

HALLIBURTON

iCem[®] Service

LARAMIE ENERGY LLC-EBUS

United States of America, COLORADO

For: Aaron Duncan

Date: Tuesday, November 13, 2018

Sup & Shep 0993-25-09W Surface PJR

API# 05-077-10580-00

Sincerely,

Grand Junction Cement Engineering

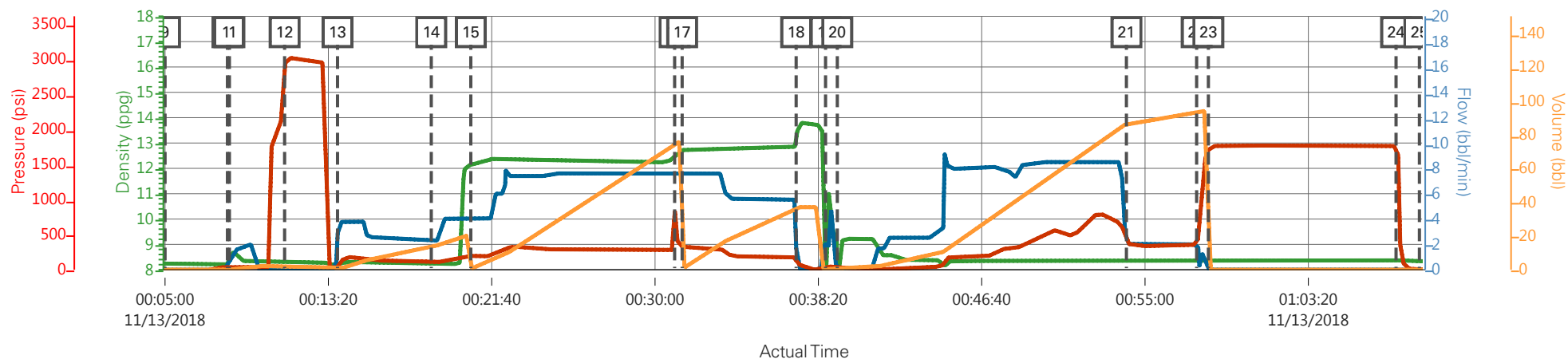
2.0 Real-Time Job Summary

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	11/12/2018	16:00:00	USER					ON LOCATION REQUESTED 21:00
Event	2	Pre-Convoy Safety Meeting	11/12/2018	18:45:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	11/12/2018	19:00:00	USER					1 ELITE, 1 660 BULK TRAILER, 1 PICK UP
Event	4	Arrive at Location from Service Center	11/12/2018	21:00:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	11/12/2018	21:05:00	USER					MET WITH COMPANY REP SDS OFFERED
Event	6	Pre-Rig Up Safety Meeting	11/12/2018	21:10:00	USER					1-ELITE, 1-660 BULK TRAILER, 8.625" QL, 2" PUMP IRON, 4" SUCTION HOSE
Event	7	Rig-Up Completed	11/12/2018	21:45:00	USER					
Event	8	Pre-Job Safety Meeting	11/12/2018	23:15:00	USER					ALL HES AND RIG CREW PRESENT
Event	9	Start Job	11/13/2018	00:05:00	USER	8.34	0.00	7.00	0.00	TD-1552', TP-1541.1', SJ-46.21', OH-11", CSG-8.625" 24# J55, MUD-9.2PPG
Event	10	Prime Pumps	11/13/2018	00:08:11	USER	8.35	1.80	38.00	2.00	FRESH WATER
Event	11	Drop Bottom Plug	11/13/2018	00:08:17	USER					PLUG AWAY
Event	12	Test Lines	11/13/2018	00:11:06	USER	8.34	0.00	3015.00	2.20	ALL PRESSURE HELD
Event	13	Pump Spacer 1	11/13/2018	00:13:48	USER	8.34	4.00	190.00	20.00	FRESH WATER
Event	14	Check Weight	11/13/2018	00:18:35	USER					WEIGHT VERIFIED BY PRESSURIZED MUD SCALES

Event	15	Pump Lead Cement	11/13/2018	00:20:36	USER	12.30	7.50	300.00	77.50	177SKS, 12.3PPG, 2.46CF/SK, 14.17GL/SK
Event	16	Bottom Plug Rupture	11/13/2018	00:31:00	USER			848.00	74.00	
Event	17	Pump Tail Cement	11/13/2018	00:31:23	USER	12.80	7.60	325.00	38.00	98SKS, 12.8PG, 2.18CF/SK, 12.11GL/SK
Event	18	Shutdown	11/13/2018	00:37:12	USER					
Event	19	Pump Displacement	11/13/2018	00:38:42	USER	8.35	8.50	700.00	95.10	FRESH WATER
Event	20	Drop Top Plug	11/13/2018	00:39:18	USER					
Event	21	Slow Rate	11/13/2018	00:54:03	USER	8.32	2.00	343.00	86.10	SLOW RATE 10 BARRELS FROM CALCULATED TOTAL
Event	22	Bump Plug	11/13/2018	00:57:38	USER	8.34	2.00	357.00	95.10	PLUG BUMPED AT 357 PSI
Event	23	Casing Test	11/13/2018	00:58:14	USER	8.39	0.00	1711.00	0.00	10 MINUTE CASING TEST
Event	24	Check Floats	11/13/2018	01:07:48	USER	8.37	0.00	1759.00	0.00	FLOATS HELD, 1 BBL BACK TO DISPLACEMENT TANK
Event	25	End Job	11/13/2018	01:09:00	USER	8.34	0.00	-8.00	0.00	GOOD RETURNS THROUGH OUT JOB, 25 BBLS CEMENT TO SURFACE
Event	26	Post-Job Safety Meeting (Pre Rig-Down)	11/13/2018	01:11:00	USER					ALL HES PRESENT
Event	27	Rig-Down Completed	11/13/2018	01:45:00	USER					
Event	28	Pre-Convoy Safety Meeting	11/13/2018	02:30:00	USER					ALL HES PRESENT
Event	29	Crew Leave Location	11/13/2018	02:40:00	USER					THANK YOU FOR CHOOSING HALLIBURTON, ANDREW BRENNECKE AND CREW

LARAMIE ENERGY - SUP & SHEP 993-25-09W - 8.625" SURFACE



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

Description	Actual Time	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)
9 Start Job	00:05:00	8.24	0.00	-7.00	0.00
10 Prime Pumps	00:08:11	8.20	0.00	38.00	0.00
11 Drop Bottom Plug	00:08:17	8.26	0.80	37.00	0.00
12 Test Lines	00:11:06	8.34	0.00	2922.00	2.20
13 Pump Spacer 1	00:13:48	8.17	2.60	26.00	0.10
14 Check Weight	00:18:35	8.24	2.30	109.00	13.70
15 Pump Lead Cement	00:20:36	12.12	4.10	200.00	0.60
16 Bottom Plug Rupture	00:31:00	12.47	7.50	848.00	74.00
17 Pump Tail Cement	00:31:23	12.73	7.60	325.00	0.40
18 Shutdown	00:37:12	12.84	1.70	154.00	37.00
19 Pump Displacement	00:38:42	7.56	1.80	20.00	0.40
20 Drop Top Plug	00:39:18	5.98	0.00	41.00	1.70
21 Slow Rate	00:54:03	8.32	2.00	383.00	86.10
22 Bump Plug	00:57:38	8.34	2.00	357.00	93.40
23 Casing Test	00:58:14	8.39	0.00	1711.00	0.00
24 Check Floats	01:07:48	8.37	0.00	1759.00	0.00
25 End Job	01:09:00	8.34	0.00	-8.00	0.00

▼ **HALLIBURTON** | iCem® Service

Created: 2018-11-12 21:32:36, (UTC-07:00), Version: 5.0.161.0

Edit

Customer : LARAMIE ENERGY II LLC

Job Date : 11/13/2018

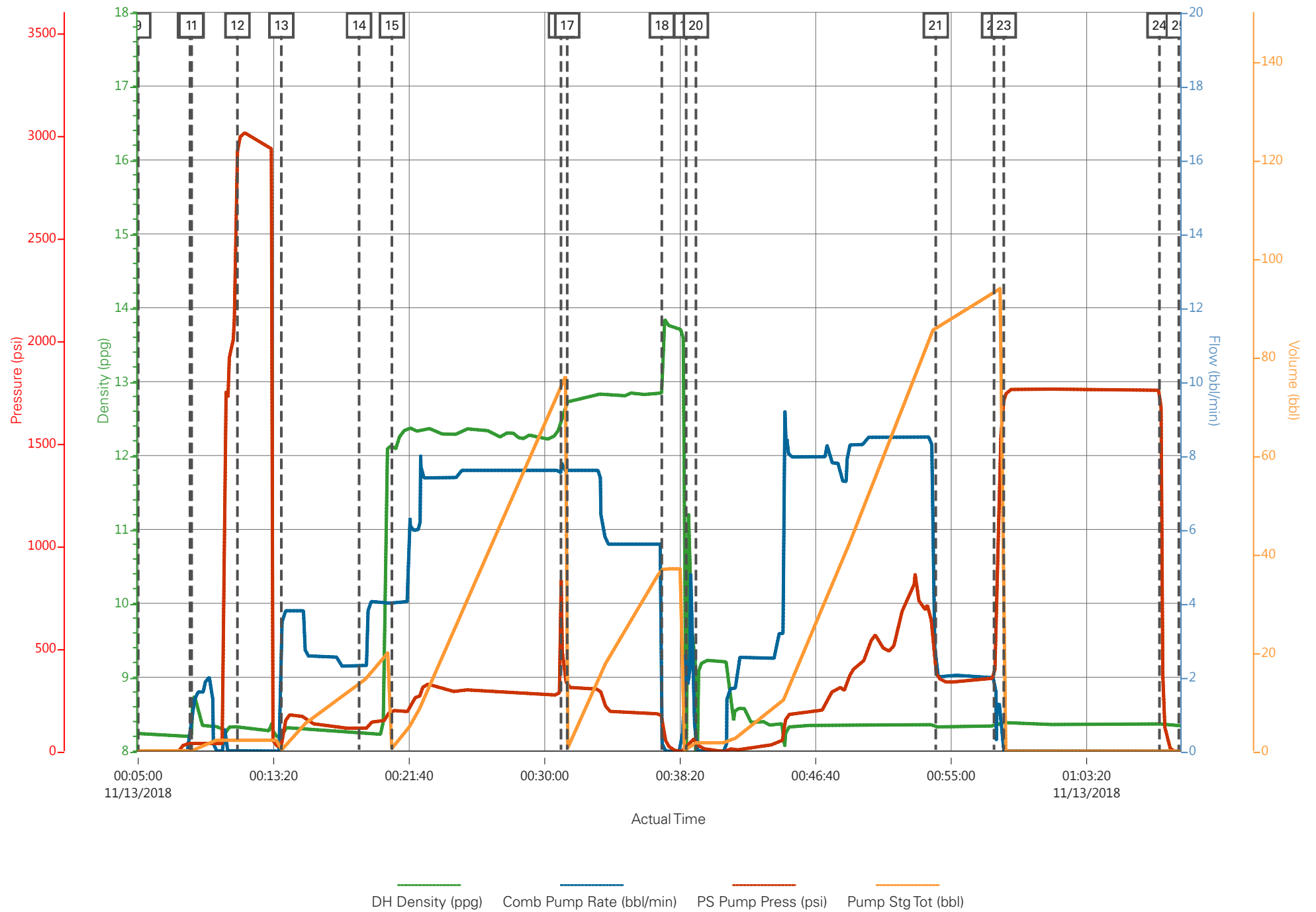
Well : SUP & SHEP 993-25-09W

Representative : TYLER HALE

Sales Order # : 905273547

ELITE #1 : A.ANGELO

LARAMIE ENERGY - SUP & SHEP 993-25-09W - 8.625" SURFACE



HALLIBURTON

iCem[®] Service

Laramie Energy LLC-EBUS

United States of America, COLORADO

For: Aaron Duncan

Date: Friday, November 16, 2018

Sup & Shep 993-25-09W Production PJR

API# 05-077-10580-00

Sincerely,

Grand Junction Cement Engineering

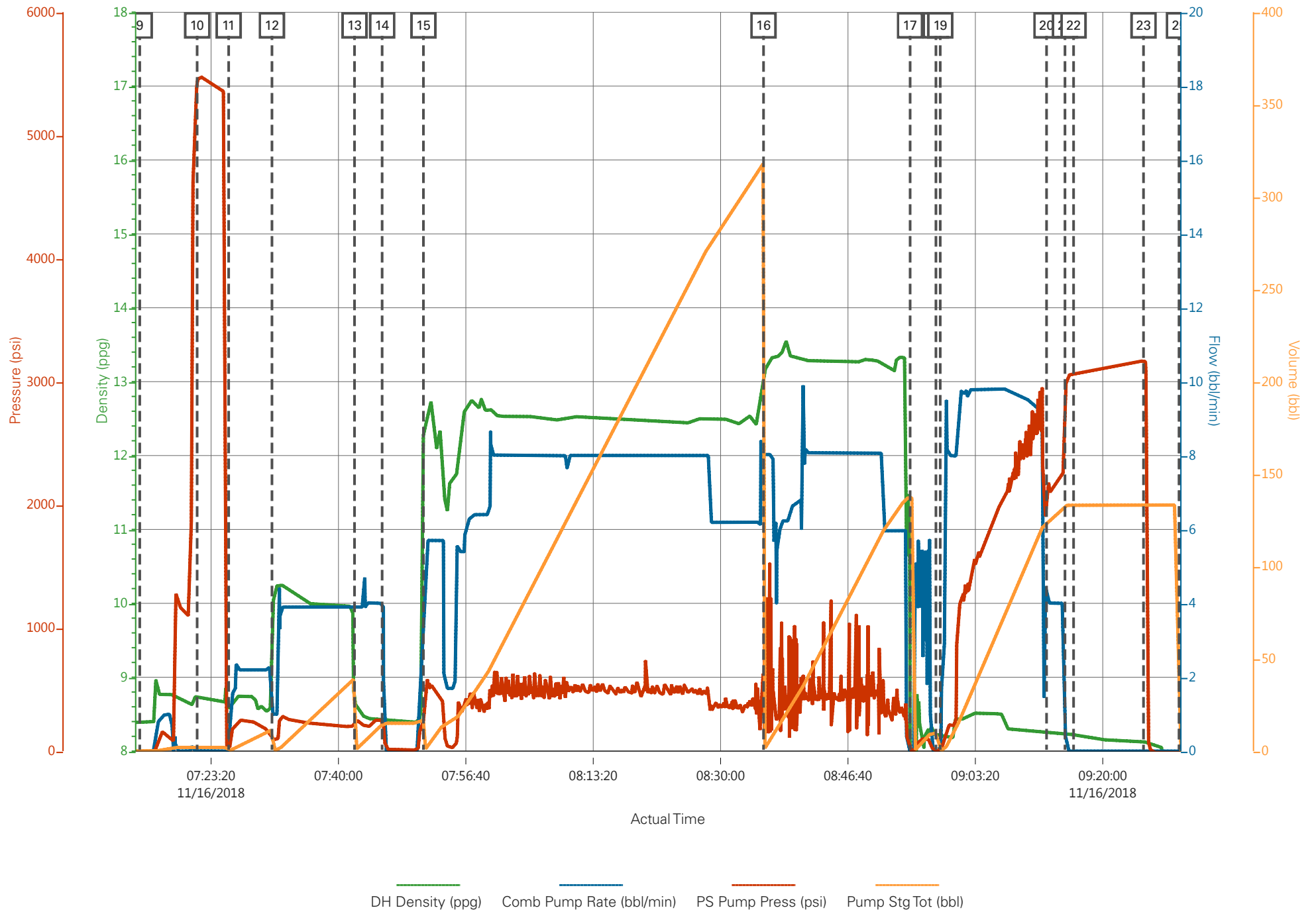
2.0 Real-Time Job Summary

2.1 Job Event Log

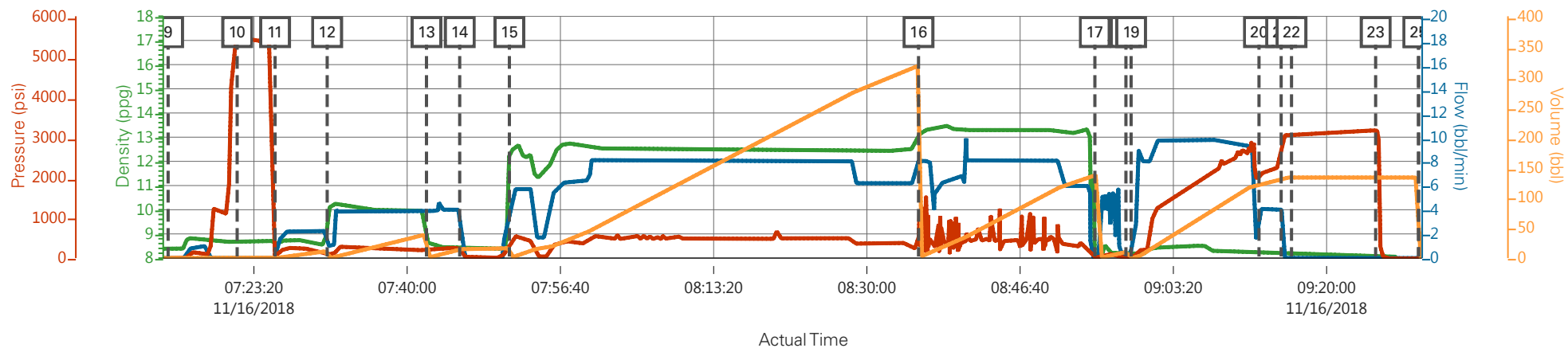
Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	11/15/2018	22:00:00	USER					
Event	2	Pre-Convoy Safety Meeting	11/16/2018	02:30:00	USER					JOURNEY MANAGEMENT COMPLETE, AS WELL AS JSA
Event	3	Crew Leave Yard	11/16/2018	03:00:00	USER					
Event	4	Arrive At Loc	11/16/2018	05:00:00	USER					JOURNEY MANAGEMENT CLOSED OUT. RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	11/16/2018	05:10:00	USER					
Event	6	Pre-Rig Up Safety Meeting	11/16/2018	05:20:00	USER					JSA COMPLETE
Event	7	Rig-Up Equipment	11/16/2018	05:30:00	USER					
										WATER TEST: PH-7, CL-0, TEMP-67
Event	8	Other	11/16/2018	06:00:00	USER					WELL INFO: 4.5 11.6# SET AT 8623, TD-8633, S.J.-85.98 HOLE- 7 7/8, SURFACE CASING SET AT 1543FT.
Event	9	Other	11/16/2018	06:10:00	USER					MUD SCALES CHECKED WITH WATER PRIOR TO JOB.
Event	10	Pre-Job Safety Meeting	11/16/2018	06:30:00	USER					JSA COMPLETE
Event	11	Prime Pumps	11/16/2018	07:04:52	COM5					
Event	12	Start Job	11/16/2018	07:14:00	COM5					

Event	13	Test Lines	11/16/2018	07:21:31	COM5			5583.00		5583 PSI
Event	14	Pump Spacer 1	11/16/2018	07:25:38	COM5	8.33	2.00	230.00	10.00	FRESH WATER WITH POLY
Event	15	Pump Spacer 2	11/16/2018	07:31:18	COM5	11.7	4.00	275.00	40.00	SUPERFLUSH
Event	16	Pump Spacer 1	11/16/2018	07:42:06	COM5	8.33	4.00	246.00	15.00	FRESH WATER
Event	17	Drop Bottom Plug	11/16/2018	07:45:43	USER					AWAY
Event	18	Pump Lead Cement	11/16/2018	07:51:07	COM5	12.50	8.00	470.00	316.10	915 SKS NEOCEM, 12.5 PPG, 1.94 FT3/SK, 9.59 GAL/SK
Event	19	Pump Tail Cement	11/16/2018	08:35:37	COM5	13.30	8.00	585.00	112.2	362 SKS THERMACEM, 13.3 PPG, 1.74 FT3/SK, 7.8 GAL/SK
Event	20	Shutdown	11/16/2018	08:54:48	USER					TO CLEAN UP PUMPS AND LINES AND DROP TOP PLUGS
Event	21	Drop Top Plug	11/16/2018	08:58:10	USER					DROPPED 2 TOP PLUGS AWAY
Event	22	Pump Displacement	11/16/2018	08:58:44	COM5	8.33	10.00	2639.00	132.3	FRESH WATER WITH 5 GAL CLA-WEB, 1 GAL MMCR, 3 LBS BE-6
Event	23	Slow Rate	11/16/2018	09:12:39	USER	8.33	4.00	2119.00	123.30	TO BUMP PLUG
Event	24	Bump Plug	11/16/2018	09:15:03	USER	8.33	4.00	2190.00	132.30	PLUGS BUMPED
Event	25	Standby - Other - see comments	11/16/2018	09:16:11	USER			3057.00		CASING TEST FOR 10 MINS
Event	26	Check Floats	11/16/2018	09:25:20	USER			3169.00		FLOATS HELD 1.5 BBLS BACK TO TRUCK
Event	27	Post-Job Safety Meeting (Pre Rig-Down)	11/16/2018	09:30:00	USER					JSA COMPLETE
Event	28	End Job	11/16/2018	09:30:00	COM5					GOOD RETURNS THROUGHOUT JOB, NO PIPE MOVEMENT, 30 BBLS OF SUPERFLUSH TO SURFACE
Event	29	Crew Leave Location	11/16/2018	11:00:00	USER					THANK YOU FOR USING HALLIBURTON CEMENT, JAMES LEIST AND CREW

LARAMIE ENERGY - SUP & SHEP - 993-25-09W - 4.5" PRODUCTION CASING



LARAMIE ENERGY - SUP & SHEP - 993-25-09W - 4.5" PRODUCTION CASING



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

Description	Actual Time	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	
9 Start Job	07:14:00	8.38	0.00	-10.00	0.00	
10 Test Lines	07:21:31	8.75	0.00	5432.00	2.00	
11 Pump Spacer 1	07:25:38	8.59	0.00	31.00	2.00	
12 Pump Spacer 2	07:31:18	9.63	1.00	101.00	11.40	
13 Pump Spacer 1	07:42:06	8.70	3.90	246.00	0.00	
14 Drop Bottom Plug	07:45:43	8.41	4.00	249.00	14.40	
15 Pump Lead Cement	07:51:07	12.28	2.90	242.00	16.70	
16 Pump Tail Cement	08:35:37	13.09	8.00	585.00	0.10	
17 Shutdown	08:54:48	7.87	0.00	8.00	137.20	
18 Drop Top Plug	08:58:10	8.23	0.00	0.00	9.70	
19 Pump Displacement	08:58:44	8.23	0.00	-2.00	0.00	
20 Slow Rate	09:12:39	8.25	4.20	2119.00	123.30	
21 Bump Plug	09:15:03	8.23	4.00	2579.00	132.90	
22 Standby - Other - see comments	09:16:11	8.22	0.00	3057.00	133.20	
23 Check Floats	09:25:20	8.12	0.00	3169.00	133.20	
24 Post-Job Safety Meeting (Pre Rig-Down)	09:30:00	-0.38	0.00	-16.00	0.00	
25 End Job	09:30:00	-0.38	0.00	-16.00	0.00	

Job Information

Request/Slurry	2514761/1	Rig Name	H&P 522	Date	12/NOV/2018
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Sup & Shep 0993-25-09W

Well Information

Casing/Liner Size	4.5 in	Depth MD	8688 ft	BHST	114°C / 237°F
Hole Size	7.875 in	Depth TVD	8636 ft	BHCT	74°C / 165°F
Pressure	5345 psi				

Drilling Fluid Information

Mud Supplier Name	Baroid	Mud Trade Name	BARADRIL-N	Density	9.9 lbm/gal
--------------------------	--------	-----------------------	------------	----------------	-------------

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	1.946	ft3/sack
						Water Requirement	9.615	gal/sack
						Total Mix Fluid	9.615	gal/sack
						Water Source	Field (Fresh) Water	
						Water Chloride		

This report is the property of Halliburton Energy Services and neither it nor any part thereof, nor a copy thereof, is to be published or disclosed without first securing the expressed written approval of Halliburton. It may however be used in the course of regular business operations by any person or concern receiving such report from Halliburton. This report is for information purposes only and the content is limited to the sample described. Halliburton makes no warranties, expressed or implied, as to the accuracy of the contents or results. Any user of this report agrees Halliburton shall not be liable for any loss or damage regardless of cause, including any act or omission of Halliburton, resulting from the use hereof.

Thickening Time - ON-OFF-ON

14/NOV/2018

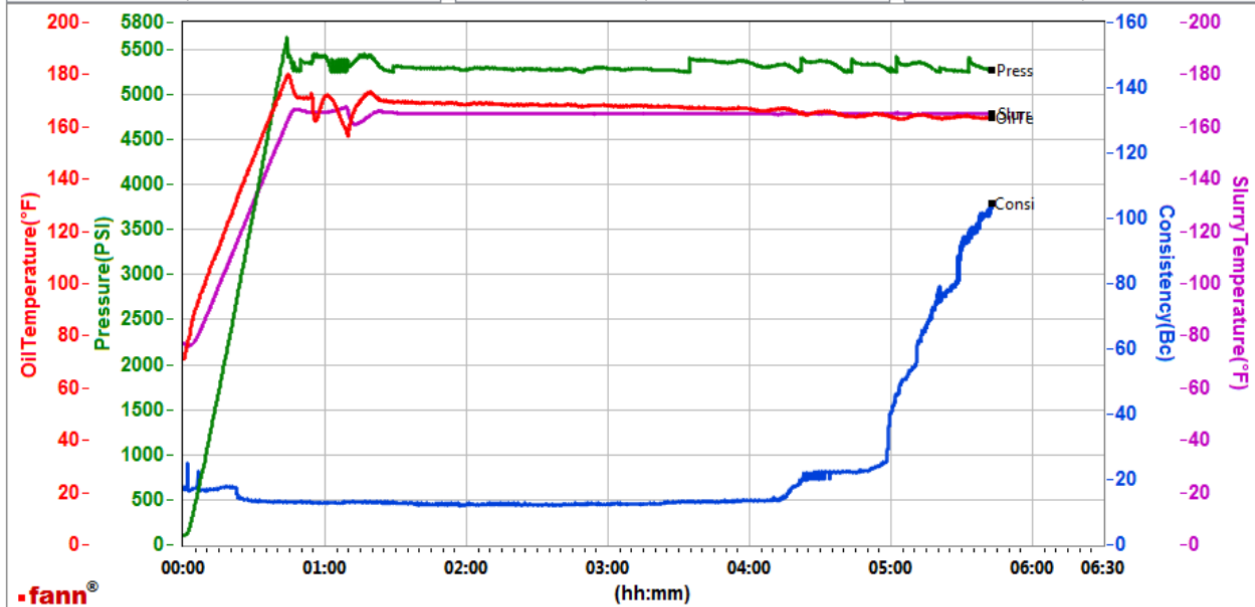
Test Temp (degF)	Pressure (psi)	Reached in (min)	30 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
165	5345	44	4:58	5:04	5:17	5:38	17	54	15	13

Grand Junction

Fields	Values
Project Name	2514761-1 H&P 522 Lara
SW Version	1.0
Test ID	35975940-TT
Request ID	GJ2514761-1
Tested by	DEBA
Customer	LARAMIE ENERGY
Well No	SUP&SHEP 0993-25-09\

Fields	Values
Rig	H&P 522
Casing/Liner Size	4.5"
Job Type	PRODUCTION CASING
Cement Weight	GCC TYPE I/II
Comments	Standard
Date Time	11/13/2018 14:55:57.482
Temp. Units	degF

Events	Results
30 BC	4:58
50 BC	5:04
70 BC	5:17
100 BC	5:38



Data File C:\Users\H185329\Desktop\000 Graphs\GJ2514761-1 LARAMIE PRODUCTION BULK LEAD.tdms

Comments Standard

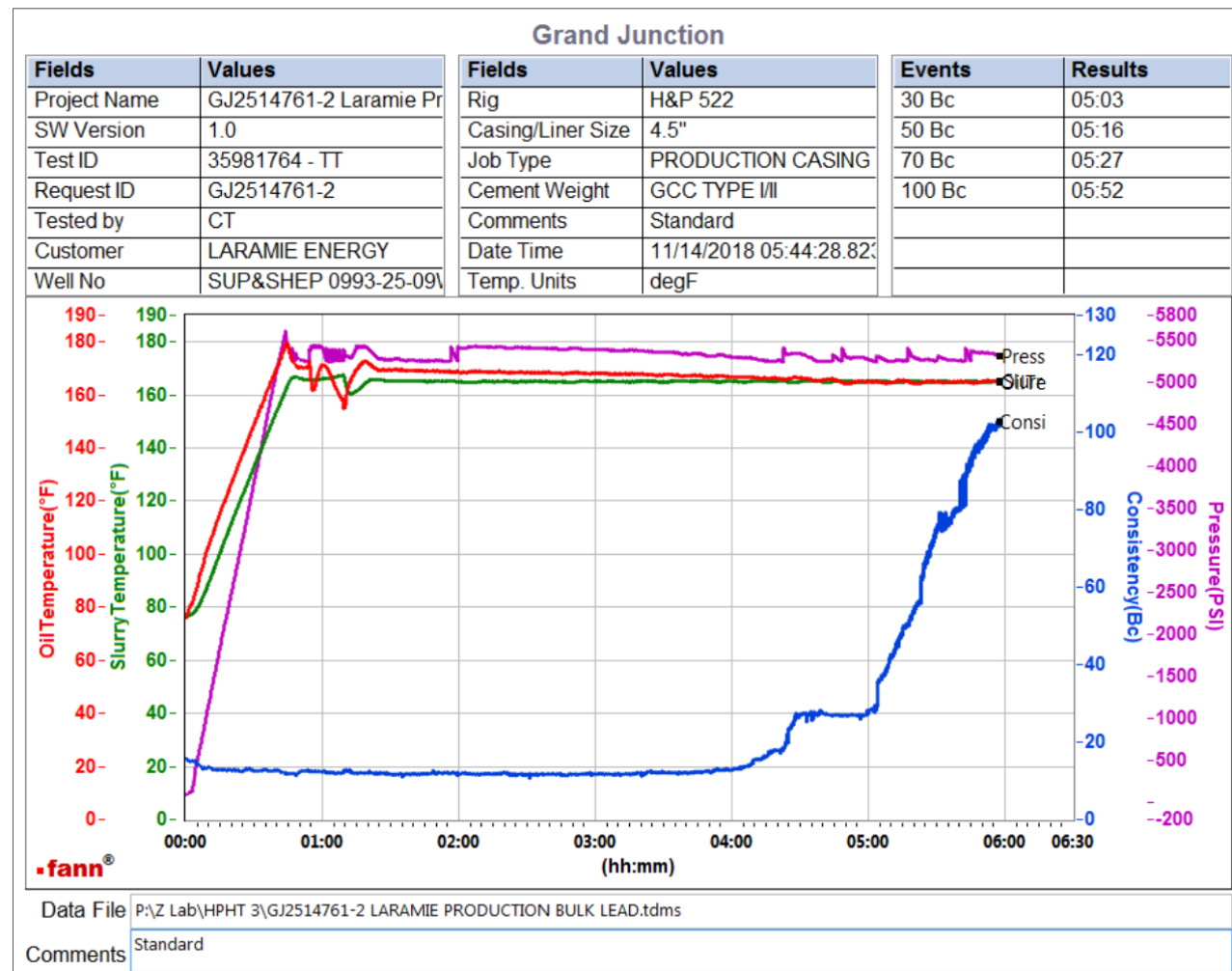
This report is the property of Halliburton Energy Services and neither it nor any part thereof, nor a copy thereof, is to be published or disclosed without first securing the expressed written approval of Halliburton. It may however be used in the course of regular business operations by any person or concern receiving such report from Halliburton. This report is for information purposes only and the content is limited to the sample described. Halliburton makes no warranties, expressed or implied, as to the accuracy of the contents or results. Any user of this report agrees Halliburton shall not be liable for any loss or damage regardless of cause, including any act or omission of Halliburton, resulting from the use hereof.

Operation Test Results Request ID 2514761/2

Thickening Time - ON-OFF-ON

14/NOV/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)
165	5345	44	5:03	5:16	5:27	5:52	17	54	15	12



Total sks = 915
CS2464, Trailer 7304, 115 sks
No deflection

This report is the property of Halliburton Energy Services and neither it nor any part thereof, nor a copy thereof, is to be published or disclosed without first securing the expressed written approval of Halliburton. It may however be used in the course of regular business operations by any person or concern receiving such report from Halliburton. This report is for information purposes only and the content is limited to the sample described. Halliburton makes no warranties, expressed or implied, as to the accuracy of the contents or results. Any user of this report agrees Halliburton shall not be liable for any loss or damage regardless of cause, including any act or omission of Halliburton, resulting from the use hereof.

HALLIBURTON

Rockies, Grand Junction

Lab Results- Tail

Job Information

Request/Slurry	2514762/1	Rig Name	H&P 522	Date	12/NOV/2018
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Sup & Shep 0993-25-09W

Well Information

Casing/Liner Size	4.5 in	Depth MD	8688 ft	BHST	114°C / 237°F
Hole Size	7.875 in	Depth TVD	8636 ft	BHCT	74°C / 165°F
Pressure	5345 psi				

Drilling Fluid Information

Mud Supplier Name	Baroid	Mud Trade Name	BARADRIL-N	Density	9.9 lbm/gal
--------------------------	--------	-----------------------	------------	----------------	-------------

Cement Information - Tail Design



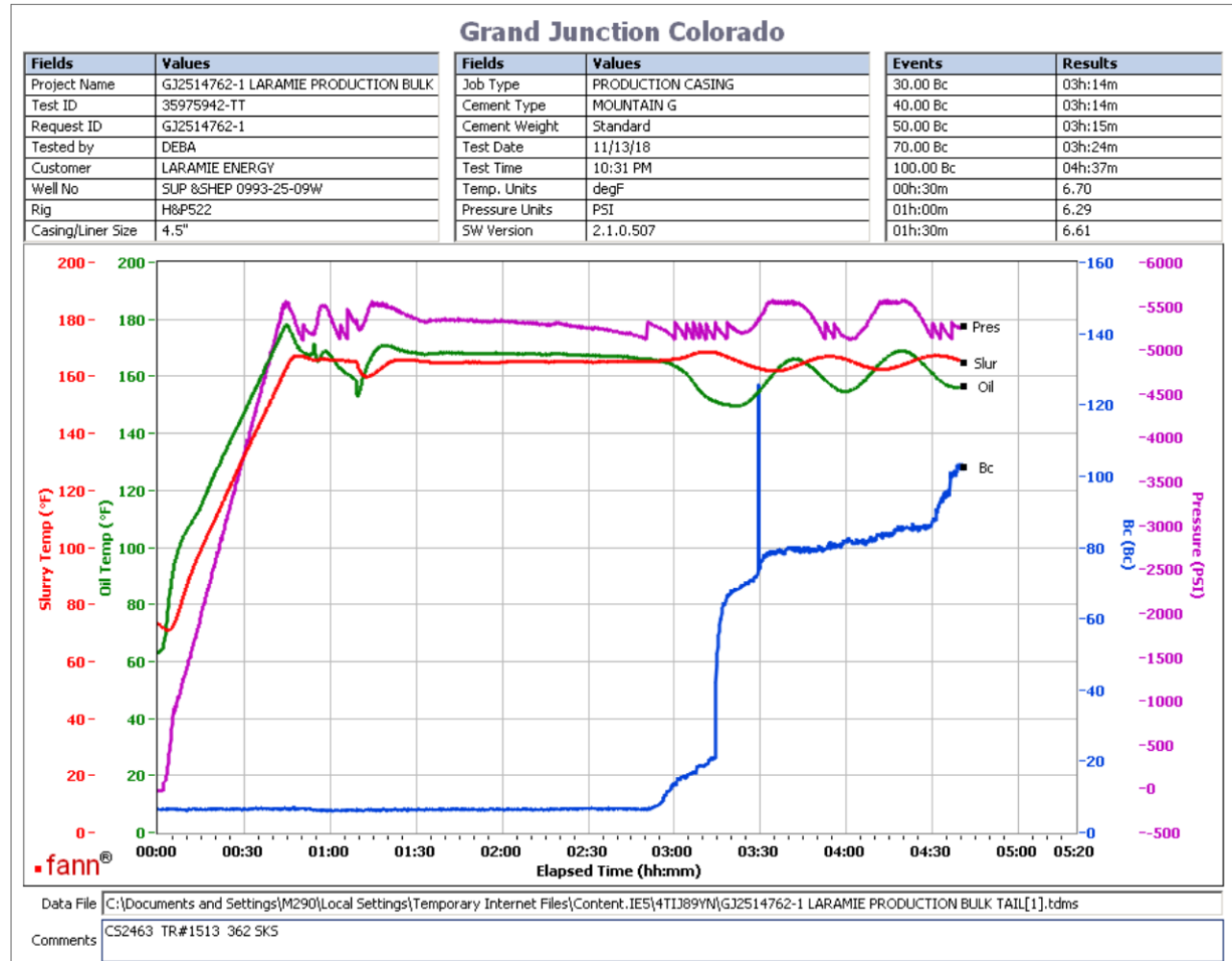
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		ThermaCem Tail				Slurry Density	13.3	lbm/gal
						Slurry Yield	1.738	ft3/sack
						Water Requirement	7.795	gal/sack
						Total Mix Fluid	7.795	gal/sack
						Water Source	Field (Fresh) Water	
						Water Chloride		

This report is the property of Halliburton Energy Services and neither it nor any part thereof, nor a copy thereof, is to be published or disclosed without first securing the expressed written approval of Halliburton. It may however be used in the course of regular business operations by any person or concern receiving such report from Halliburton. This report is for information purposes only and the content is limited to the sample described. Halliburton makes no warranties, expressed or implied, as to the accuracy of the contents or results. Any user of this report agrees Halliburton shall not be liable for any loss or damage regardless of cause, including any act or omission of Halliburton, resulting from the use hereof.

Thickening Time - ON-OFF-ON

14/NOV/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)
165	5345	44	3:14	3:15	3:24	4:37	7	54	15	6



Total sks = 362
 CS2463 TR#1513 362 SKS
 Deflection: 6 - 6

This report is the property of Halliburton Energy Services and neither it nor any part thereof, nor a copy thereof, is to be published or disclosed without first securing the expressed written approval of Halliburton. It may however be used in the course of regular business operations by any person or concern receiving such report from Halliburton. This report is for information purposes only and the content is limited to the sample described. Halliburton makes no warranties, expressed or implied, as to the accuracy of the contents or results. Any user of this report agrees Halliburton shall not be liable for any loss or damage regardless of cause, including any act or omission of Halliburton, resulting from the use hereof.