

HALLIBURTON

iCem[®] Service

LARAMIE ENERGY II LLC

For: Laramie

Date: Thursday, September 13, 2018

BCU 0993-21-07W Surface PJR

API #: 05-077-10526-00

Sincerely,

Grand Junction Cement Engineering

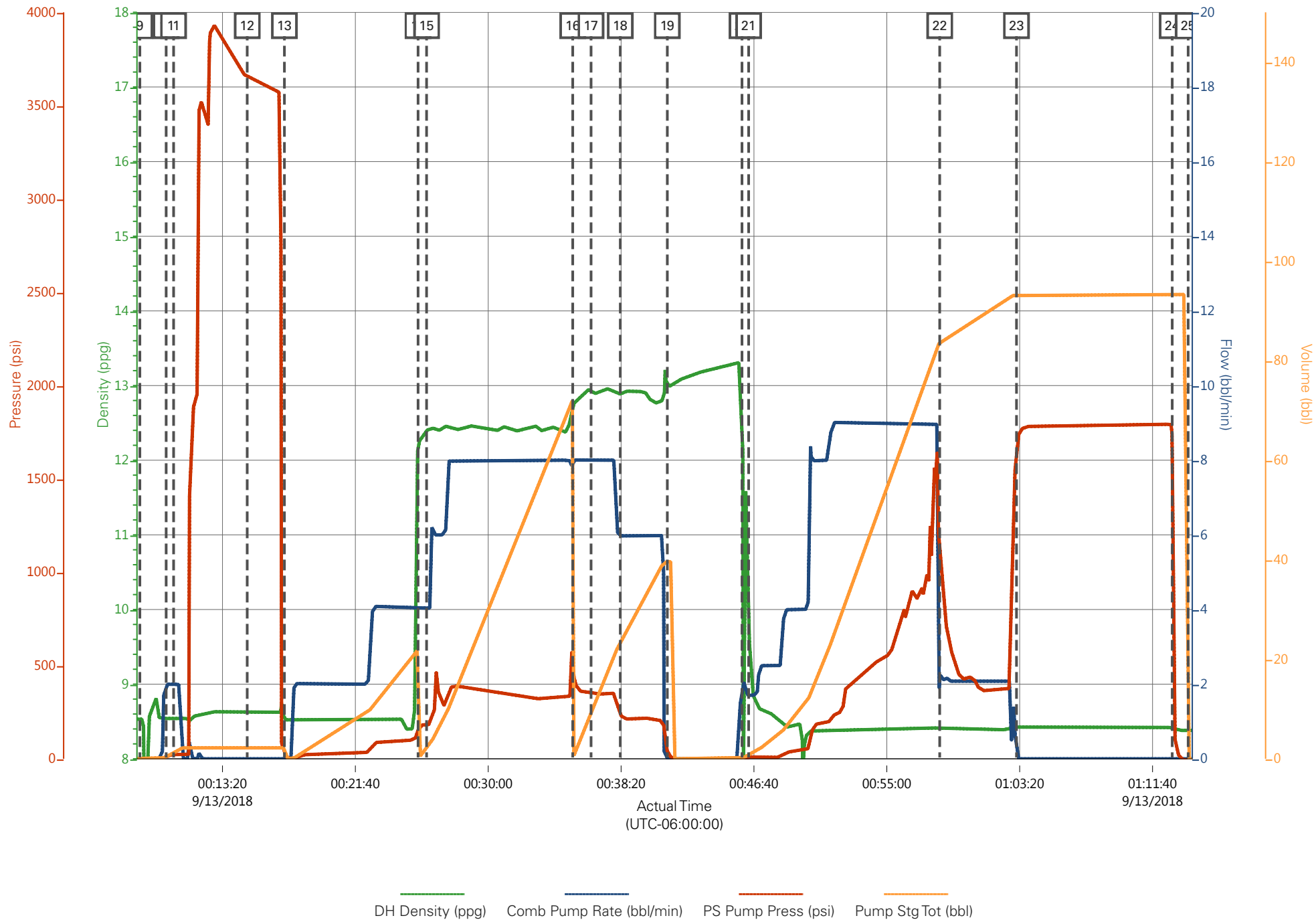
2.0 Real-Time Job Summary

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	9/12/2018	17:30:00	USER					REQUESTED ON LOCATION @ 23:30
Event	2	Pre-Convoy Safety Meeting	9/12/2018	19:30:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	9/12/2018	19:45:00	USER					1 HT 400 PUMP TRUCK E1, 1 660 BULK TRUCK, 1 550 SERVICE PICKUP
Event	4	Arrive At Loc	9/12/2018	22:00:00	USER					RIG RUNNING CASING WHEN HES ARRIVED AT LOCATION
Event	5	Assessment Of Location Safety Meeting	9/12/2018	22:10:00	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- 72F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Pre-Rig Up Safety Meeting	9/12/2018	22:15:00	USER					ALL HES PRESENT
Event	7	Rig-Up Equipment	9/12/2018	22:17:41	USER					HES RIGGED UP 1 HT400 PUMP TRUCK, 1 660 BULK TRUCK, 2" DISCHARGE IRON, AND 4" SUCTION HOSE WITHOUT ENTERING RED ZONE.
Event	8	Pre-Job Safety Meeting	9/13/2018	00:00:01	USER					ALL HES EMPLOYEES AND RIG CREW PRESENT, RIG CIRCULATED @ 10 BPM PRIOR TO JOB PRESSURE @ 290 PSI.CALIBRATED MUD SCALES ON FRESH WATER.
Event	9	Start Job	9/13/2018	00:08:09	COM6					TD-1598', TP-1588', SJ-45.51', CSG-8.625" 32# J55, OH-11", MUD-9.1PPG
Event	10	Prime Lines	9/13/2018	00:09:48	USER	8.33	2	45	2	FRESH WATER
Event	11	Drop Bottom Plug	9/13/2018	00:10:16	USER					VERIFIED BY FLAG INDICATOR
Event	12	Test Lines	9/13/2018	00:14:53	USER			3660		ALL LINES HELD PRESSURE AT 3660 PSI

Event	13	Pump H2O Spacer	9/13/2018	00:17:13	COM6	8.33	4	100	20	FRESH WATER
Event	14	Pump Lead Cement	9/13/2018	00:25:36	COM6	12.3	8	400	66.4	171 SKS VARICEM GJ5 CMT 12.3 PPG, 2.46 FT3/SK, 14.17 GAL/SK
Event	15	Check Weight	9/13/2018	00:26:08	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	16	Pump Tail Cement	9/13/2018	00:35:18	COM6	12.8	8	466	36.5	94 SKS VARICEM GJ5 CMT 12.8 PPG, 2.18 FT3/SK, 12.11 GAL/SK
Event	17	Check Weight	9/13/2018	00:36:27	COM6					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	18	Slow Rate	9/13/2018	00:38:17	USER					SLOWED TO END CEMENT
Event	19	Shutdown	9/13/2018	00:41:14	USER					END OF CEMENT, WASH UP ON TOP OF PLUG.
Event	20	Pump Displacement	9/13/2018	00:45:55	COM6	8.33	9	1400	93.9	FRESH WATER
Event	21	Drop Top Plug	9/13/2018	00:46:20	USER					VERIFIED BY FLAG INDICATOR
Event	22	Slow Rate	9/13/2018	00:58:19	USER	8.33	2	380	83.9	SLOW RATE TO 2 BPM TO BUMP PLUG
Event	23	Bump Plug	9/13/2018	01:03:08	COM6	8.33	2	400	93.9	LAND PLUG AT 400 PSI, BROUGHT UP TO 1800 PSI AND HELD FOR TEN MINS FOR CASING TEST
Event	24	Check Floats	9/13/2018	01:12:54	USER					FLOATS HELD, 1 BBL BACK TO TRUCK
Event	25	End Job	9/13/2018	01:13:54	COM6					RETURNS THROUGHOUT JOB, 10 BBLs CMT TO SURFACE. 40# OF SUGAR USED
Event	26	Post-Job Safety Meeting (Pre Rig-Down)	9/13/2018	01:15:00	USER					ALL HES PRESENT
Event	27	Rig Down Lines	9/13/2018	01:20:00	USER					ALL HES PRESENT
Event	28	Pre-Convoy Safety Meeting	9/13/2018	02:30:00	USER					ALL HES PRESENT
Event	29	Crew Leave Location	9/13/2018	02:40:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENT, SHAWN BLOSSOM AND CREW

Custom Results



HALLIBURTON

iCem[®] Service

Laramie Energy LLC

United States of America, COLORADO

Date: Monday, September 24, 2018

BCU 0993-21-07W Production

Laramie BCU 0993-21-07W Production

API# 05-077-10526-00

Job Date: Saturday, September 15, 2018

Sincerely,

Grand Junction Cement Engineering

1.0 Real-Time Job Summary

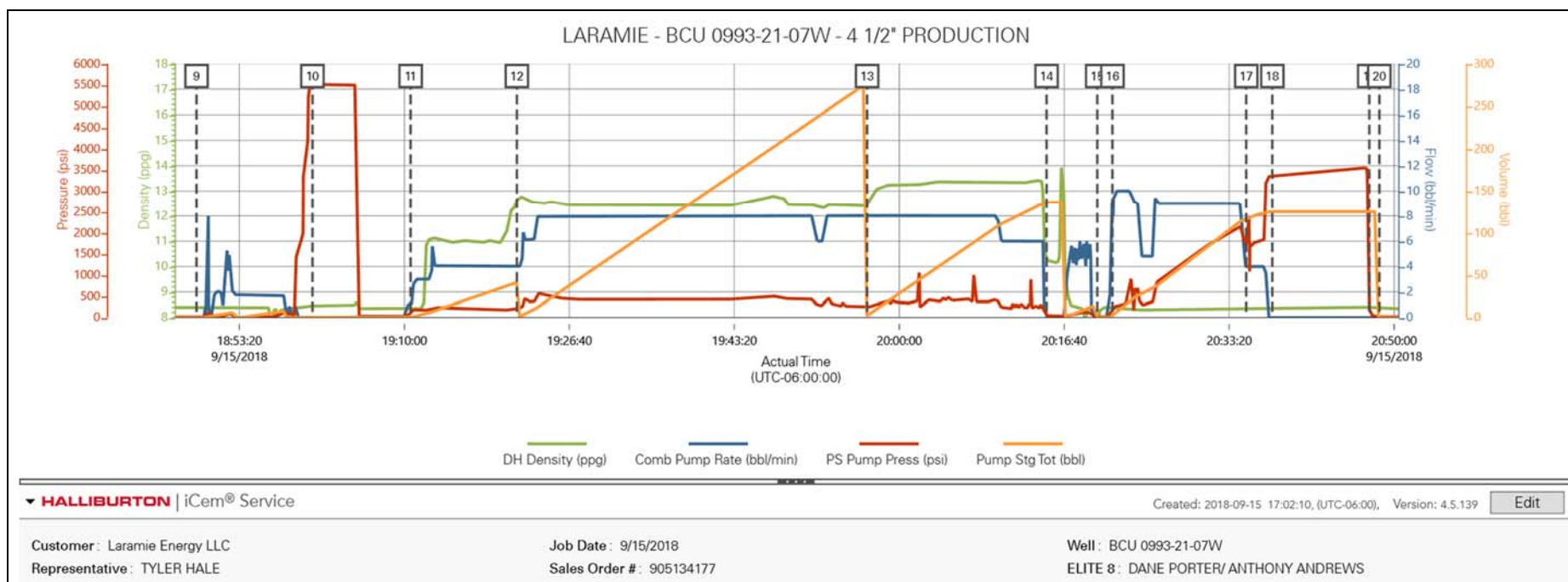
1.1 Job Event Log

Type	Seq. No.	Activity	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	9/15/2018	11:00:00	USER					
Event	2	Pre-Convoy Safety Meeting	9/15/2018	13:55:00	USER					
Event	3	Crew Leave Yard	9/15/2018	14:00:00	USER					
Event	4	Arrive At Loc	9/15/2018	16:00:00	USER					REQUESTED ON LOC TIME WAS 1700, CREW ARRIVED AT 1600, RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	9/15/2018	16:05:00	USER					
Event	6	Other	9/15/2018	16:10:00	USER					
Event	7	Rig-Up Equipment	9/15/2018	16:15:00	USER					
Event	8	Pre-Job Safety Meeting	9/15/2018	18:30:00	USER					
Event	9	Start Job	9/15/2018	18:49:00	COM5					TD: 7710 TP: 7700 SJ: 78.5' MW: 9.1 PPG 4 1/2" 11.6#/FT CSG IN 7 7/8" OH WATER TEST: PH: 7 POTASSIUM: 700 CHLORIDES: 0 SULFATES: <200 TEMP: 72 DEGREES. PRESSURIZED MUD SCALES VERIFIED ON DRINKING WATER PRIOR TO JOB.
Event	10	Test Lines	9/15/2018	19:00:43	COM5			5000.00		5000 PSI TEST SUCCESSFUL
Event	11	Pump Spacer 1	9/15/2018	19:10:38	COM5	11.00	4.00	238.00	40.00	40 BBL TUNED SPACER @ 11.0 PPG. DROPPED BOTTOM PLUG ON THE FLY AT THE END OF SPACER
Event	12	Pump Lead Cement	9/15/2018	19:21:22	COM5	12.50	8.00	619.00	220.80	639 SKS @ 12.5 PPG 1.94 YLD 9.59 GAL/SK H2O

Event	13	Pump Tail Cement	9/15/2018	19:56:45	COM5	13.30	8.00	227.00	108.50	350 SKS @ 13.3 PPG 1.75 YLD 7.8 GAL/SK H2O
Event	14	Shutdown	9/15/2018	20:14:53	USER					SHUTDOWN, CLEAN LINES TO CELLAR
Event	15	Drop Top Plug	9/15/2018	20:20:00	USER					PLUG AWAY
Event	16	Pump Displacement	9/15/2018	20:21:32	COM5	8.33	10.00	2370.00	118.10	FRESH H2O DISPLACEMENT WITH MMCR, CLAY-WEB, BACTERIACIDE (CUSTOMER SUPPLIED)
Event	17	Slow Rate	9/15/2018	20:35:03	USER	8.33	4.00	1703.00	108.00	
Event	18	Bump Plug	9/15/2018	20:37:41	COM5	8.33	4.00	3363.00	118.1	PLUG BUMPED AT CALCULATED DISPLACEMENT, PRESSURED UP TO 3000 PSI FOR A 10 MIN CASING TEST
Event	19	Check Floats	9/15/2018	20:47:29	USER					FLOATS HELD, GAINED 1.5 BBL BACK TO PUMP
Event	20	End Job	9/15/2018	20:48:30	COM5					
Event	21	Post-Job Safety Meeting (Pre Rig-Down)	9/15/2018	20:55:00	USER					
Event	22	Rig-Down Equipment	9/15/2018	21:00:00	USER					GOOD CIRCULATION THROUGHOUT JOB. PIPE WAS LEFT STATIC. CIRCULATED 8 BBL TUNED SPACER TO SURFACE. TOP AND BOTTOM PLUGS USED. NO SUGAR USED, NO ADD HOURS CHARGED.
Event	23	Pre-Convoy Safety Meeting	9/15/2018	22:15:00	USER					
Event	24	Crew Leave Location	9/15/2018	22:30:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENTING OF GRAND JCT, CO ANTHONY ANDREWS AND CREW

2.0 Attachments

2.1 905134177-Custom Results.png



Job Information

Request/Slurry	2499812/1	Rig Name	H&P 522	Date	08/SEP/2018
Submitted By	Patrick Ealey	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	BCU 0993-21-07W

Well Information

Casing/Liner Size	4.5 in	Depth MD	7700 ft	BHST	100°C / 212°F
Hole Size	7.875 in	Depth TVD	7694 ft	BHCT	61°C / 142°F
Pressure	4686 psi				

Drilling Fluid Information

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

Cement Information - Lead Design



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

Operation Test Results Request ID 2499812/1

Thickening Time - ON-OFF-ON

13/SEP/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)
142	4686	40	5:38	6:47	6:47	6:47	7	50	15	10

Total sks = 639

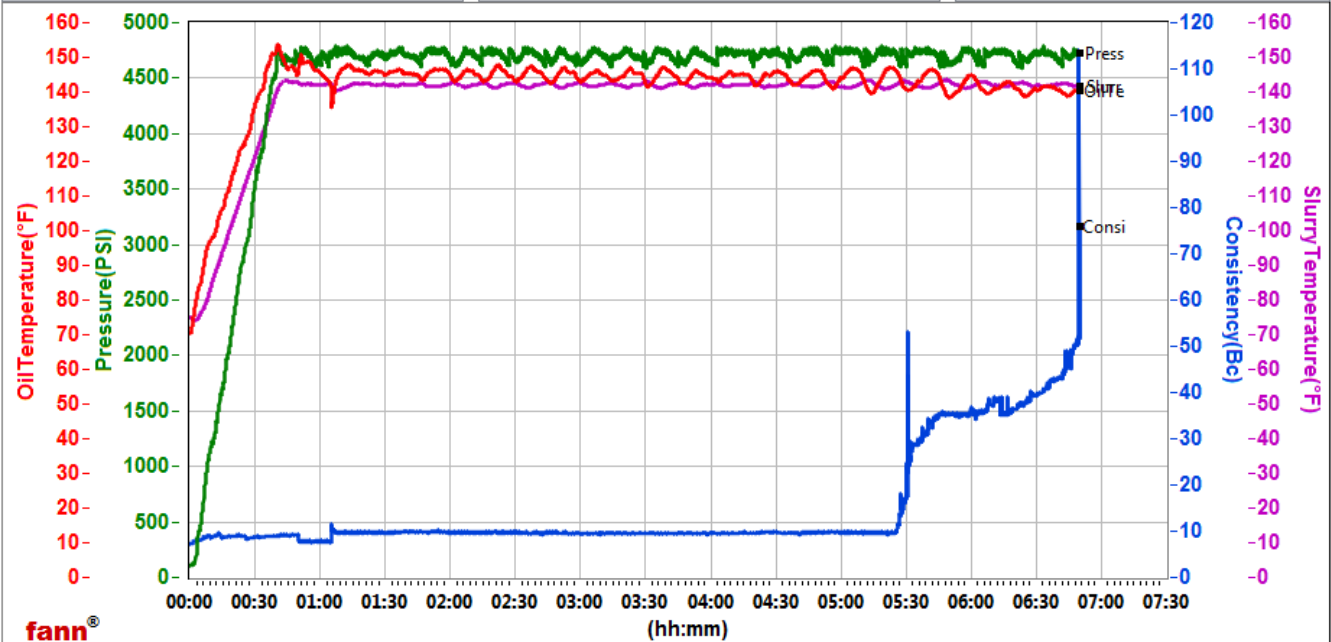
CS2019, Trailer 2878, 319.5 sks

CS2021, Trailer 1513, 319.5 sks

deflected from 7Bc--- > 10Bc

GRAND JUNCTION LAB

Fields	Values	Fields	Values	Events	Results
Project Name	TempTest	Rig	H&P 522		
SW Version	1.0	Casing/Liner Size	4.5 INCH		
Test ID	35803392 - TT	Job Type	PRODUCTION CASING		
Request ID	2499812-1	Cement Weight	GCC TYPE III		
Tested by	CT	Comments	Light Weight		
Customer	LARAMIE ENERGY	Date Time	9/12/2018 15:12:08.572		
Well No	BCU 0993-21-07W	Temp. Units	degF		



Data File C:\Users\hx25273\Desktop\new Graph M290\GJ24999812-1 LARAMIE BULK PRODUCTION LEAD.tdms

Comments Light Weight

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	2499813/1	Rig Name	H&P 522	Date	08/SEP/2018
Submitted By	Patrick Ealey	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	BCU 0993-21-07W

Well Information

Casing/Liner Size	4.5 in	Depth MD	7700 ft	BHST	100°C / 212°F
Hole Size	7.875 in	Depth TVD	7694 ft	BHCT	61°C / 142°F
Pressure	4686 psi				

Drilling Fluid Information

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

Cement Information - Tail Design



Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
		ThermaCem				Slurry Density	13.3	lbm/gal
						Slurry Yield	1.737	ft3/sack
						Water Requirement	7.785	gal/sack
						Total Mix Fluid	7.785	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.

Operation Test Results Request ID 2499813/1

Thickening Time - ON-OFF-ON

13/SEP/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)
142	4686	40	3:52	4:19	4:56	5:49	16	53	15	13

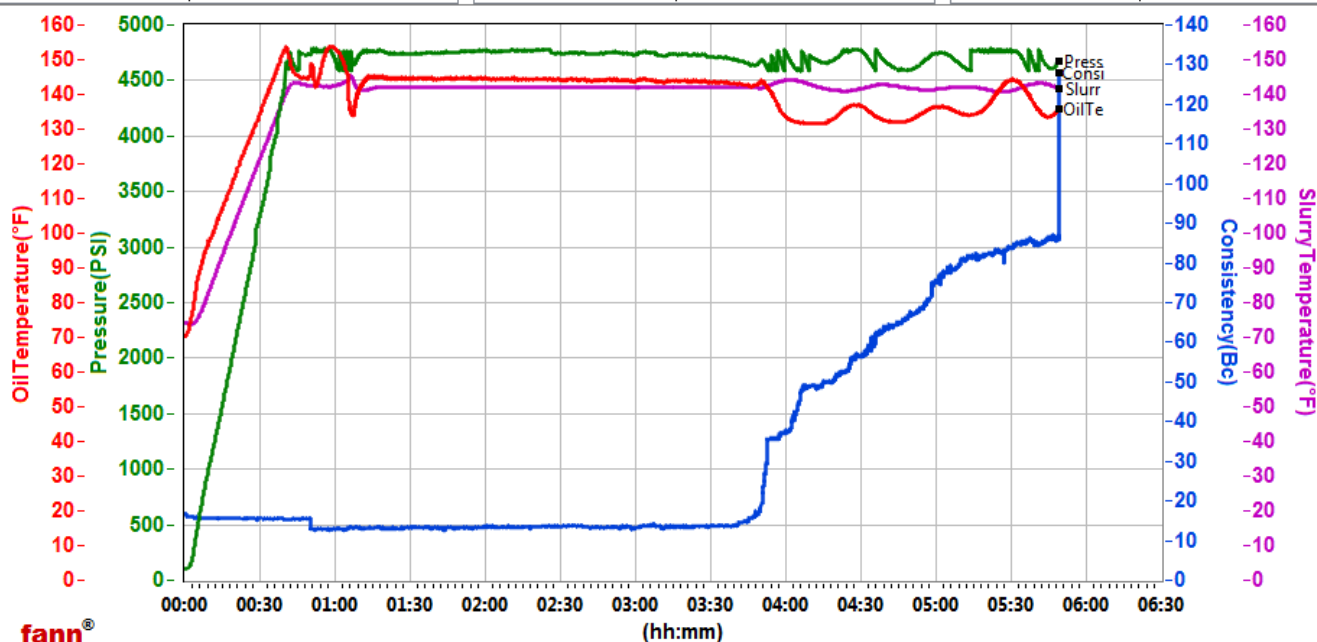
Total sks = 350

CS2018, Trailer 8476, 350 sks

no deflection, 15BC---- > 13Bc please note heat of hydration at 3:50

GRAND JUNCTION

Fields	Values	Fields	Values	Events	Results
Project Name	TempTest	Rig	H&P 522		
SW Version	1.0	Casing/Liner Size	4.5 INCH		
Test ID	35803394 - TT	Job Type	PRODUCTION CASING		
Request ID	2499813-1	Cement Weight	MOUNTAIN G		
Tested by	CT	Comments	Standard		
Customer	LARAMIE ENERGY	Date Time	9/12/2018 12:27:24.396		
Well No	BCU 0993-21-07W	Temp. Units	degF		



Data File C:\Users\hx25273\Desktop\new Graph M290\GJ2499813-1 LARAMIE BULK PRODUCTION TAIL.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.