HALLIBURTON

iCem® Service

Laramie Energy LLC

For: Aaron Duncan

Date: Tuesday, July 02, 2019

CC Federal 0697-03-01W Surface PJR

API#05-045-23992-00

Sincerely,

Grand Junction Cement Engineering

2.0 Real-Time Job Summary

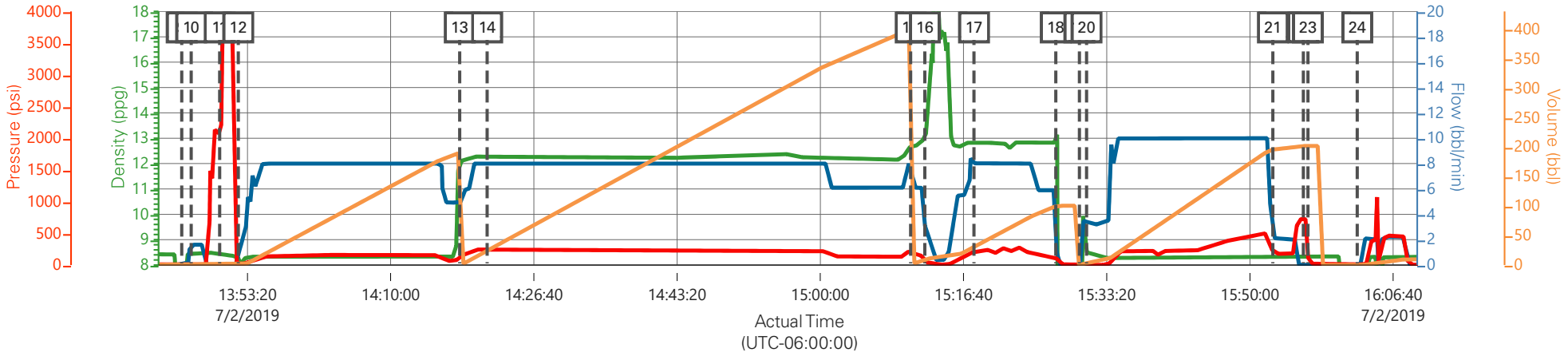
2.1 Job Event Log

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	7/2/2019	07:00:00	USER					REQUESTED ON LOCATION @ 13:00
Event	2	Pre-Convoy Safety Meeting	7/2/2019	09:00:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	7/2/2019	09:15:00	USER					1 HT 400 PUMP TRUCK, 1 660 BULK TRUCK, 1 TRANSPORT, 1 550 SERVICE PICKUP
Event	4	Arrive At Loc	7/2/2019	11:30:00	USER					RIG RUNNING CASING WHEN HES ARRIVED AT LOCATION
Event	5	Assessment Of Location Safety Meeting	7/2/2019	11:40:00	USER					MET WITH COMP REP, AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (PH-7.0, CHLORIDES-500, TEMP-70F). COMP REP WAS OFFERED SDS FOR ALL CHEMICALS USED BY HES. CALIBRATED MUD SCALES ON WATER.
Event	6	Pre-Rig Up Safety Meeting	7/2/2019	11:45:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	7/2/2019	11:50:00	USER					HES RIGGED UP 1 HT 400 PUMP TRUCK, 1 660 BULK TRUCK, 1 CEMENT SILOS, 1 TRANSPORT, 2" DISCHARGE IRON, AND 4" SUCTION HOSE WITHOUT ENTERING RED ZONE.
Event	8	Pre-Job Safety Meeting	7/2/2019	13:30:00	USER					ALL HES EMPLOYEES AND RIG CREW PRESENT. RIG CIRCULATED @ 8.5 BPM PRIOR TO JOB. PRESSURE WAS 50 PSI.

Event	9	Start Job	7/2/2019	13:45:41	COM4					TD 2608', TP 2598', CSG 9 5/8'' J-55 36#, SJ 45.03', OH 14.5'', MUD 8.8 PPG
Event	10	Prime Lines	7/2/2019	13:46:47	COM4	8.33	2	31	3	FRESH WATER
Event	11	Test Lines	7/2/2019	13:50:06	COM4			3660		ALL LINES HELD PRESSURE AT 3660 PSI
Event	12	Pump H2O Spacer	7/2/2019	13:52:16	COM4	8.33	8	158	190	190BBLS FRESH WATER
Event	13	Pump Lead Cement	7/2/2019	14:18:02	COM4	12.3	8	233	370.6	878 SKS VARICEM CMT 12.3 PPG, 2.4 FT3/SK, 13.8 GAL/SK
Event	14	Check Weight	7/2/2019	14:21:14	USER					WEIGHT VERIFIED VIA PRISSEREIZED MUD SCALES
Event	15	Pump Tail Cement	7/2/2019	15:10:31	COM4	12.8	8	250	94.7	252 SKS VARICEM CMT 12.8 PPG, 2.13 FT3/SK, 11.79 GAL/SK
Event	16	Slow Rate	7/2/2019	15:12:10	USER					SLOWED RATE DUE DELIVERY ISSUES
Event	17	Check Weight	7/2/2019	15:17:53	USER					WEIGHT VERIFIED VIA PRISSEREIZED MUD SCALES
Event	18	Shutdown	7/2/2019	15:27:24	USER					END OF CEMENT, WASH UP ON TOP OF PLUG
Event	19	Pump Displacement	7/2/2019	15:30:09	COM4	8.33	10	520	197.4	FRESH WATER
Event	20	Drop Top Plug	7/2/2019	15:30:59	USER					VERIFIED BY FLAG INDICATOR
Event	21	Slow Rate	7/2/2019	15:52:40	USER	8.33	2	200	187.4	SLOW RATE TO 2 BPM TO BUMP PLUG
Event	22	Bump Plug	7/2/2019	15:56:13	COM4	8.33	2	200	197.4	LAND PLUG AT 190 PSI, BROUGHT UP TO 820 PSI
Event	23	Check Floats	7/2/2019	15:56:45	COM4					FLOATS HELD, .5 BBL BACK TO TRUCK
Event	24	Circulate Parasite line	7/2/2019	16:02:29	COM4	8.33	2	390	10	10BBLS SUGAR WATER
Event	25	Top Out	7/2/2019	17:01:37	USER	15.6	2	110	84	400 SKS TYPE I-II CMT 15.6 PPG, 1.19 FT3/SK, 5.24 GAL/SK. 2 BAGS CALCIUM CHLORIDE AND 5BBLS OF SUPER FLUSH AHEAD. NO CEMENT TO SURFACE, SHUTDOWN AND WAIT 2 HOURS PER CO REP.
Event	26	Top Out	7/2/2019	19:48:54	USER	15.6	2.5	140	20	94 SKS TYPE I-II CMT 15.6 PPG, 1.19 FT3/SK, 5.24 GAL/SK. 6BBLS OF SUPER FLUSH AHEAD.

Event	27	End Job	7/2/2019	19:59:30	COM4	NO RETURNS THROUGHOUT JOB .USED 40# OF SUGAR AND TOP PLUG. NO CEMENT TO SURFACE. TOPPED OUT WELL WITH 104BBLS.
Event	28	Post-Job Safety Meeting (Pre Rig-Down)	7/2/2019	20:10:00	USER	ALL HES PRESENT
Event	29	Rig-Down Equipment	7/2/2019	20:20:00	USER	ALL HES PRESENT
Event	30	Pre-Convoy Safety Meeting	7/2/2019	21:30:00	USER	ALL HES PRESENT
Event	31	Crew Leave Location	7/2/2019	21:45:00	USER	THANK YOU FOR CHOOSING HALLIBURTON CEMENT, SHAWN BLOSSOM AND CREW.

LARAMIE CC FED 0697-03-01W SURFACE



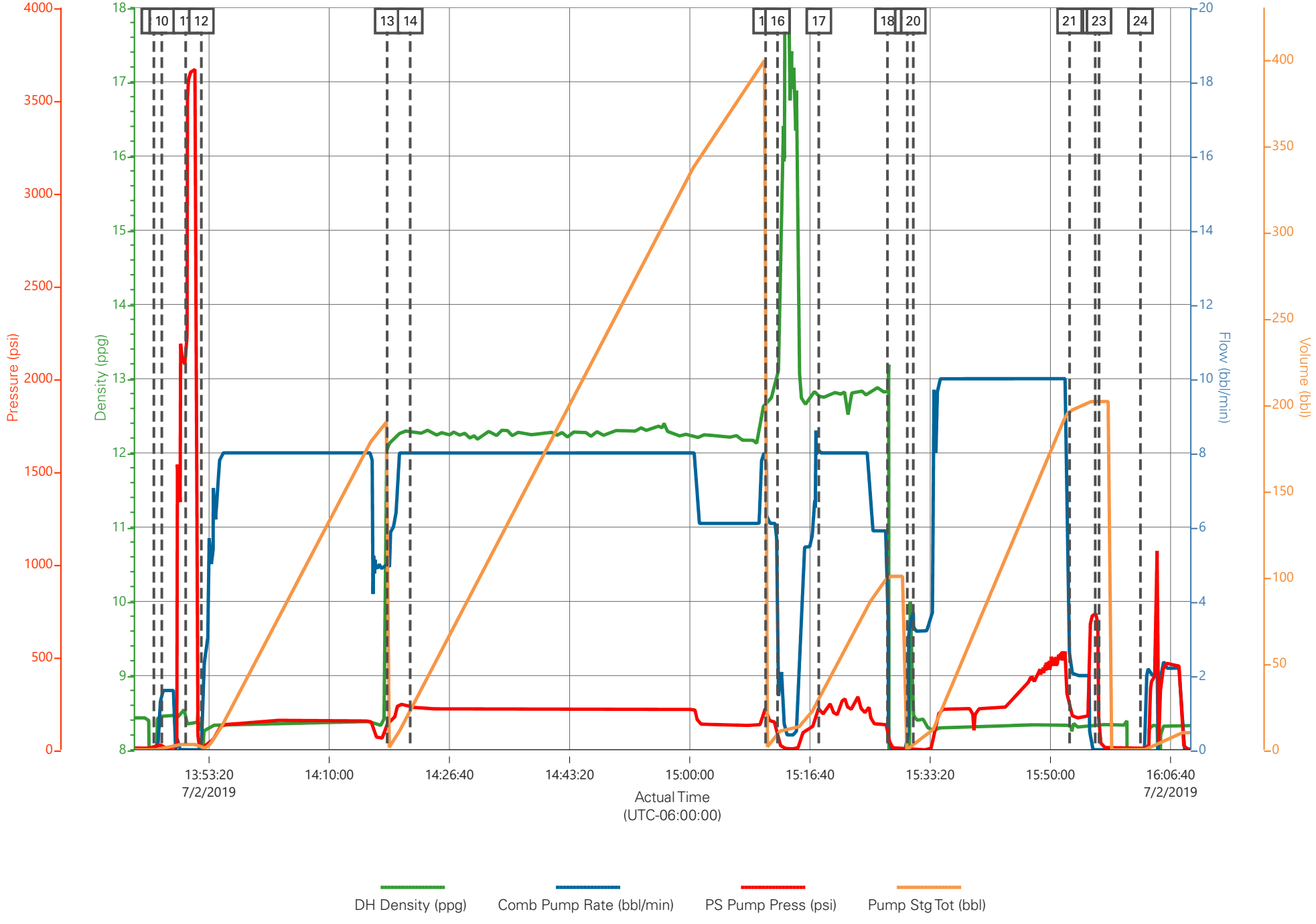
	Description	Actual Time (UTC-06:00:00)	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)
9	Start Job	13:45:41	0.23	0.00	9.00	0.00
10	Prime Lines	13:46:47	8.45	1.60	19.00	0.40
11	Test Lines	13:50:06	8.33	0.00	2074.00	3.10
12	Pump H2O Spacer	13:52:16	8.30	0.00	5.00	0.00
13	Pump Lead Cement	14:18:02	12.14	5.00	136.00	0.00
14	Check Weight	14:21:14	12.27	8.00	230.00	22.80
15	Pump Tail Cement	15:10:31	12.69	8.00	233.00	400.50
16	Slow Rate	15:12:10	13.00	3.10	100.00	10.10
17	Check Weight	15:17:53	12.77	8.00	221.00	28.80
18	Shutdown	15:27:24	12.82	5.90	138.00	99.90
19	Pump Displacement	15:30:09	-0.14	0.00	4.00	0.00
20	Drop Top Plug	15:30:59	8.52	3.70	2.00	2.30
21	Slow Rate	15:52:40	8.33	2.10	219.00	196.10
22	Bump Plug	15:56:13	8.33	0.00	735.00	201.80
23	Check Floats	15:56:45	8.33	0.00	128.00	201.80
24	Circulate Parasite line	16:02:29	-0.15	0.00	10.00	0.00

Customer : Laramie Energy LLC
Representative : MATT SETTLES

Job Date : 7/2/2019
Sales Order # : 905812287

Well : CC FED 0697-03-01W
ELITE 4 : D.PORTER/S.BLOSSOM

LARAMIE CC FED 0697-03-01W SURFACE



HALLIBURTON | iCem® Service

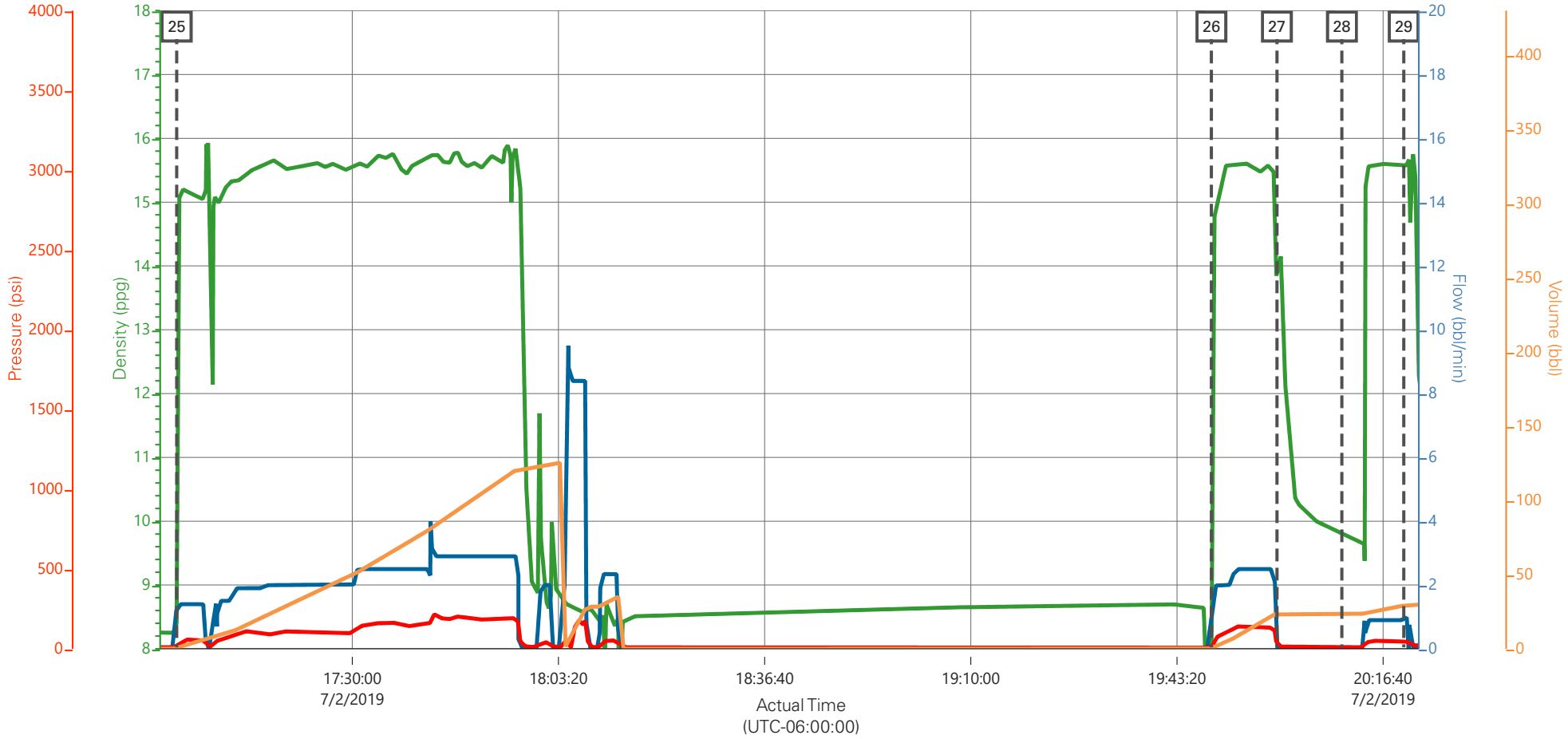
Created: 2019-07-02 08:09:15, (UTC-06:00), Version: 5.0.161.0 Edit

Customer : Laramie Energy LLC
Representative : MATT SETTLES

Job Date : 7/2/2019
Sales Order # : 905812287

Well : CC FED 0697-03-01W
ELITE 4 : D.PORTER/S.BLOSSOM

LARAMIE CC FED 0697-03-01W, TOP OUT

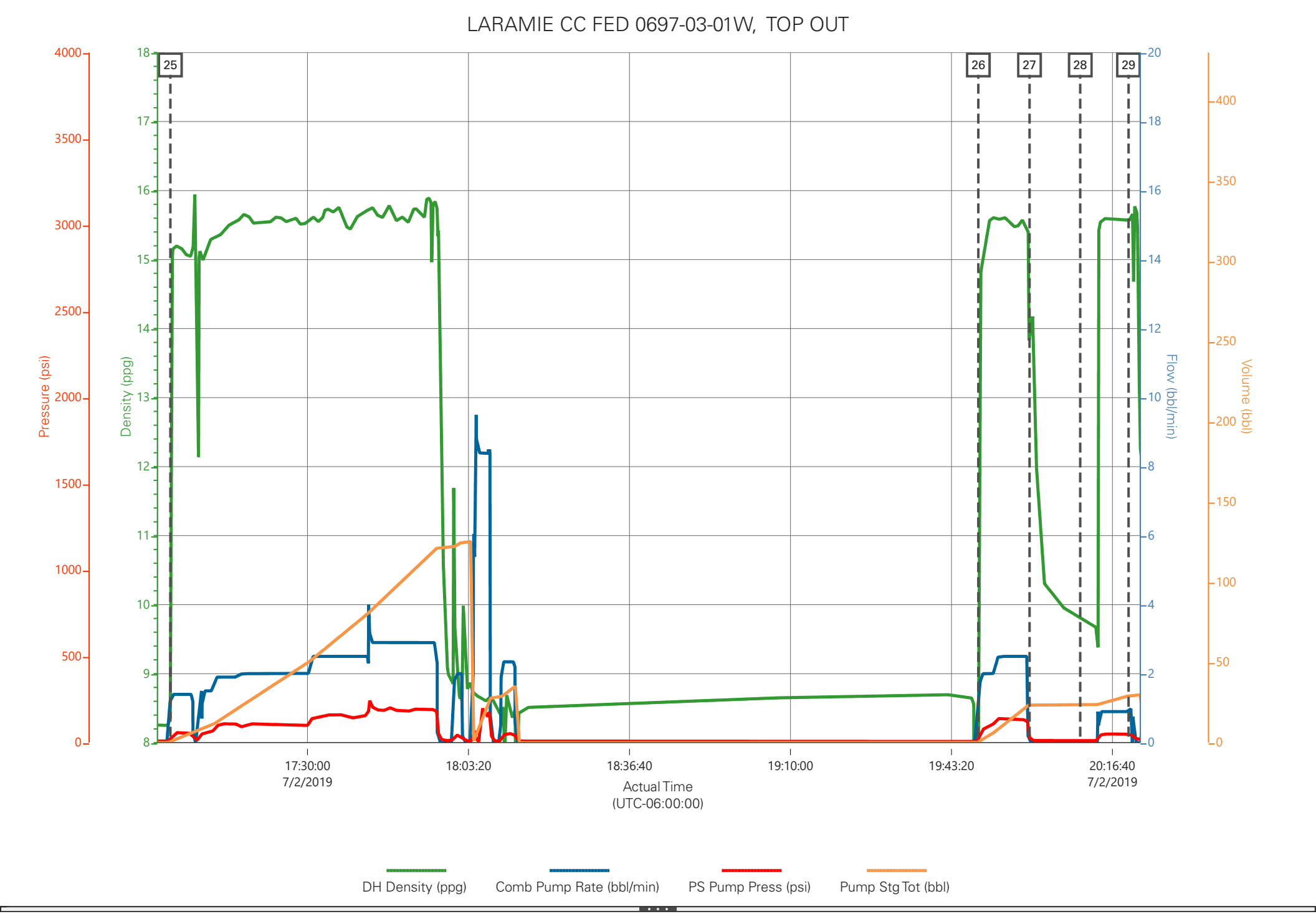


Description	Actual Time (UTC-06:00:00)	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)
25 Top Out	17:01:37	8.62	1.20	19.00	0.40
26 Top Out	19:48:54	7.82	0.90	11.00	0.20
27 End Job	19:59:30	14.00	0.00	28.00	23.60
28 Post-Job Safety Meeting (Pre Rig-Down)	20:10:00	9.82	0.00	10.00	23.60
29 Rig-Down Equipment	20:20:00	15.58	0.90	48.00	29.20

Customer : Laramie Energy LLC
Representative : MATT SETTLES

Job Date : 7/2/2019
Sales Order # : 905812287

Well : CC FED 0697-03-01W
ELITE 4 : D.PORTER/S.BLOSSOM



HALLIBURTON | iCem® Service

Created: 2019-07-02 08:09:15, (UTC-06:00), Version: 5.0.161.0 Edit

Customer : Laramie Energy LLC
Representative : MATT SETTLES
Job Date : 7/2/2019
Sales Order # : 905812287
Well : CC FED 0697-03-01W
ELITE 4 : D.PORTER/S.BLOSSOM

HALLIBURTON

iCem® Service

Laramie Energy LLC

Rock Springs District, Colorado

For: Aaron Duncan

Date: Saturday, July 06, 2019

CC 697-03-01W Production PJR

API# 05-045-23992-00

Sincerely,

Grand Junction Cement Engineering

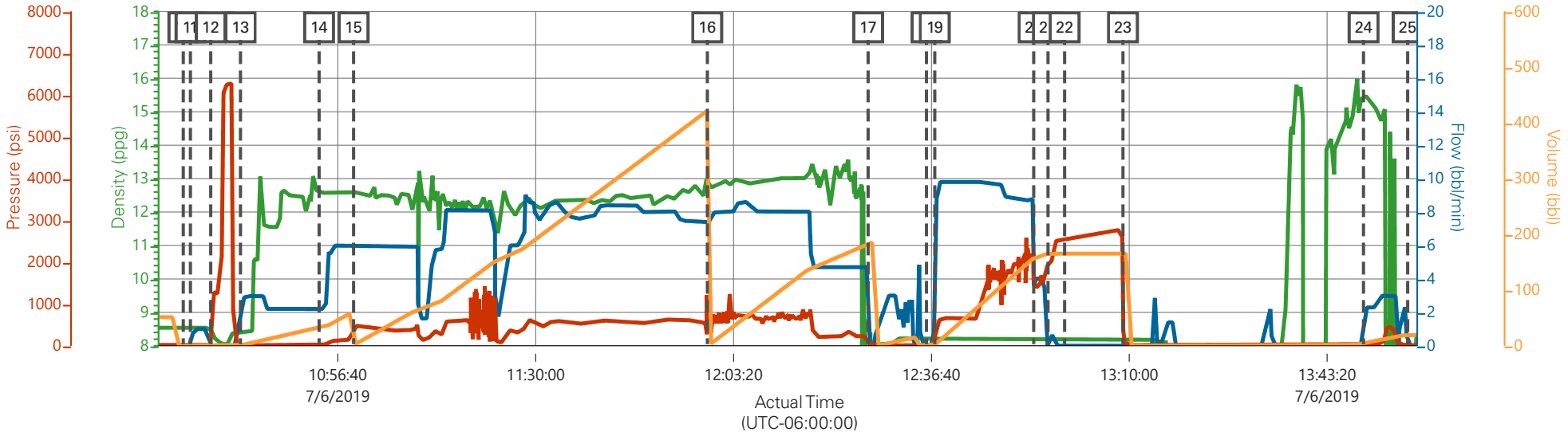
1.0 Real-Time Job Summary

1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	Recirc Density (ppg)	Comb Pump Rate (bpm)	PSI	Volume *(bbl)*	Comments
Event	1	Call Out	7/5/2019	20:00:00						Requested on Location @ 03:00
Event	2	Pre-Convoy Safety Meeting	7/5/2019	21:50:00						
Event	3	Crew Leave Yard	7/5/2019	22:00:00						1 Elite, 1 660, 1 pickup
Event	4	Arrive At Loc	7/6/2019	03:00:00						Rig running casing
Event	5	Assessment Of Location Safety Meeting	7/6/2019	03:10:00						JSA completed - Customer offered/received SDS - water test pH 7.0, Cl <200, temp 64 degrees
Event	6	Pre-Rig Up Safety Meeting	7/6/2019	03:20:00						
Event	7	Rig-Up Equipment	7/6/2019	03:33:00						1 hardline to standpipe, water hoses to upright, bulk hoses to silos and 660.
Event	8	Other	7/6/2019	04:00:00						Mud scales calibrated to drinking water prior to job.
Event	9	Pre-Job Safety Meeting	7/6/2019	10:13:00						All HES personnel, rig crew, and company rep
Event	10	Start Job	7/6/2019	10:30:39						TD 10422', TP 10410.5, SJ 87.84', OH 8 3/4'', Csg 4.5'' 11.6 lb/ft P-110, Mud 9.6 ppg
Event	11	Fill Lines	7/6/2019	10:31:51		8.33	2	50	5	Fresh Water
Event	12	Test Lines	7/6/2019	10:35:16				6350		No Leaks
Event	13	Pump Spacer 1	7/6/2019	10:40:17		8.4	6	180	60	240 lbs. Mud Flush III

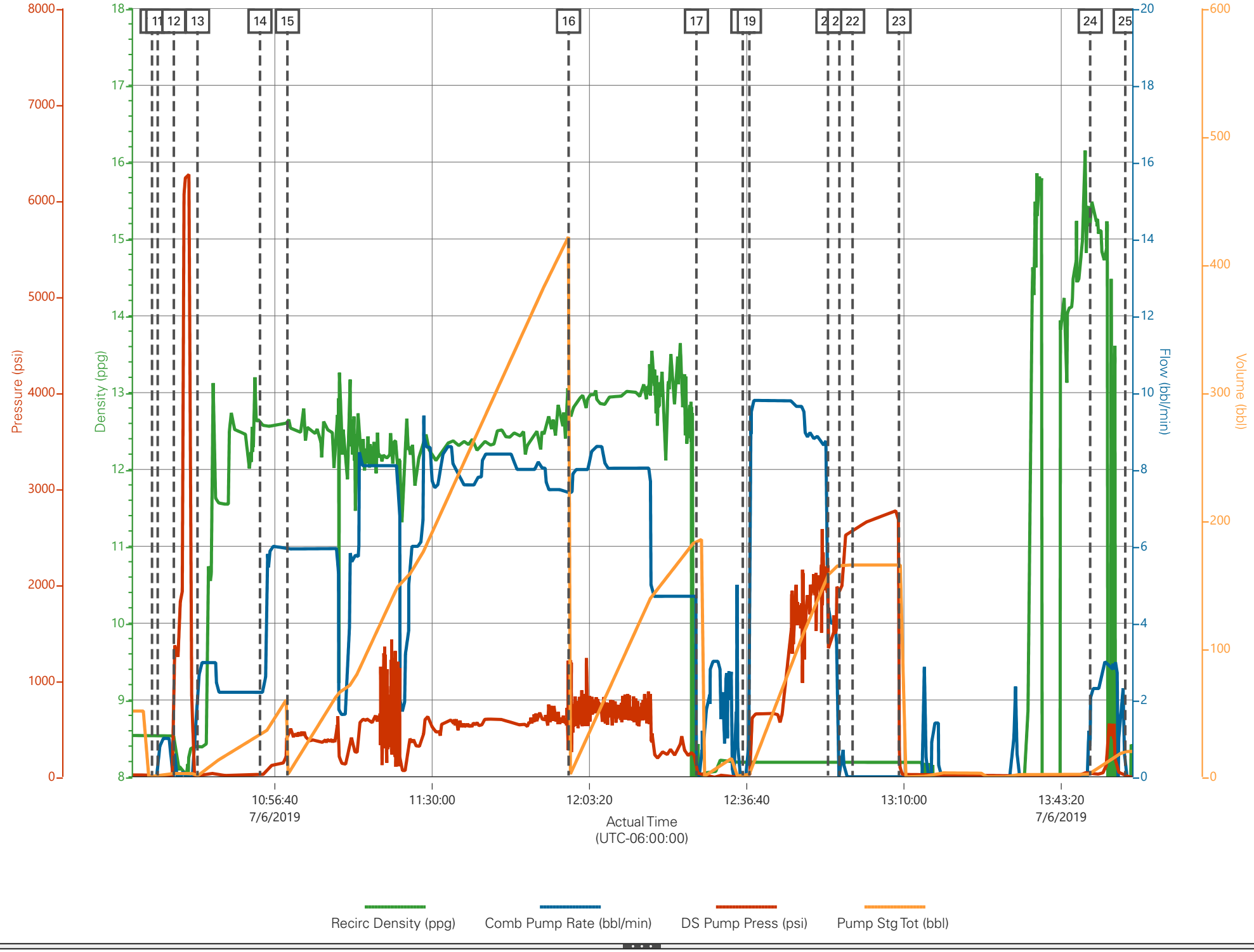
Event	14	Check Weight	7/6/2019	10:53:31						Density Verified via Mud Scales, Tub Recirc. Denso. on chart, down hole denso. Was having issues with correct density.
Event	15	Pump Lead Cement	7/6/2019	10:59:20	12.5	8	700	408.7		1183 Sks 12.5 ppg 1.94 yield 9.59 gal/sk
Event	16	Pump Tail Cement	7/6/2019	11:58:56	13.0	8	950	162.2		440 Sks 13.0 ppg 1.94 yield 9.42 gal/sk
Event	17	Shutdown	7/6/2019	12:26:01						Wash lines to pit
Event	18	Drop Top Plug	7/6/2019	12:35:51						Customer verified top plug launched
Event	19	Pump Displacement	7/6/2019	12:37:15	8.33	10	2197	160		1 gal. MMCR, 5 Gal Clay-web.
Event	20	Slow Rate	7/6/2019	12:53:54			2270			Slow Rate 10 bbls to Calculated Displacement
Event	21	Bump Plug	7/6/2019	12:56:18			2830			Plug Bumped at 2270 psi, Brought up to 2830 psi
Event	22	Pressure Test	7/6/2019	12:59:07						10 Min. Casing Test
Event	23	Check Floats	7/6/2019	13:08:57						Floats held – 2 bbl back to the truck
Event	24	Pump Cement	7/6/2019	13:49:28	15.6	3	50	6.3		30 sks, 15.6 ppg, 1.18 Yield, 5.23 gal/sk
Event	25	End Job	7/6/2019	13:56:54						Good returns throughout job, pipe was reciprocated not during cement job. 20 bbl of mud flush to surface
Event	26	Pre-Rig Down Safety Meeting	7/6/2019	14:16:46						40 lbs sugar used, 3 add hour
Event	27	Rig-Down Equipment	7/6/2019	14:22:47						
Event	28	Pre-Convoy Safety Meeting	7/6/2019	15:05:07						
Event	29	Crew Leave Location	7/6/2019	15:12:56						Thank you for using Halliburton – Chris Martinez and crew.

Laramie, CC 697-03-01W, 4 1/2" Production



Description	Actual Time (UTC-06:00:00)	Recirc Density (ppg)	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Pump Stg Tot (bbl)
10 Start Job	10:30:39	8.54	0.00	-7.00	0.00
11 Fill Lines	10:31:51	8.54	0.00	-4.00	0.00
12 Test Lines	10:35:16	8.54	0.00	22.00	2.60
13 Pump Spacer 1	10:40:17	8.39	1.60	0.00	0.70
14 Check Weight	10:53:31	12.62	2.20	26.00	32.60
15 Pump Lead Cement	10:59:20	12.60	5.90	493.00	1.30
16 Pump Tail Cement	11:58:56	12.82	7.40	553.00	421.90
17 Shutdown	12:26:01	-0.33	0.00	118.00	185.30
18 Drop Top Plug	12:35:51	8.19	0.00	7.00	1.10
19 Pump Displacement	12:37:15	8.19	2.40	14.00	1.40
20 Slow Rate	12:53:54	8.18	4.30	1333.00	157.80
21 Bump Plug	12:56:18	8.18	0.00	1934.00	165.00
22 Pressure Test	12:59:07	8.18	0.00	2574.00	165.40
23 Check Floats	13:08:57	8.18	0.00	660.00	165.40
24 Pump Cement	13:49:28	15.43	1.00	29.00	2.10
25 End Job	13:56:54	-0.33	0.00	0.00	19.80

Laramie, CC 697-03-01W, 4 1/2" Production



HALLIBURTON

Rockies, Grand Junction

Lab Results- Lead

Job Information

Request/Slurry	2567292/1	**Rig Name**	H&P 522	**Date**	01/JUL/2019
Submitted By	Patrick Ealey	**Job Type**	Production Casing	**Bulk Plant**	Grand Junction
Customer	Laramie Energy	**Location**	Garfield	**Well**	CC Federal 0697-03-01W

Well Information

Casing/Liner Size	4.5 in	**Depth MD**	10461 ft	**BHST**	119°C / 247°F
Hole Size	8.75 in	**Depth TVD**	9807 ft	**BHCT**	81°C / 177°F
Pressure	6165 psi				

Drilling Fluid Information

Mud Supplier Name	**Mud Trade Name**	**Density**

Cement Information - Lead Design

Conc	UOM	Cement/Additive	MP	Sample Type	Sample Date	Lot No.
		NeoCem Lead				

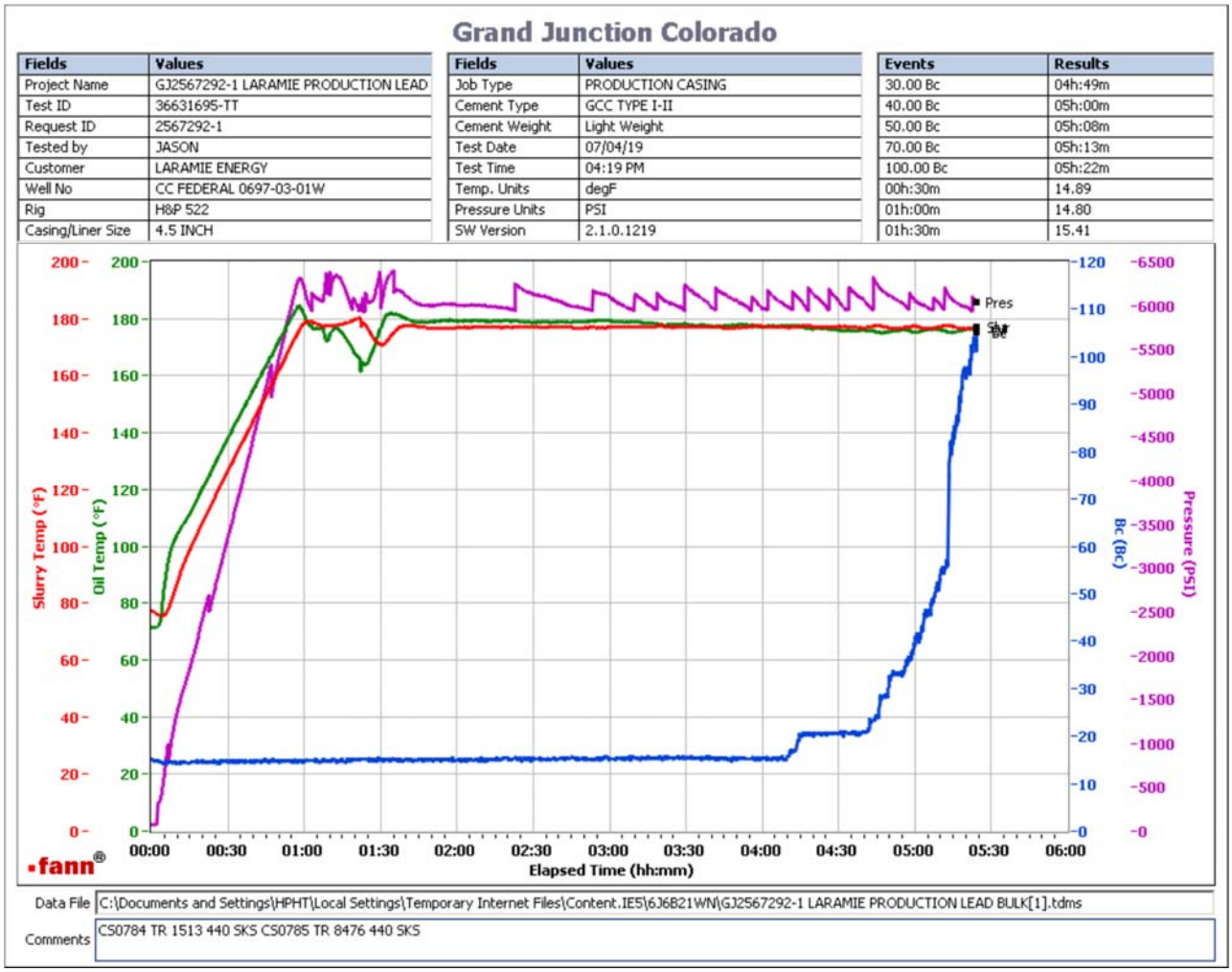
Cement Properties

Slurry Density	12.5	lbm/gal
Slurry Yield	1.95	ft3/sack
Water Requirement	9.61	gal/sack
Total Mix Fluid	9.61	gal/sack
Water Source	Fresh Water	
Water Chloride		

Operation Test Results Request ID 2567292/1

Thickening Time - ON-OFF-ON, Request Test ID:36631695 04/JUL/2019

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	6165	57	4:49	5:08	5:13	5:22	16	67	15	16



Total SKS = 1183
CS0784 TR 1513 440 SKS
CS0785 TR 8476 440 SKS
no deflection, 16Bc--- > 16Bc

Operation Test Results Request ID 2567292/2

Thickening Time - ON-OFF-ON, Request Test ID:36640831 04/JUL/2019

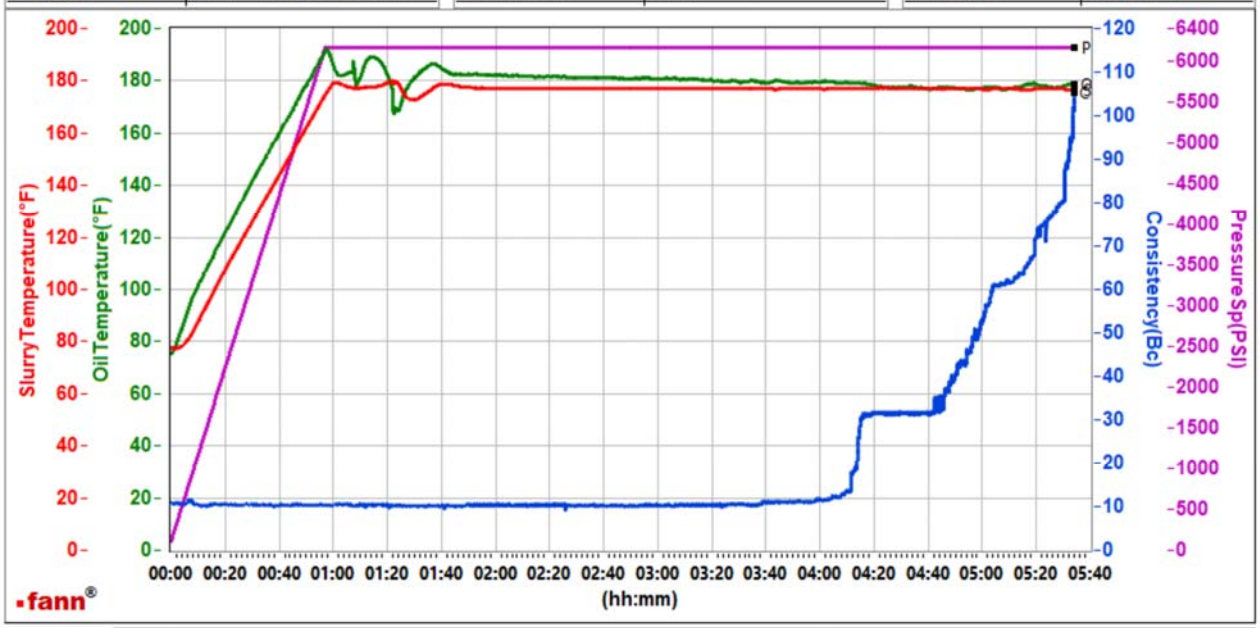
Test Temp (degF)	Pressure (psi)	Reached in (min)	30 Bc (hh:min)	50 Bc (hh:min)	70 Bc (hh:min)	100 Bc (hh:min)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
177	6165	57	4:15	4:58	5:19	5:33	10	67	15	10

GRAND JUNCTION

Fields	Values
Project Name	GJ2567292-2 Laramie Pr
SW Version	1.0
Test ID	36640831-TT
Request ID	2567292-2
Tested by	DEBA
Customer	LARAMIE ENERGY
Well No	CC FED 0697-03-01W

Fields	Values
Rig	H&P 522
Casing/Liner Size	4.5 INCH
Job Type	PRODUCTION
Cement Weight	GCC TYPE I-II
Comments	Light Weight
Date Time	7/4/2019 06:10:38.301
Temp. Units	degF

Events	Results
30Bc	4:15
50 Bc	4:58
70Bc	5:19
100 Bc	5:33
00h:00m	11.15 Bc
100.00 Bc	05h:33m
70.00 Bc	05h:33m



Data File C:\Users\HX25273\Desktop\HPHT Graphs\GJ2567292-2 LARAMIE PRODUCTION BULK LEAD.tdms

Comments Light Weight

Total SKS = 1183
CS0789 TR#6813, 303 SKS
no deflection, 10Bc--- > 10Bc
Heat of hydration at 5:13

HALLIBURTON

Rockies, Grand Junction

Lab Results- Tail

Job Information

Request/Slurry	2567293/1	**Rig Name**	H&P 522	**Date**	01/JUL/2019
Submitted By	Patrick Ealey	**Job Type**	Production Casing	**Bulk Plant**	Grand Junction
Customer	Laramie Energy	**Location**	Garfield	**Well**	CC Federal 0697-03-01W

Well Information

Casing/Liner Size	4.5 in	**Depth MD**	10461 ft	**BHST**	119°C / 247°F
Hole Size	8.75 in	**Depth TVD**	9807 ft	**BHCT**	81°C / 177°F
Pressure	6165 psi				

Drilling Fluid Information

Mud Supplier Name	Mud Trade Name	Density

Cement Information - Tail Design

Conc	UOM	Cement/Additive	MP	Sample Type	Sample Date	Lot No.
		NeoCem HT Tail				

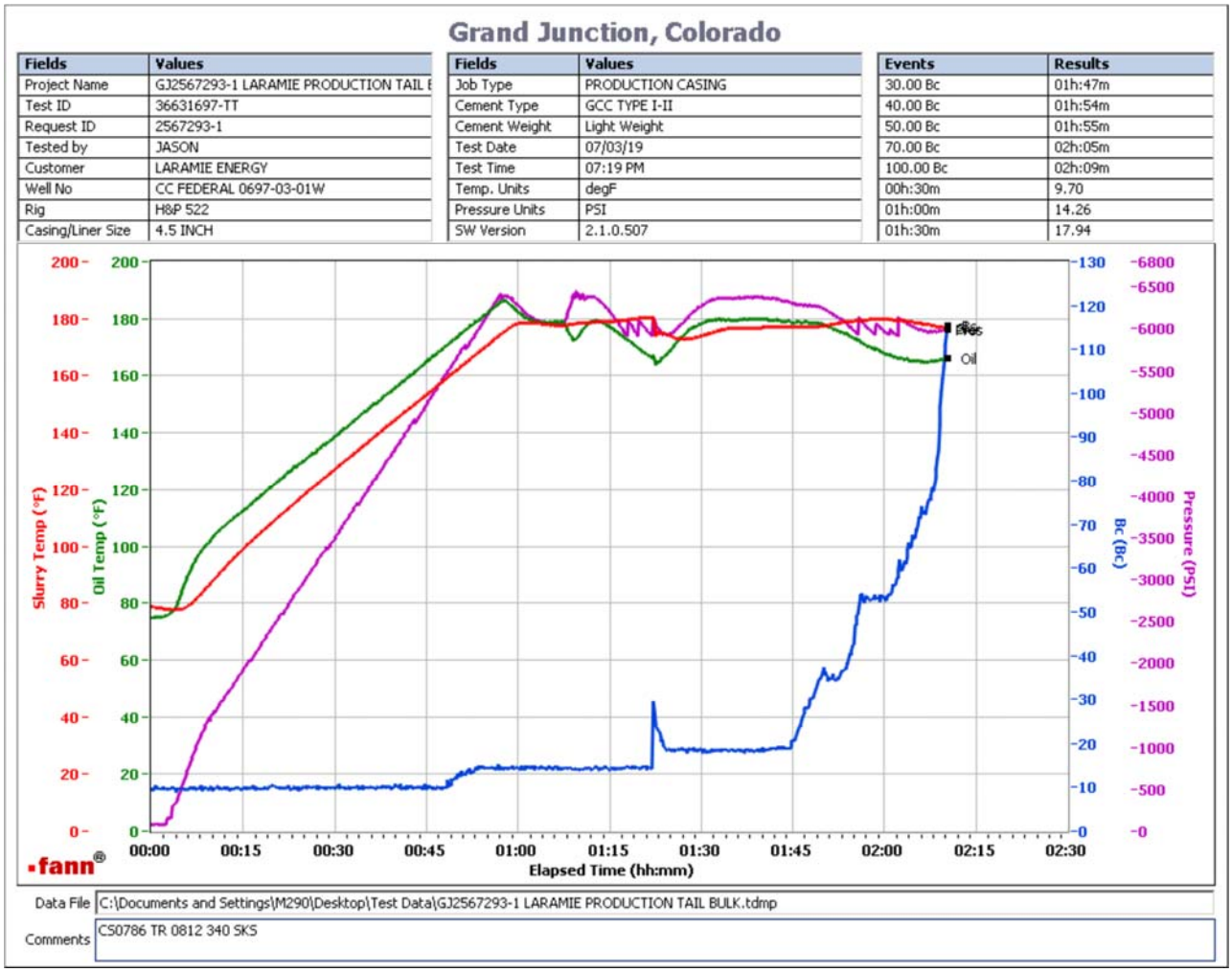
Cement Properties

Slurry Density	13	lbm/gal
Slurry Yield	2.07	ft3/sack
Water Requirement	9.42	gal/sack
Total Mix Fluid	9.42	gal/sack
Water Source	Fresh Water	
Water Chloride		

Operation Test Results Request ID 2567293/1

Thickening Time - ON-OFF-ON, Request Test ID:36631697 04/JUL/2019

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	6165	57	1:47	1:55	2:05	2:09	10	67	15	29



Fields	Values
Project Name	GJ2567293-1 LARAMIE PRODUCTION TAIL B
Test ID	36631697-TT
Request ID	2567293-1
Tested by	JASON
Customer	LARAMIE ENERGY
Well No	CC FEDERAL 0697-03-01W
Rig	H&P 522
Casing/Liner Size	4.5 INCH

Fields	Values
Job Type	PRODUCTION CASING
Cement Type	GCC TYPE I-II
Cement Weight	Light Weight
Test Date	07/03/19
Test Time	07:19 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

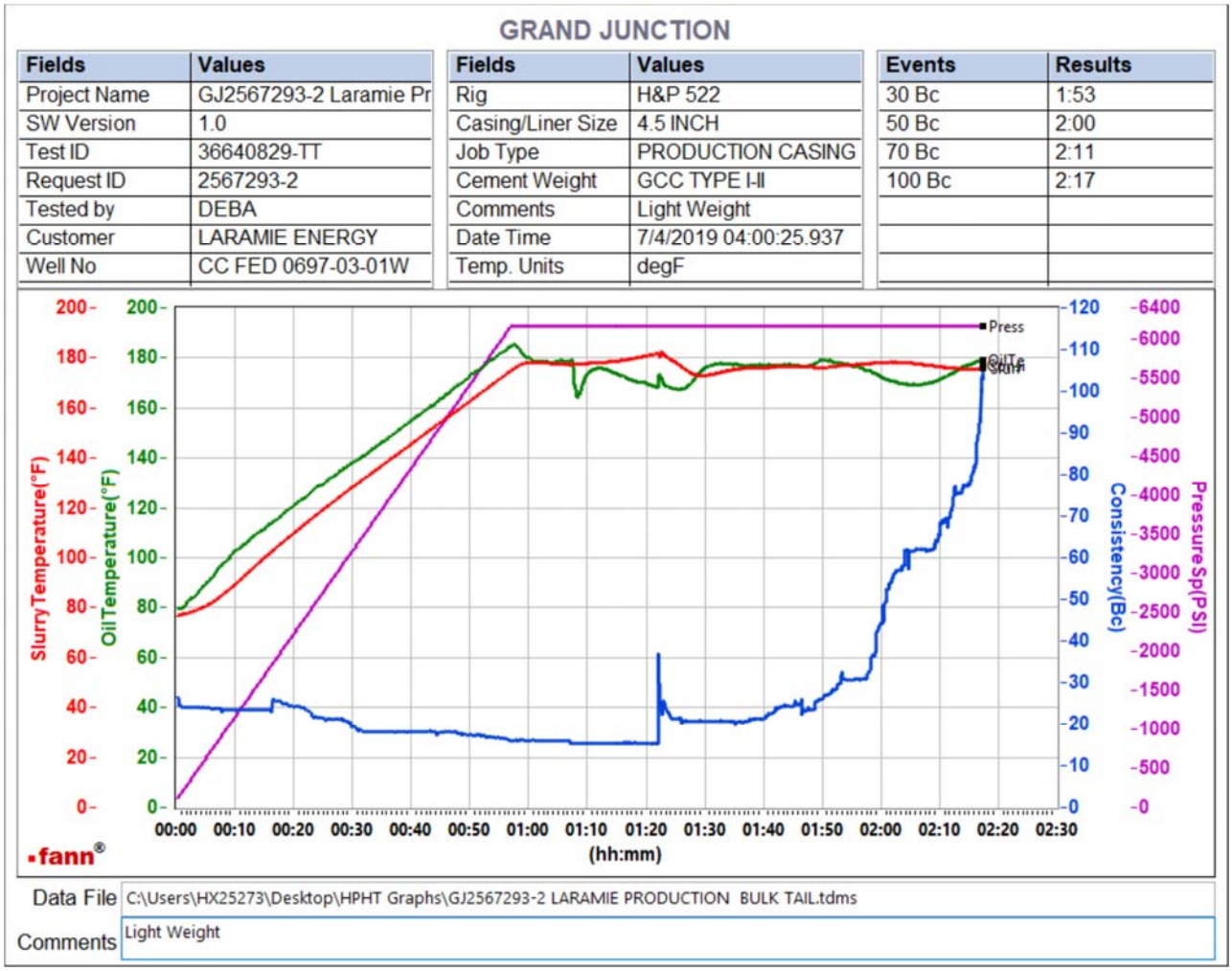
Events	Results
30.00 Bc	01h:47m
40.00 Bc	01h:54m
50.00 Bc	01h:55m
70.00 Bc	02h:05m
100.00 Bc	02h:09m
00h:30m	9.70
01h:00m	14.26
01h:30m	17.94

Total SKS = 440
CS0786 TR 0812 340 SKS
Deflected from 14Bc--- > 29Bc--- > 20 Bc within one minute
please see the graph , heat of hydration at 1:50

Operation Test Results Request ID 2567293/2

Thickening Time - ON-OFF-ON, Request Test ID:36640829 04/JUL/2019

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	6165	57	1:53	2:00	2:11	2:17	24	67	15	36



Total SKS = 440
CS0787, TR#1972 100 SKS
deflected from 14Bc---- > 36Bc--- > 27Bc within one minute.
Please review the graph for heat of hydration at 1:55