

HALLIBURTON

iCem[®] Service

LARAMIE ENERGY II LLC

Date: Monday, June 18, 2018

Cascade Creek 0697-03-13W

API# 05-045-23794-00
Laramie Cascade Creek 0697-03-13W
Job Date: Tuesday, June 12, 2018

Sincerely,

Grand Junction Cement Engineering

1.0 Real-Time Job Summary

1.1 Job Event Log

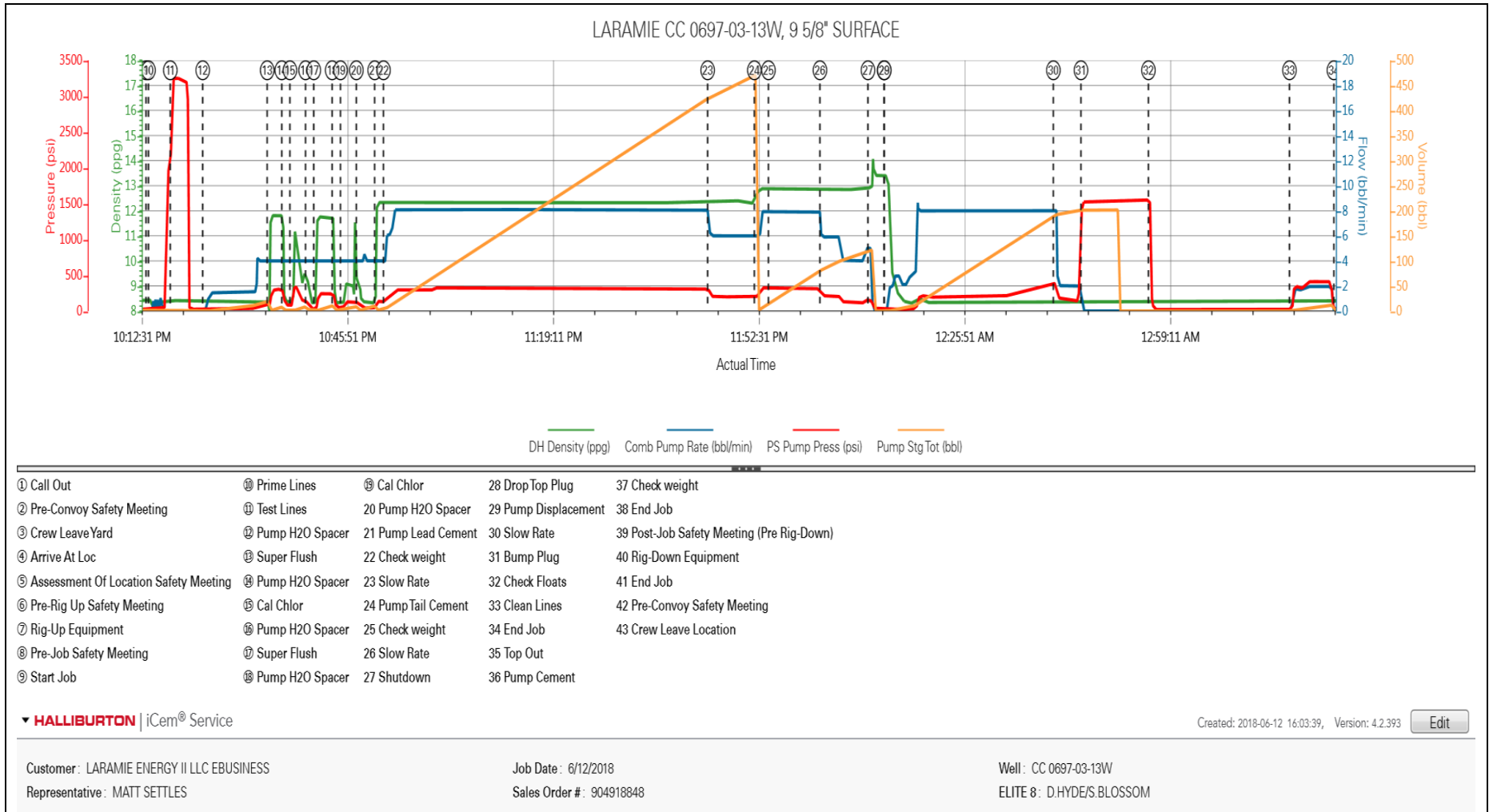
Type	Seq. No.	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	6/12/2018	14:30:00	USER					REQUESTED ON LOCATION @ 21:30
Event	2	Pre-Convoy Safety Meeting	6/12/2018	17:00:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	6/12/2018	17:05:00	USER					1 HT 400 PUMP TRUCK E8, 1 SUPERFLUSH TRANSPORT, 1 660 BULK TRUCK, 1 450 SERVICE PICKUP
Event	4	Arrive At Loc	6/12/2018	19:30:00	USER					RIG RUNNING CASING UPON HES ARRIVAL
Event	5	Assessment Of Location Safety Meeting	6/12/2018	19:45:00	USER					MET WITH COMP REP, AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (PH- 7, CHLORIDES- 500, TEMP- 60F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Pre-Rig Up Safety Meeting	6/12/2018	19:50:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	6/12/2018	20:00:00	USER					HES RIGGED UP EQUIPMENT WITHOUT ENTERING RED ZONE.
Event	8	Pre-Job Safety Meeting	6/12/2018	22:00:00	USER					ALL HES EMPLOYEES AND RIG CREW PRESENT, RIG CIRCULATED @ 8.5 BPM WITH 40PSI
Event	9	Start Job	6/12/2018	22:13:31	COM6					TD 2585', TP 2575', CSG 9 5/8" J-55 36#, SJ 45.74', OH 14 3/4", MUD 9 PPG
Event	10	Prime Lines	6/12/2018	22:13:55	COM6	8.33	2	40	2	8.33 PPG FRESH WATER

Event	11	Test Lines	6/12/2018	22:17:27	COM6			3250		ALL LINES HELD PRESSURE AT 3250 PSI
Event	12	Pump H2O Spacer	6/12/2018	22:22:42	COM6	8.33	4	100	20	FRESH WATER
Event	13	Super Flush	6/12/2018	22:33:09	COM6	10	4	310	10	10BBLS SUPER FLUSH
Event	14	Pump H2O Spacer	6/12/2018	22:35:31	COM6	8.33	4	80	5	FRESH WATER
Event	15	Cal Chlor	6/12/2018	22:36:50	COM6	8.4	4	250	10	10BBLS CALCIUM CHL. WATER
Event	16	Pump H2O Spacer	6/12/2018	22:39:22	COM6	8.33	4	40	5	FRESH WATER
Event	17	Super Flush	6/12/2018	22:40:42	COM6	10	4	300	10	10BBLS SUPER FLUSH
Event	18	Pump H2O Spacer	6/12/2018	22:43:41	COM6	8.33	4	40	5	FRESH WATER
Event	19	Cal Chlor	6/12/2018	22:45:02	COM6	8.4	4	200	10	10BBLS CALCIUM CHL. WATER
Event	20	Pump H2O Spacer	6/12/2018	22:47:36	COM6	8.33	4	40	10	FRESH WATER
Event	21	Pump Lead Cement	6/12/2018	22:50:34	COM6	12.3	8	315	428.5	1015 SKS VARICEM CMT 12.3 PPG, 2.37 FT3/SK, 13.74 GAL/SK
Event	22	Check weight	6/12/2018	22:52:00	COM6					WEIGHT VERIFIED VIA PRISSEREIZED MUD SCALES
Event	23	Slow Rate	6/12/2018	23:44:32	USER					SLOWED TO END LEAD SILO
Event	24	Pump Tail Cement	6/12/2018	23:52:06	COM6	12.8	8	315	110	292 SKS VARICEM CMT 12.8 PPG, 2.11 FT3/SK, 11.75 GAL/SK
Event	25	Check weight	6/12/2018	23:54:23	COM6					WEIGHT VERIFIED VIA PRISSEREIZED MUD SCALES
Event	26	Slow Rate	6/13/2018	00:02:44	USER					SLOWED TO END CEMENT
Event	27	Shutdown	6/13/2018	00:10:31	USER					END OF CEMENT, WASH UP ON TOP OF PLUG
Event	28	Drop Top Plug	6/13/2018	00:13:07	COM6					VERIFIED BY FLAG INDICATOR
Event	29	Pump Displacement	6/13/2018	00:13:10	COM6	8.33	8	390	195.5	FRESH WATER
Event	30	Slow Rate	6/13/2018	00:40:33	USER	8.33	2	160	185.5	SLOW RATE TO 2 BPM TO BUMP PLUG
Event	31	Bump Plug	6/13/2018	00:45:02	COM6	8.33	2	160	195.5	LAND PLUG AT 160 PSI, BROUGHT UP TO 1500 PSI AND HELD FOR 10 MINS FOR CASING TEST
Event	32	Check Floats	6/13/2018	00:55:58	USER					FLOATS HELD, 1.5 BBL BACK TO TRUCK

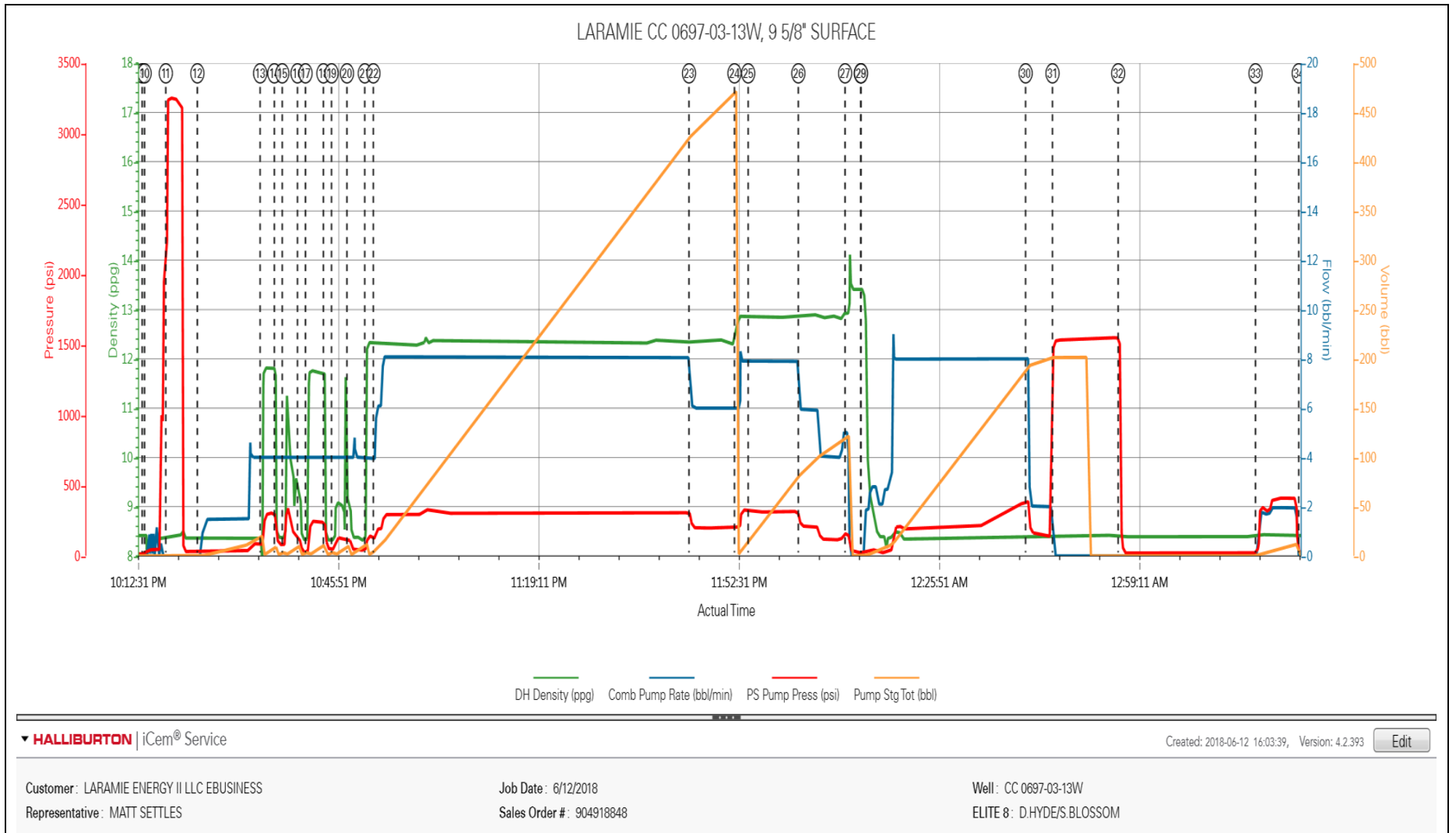
Event	33	Clean Lines	6/13/2018	01:18:49	COM6					PUMPED 12BBLS OF SUGAR WATER THROUGH PARASITE LINE
Event	34	End Job	6/13/2018	01:26:01	COM6					NO RETURNS THROUGHOUT JOB .USED 20# OF SUGAR. NO CEMENT TO SURFACE.
Event	35	Top Out	6/13/2018	04:59:00	COM6					101 SKS TYPE I-II CMT 15.6 PPG, 1.19 FT3/SK, 5.24 GAL/SK.
Event	36	Pump Cement	6/13/2018	04:59:33	COM6	15.6	2	150	21.4	101 SKS TYPE I-II CMT 15.6 PPG, 1.19 FT3/SK, 5.24 GAL/SK.
Event	37	Check weight	6/13/2018	05:00:00	COM6					WEIGHT VERIFIED VIA PRISSEREIZED MUD SCALES
Event	38	End Job	6/13/2018	05:13:19	USER					PUMPED 21.4BBLS OF TOP OUT WITH 10BBLS OF SUPER FLUSH . CEMENT TO SURFACE.
Event	39	Post-Job Safety Meeting (Pre Rig-Down)	6/13/2018	05:14:00	USER					ALL HES PRESENT
Event	40	Rig-Down Equipment	6/13/2018	05:20:00	USER					ALL HES PRESENT
Event	41	Pre-Convoy Safety Meeting	6/13/2018	06:30:00	USER					ALL HES PRESENT
Event	42	Crew Leave Location	6/13/2018	06:45:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENT, SHAWN BLOSSOM AND CREW

2.0 Attachments

2.1 CHART WITH EVENTS.png



2.2 CHART WITH OUT EVENTS.png



HALLIBURTON

iCem[®] Service

Laramie Energy LLC-EBUS

United States of America, COLORADO

For: Aaron Duncan

Date: Sunday, June 17, 2018

Cascade Creek 0697-03-13W Production PJR

API# 05-045-23794-00

Sincerely,

Grand Junction Cement Engineering

2.0 Real-Time Job Summary

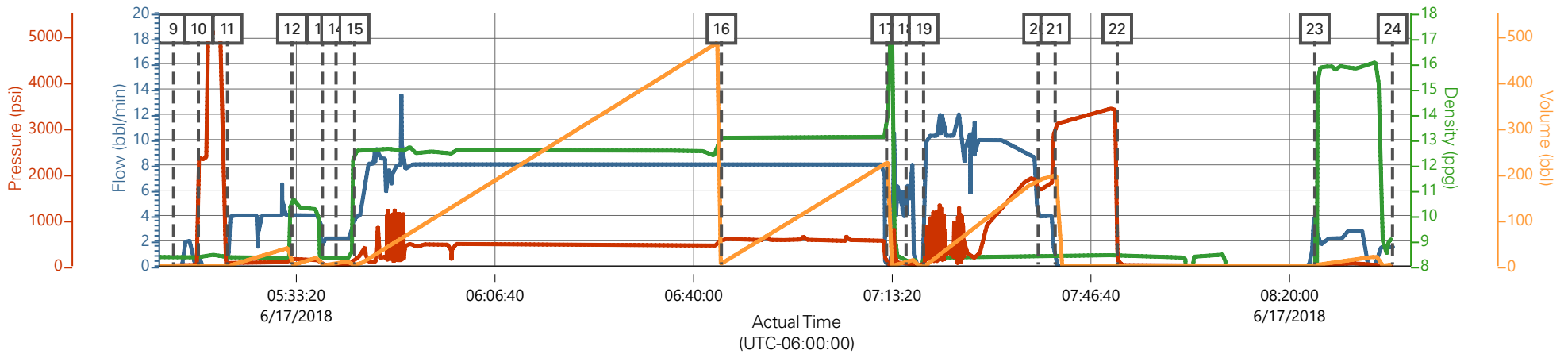
2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	DH Density (ppg)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	6/16/2018	21:00:00	USER					REQUESTED ON LOCATION 6/17/18 @ 03:30
Event	2	Depart Yard Safety Meeting	6/16/2018	23:25:00	USER					JSA COMPLETED
Event	3	Crew Leave Shop	6/16/2018	23:30:00	USER					
Event	4	Arrive At Loc	6/17/2018	02:00:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	6/17/2018	02:05:00	USER					JSA COMPLETED
Event	6	Pre-Rig Up Safety Meeting	6/17/2018	02:15:00	USER					JSA COMPLETED
Event	7	Rig-Up Equipment	6/17/2018	02:20:00	USER					
Event	8	Pre-Job Safety Meeting	6/17/2018	04:45:00	USER					JSA COMPLETED
Event	9	Start Job	6/17/2018	05:12:44	COM4					4 1/2"-11.6# CASING IN 8 3/4" OH, TD 9739', TP 9729', ST 84.7', MUD 9.4 PPG, WATER TEMP 60, PH 7, CHLORIDES 0
Event	10	Test Lines	6/17/2018	05:16:54	COM4			5000.00		TEST LINES TO 5000 PSI
Event	11	Pump Spacer 1	6/17/2018	05:21:47	COM4	4.00	8.40	90.00	40.00	40 BBL MUDDLUSH
Event	12	Pump Spacer 2	6/17/2018	05:32:36	COM4	4.00	10.00	150.00	20.00	20 BBL SUPERFLUSH

Event	13	Pump Spacer 1	6/17/2018	05:37:43	COM4	2.00	8.33	32.00	10.00	10 BBL FRESH WATER
Event	14	Drop Bottom Plug	6/17/2018	05:40:00	USER					PLUG AWAY
Event	15	Pump Lead Cement	6/17/2018	05:43:07	COM4	8.00	12.50	475.00	400.80	400.8 BBL LEAD CEMENT, 1160 SKS @ 12.5 PPG / 1.94 YLD / 9.59 GAL/SK
Event	16	Pump Tail Cement	6/17/2018	06:44:40	COM4	8.00	13.00	575.00	185.10	185.1 BBLS TAIL CEMENT, 502 SKS @ 13.0 PPG / 2.07 YLD / 9.42 GAL/SK
Event	17	Shutdown	6/17/2018	07:12:23	COM4					
Event	18	Drop Top Plug	6/17/2018	07:15:39	COM4					PLUG AWAY
Event	19	Pump Displacement	6/17/2018	07:18:35	COM4	10.00	8.40	1860.00	149.50	149.5 BBLS H2O DISPLACEMENT WITH 5 GAL CLA WEB, 1 GAL MMCR AND 5 GAL BIOCIDES FROM CUSTOMER
Event	20	Slow Rate	6/17/2018	07:37:49	COM4	4.00	8.40	1600.00	139.00	SLOW RATE AT 139 BBLS AWAY TO 4/MIN, 1860 PSI TO 1600 PSI
Event	21	Bump Plug	6/17/2018	07:40:40	COM4	4.00	8.40	1800.00	149.50	PLUG BUMPED AT CALCULATED, FINAL CIRCULATING PRESSURE 1800 PSI BROUGHT TO 3000 PSI FOR 10 MINUTE CASING TEST
Event	22	Check Floats	6/17/2018	07:51:05	COM4					FLOATS HELD, 2 BBL BACK TO PUMP
Event	23	Pump Cement	6/17/2018	08:24:14	USER	1.50	15.60	75.00	7.40	7.4 BBLS TOP OUT CEMENT DOWN PARASITE LINE, 35 SKS @ 15.6 PPG / 1.19 YLD / 5.24 GAL/SK
Event	24	End Job	6/17/2018	08:37:16	COM4					PIPE LEFT STATIC, GOOD RETURNS UNTIL DISPLACEMENT, WHILE CLEANING LINES 10 BBLS SPACER CAME TO SURFACE AND CUSTOMER SHUT OFF AIR, 40# SUGAR USED, NO ADD HOURS CHARGED
Event	25	Pre-Rig Down Safety Meeting	6/17/2018	09:00:00	USER					JSA COMPLETED

Event	26	Rig-Down Equipment	6/17/2018	09:05:00	USER	
Event	27	Pre-Convoy Safety Meeting	6/17/2018	09:25:00	USER	JSA COMPLETED
Event	28	Crew Leave Location	6/17/2018	09:30:00	USER	THANK YOU FOR CHOOSING HALLIBURTON CEMENTING OF GRAND JUNCTION, CO - RYAN MARTIN AND CREW

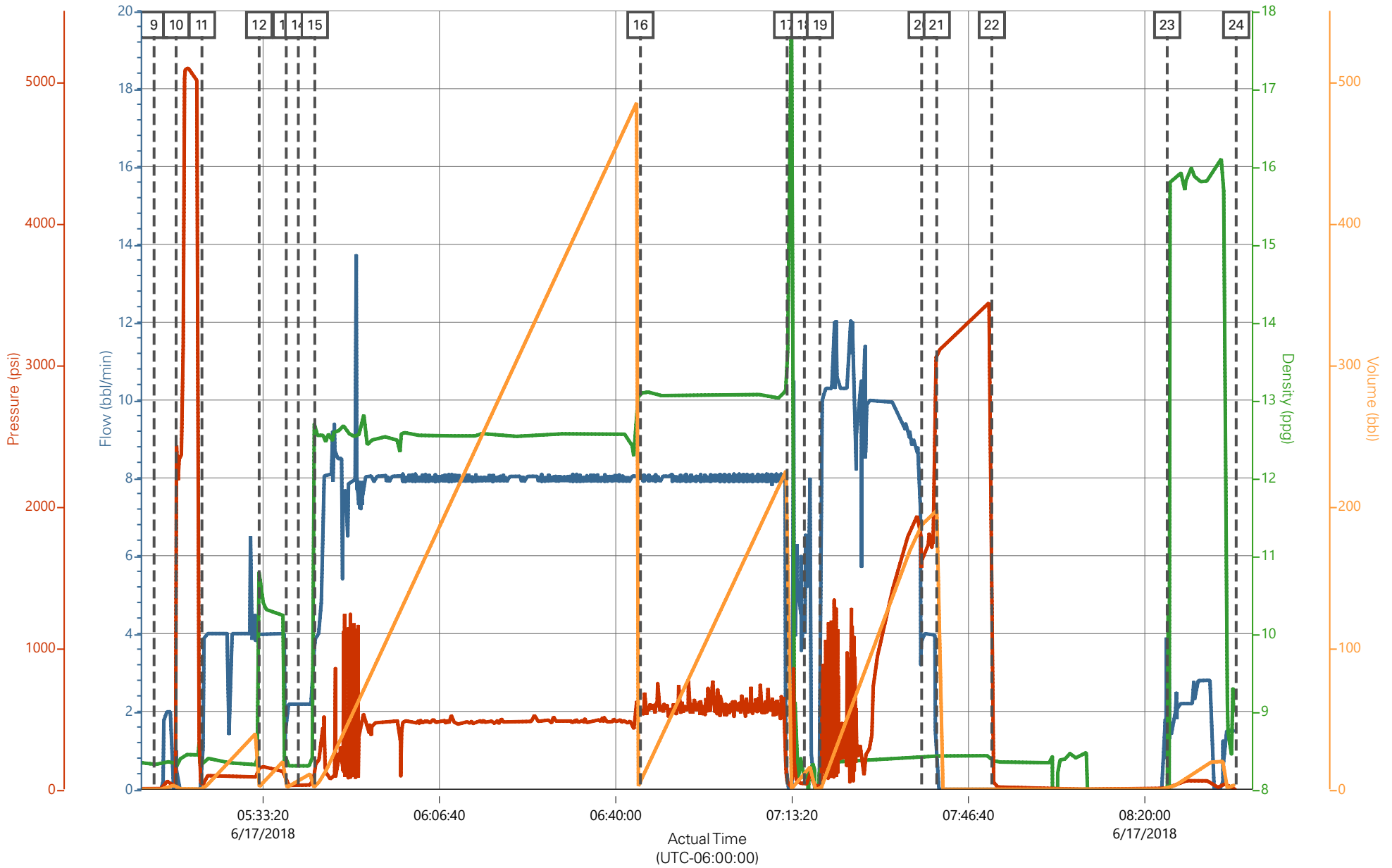
LARAMIE - CASCADE CREEK 697-03-13W - 4 1/2" PRODUCTION CASING



Comb Pump Rate (bbl/min) 1.5 DH Density (ppg) 9.01 PS Pump Press (psi) 1 Pump Stg Tot (bbl) 3.8

Description	Actual Time (UTC-06:00:00)	Comb Pump Rate (bbl/min)	DH Density (ppg)	PS Pump Press (psi)	Pump Stg Tot (bbl)
9 Start Job	05:12:44	0.00	8.32	0.00	0.00
10 Test Lines	05:16:54	0.00	8.33	18.00	2.70
11 Pump Spacer 1	05:21:47	0.00	8.33	24.00	0.00
12 Pump Spacer 2	05:32:36	4.00	10.77	151.00	1.60
13 Pump Spacer 1	05:37:43	2.10	8.30	32.00	1.10
14 Drop Bottom Plug	05:40:00	2.20	8.30	27.00	6.00
15 Pump Lead Cement	05:43:07	3.70	12.50	146.00	1.90
16 Pump Tail Cement	06:44:40	8.10	13.09	576.00	5.40
17 Shutdown	07:12:23	0.00	13.44	55.00	225.40
18 Drop Top Plug	07:15:39	3.90	8.11	24.00	10.20
19 Pump Displacement	07:18:35	0.00	8.32	9.00	0.00
20 Slow Rate	07:37:49	3.80	8.40	1621.00	186.70
21 Bump Plug	07:40:40	0.00	8.43	3090.00	197.10
22 Check Floats	07:51:05	0.00	8.41	413.00	0.00
23 Pump Cement	08:24:14	1.50	7.86	8.00	1.10
24 End Job	08:37:16	1.50	9.01	0.00	3.47

LARAMIE - CASCADE CREEK 697-03-13W - 4 1/2" PRODUCTION CASING



— Comb Pump Rate (bbl/min) 1.5
 — DH Density (ppg) 9.01
 — PS Pump Press (psi) 1
 — Pump Stg Tot (bbl) 3.8

Job Information

Request/Slurry	2480954/1	Rig Name		Date	12/JUN/2018
Submitted By	Lukas Van Zyl	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	CC 0697-03-13W

Well Information

Casing/Liner Size	4.5 in	Depth MD	9772 ft	BHST	117°C / 242°F
Hole Size	8.75 in	Depth TVD	9525 ft	BHCT	78°C / 172°F
Pressure	5968 psi				

Drilling Fluid Information

Mud Supplier Name		Mud Trade Name		Density	
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Cement Information - Lead Design

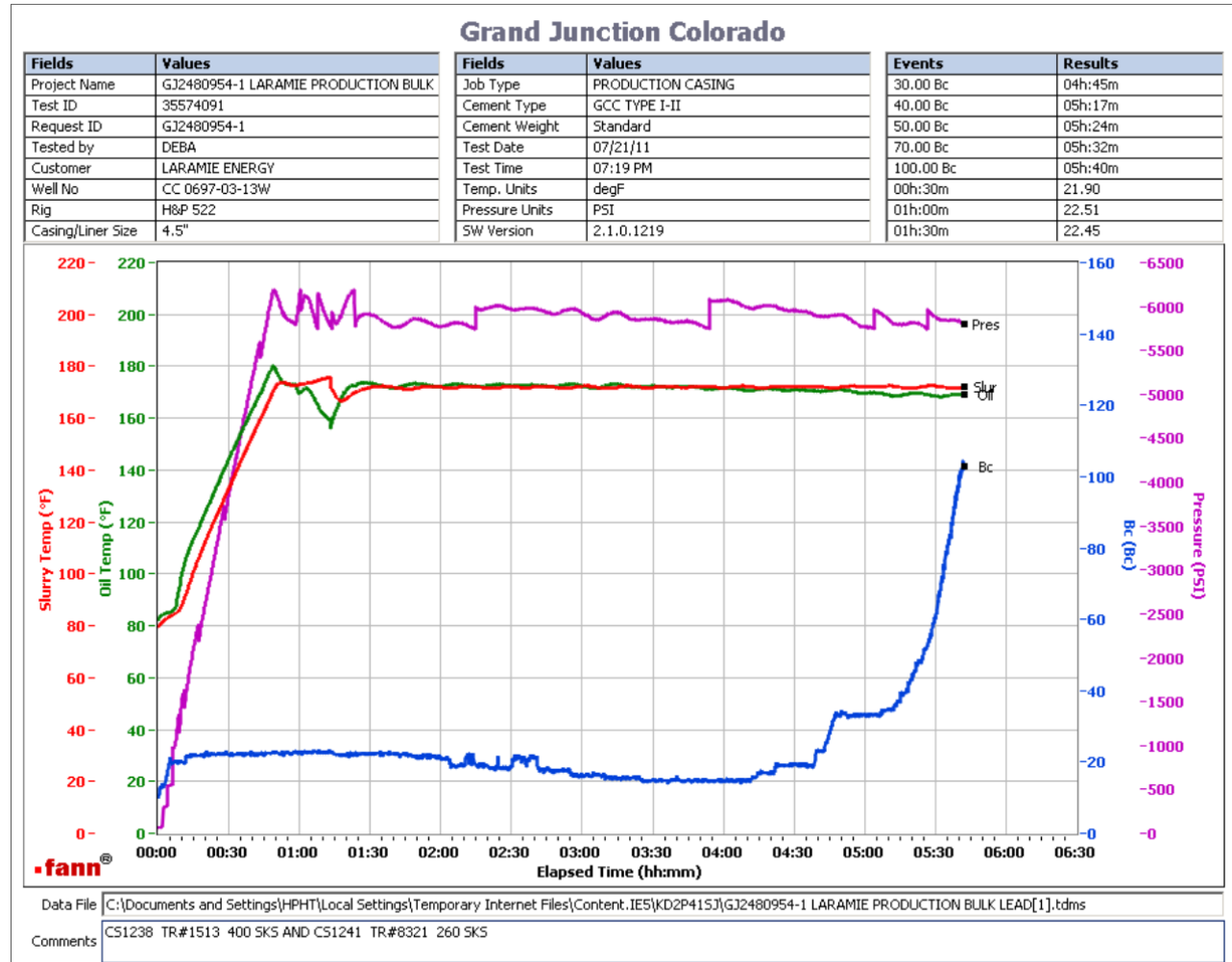
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		NeoCem GJ2 Lead				Slurry Density	12.5	lbm/gal
						Slurry Yield	1.946	ft3/sack
						Water Requirement	9.615	gal/sack
						Total Mix Fluid	9.615	gal/sack
						Water Source	Fresh Water	
						Water Chloride		

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Thickening Time - ON-OFF-ON

14/JUN/2018

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)
172	5968	48	4:45	5:24	5:32	5:40	9	58	15	22



Deflection: 22 – 22

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Operation Test Results Request ID 2480954/2

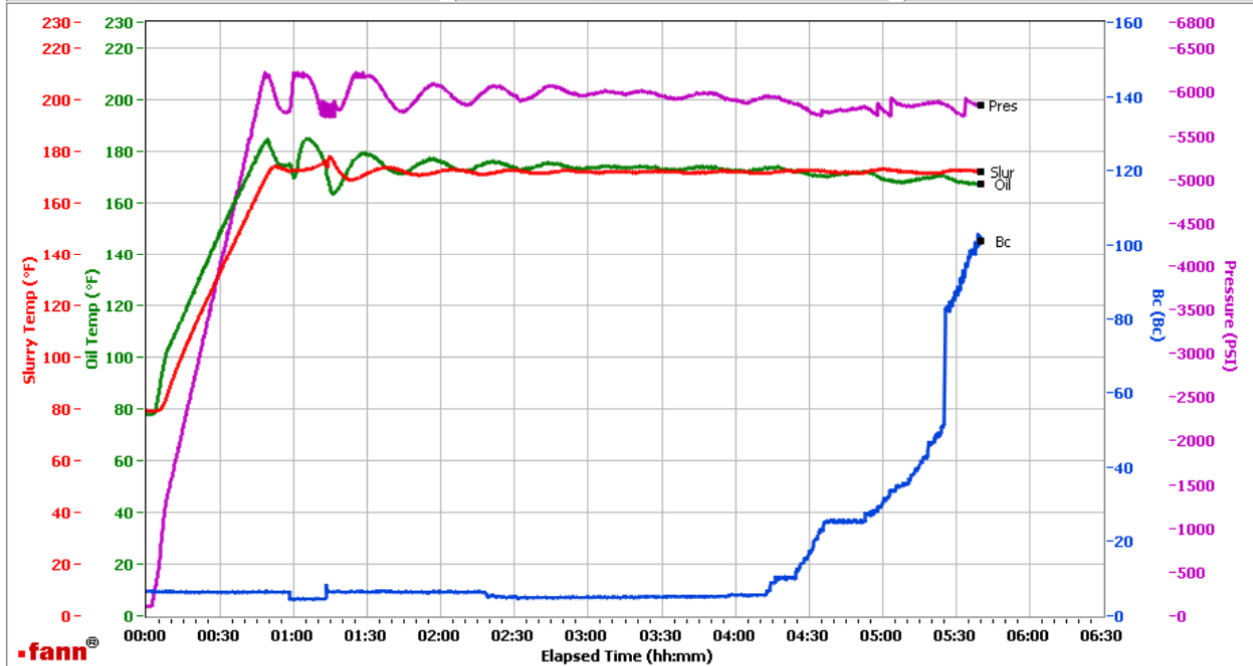
Thickening Time - ON-OFF-ON

14/JUN/2018

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)
172	5968	48	4:59	5:24	5:25	5:37	7	58	15	10

Grand Junction, Colorado

Fields	Values	Fields	Values	Events	Results
Project Name	GJ2480954-2 LARAMIE PRODUCTION BULK	Job Type	PRODUCTION CASING	30.00 Bc	04h:59m
Test ID	35577812	Cement Type	GCC TYPE I-II	40.00 Bc	05h:14m
Request ID	GJ2480954-2	Cement Weight	Standard	50.00 Bc	05h:24m
Tested by	DEBA	Test Date	06/13/18	70.00 Bc	05h:25m
Customer	LARAMIE PRODUCTION	Test Time	07:02 PM	100.00 Bc	05h:37m
Well No	CC 0697-03-13W	Temp. Units	degF	00h:30m	6.33
Rig	H&P 522	Pressure Units	PSI	01h:00m	4.59
Casing/Liner Size	4.5"	SW Version	2.1.0.507	01h:30m	6.65



Data File C:\Documents and Settings\M290\Local Settings\Temporary Internet Files\Content.IE5\K9Y20P2R\GJ2480954-1 LARAMIE PRODUCTION BULK LEAD[1].tdms

Comments CS1240 TR#8476 400 SKS AND CS1242 TR#7428 100 SKS

Total SKS = 1160
 CS1240 TR# 8476 400 SKS
 CS1242 TR# 7428 100 SKS
 Deflection: 8 -10

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Job Information

Request/Slurry	2480955/1	Rig Name		Date	12/JUN/2018
Submitted By	Lukas Van Zyl	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	CC 0697-03-13W

Well Information

Casing/Liner Size	4.5 in	Depth MD	9772 ft	BHST	117°C / 242°F
Hole Size	8.75 in	Depth TVD	9525 ft	BHCT	78°C / 172°F
Pressure	5968 psi				

Drilling Fluid Information

Mud Supplier Name		Mud Trade Name		Density	
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Cement Information - Tail Design 

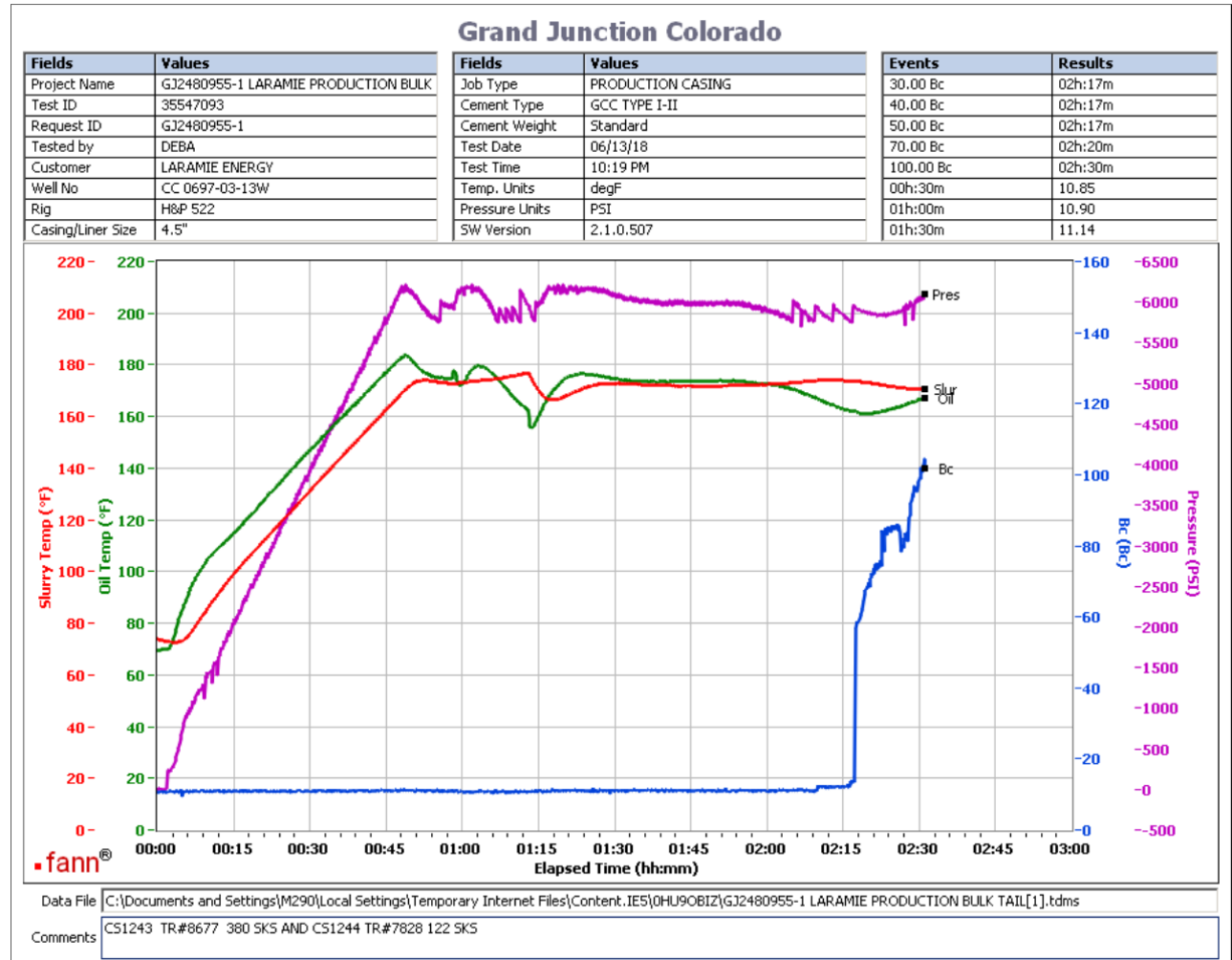
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		NeoCem HT Tail				Slurry Density	13	lbm/gal
						Slurry Yield	2.069	ft3/sack
						Water Requirement	9.417	gal/sack
						Total Mix Fluid	9.417	gal/sack
						Water Source	Fresh Water	
						Water Chloride		

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Thickening Time - ON-OFF-ON

14/JUN/2018

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)
172	5968	48	2:17	2:17	2:20	2:30	10	58	15



Total SKS = 502
 CS1243 TR#8677 380 SKS
 CS1244 TR#7428 122 sks
 Deflection: 10 - 10

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