

HALLIBURTON

iCem[®] Service

LARAMIE ENERGY LLC

For: Chuck Mallary

Date: Thursday, July 20, 2017

Gunderson 20-08W Surface PJR

API# 05-077-10340-00

Sincerely,

Grand Junction Cement Engineering

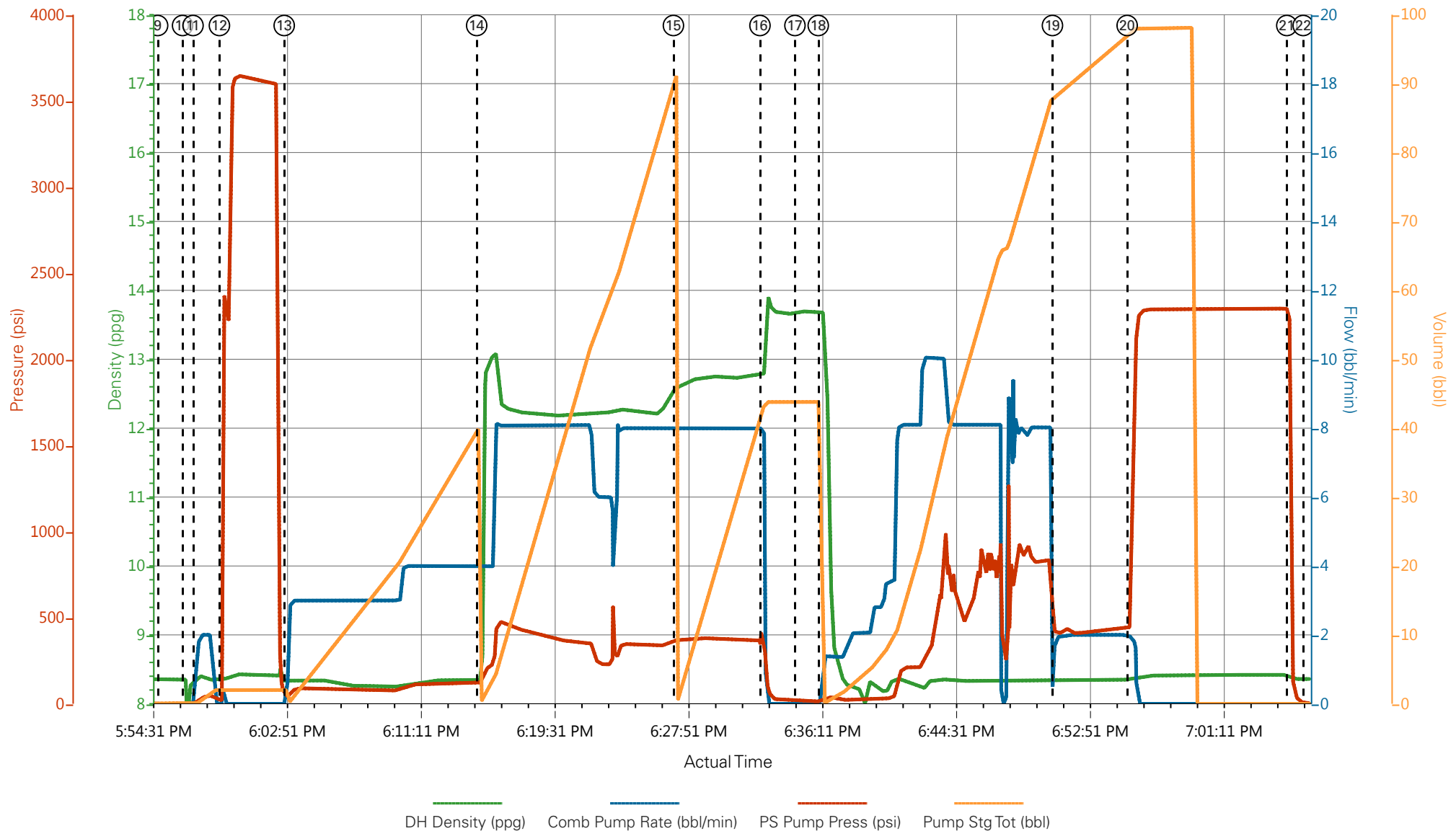
2.0 Real-Time Job Summary

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	7/20/2017	09:30:00	USER					ELITE #4
Event	2	Pre-Convoy Safety Meeting	7/20/2017	12:00:00	USER					ALL HES EMPLOYEES
Event	3	Arrive At Loc	7/20/2017	14:30:00	USER					ARRIVED ON LOCATION 1 HOUR EARLY, RIG RUNNING CASING
Event	4	Meet With Company Rep	7/20/2017	14:35:00	USER					COMPANY REP OFFERED SDS / WATER TEST: TEMP: 73 PH: 7 CHLORIDES: 0 IRON: 0 SULFATES: <200
Event	5	Assessment Of Location Safety Meeting	7/20/2017	14:45:00	USER					ALL HES EMPLOYEES
Event	6	Pre-Rig Up Safety Meeting	7/20/2017	14:50:00	USER					ALL HES EMPLOYEES
Event	7	Rig-Up Equipment	7/20/2017	17:00:00	USER					1 HT-400 PUMP TRUCK 1 660 BULK TRUCK 1 F-550
Event	8	Pre-Job Safety Meeting	7/20/2017	17:45:00	USER					ALL HES EMPLOYEES AND RIG CREW RIG CIRCULATED FOR 30 MINUTES ON BOTTOM @ 10.5 BPM PRESSURE @ 450 PSI
Event	9	Start Job	7/20/2017	17:55:00	COM5					TD: 1565 TP: 1554.1 SJ: 45 CSG: 8 5/8 24# J-55 OH: 11 MUD WT: 9.2 PPG
Event	10	Drop Bottom Plug	7/20/2017	17:56:33	USER					PLUG AWAY NO PROBLEMS
Event	11	Prime Lines	7/20/2017	17:57:12	COM5	8.33	2.0	44	2.0	PRIME LINES WITH 2 BBLS FRESH WATER
Event	12	Test Lines	7/20/2017	17:58:50	COM5	8.33	0.0	3643	2.0	PRESSURE TEST OK
Event	13	Pump Fresh Water	7/20/2017	18:02:52	COM5	8.33	4.0	120	40	PUMP 40 BBL FRESH WATER SPACER

Spacer										
Event	14	Pump Lead Cement	7/20/2017	18:14:52	COM5	12.3	8.0	364	86.3	197 SKS 12.3 PPG 2.46 YIELD 14.17 GAL/SK LEAD CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	15	Pump Tail Cement	7/20/2017	18:27:07	COM5	12.8	8.0	377	42.3	109 SKS 12.8 PPG 2.18 YIELD 12.11 GAL/SK TAIL CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	16	Shutdown	7/20/2017	18:32:30	USER					SHUTDOWN TO DROP TOP PLUG
Event	17	Drop Top Plug	7/20/2017	18:34:41	COM5					PLUG AWAY NO PROBLEMS, WASHED UP ON TOP OF THE PLUG AS PER COMPANY REP
Event	18	Pump Displacement	7/20/2017	18:36:08	COM5	8.33	10.0,8.0	900	96	FRESH WATER DISPLACEMENT
Event	19	Slow Rate	7/20/2017	18:50:43	USER	8.33	2.0	450	86	SLOW RATE TO BUMP PLUG
Event	20	Bump Plug	7/20/2017	18:55:22	COM5	8.33	2.0	2294	96	PSI BEFORE BUMPING PLUG @ 450 BUMPED PLUG UP TO 2100 FOR 10 MINUTE CSG TEST PRESSURE UP TO 2294 PSI PRIOR TO CHECKING FLOATS
Event	21	Check Floats	7/20/2017	19:05:18	USER					FLOATS HELD, 1 BBL BACK TO DISPLACEMENT TANKS
Event	22	End Job	7/20/2017	19:06:20	COM5					GOOD RETURNS THROUGHOUT JOB PIPE STATIC THROUGHOUT JOB 21 BBLs OF CEMENT TO SURFACE RIG USED 40#s OF SUGAR
Event	23	Pre-Rig Down Safety Meeting	7/20/2017	19:15:00	USER					ALL HES EMPLOYEES
Event	24	Rig-Down Equipment	7/20/2017	19:25:00	USER					
Event	25	Pre-Convoy Safety Meeting	7/20/2017	20:25:00	USER					ALL HES EMPLOYEES
Event	26	Crew Leave Location	7/20/2017	20:30:00	USER					THANK YOU FOR USING HALLIBURTON CEMENT, DUSTIN SMITH AND CREW

LARAMIE - GUNDERSON BCU 20-08W - 8 5/8 SURFACE



- | | | | | |
|---|--------------------------|---------------------------|--------------------------------|------------------------------|
| ① Call Out | ⑦ Rig-Up Equipment | ⑬ Pump Fresh Water Spacer | ⑲ Slow Rate | 25 Pre-Convoy Safety Meeting |
| ② Pre-Convoy Safety Meeting | ⑧ Pre-Job Safety Meeting | ⑭ Pump Lead Cement | 20 Bump Plug | 26 Crew Leave Location |
| ③ Arrive At Loc | ⑨ Start Job | ⑮ Pump Tail Cement | 21 Check Floats | |
| ④ Meet With Company Rep | ⑩ Drop Bottom Plug | ⑯ Shutdown | 22 End Job | |
| ⑤ Assessment Of Location Safety Meeting | ⑪ Prime Lines | ⑰ Drop Top Plug | 23 Pre-Rig Down Safety Meeting | |
| ⑥ Pre-Rig Up Safety Meeting | ⑫ Test Lines | ⑱ Pump Displacement | 24 Rig-Down Equipment | |

▼ **HALLIBURTON** | iCem® Service

Created: 2017-07-20 10:07:35, Version: 4.2.393

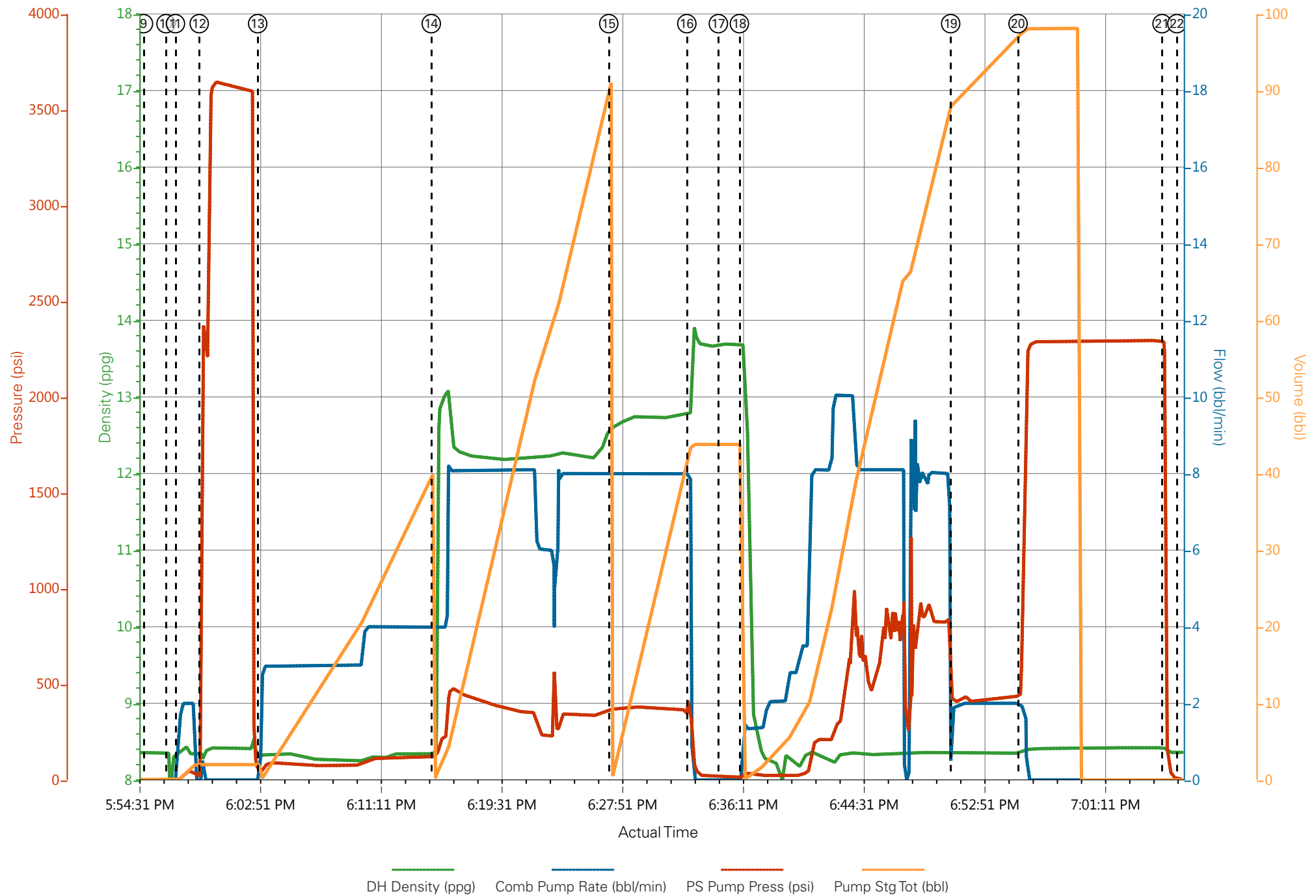
Edit

Customer : LARAMIE ENERGY II LLC
Representative : TYLER HALE

Job Date : 7/20/2017 4:04:39 PM
Sales Order # : 0904174120

Well : GUNDERSON BCU 20-08W
ELITE# 4 : DUSTIN SMITH / WES GOWEN

LARAMIE - GUNDERSON BCU 20-08W - 8 5/8 SURFACE



HALLIBURTON

iCem[®] Service

LARAMIE ENERGY LLC

For: Chuck Mallary

Date: Sunday, July 23, 2017

Gunderson 20-08W Production PJR

API #05-077-10340-00

Sincerely,

Grand Junction Cement Engineering

1.0 Real-Time Job Summary

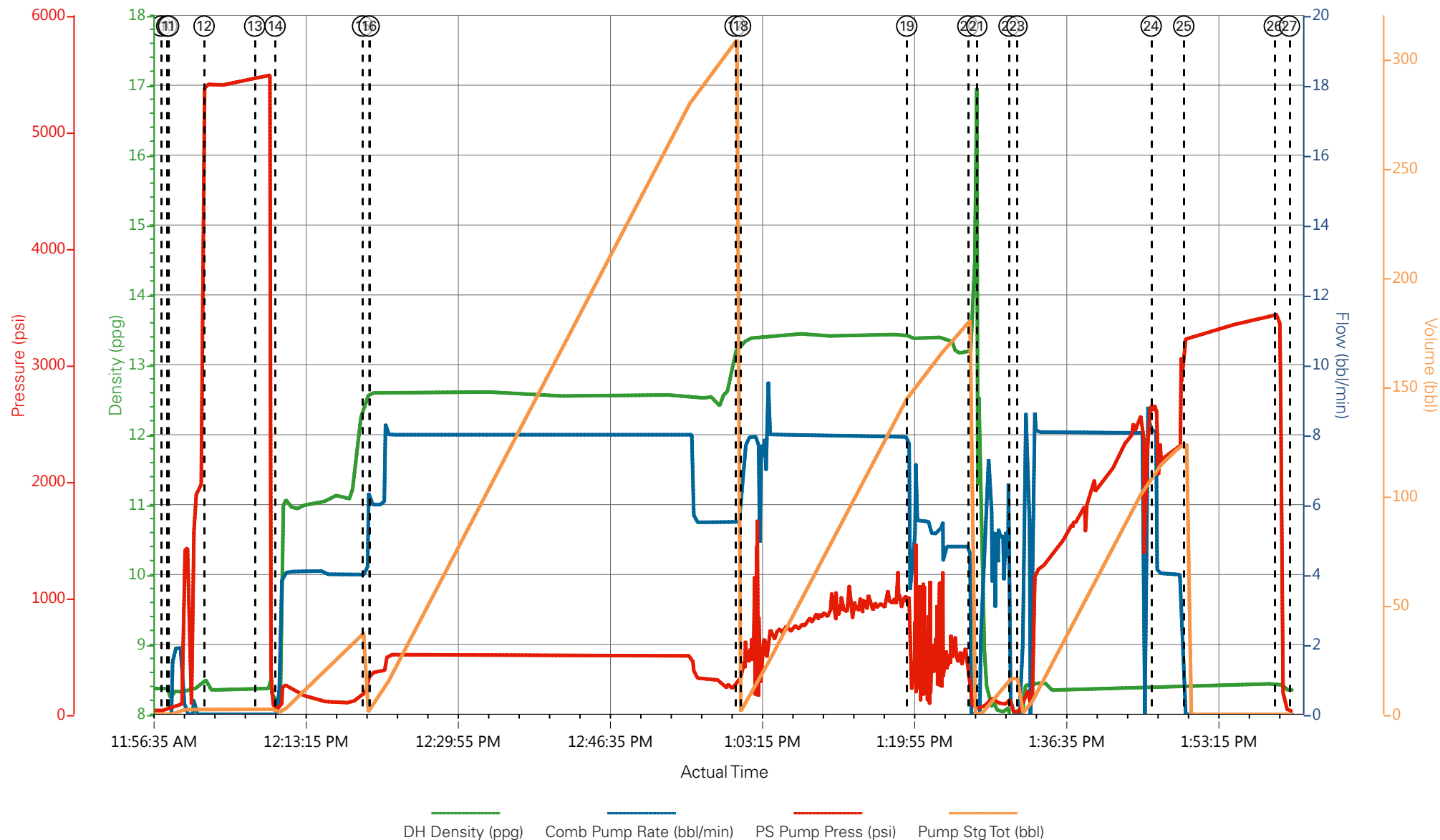
1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	7/23/2017	05:00:00	USER					REQUESTED ON LOCATION @ 11:00
Event	2	Pre-Convoy Safety Meeting	7/23/2017	07:45:00	USER					ALL HES EMPLOYEES PRESENT
Event	3	Crew Leave Yard	7/23/2017	08:00:00	USER					1 HT 400 PUMP TRUCK E8, 1 660 BULK TRUCK, 1 450 SERVICE PICKUP
Event	4	Arrive At Loc	7/23/2017	10:30:00	USER					RIG RUNNING CASING, ALMOST DONE WHEN HES ARRIVED ON LOCATION
Event	5	Assessment Of Location Safety Meeting	7/23/2017	10:45:00	USER					MET WITH COMP REP, AND WENT OVER NUMBERS AND JOB PROCEDURE. WALKED AROUND LOCATION AND COLLECTED WATER SAMPLE (PH- 7.5, CHLORIDES- 0, TEMP- 68F). COMP REP WAS OFFERED SDS FOR ALL CHEMICLES USED BY HES.
Event	6	Spot Equipment	7/23/2017	11:00:00	USER					1 HT 400 PUMP TRUCK E8, 1 660 BULK TRUCK, 1 450 SERVICE PICKUP
Event	7	Pre-Rig Up Safety Meeting	7/23/2017	11:15:00	USER					ALL HES EMPLOYEES PRESENT
Event	8	Pre-Job Safety Meeting	7/23/2017	11:30:00	USER					ALL HES EMPLOYEES AND RIG CREW PRESENT, RIG CIRCULATED @ 10.5 BPM PRIOR TO JOB PRESSURE @ 850 PSI.
Event	9	Start Job	7/23/2017	11:57:45	COM5					TD 7672', TP 7662' OF 4 ½" 11.6# CSG, SJ 90.78', SURFACE CSG 8 5/8" 24# J55 SET @ 1554', OH 8 7/8", MUD 9.1 PPG

Event	10	Drop Bottom Plug	7/23/2017	11:58:22	USER					VERIFIED BY FLAG INDICATOR
Event	11	Prime Lines	7/23/2017	11:58:34	USER	8.33	2.0	95	2	FRESH WATER
Event	12	Pressure Test	7/23/2017	12:02:27	USER			5445		PRESSURE HELD. MIXED UP TUNED SPACER DURING PRESSURE TEST
Event	13	Check weight	7/23/2017	12:08:00	COM5					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	14	Pump Tuned Spacer III	7/23/2017	12:10:14	COM5	11.0	4.0	250	40	40 BBL TUNED SPACER III, 11 PPG, 4.86 FT3/SK, 31.9 GAL/SK
Event	15	Pump Lead Cement	7/23/2017	12:19:49	COM5	12.5	8.0	500	271	784 SKS OF NEOCEM CMT 12.5 PPG, 1.94 FT3/SK, 9.6 GAL/SK.
Event	16	Check weight	7/23/2017	12:20:32	COM5					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	17	Pump Tail Cement	7/23/2017	13:00:38	COM5	13.3	8.0	900	132	427 SKS NEOCEM CMT 13.3 PPG, 1.73 FT3/SK, 7.81 GAL/SK.
Event	18	Check weight	7/23/2017	13:01:14	COM5					WEIGHT VERIFIED VIA PRESSUREIZED MUD SCALES
Event	19	Slow Rate	7/23/2017	13:19:26	USER					SLOWED TO END CMT
Event	20	Shutdown	7/23/2017	13:26:08	COM5					END OF CMT
Event	21	Clean Pump And Lines	7/23/2017	13:27:07	USER					WASHED UP INTO CELLUR
Event	22	Drop Top Plug	7/23/2017	13:30:39	USER					VERIFIED BY FLAG INDICATOR
Event	23	Pump Displacement	7/23/2017	13:31:31	COM5	8.4	8.0	2670	107.4	1 GAL MMCR IN FIRST 10 BBLS, 5 GALS CLAY WEB THROUGHT DISPLACEMENT
Event	24	Slow Rate	7/23/2017	13:46:13	USER	8.4	4.0	2220	10	SLOWED TO BUMP PLUG
Event	25	Bump Plug	7/23/2017	13:49:47	COM5	8.4	4.0	2300	117.4	BUMPED PLUG @ 2300 PSI BROUGHT UP TO 3200 PSI FOR A 10 MIN CSG TEST

Event	26	Check Floats	7/23/2017	13:59:42	USER	3430	FLOATS HELD, 1.5 BBL FLOW BACK TO TANK
Event	27	End Job	7/23/2017	14:01:22	USER		RETURNS THROUGHOUT JOB. 40 BBL TUNED SPACER III TO SURFACE. USED 30 LBS SUGAR
Event	28	Post-Job Safety Meeting (Pre Rig-Down)	7/23/2017	14:15:00	USER		ALL HES EMPLOYEES PRESENT
Event	29	Pre-Convoy Safety Meeting	7/23/2017	15:45:00	USER		GRABBED THE BAIL BASKETT THAT WAS LEFT BEHIND ON A PREVIOUS JOB. NO HES EQUIPMENT LEFT ON LOCATION
Event	30	Crew Leave Location	7/23/2017	16:00:00	USER		THANK YOU FOR CHOOSING HALLIBURTON CEMENT, DUSTIN HYDE AND CREW

LARAMIE, GUNDERSON 20-08W, 4 1/2" PRODUCTION



- | | | | | | |
|---|-----------------------------|-------------------------|--------------------|-------------------------|---|
| ① Call Out | ⑥ Spot Equipment | ⑪ Prime Lines | ⑯ Check weight | 21 Clean Pump And Lines | 26 Check Floats |
| ② Pre-Convoy Safety Meeting | ⑦ Pre-Rig Up Safety Meeting | ⑫ Pressure Test | ⑰ Pump Tail Cement | 22 Drop Top Plug | 27 End Job |
| ③ Crew Leave Yard | ⑧ Pre-Job Safety Meeting | ⑬ Check weight | ⑱ Check weight | 23 Pump Displacement | 28 Post-Job Safety Meeting (Pre Rig-Down) |
| ④ Arrive At Loc | ⑨ Start Job | ⑭ Pump Tuned Spacer III | ⑲ Slow Rate | 24 Slow Rate | 29 Pre-Convoy Safety Meeting |
| ⑤ Assessment Of Location Safety Meeting | ⑩ Drop Bottom Plug | ⑮ Pump Lead Cement | 20 Shutdown | 25 Bump Plug | 30 Crew Leave Location |

▼ **HALLIBURTON** | iCem® Service

Created: 2017-07-23 10:57:45, Version: 4.2.393

Edit

Customer : LARAMIE ENERGY II LLC

Job Date : 7/23/2017

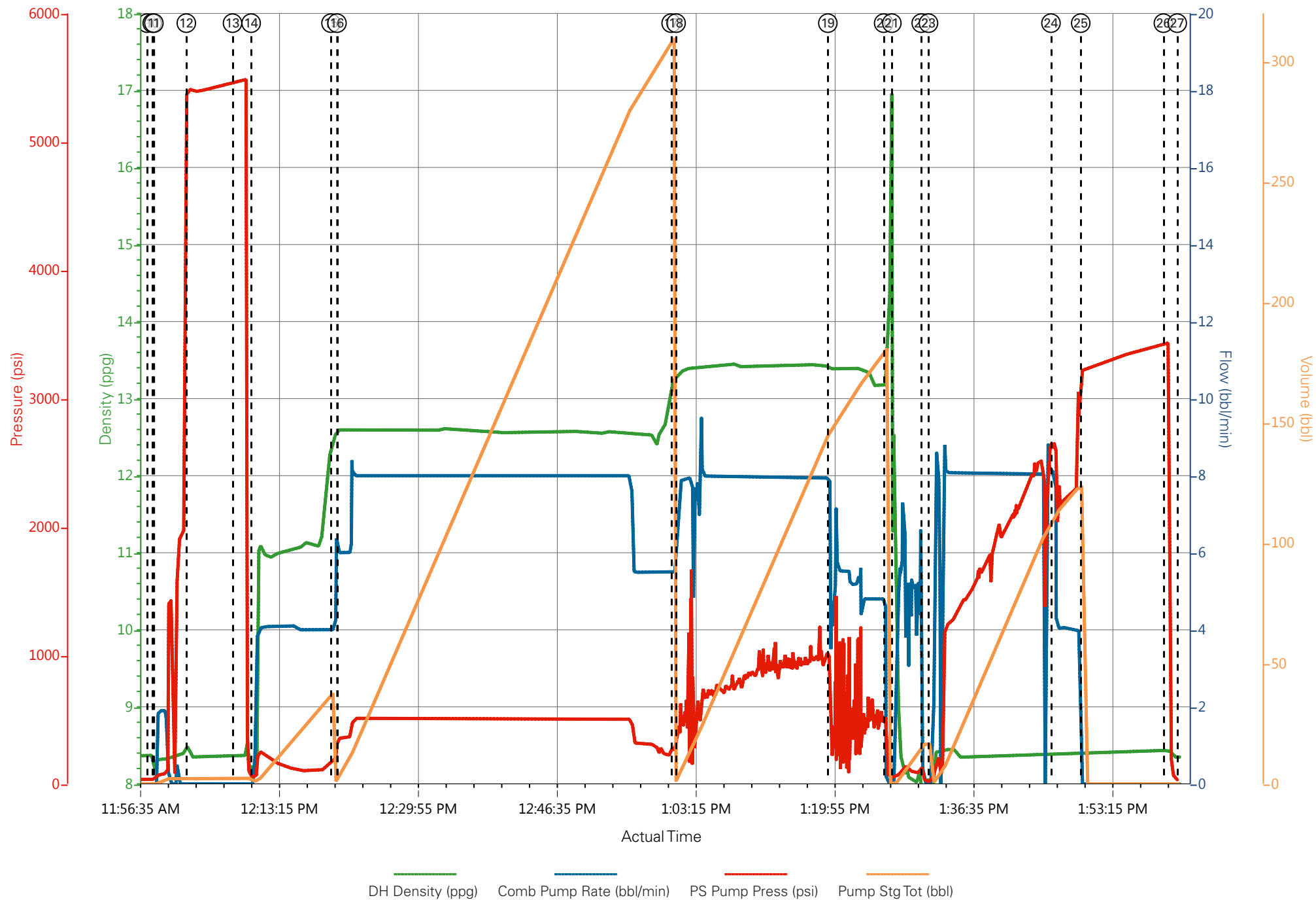
Well : GUNDERSON 20-08W

Representative : TYLER HALE

Sales Order # : 904184935

ELITE 8 : HYDE / ANGELO

LARAMIE, GUNDERSON 20-08W, 4 1/2" PRODUCTION



Job Information

Request/Slurry	2403658/1	Rig Name	H&P 522	Date	21/JUL/2017
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Gunderson 20-08W

Well Information

Casing/Liner Size	4.5 in	Depth MD	7664 ft	BHST	113°C / 235°F
Hole Size	7.875 in	Depth TVD	7539 ft	BHCT	76°C / 168°F
Pressure	4580 psi				

Drilling Fluid Information

Mud Supplier Name	Baroid	Mud Trade Name	BARADRIL-N	Density	9.9 lbm/gal
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Cement Information - Lead Design



Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
						Slurry Density	12.5	lbm/gal
						Slurry Yield	1.941	ft3/sack
						Water Requirement	9.623	gal/sack
						Total Mix Fluid	9.623	gal/sack
						Water Source	Field (Fresh) Water	
						Water Chloride		

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Operation Test Results Request ID 2403658/1

Thickening Time - ON-OFF-ON

22/JUL/2017

Test Temp (°F)	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)
168	4580	39	2:44	4:43	4:43	11:30	6	49	15	16

Total sks = 784

CS1901, Trailer MT613, 392 sks

CS1898, Trailer 8677, 392 sks

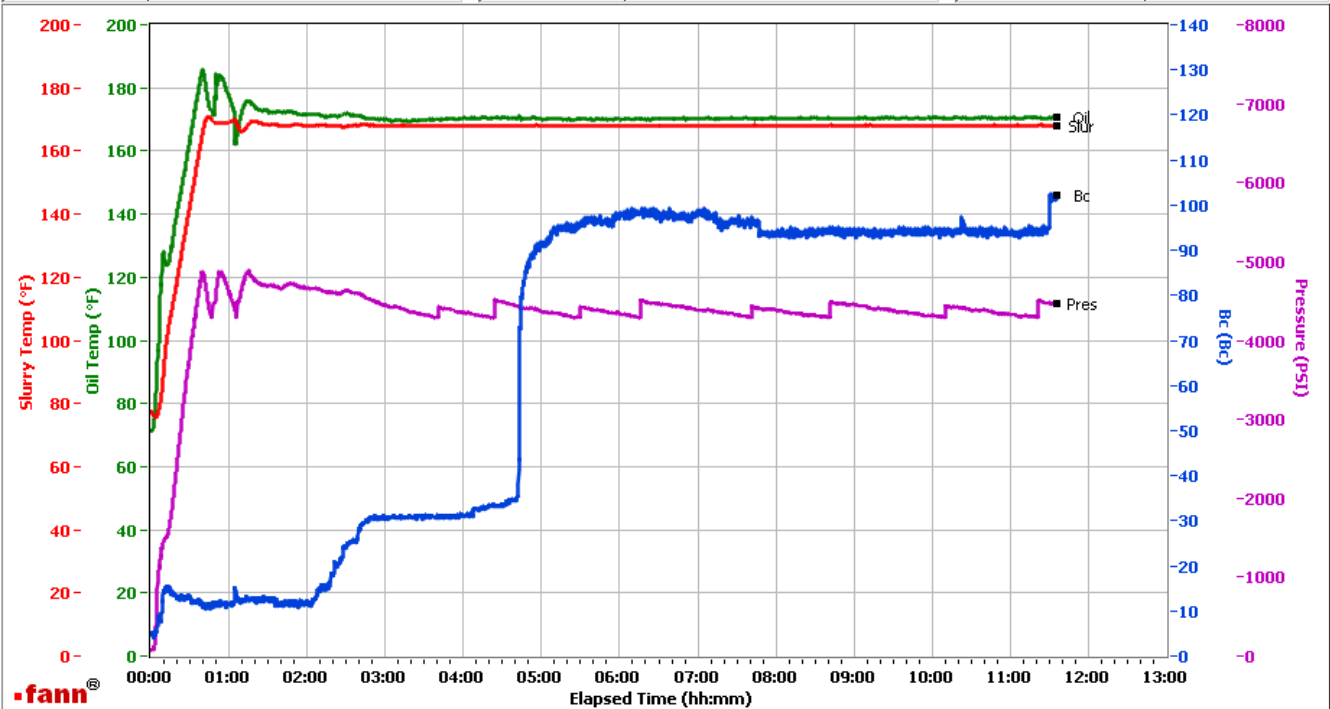
Deflection: 11 - 16

Grand Junction Colorado

Fields	Values
Project Name	2403658-1 LARAMIE ENERGY BULK PRODUC
Test ID	34722400 - TT
Request ID	2403658-1
Tested by	CT
Customer	LARAMIE ENERGY
Well No	GUNDERSON 20-08W
Rig	H&P 522
Casing/Liner Size	4.5 INCH

Fields	Values
Job Type	PRODUCTION CASING
Cement Type	TYPE I-II
Cement Weight	Standard
Test Date	07/22/17
Test Time	01:48 AM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	02h:44m
40.00 Bc	04h:42m
50.00 Bc	04h:43m
70.00 Bc	04h:43m
100.00 Bc	11h:30m
00h:30m	12.89
01h:00m	11.09
01h:30m	12.18



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Comments	CS1901, TRAILER MT613, 392 SKS - CS1898, TRAILER 8677, 392 SKS

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HALLIBURTON

Rockies, Grand Junction

Lab Results- Tail

Job Information

Request/Slurry	2403659/1	Rig Name	H&P 522	Date	21/JUL/2017
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Gunderson 20-08W

Well Information

Casing/Liner Size	4.5 in	Depth MD	7664 ft	BHST	113°C / 235°F
Hole Size	7.875 in	Depth TVD	7539 ft	BHCT	76°C / 168°F
Pressure	4580 psi				

Drilling Fluid Information

Mud Supplier Name	Baroid	Mud Trade Name	BARADRIL-N	Density	9.9 lbm/gal
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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>	<u>Cement Properties</u>	
						Slurry Density	13.3 lbm/gal
						Slurry Yield	1.733 ft3/sack
						Water Requirement	7.799 gal/sack
						Total Mix Fluid	7.799 gal/sack
						Water Source	Field (Fresh) Water
						Water Chloride	

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Operation Test Results Request ID 2403659/1

Thickening Time - ON-OFF-ON

22/JUL/2017

Test Temp (°F)	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)
168	4580	39	3:40	3:43	3:43	3:43	13	49	15	13

Total sks = 427

CS1904, Trailer MT199, 427 sks

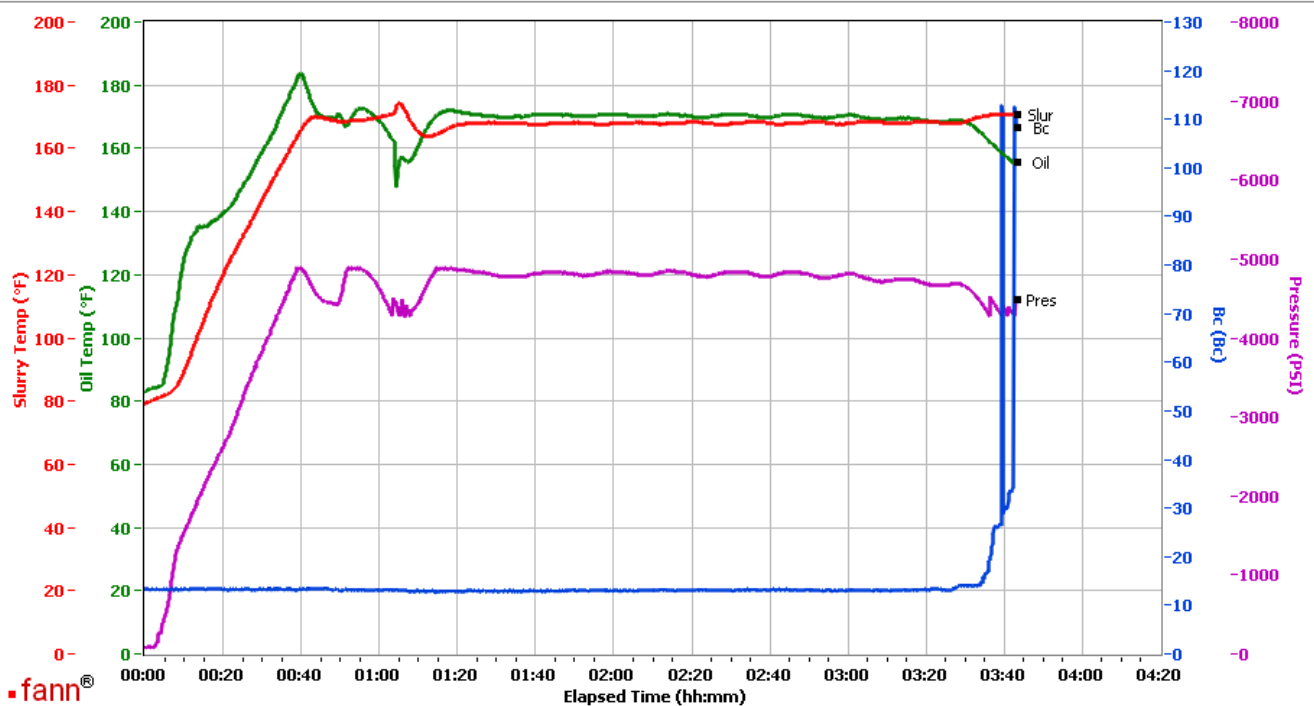
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Grand Junction Colorado

Fields	Values
Project Name	2403659-1 LARAMIE ENERGY BULK PRODU
Test ID	34722402 - TT
Request ID	2403659-1
Tested by	CT
Customer	LARAMIE ENERGY
Well No	GUNDERSON 20-08W
Rig	H&P 522
Casing/Liner Size	4.5 INCH

Fields	Values
Job Type	PRODUCTION CASING
Cement Type	MOUNTAIN G
Cement Weight	Standard
Test Date	07/22/17
Test Time	01:29 AM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
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40.00 Bc	03h:39m
50.00 Bc	03h:43m
70.00 Bc	03h:43m
100.00 Bc	03h:43m
00h:30m	13.37
01h:00m	13.20
01h:30m	12.88



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Comments OPERATION - TT - CS1904, TRAILER MT199, 427 SKS

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