

HALLIBURTON

iCem[®] Service

Laramie Energy LLC

United States of America, COLORADO

For: Laramie

Date: Saturday, November 17, 2018

SUP & SHEP 993-25-08W Surface PJR

API #: 05-077-10571

Sincerely,

Grand Junction Cement Engineering

2.0 Real-Time Job Summary

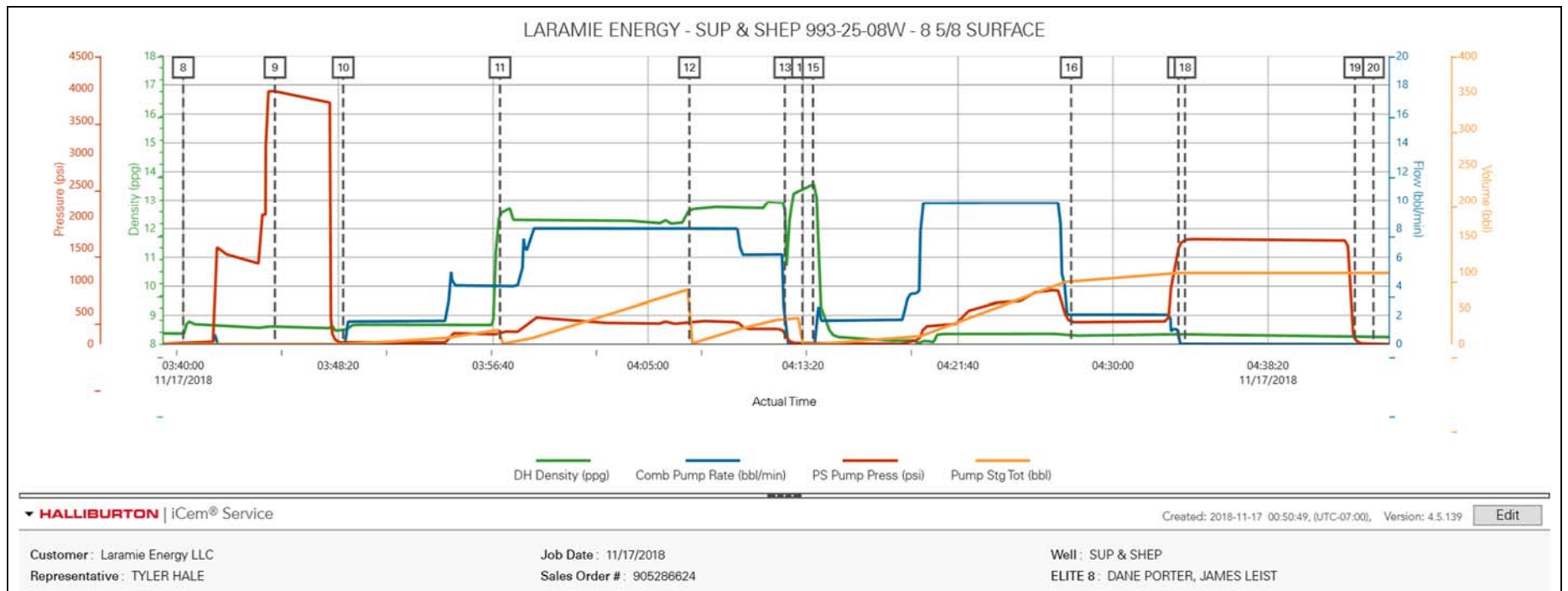
2.1 Job Event Log

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	11/16/2018	20:00:00	USER					
Event	2	Pre-Convoy Safety Meeting	11/16/2018	22:30:00	USER					JOURNEY MANAGEMENT COMPLETE, AS WELL AS JSA
Event	3	Crew Leave Yard	11/16/2018	23:00:00	USER					
Event	4	Arrive At Loc	11/17/2018	01:00:00	USER					JOURNEY MANAGEMENT CLOSED OUT. RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	11/17/2018	01:30:00	USER					
Event	6	Pre-Rig Up Safety Meeting	11/17/2018	01:45:00	USER					JSA COMPLETE
Event	7	Rig-Up Equipment	11/17/2018	02:00:00	USER					1 660, 1 ELITE, 1 UPRIGHT WATER TANK
										WATER TEST: PH-7, CL-0, TEMP-61
Event	8	Other	11/17/2018	03:00:00	USER					WELL INFO: 8 5/8 24# CASING SET AT 1547 FT., TD- 1557, HOLE- 11", MUD# 9.0#, SJ- 44.40
Event	9	Pre-Job Safety Meeting	11/17/2018	03:10:00	USER					JSA COMPLETE
Event	10	Other	11/17/2018	03:30:00	USER					MUD SCALES CHECKED WITH WATER PRIOR TO JOB.
Event	11	Start Job	11/17/2018	03:40:00	COM5					
Event	12	Test Lines	11/17/2018	03:44:56	COM5			3961.00		3961 PSI
Event	13	Pump Spacer 1	11/17/2018	03:48:36	COM5	8.33	4.00	73.00	20.00	FRESH WATER
Event	14	Pump Lead Cement	11/17/2018	03:57:02	COM5	12.50	8.00	390.00	77.50	177 SKS VARICEM, 12.3 PPG, 2.46 FT3/SK, 14.17 GAL/SK

Event	15	Pump Tail Cement	11/17/2018	04:07:13	COM5	12.80	8.00	344.00	38.00	98 SKS VARICEM, 12.8 PPG, 2.18 FT3/SK, 12.11 GAL/SK
Event	16	Shutdown	11/17/2018	04:12:21	USER					TO WASH UP ON TOP OF PLUG, AND DROP TOP PLUG
Event	17	Drop Top Plug	11/17/2018	04:13:18	COM5					AWAY
Event	18	Pump Displacement	11/17/2018	04:13:52	COM5	8.33	10.00	843.00	95.60	FRESH WATER
Event	19	Slow Rate	11/17/2018	04:27:45	USER	8.33	2.00	370.00	85.70	TO BUMP PLUG
Event	20	Bump Plug	11/17/2018	04:33:31	COM5	8.33	2.00	420.00	95.6	PLUG BUMPED ON CALULATED
Event	21	Other	11/17/2018	04:33:52	USER			1674.00		CASING TEST FOR 10 MIN. 1674 PSI
Event	22	Check Floats	11/17/2018	04:43:00	USER			1674.00		FLOATS HELD, 0.5 BBLS BACK TO TRUCK
Event	23	End Job	11/17/2018	04:44:00	COM5					GOOD RETURNS THROUGHOUT JOB, NO PIPE MOVEMENT, 25 BBLS OF CEMENT TO SURFACE
Event	24	Post-Job Safety Meeting (Pre Rig-Down)	11/17/2018	05:00:00	USER					JSA COMPLETE
Event	25	Crew Leave Location	11/17/2018	05:30:00	USER					THANK YOU FOR USING HALLIBURTON CEMENT, JAMES LEIST AND CREW

3.0 Attachments

3.1 CHART.png



HALLIBURTON

iCem[®] Service

Laramie Energy LLC

For: Laramie

Date: Tuesday, November 20, 2018

SUP & SHEP 0993-25-08W Production PJR

API # 05-077-10571-00

Sincerely,

Grand Junction Cement Engineering

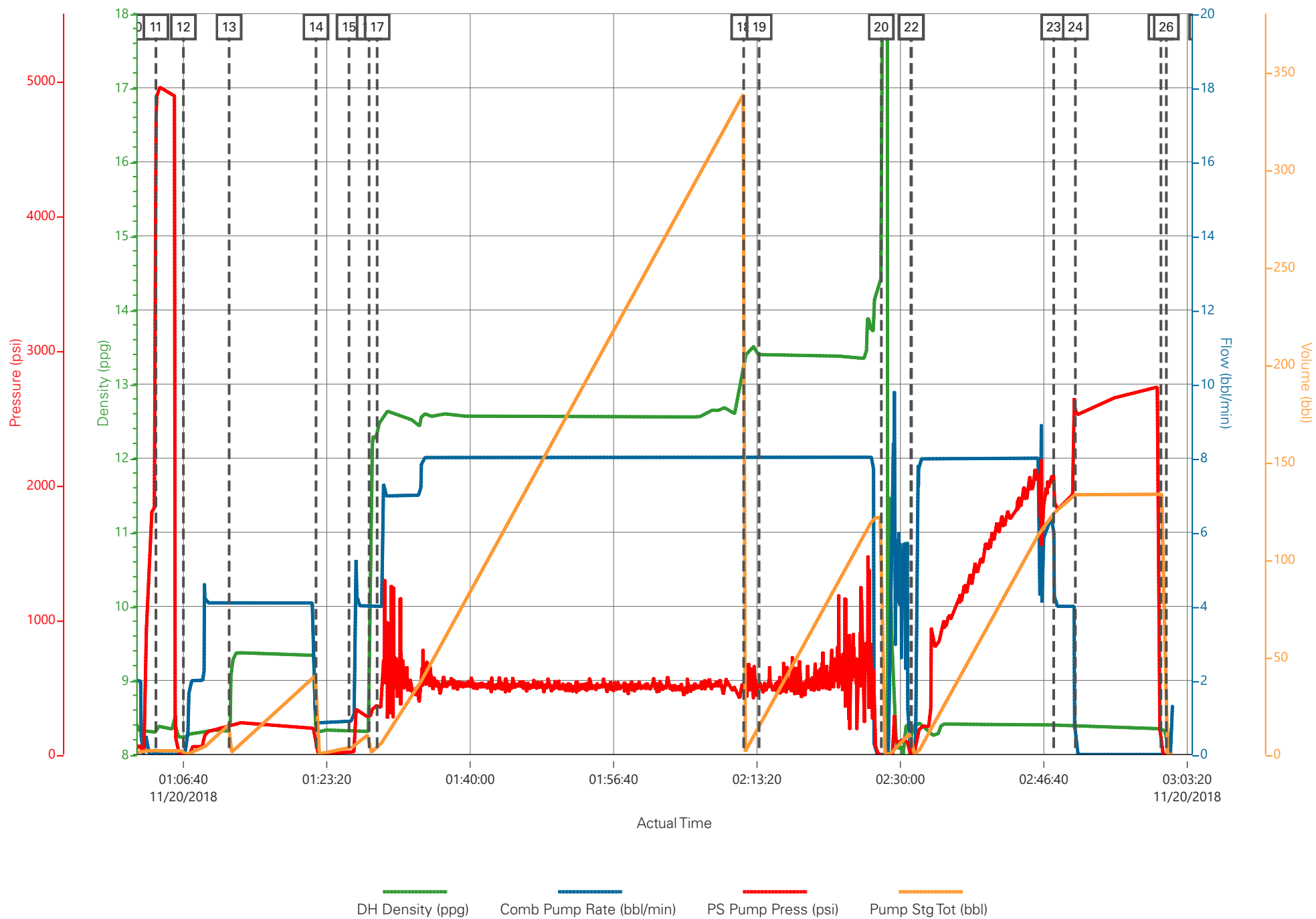
2.0 Real-Time Job Summary

2.1 Job Event Log

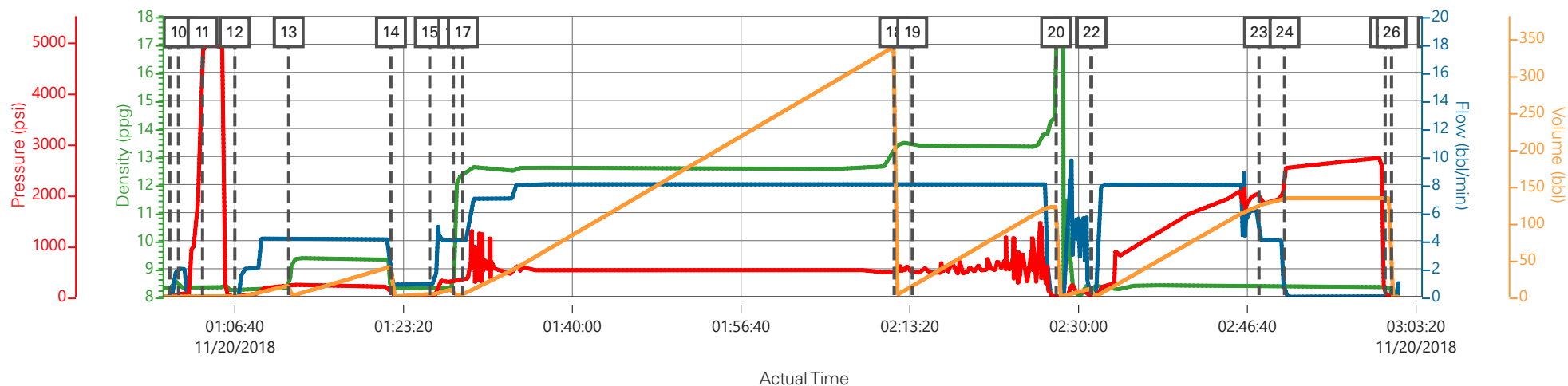
Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	11/19/2018	15:30:00	USER					REQUESTED ON LOCATION @ 21:30
Event	2	Pre-Convoy Safety Meeting	11/19/2018	18:20:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	11/19/2018	18:30:00	USER					1 HT 400 PUMP TRUCK E8, 1 660 BULK TRUCK, 1 TRANSPORT, 1 550 SERVICE PICKUP
Event	4	Arrive At Loc	11/19/2018	20:00:00	USER					RIG RUNNING CASING WHEN HES ARRIVED AT LOCATION
Event	5	Assessment Of Location Safety Meeting	11/19/2018	20:10:00	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- 62F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Pre-Rig Up Safety Meeting	11/19/2018	20:15:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	11/19/2018	20:25:00	USER					HES RIGGED UP 1 HT400 PUMP TRUCK, 1 660 BULK TRUCK, 2 CEMENT SILOS, 1 TRANSPORT, 2" DISCHARGE IRON, AND 4" SUCTION HOSE WITHOUT ENTERING RED ZONE.
Event	8	Pre-Job Safety Meeting	11/20/2018	00:45:00	USER					ALL HES EMPLOYEES AND RIG CREW PRESENT, RIG CIRCULATED @ 10 BPM PRIOR TO JOB PRESSURE @ 600 PSI. 20 UNITS OF GAS. CALIBRATED MUD SCALES ON WATER.
Event	9	Start Job	11/20/2018	01:00:15	COM6					TD 8678', TP 8668' OF 4 ½" 11.6# P110 CSG, SJ 82.32', SURFACE CSG 8 5/8" 24# J55 SET @ 1547', OH 7 7/8", MUD 9.1 PPG
Event	10	Prime Lines	11/20/2018	01:01:06	USER	8.33	2	215	2	FRESH WATER
Event	11	Test Lines	11/20/2018	01:03:28	COM6			4970		ALL LINES HELD PRESSURE AT 4970 PSI
Event	12	Pump H2O Spacer	11/20/2018	01:06:40	COM6	8.33	4	280	15	15BBLS OF FRESH WATER WITH 5LBS OF PLOY-E-FLAKE

Event	13	Super Flush	11/20/2018	01:11:59	COM6	10	4	240	20	40BBLS SUPER FLUSH
Event	14	Pump H2O Spacer	11/20/2018	01:22:05	COM6	8.33	4	340	10	10BBLS FRESH WATER
Event	15	Drop Bottom Plug	11/20/2018	01:25:55	USER					VERIFIED BY PLUG INDICATOR
Event	16	Pump Lead Cement	11/20/2018	01:28:15	COM6	12.5	8	550	318	920 SKS OF NEOCEM CMT 12.5 PPG, 1.94 FT3/SK, 9.59 GAL/SK.
Event	17	Check Weight	11/20/2018	01:29:11	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	18	Pump Tail Cement	11/20/2018	02:11:47	COM6	13.3	8	520	112.2	362 SKS THERMACEM CMT 13.3 PPG, 1.73 FT3/SK, 7.81 GAL/SK.
Event	19	Check Weight	11/20/2018	02:13:34	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	20	Clean Lines	11/20/2018	02:27:47	COM6					END OF CEMENT. CLEAN PUMPS AND LINES TO CELLAR.
Event	21	Drop Top Plug	11/20/2018	02:31:13	COM6					VERIFIED BY PLUG INDICATOR
Event	22	Pump Displacement	11/20/2018	02:31:17	COM6	8.4	8	2100	133	1 GAL MMCR IN FIRST 10 BBLS, 5 GALS CLAY WEB THROUGHOUT DISPLACEMENT, 1# BE-6 PER 20BBLS FOR THE FIRST 100BBLS
Event	23	Slow Rate	11/20/2018	02:47:49	USER	8.4	4	1820	123	SLOW RATE TO 4 BPM TO BUMP PLUG.
Event	24	Bump Plug	11/20/2018	02:50:20	COM6	8.4	4	1950	133	LANDED PLUG AT 1950 PSI, BROUGHT UP TO 2550 PSI AND HELD TEN MINS FOR CASING TEST.
Event	25	Check Floats	11/20/2018	03:00:17	USER					FLOATS HELD, 1.5 BBL BACK TO TRUCK
Event	26	End Job	11/20/2018	03:00:54	COM6					RETURNS THROUGHOUT JOB, RETURNS SLOWED AT 80BBLS GONE ON DISPLACEMENT. 40 BBLS OF SUPER FLUSH TO SURFACE. 40# OF SUGAR USED.
Event	27	Post-Job Safety Meeting (Pre Rig-Down)	11/20/2018	03:05:00	USER					ALL HES PRESENT
Event	28	Rig Down Lines	11/20/2018	03:10:00	USER					ALL HES PRESENT
Event	29	Pre-Convoy Safety Meeting	11/20/2018	04:30:00	USER					ALL HES PRESENT
Event	30	Crew Leave Location	11/20/2018	04:40:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENT, SHAWN BLOSSOM AND CREW

LARAMIE SUP&SHEP 993-25-08W, 4.5" PRODUCTION



LARAMIE SUP&SHEP 993-25-08W, 4.5" PRODUCTION



—— 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)
11 Test Lines	01:03:28	8.37	0.00	4459.30	2.00
12 Pump H2O Spacer	01:06:40	8.24	0.00	-5.70	2.00
13 Super Flush	01:11:59	8.30	4.00	212.30	15.40
14 Pump H2O Spacer	01:22:05	8.34	0.80	72.30	40.50
15 Drop Bottom Plug	01:25:55	8.33	0.90	11.30	3.40
16 Pump Lead Cement	01:28:15	8.33	4.00	272.30	0.00
17 Check Weight	01:29:11	12.36	4.00	358.30	3.80
18 Pump Tail Cement	02:11:47	13.28	8.00	506.30	0.10
19 Check Weight	02:13:34	13.40	8.00	492.30	14.50
20 Clean Lines	02:27:47	15.07	0.00	-11.70	121.60
21 Drop Top Plug	02:31:13	7.89	0.00	-2.70	10.60
22 Pump Displacement	02:31:17	8.33	0.00	-8.70	0.00
23 Slow Rate	02:47:49	8.40	6.40	1998.30	123.70
24 Bump Plug	02:50:20	8.39	0.00	2526.30	133.50
25 Check Floats	03:00:17	8.34	0.00	60.30	133.50
26 End Job	03:00:54	8.32	0.00	-20.70	0.00

▼ HALLIBURTON | iCem® Service

Created: 2018-11-19 21:44:33, (UTC-07:00), Version: 5.0.161.0

Edit

Customer : Laramie Energy LLC

Job Date : 11/20/2018

Well : SUP & SHEP 0993-25-08W

Representative : TYLER HALE

Sales Order # : 905290719

ELITE 8 : PSALAZAR/S.BLOSSOM

Job Information

Request/Slurry	2515739/1	Rig Name	H&P 522	Date	16/NOV/2018
Submitted By	Connor Matthews	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Sup & Shep 0993-25-08W

Well Information

Casing/Liner Size	4.5 in	Depth MD	8723 ft	BHST	114°C / 237°F
Hole Size	7.875 in	Depth TVD	8642 ft	BHCT	74°C / 165°F
Pressure	5349 psi				

Drilling Fluid Information

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

Cement Information - Lead Design



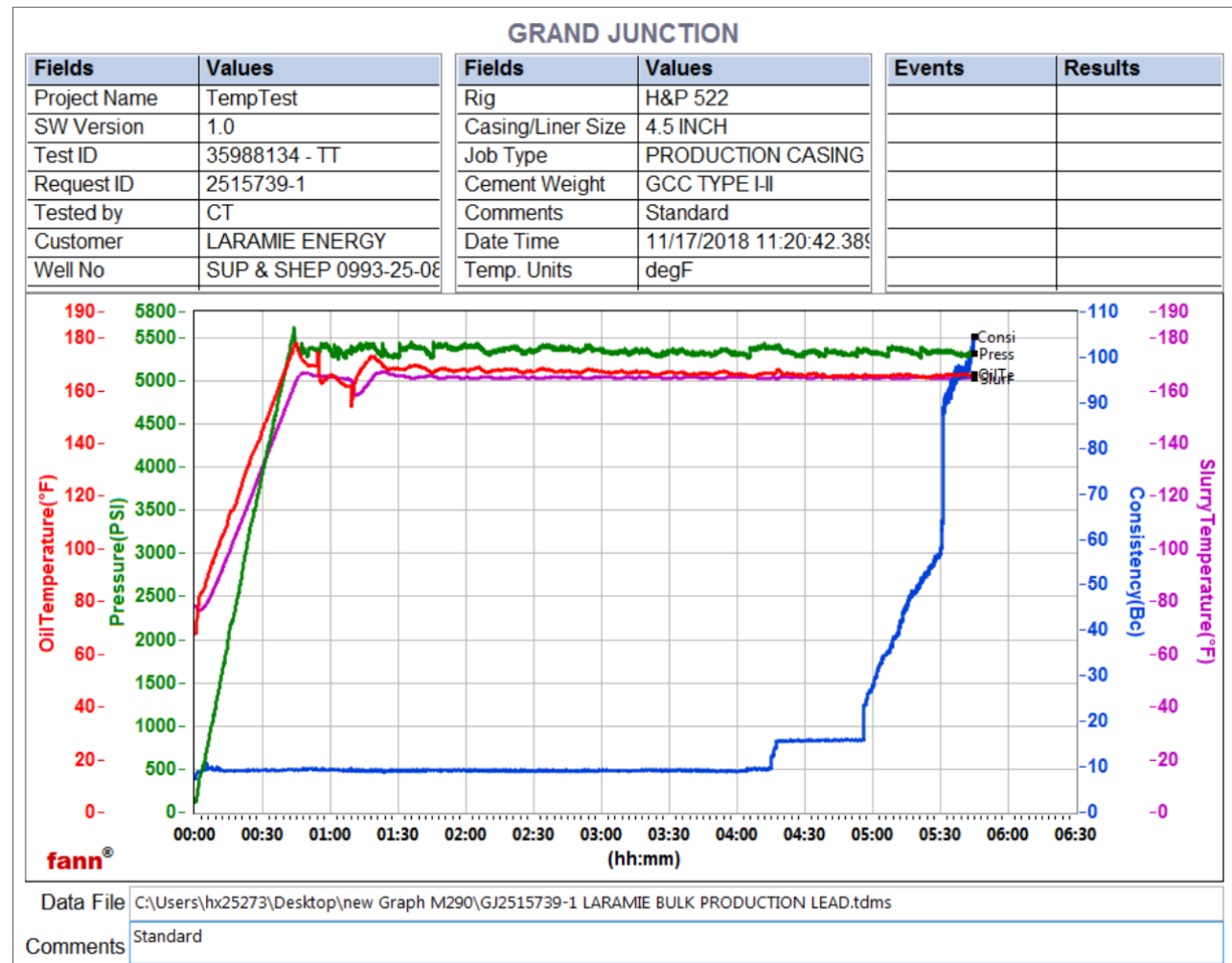
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		NeoCem Lead				Slurry Density	12.5	lbm/gal
						Slurry Yield	1.946	ft3/sack
						Water Requirement	9.615	gal/sack
						Total Mix Fluid	9.615	gal/sack
						Water Source	Field (Fresh)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

18/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	5349	44	5:01	5:20	5:30	5:43	7	54	15	9



Total sks = 920
 CS2475, Trailer 8678, 400 sks
 CS2477, Trailer 2878, 400 sks
 CS2479, Trailer 7304 - Front Pod, 120 sks
 Deflection: 9 - 9

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	2515740/1	Rig Name	H&P 522	Date	16/NOV/2018
Submitted By	Connor Matthews	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Sup & Shep 0993-25-08W

Well Information

Casing/Liner Size	4.5 in	Depth MD	8723 ft	BHST	114°C / 237°F
Hole Size	7.875 in	Depth TVD	8642 ft	BHCT	74°C / 165°F
Pressure	5349 psi				

Drilling Fluid Information

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

Cement Information - Tail Design



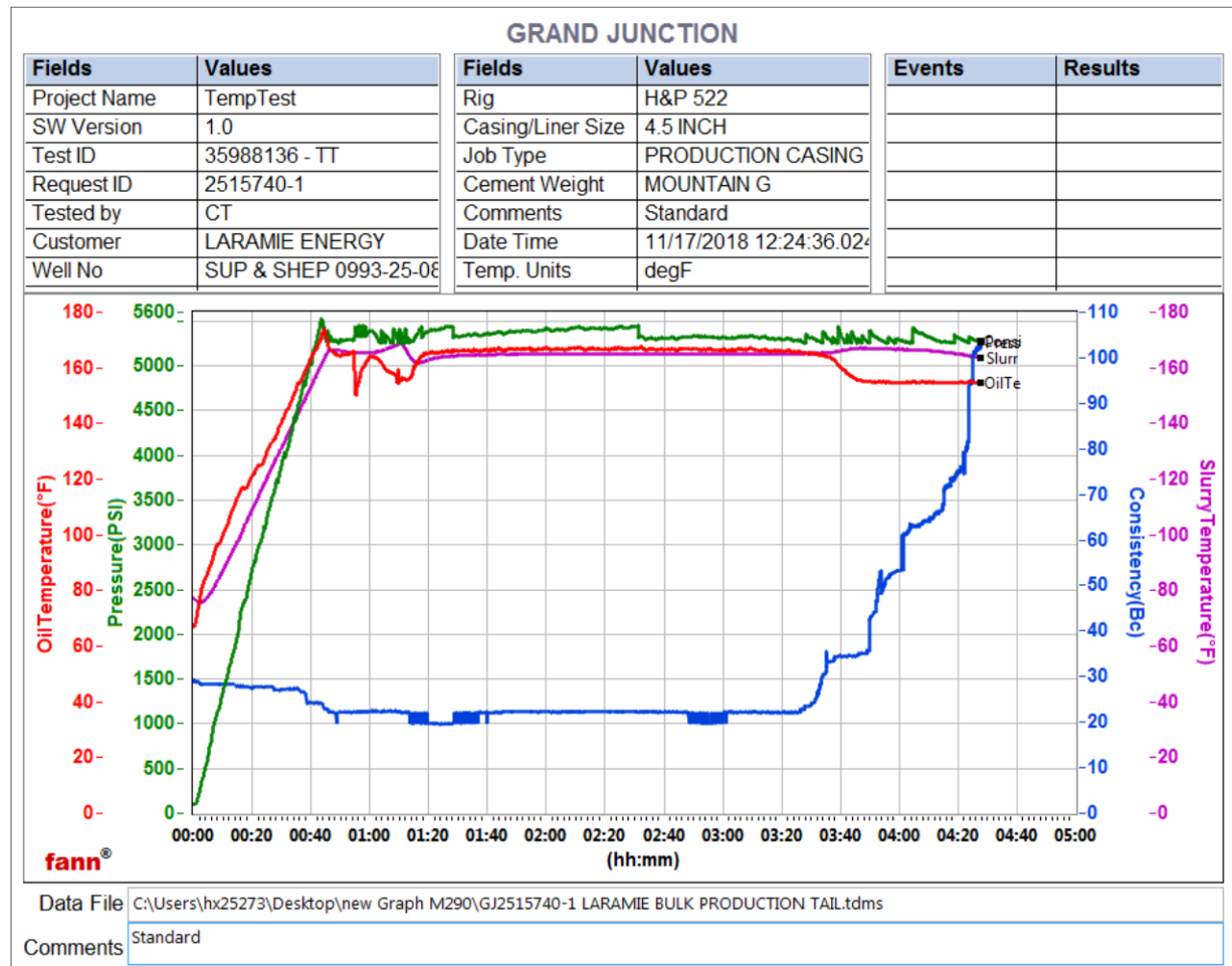
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		ThermaCem Tail				Slurry Density	13.3	lbm/gal
						Slurry Yield	1.738	ft3/sack
						Water Requirement	7.795	gal/sack
						Total Mix Fluid	7.795	gal/sack
						Water Source	Field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

18/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	5349	44	3:34	3:49	4:15	4:25	29	54	15	22



Total sks = 362
 CS2481, Trailer 1513, 362 sks
 Deflection:20Bc--- > 22Bc
 Please note heat of hydration at 3:35

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.