMPLOYEES AND RIG CREW PRESENT, RIG CIRCULATED @ 10 BPM FOR .5HR PRIOR TO JOB, PRESSURE @190 PSI
Event	9	Start Job	3/4/2018	09:50:00	COM6					TD-1555', TP-1545', SJ-47.59', CSG-8.625" 28# J55, OH-11", MUD-9.1PPG
Event	10	Drop Bottom Plug	3/4/2018	09:51:22	USER					VERIFIED BY FLAG INDICATOR
Event	11	Prime Lines	3/4/2018	09:52:03	USER	8.33	2	60	2	8.33 PPG FRESH WATER
Event	12	Test Lines	3/4/2018	09:53:00	COM6	8.33	0	3285	.5	ALL LINES HELD PRESSURE AT 3285 PSI

Event	13	Pump H2O Spacer	3/4/2018	09:56:30	COM6	8.33	4	150	30	8.33 PPG FRESH WATER
Event	14	Pump Lead Cement	3/4/2018	10:05:51	COM6	12.30	8	390	86.3	197 SKS VARICEM GJ5 CMT 12.3 PPG, 2.46 FT3/SK, 14.17 GAL/SK
Event	15	Check weight	3/4/2018	10:06:30	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	16	Bump Bottom Plug	3/4/2018	10:14:41	USER					BUMPED PLUG AT 350PSI BROUGHT UP TO 850PSI
Event	17	Pump Tail Cement	3/4/2018	10:18:24	COM6	12.8	8	380	42.3	109 SKS VARICEM GJ5 CMT 12.8 PPG, 2.18 FT3/SK, 12.11 GAL/SK
Event	18	Check weight	3/4/2018	10:20:00	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	19	Slow Rate	3/4/2018	10:21:05	USER					SLOWED TO END CEMENT
Event	20	Shutdown	3/4/2018	10:25:02	USER					END OF CEMENT, WASH UP ON TOP OF PLUG.
Event	21	Drop Top Plug	3/4/2018	10:25:36	USER					VERIFIED BY FLAG INDICATOR
Event	22	Pump Displacement	3/4/2018	10:26:27	COM6	8.33	8	670	93.4	FRESH WATER
Event	23	Slow Rate	3/4/2018	10:40:15	USER	8.33	2	380	83.4	SLOW RATE TO 2 BPM TO BUMP PLUG
Event	24	Bump Plug	3/4/2018	10:44:00	COM6	8.33	2	390	93.4	LAND PLUG AT 390 PSI, BROUGHT UP TO 1690 PSI AND HELD FOR TEN MINS FOR CASING TEST
Event	25	Check Floats	3/4/2018	10:54:00	USER					FLOATS HELD, 1 BBL BACK TO TRUCK
Event	26	End Job	3/4/2018	10:55:32	COM6					RETURNS THROUGHOUT JOB, 44 BBLs CMT TO SURFACE, USED 40 POUNDS OF SUGAR
Event	27	Post-Job Safety Meeting (Pre Rig-Down)	3/4/2018	11:00:00	USER					ALL HES PRESENT
Event	28	Rig-Down Equipment	3/4/2018	11:10:00	USER					ALL HES PRESENT
Event	29	Pre-Convoy Safety Meeting	3/4/2018	11:50:00	USER					ALL HES PRESENT
Event	30	Crew Leave Location	3/4/2018	12:00:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENT, SHAWN BLOSSOM AND CREW

LARAMIE GUNDERSON 994-10-06W, 8 5/8" SURFACE



- | | | | | |
|---|--------------------------|--------------------|----------------------|---|
| ① Call Out | ⑦ Rig-Up Equipment | ⑬ Pump H2O Spacer | ⑰ Slow Rate | 25 Check Floats |
| ② Pre-Convoy Safety Meeting | ⑧ Pre-Job Safety Meeting | ⑭ Pump Lead Cement | 20 Shutdown | 26 End Job |
| ③ Crew Leave Yard | ⑨ Start Job | ⑮ Check weight | 21 Drop Top Plug | 27 Post-Job Safety Meeting (Pre Rig-Down) |
| ④ Arrive At Loc | ⑩ Drop Bottom Plug | ⑯ Bump Bottom Plug | 22 Pump Displacement | 28 Rig-Down Equipment |
| ⑤ Assessment Of Location Safety Meeting | ⑪ Prime Lines | ⑰ Pump Tail Cement | 23 Slow Rate | 29 Pre-Convoy Safety Meeting |
| ⑥ Pre-Rig Up Safety Meeting | ⑫ Test Lines | ⑱ Check weight | 24 Bump Plug | 30 Crew Leave Location |

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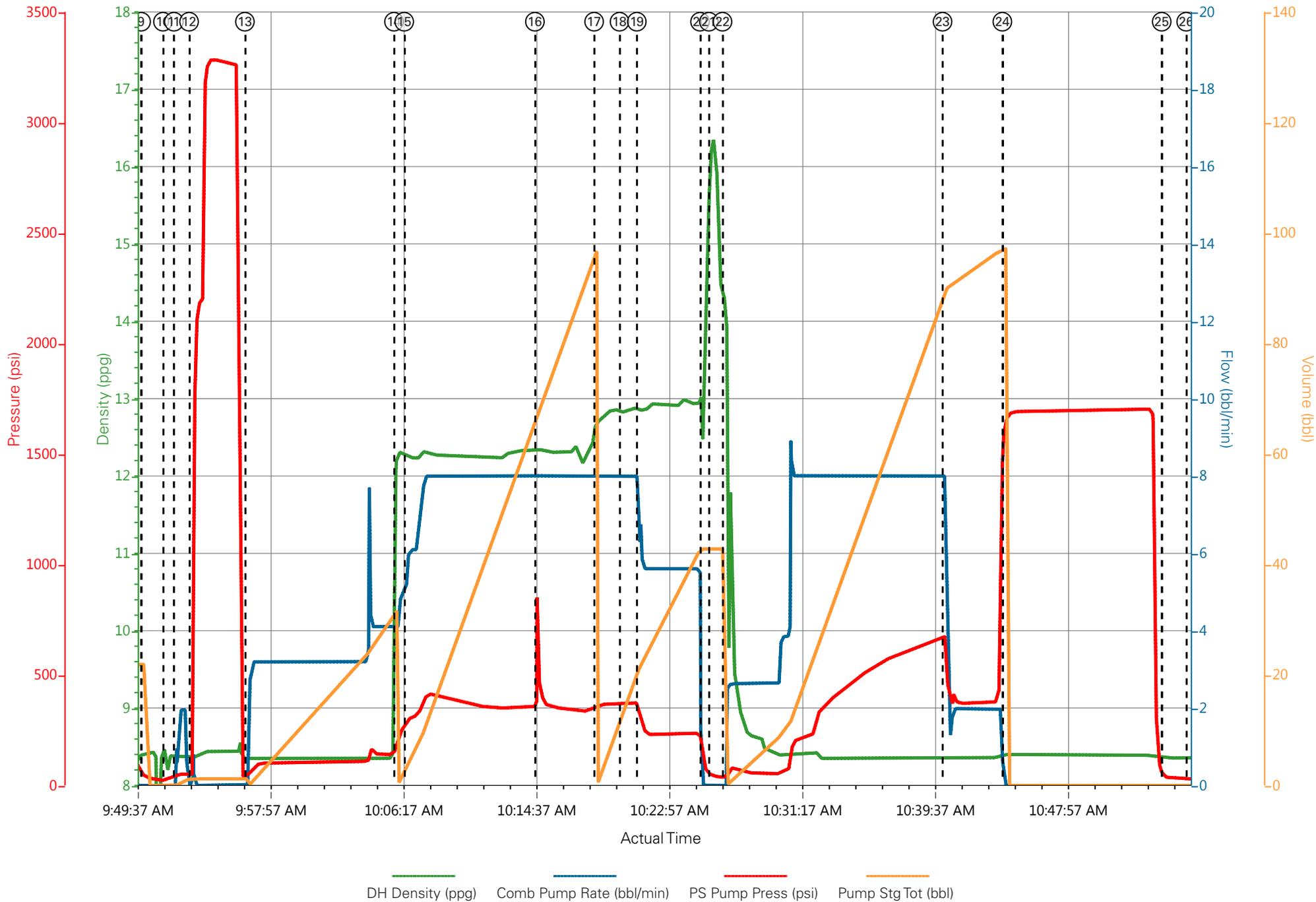
Edit

Customer : LARAMIE ENERGY II LLC EBUSINESS
 Representative : TYLER HALE

Job Date : 3/4/2018
 Sales Order # : 904689097

Well : GUNDERSON 994-13-06W
 ELITE 4 : ADAM ANGELO

LARAMIE GUNDERSON 994-10-06W, 8 5/8" SURFACE



HALLIBURTON

iCem[®] Service

LARAMIE ENERGY

Date: Tuesday, March 27, 2018

GUNDERSON 994-13-06W

API# 05-077-10541-00

Job Date: Wednesday, March 07, 2018

Sincerely,

Grand Junction Cement Engineering

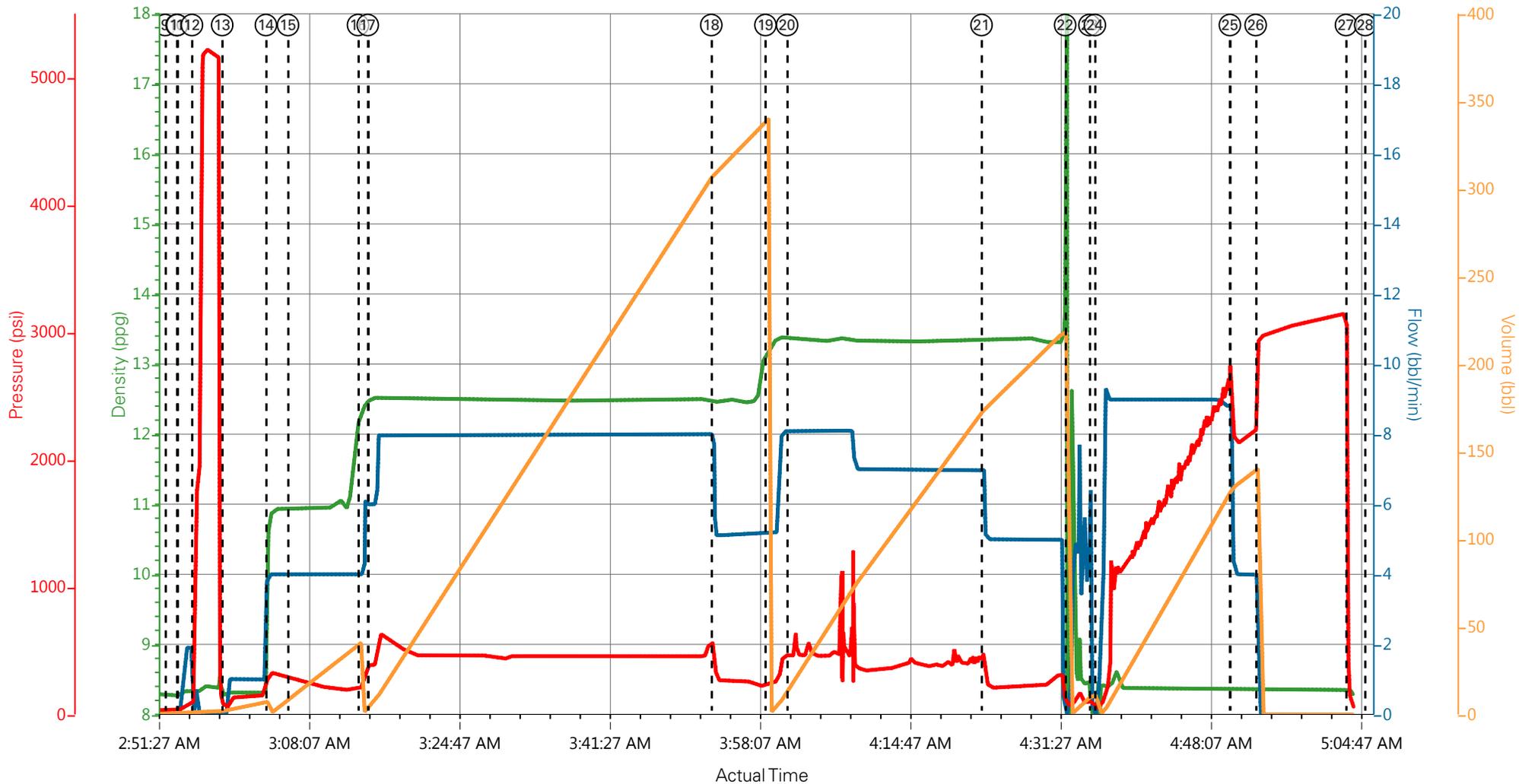
1.0 Real-Time Job Summary

1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	3/7/2018	18:30:00	USER					REQUESTED ON LOCATION @ 00:30
Event	2	Pre-Convoy Safety Meeting	3/7/2018	20:00:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	3/7/2018	20:10:00	USER					1 HT 400 PUMP TRUCK E4, 1 660 BULK TRUCK, 1 550 SERVICE PICKUP
Event	4	Arrive At Loc	3/7/2018	21:30:00	USER					RIG RUNNING CASING WHEN HES ARRIVED AT LOCATION
Event	5	Assessment Of Location Safety Meeting	3/7/2018	21:45:00	USER					MET WITH COMP REP, AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (PH- 7.0, CHLORIDES- 0, TEMP- 60F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Pre-Rig Up Safety Meeting	3/7/2018	21:55:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	3/7/2018	22:00:00	USER					HES RIGGED UP 1 HT400 PUMP TRUCK, 1 660 BULK TRUCK, 2 CEMENT SILOS, 2" DISCHARGE IRON, AND 4" SUCTION HOSE WITHOUT ENTERING RED ZONE.
Event	8	Pre-Job Safety Meeting	3/8/2018	02:30:00	USER					ALL HES EMPLOYEES AND RIG CREW PRESENT, RIG CIRCULATED @ 10 BPM PRIOR TO JOB PRESSURE @ 775 PSI.
Event	9	Start Job	3/8/2018	02:52:30	COM6					TD 8642', TP 8632' OF 4 ½" 11.6# P110 CSG, SJ 80.5', SURFACE CSG 8 5/8" 28# J55 SET @ 1545', OH 7 7/8", MUD 9.1 PPG
Event	10	Prime Lines	3/8/2018	02:53:46	USER	8.33	2	130	2	8.33 PPG FRESH WATER
Event	11	Drop Bottom Plug	3/8/2018	02:53:50	USER					VERIFIED BY PLUG INDICATOR
Event	12	Test Lines	3/8/2018	02:55:28	COM6			5220		ALL LINES HELD PRESSURE AT 5220 PSI

Event	13	Pump H2O Spacer	3/8/2018	02:58:49	USER	8.33	1	60	5	FRESH WATER TO ESTABLISH RETURNS
Event	14	Tuned Spacer	3/8/2018	03:03:40	COM6	11.0	4	320	40	40 BBL TUNED SPACER III, 11 PPG, 4.86 FT3/SK, 31.9 GAL/SK
Event	15	Check weight	3/8/2018	03:06:07	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	16	Pump Lead Cement	3/8/2018	03:13:53	COM6	12.3	8	450	304	880 SKS OF NEOCEM CMT 12.5 PPG, 1.94 FT3/SK, 9.6 GAL/SK.
Event	17	Check weight	3/8/2018	03:14:57	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	18	Slow Rate	3/8/2018	03:53:03	USER					SLOWED TO END LEAD SILO
Event	19	Pump Tail Cement	3/8/2018	03:59:04	COM6	13.3	7	500	163.9	532 SKS THERMACEM CMT 13.3 PPG, 1.73 FT3/SK, 7.81 GAL/SK.
Event	20	Check weight	3/8/2018	04:01:28	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	21	Slow Rate	3/8/2018	04:23:02	USER					SLOWED TO END CEMENT
Event	22	End Of Cement	3/8/2018	04:32:18	COM6					END OF CEMENT. CLEAN PUMPS AND LINES TO CELLAR.
Event	23	Drop Top Plug	3/8/2018	04:35:00	USER					VERIFIED BY PLUG INDICATOR
Event	24	Pump Displacement	3/8/2018	04:35:36	COM6	8.4	9	2640	132.6	1 GAL MMCR IN FIRST 10 BBLs, 5 GALS CLAY WEB THROUGHOUT DISPLACEMENT
Event	25	Slow Rate	3/8/2018	04:50:34	USER	8.4	4	2190	122.6	SLOW RATE TO 4 BPM TO BUMP PLUG
Event	26	Bump Plug	3/8/2018	04:53:26	COM6	8.4	4	2240	3000	LANDED PLUG AT 2240 PSI, BROUGHT UP TO 3000 PSI AND HELD FOR 10MINS FOR CASING TEST.
Event	27	Check Floats	3/8/2018	05:03:27	USER					FLOATS HELD, 1.5 BBL BACK TO TRUCK
Event	28	End Job	3/8/2018	05:05:35	USER					RETURNS THROUGHOUT JOB, 22BBLs OF LEAD TO SURFACE. 40# OF SUGAR USED.
Event	29	Post-Job Safety Meeting (Pre Rig-Down)	3/8/2018	05:10:00	USER					ALL HES PRESENT
Event	30	Rig-Down Equipment	3/8/2018	05:15:00	USER					ALL HES PRESENT
Event	31	Pre-Convoy Safety Meeting	3/8/2018	06:00:00	USER					ALL HES PRESENT
Event	32	Crew Leave Location	3/8/2018	06:10:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENT, SHAWN BLOSSOM AND CREW

LARAMIE GUNDERSON 994-13-06W, 4.5" PRODUCTION



DH Density (ppg) 8.29 Comb Pump Rate (bbl/min) 0 PS Pump Press (psi) 61 Pump Stg Tot (bbl) 0

- | | | | | |
|---|--------------------------|--------------------|----------------------|---|
| ① Call Out | ⑧ Pre-Job Safety Meeting | ⑮ Check weight | 22 End Of Cement | 29 Post-Job Safety Meeting (Pre Rig-Down) |
| ② Pre-Convoy Safety Meeting | ⑨ Start Job | ⑯ Pump Lead Cement | 23 Drop Top Plug | 30 Rig-Down Equipment |
| ③ Crew Leave Yard | ⑩ Prime Lines | ⑰ Check weight | 24 Pump Displacement | 31 Pre-Convoy Safety Meeting |
| ④ Arrive At Loc | ⑪ Drop Bottom Plug | ⑱ Slow Rate | 25 Slow Rate | 32 Crew Leave Location |
| ⑤ Assessment Of Location Safety Meeting | ⑫ Test Lines | ⑲ Pump Tail Cement | 26 Bump Plug | |
| ⑥ Pre-Rig Up Safety Meeting | ⑬ Pump H2O Spacer | 20 Check weight | 27 Check Floats | |
| ⑦ Rig-Up Equipment | ⑭ Tuned Spacer | 21 Slow Rate | 28 End Job | |

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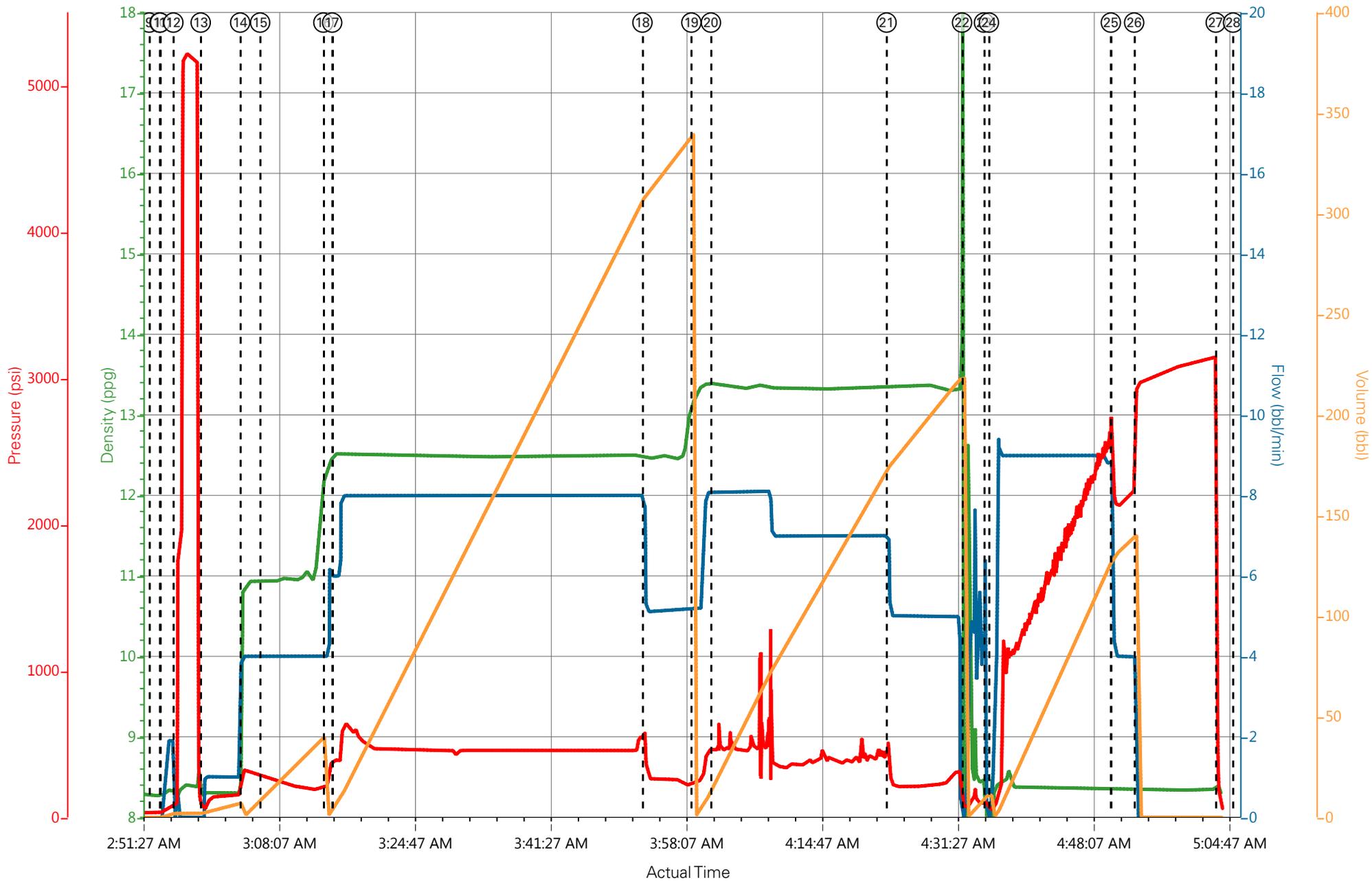
Edit

Customer : LARAMIE ENERGY II LLC EBUSINESS
 Representative : TYLER HALE

Job Date : 3/7/2018
 Sales Order # : 904691165

Well : GUNDERSON 994-13-06W
 ELITE 4 : ADAM ANGELO

LARAMIE GUNDERSON 994-13-06W, 4.5" PRODUCTION



DH Density (ppg) 8.29 Comb Pump Rate (bbl/min) 0 PS Pump Press (psi) 61 Pump Stg Tot (bbl) 0

Job Information

Request/Slurry	2458227/1	Rig Name	H&P 522	Date	04/MAR/2018
Submitted By	Lukas Van Zyl	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Gunderson 0994-13-06W

Well Information

Casing/Liner Size	4.5 in	Depth MD	8648 ft	BHST	121°C / 249°F
Hole Size	7.875 in	Depth TVD	8157 ft	BHCT	82°C / 179°F
Pressure	5010 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	
						Slurry Density	12.5 lbm/gal
						Slurry Yield	1.941 ft ³ /sack
						Water Requirement	9.623 gal/sack
						Total Mix Fluid	9.623 gal/sack
						Water Source	Fresh Water
						Water Chloride	

These are draft results and have not been approved for final use.

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Operation Test Results Request ID 2458227/1

Thickening Time - ON-OFF-ON

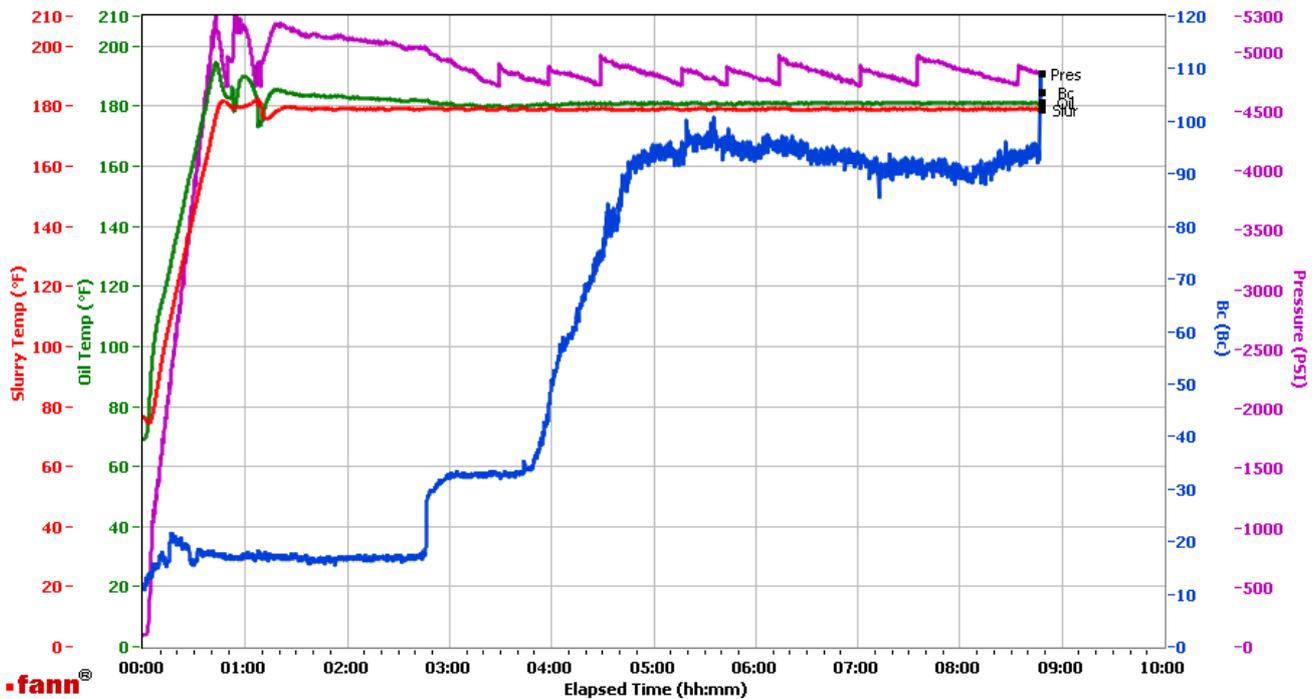
06/MAR/2018

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)
179	5010	42	2:50	3:59	4:23	5:19	12	52	15	17

Total sks = 880
 composite:
 CS0559 TR# 8677 440 sks
 CS0560 TR 1656 440 SKS
 no deflection- 17Bc--- > 17Bc

Grand Junction Colorado

Fields	Values	Fields	Values	Events	Results
Project Name	GJ2458227-1 LARAMIE PRODUCTION LEAD	Job Type	PRODUCTION	30.00 Bc	02h:50m
Test ID	35305264	Cement Type	HOLCIM TYPE I-II	40.00 Bc	03h:55m
Request ID	2458227-1	Cement Weight	Light Weight	50.00 Bc	03h:59m
Tested by	JASON	Test Date	03/06/18	70.00 Bc	04h:23m
Customer	LARAMIE ENERGY	Test Time	05:24 PM	100.00 Bc	05h:19m
Well No	GUNDERSON 0994-13-06W	Temp. Units	degF	00h:30m	15.26
Rig	H&P 522	Pressure Units	PSI	01h:00m	16.76
Casing/Liner Size	4.5 INCH	SW Version	2.1.0.507	01h:30m	16.83



Data File C:\Documents and Settings\Administrator\Local Settings\Temporary Internet Files\Content.IE5\OPEF4HI7\GJ2458227-1 LARAMIE PRODUCTION LEAD BULK[1].tdms

Comments CS0559 TR 8677 440 SKS CS0560 TR 1656 440 SKS

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Job Information

Request/Slurry	2458228/1	Rig Name	H&P 522	Date	04/MAR/2018
Submitted By	Lukas Van Zyl	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Gunderson 0994-13-06W

Well Information

Casing/Liner Size	4.5 in	Depth MD	8648 ft	BHST	121°C / 249°F
Hole Size	7.875 in	Depth TVD	8157 ft	BHCT	82°C / 179°F
Pressure	5010 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		
						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	N/A	

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Operation Test Results Request ID 2458228/1

Thickening Time - ON-OFF-ON

05/MAR/2018

Test Temp (degF)	Pressure (psi)	Reached in (min)	30 Bc (hh:min)	50 Bc (hh:min)	70 Bc (hh:min)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
179	5010	42	4:19	4:44	5:15	19	52	15	14

Total sks = 532

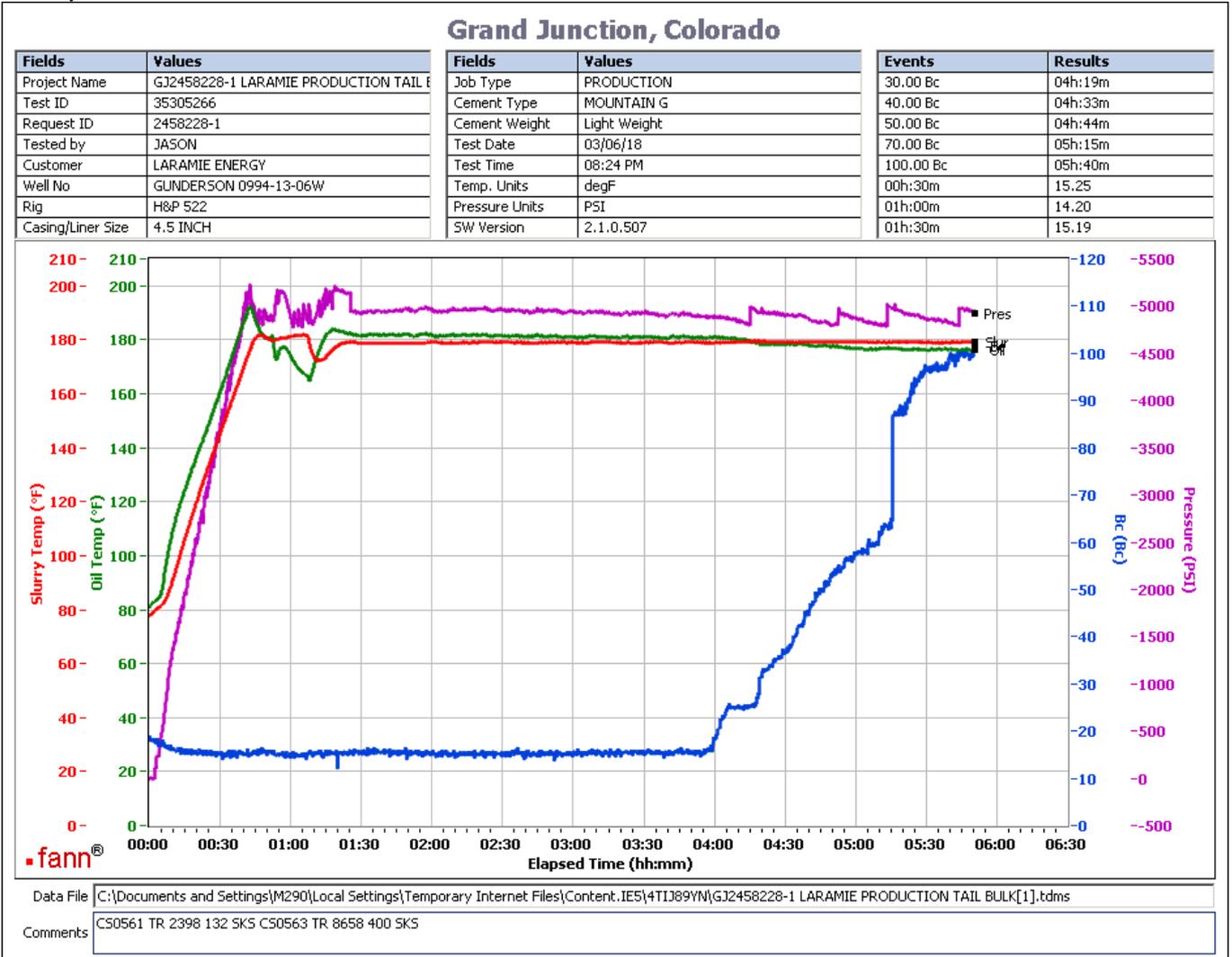
Composite:

CS0561 TR 2398 132 SKS

CS0563 TR 8658 400 SKS

no deflection was recorded on the graph. 13Bc---- > 13Bc

heat of hydration at 4:50



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