

# HALLIBURTON

iCem<sup>®</sup> Service

**Laramie Energy LLC**

United States of America, COLORADO

Date: Thursday, January 17, 2019

**Sup & Shep 0993-25-19W Surface**

Laramie Sup & Shep 0993-25-19W Surface

API# 05-077-10583-00

Job Date: Thursday, January 17, 2019

Sincerely,

**Grand Junction Cement Engineering**

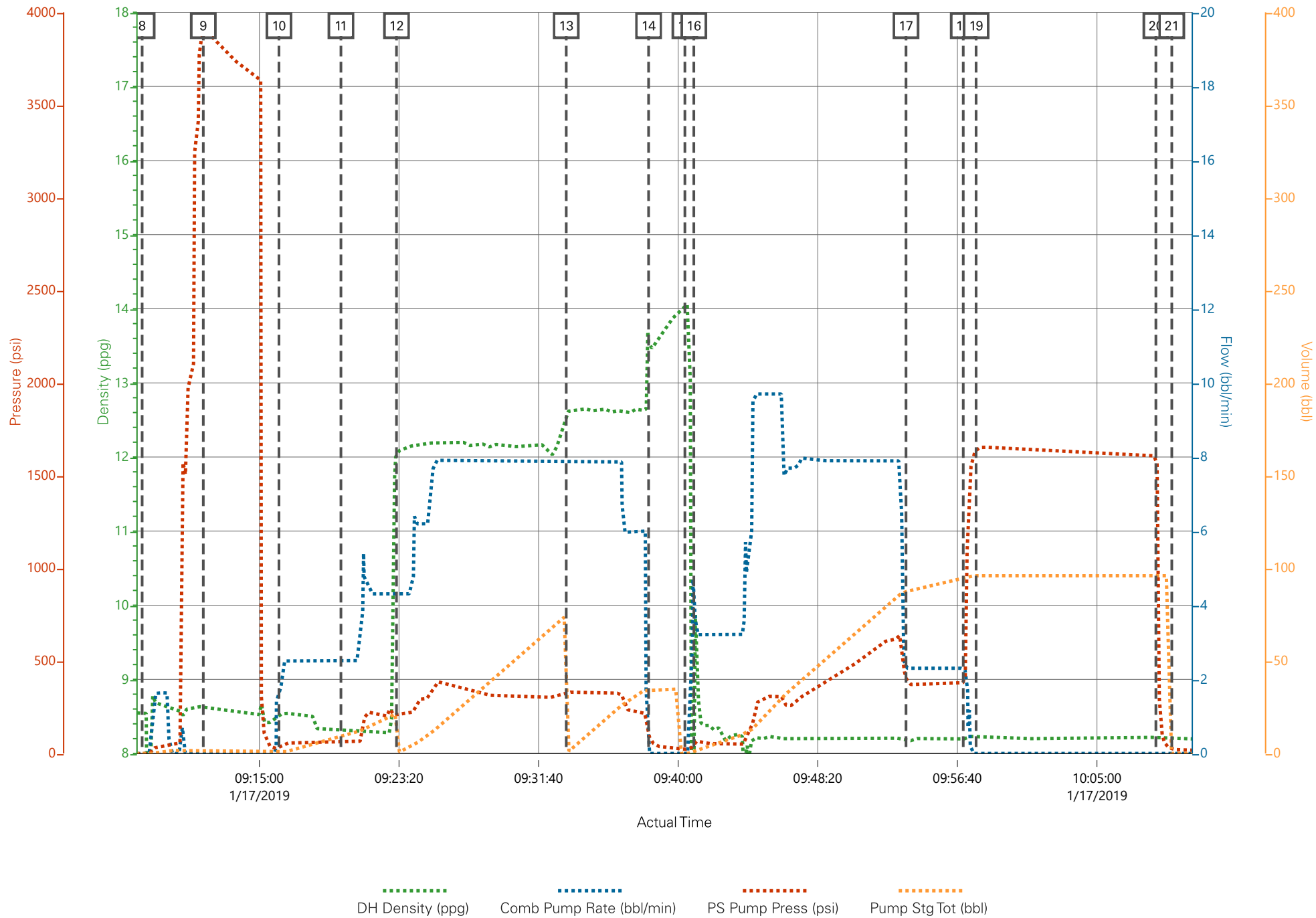
## 1.0 Real-Time Job Summary

### 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	1/17/2019	00:01:00	USER					
Event	2	Pre-Convoy Safety Meeting	1/17/2019	01:30:00	USER					JOURNEY MANAGEMENT COMPLETE, AS WELL AS JSA
Event	3	Crew Leave Yard	1/17/2019	02:00:00	USER					
Event	4	Arrive At Loc	1/17/2019	04:30:00	USER					JOURNEY MANAGEMENT CLOSED OUT. RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	1/17/2019	05:00:00	USER					
Event	6	Other	1/17/2019	05:10:00	USER					WATER TEST: PH-7, CL-0, TEMP-62  WELL INFO: TP- 1554' 8 5/8" 24#, TD- 1564', S.J.- 42.13', HOLE-11", MUD# - 9.1
Event	7	Other	1/17/2019	05:20:00	USER					MUD SCALES CHECKED WITH WATER PRIOR TO JOB.
Event	8	Pre-Rig Up Safety Meeting	1/17/2019	05:30:00	USER					JSA COMPLETE
Event	9	Rig-Up Equipment	1/17/2019	05:45:00	USER					1 UPRIGHT WATER , HEATED, 1 ELITE PUMP THAT WAS LEFT ON LOCATION FROM PREVIOUS JOB, 1 660
Event	10	Pre-Job Safety Meeting	1/17/2019	08:30:00	USER					JSA COMPLETE
Event	11	Start Job	1/17/2019	09:08:00	COM5					
Event	12	Pressure Test	1/17/2019	09:11:39	USER			3893.00		3893 PSI

Event	13	Pump Spacer 1	1/17/2019	09:16:10	COM5	8.33	4.00	189.00	20.00	FRESH WATER
Event	14	Pump Lead Cement	1/17/2019	09:23:11	COM5	12.30	8.00	390.00	70.90	162 SKS VARICEM, 12.3 PPG, 2.46 FT3/SK, 14.17 GAL/SK
Event	15	Pump Tail Cement	1/17/2019	09:33:19	COM5	12.80	8.00	326.00	34.60	89 SKS VARICEM, 12.8 PPG, 2.18 FT3/SK, 12.11 GAL/SK
Event	16	Shutdown	1/17/2019	09:38:14	USER					TO DROP TOP PLUG AND WASH UP ON TOP OF PLUG
Event	17	Drop Plug	1/17/2019	09:40:24	USER					TOP PLUG AWAY
Event	18	Pump Displacement	1/17/2019	09:40:56	COM5	8.33	8.00	647.00	96.20	FRESH WATER
Event	19	Slow Rate	1/17/2019	09:53:36	USER	8.33	2.30	366.00	86.40	TO BUMP PLUG
Event	20	Bump Plug	1/17/2019	09:57:01	USER	8.33	2.30	381.00	96.20	PLUG BUMPED
Event	21	Other	1/17/2019	09:57:47	COM5			1640.00		CASING TEST FOR 10 MINS
Event	22	Check Floats	1/17/2019	10:08:31	USER			1607.00		FLOATS HELD, 1 BBL BACK TO TRUCK
Event	23	End Job	1/17/2019	10:09:28	COM5					GOOD CIRCULATION THROUGHOUT JOB, NO PIPE MOVEMENT, 21 BBLS OF CEMENT TO SURFACE
Event	24	Post-Job Safety Meeting (Pre Rig-Down)	1/17/2019	10:11:58	USER					JSA COMPLETE
Event	25	Crew Leave Location	1/17/2019	10:30:08	USER					THANK YOU FOR USING HALLIBURTON CEMENT, JAMES LEIST AND CREW

# LARAMIE ENERGY - SUP & SHEP 993-25-19W - 8 5/8 SURFACE



# HALLIBURTON

iCem<sup>®</sup> Service

**Laramie Energy LLC**

United States of America, COLORADO

Date: Wednesday, March 6, 2019

**Sup & Shep 0993-25-19W Production**

Laramie Sup & Shep 0993-25-19W Production

API# 05-077-10583-00

Job Date: Sunday, January 20, 2019

Sincerely,

**Grand Junction Cement Engineering**

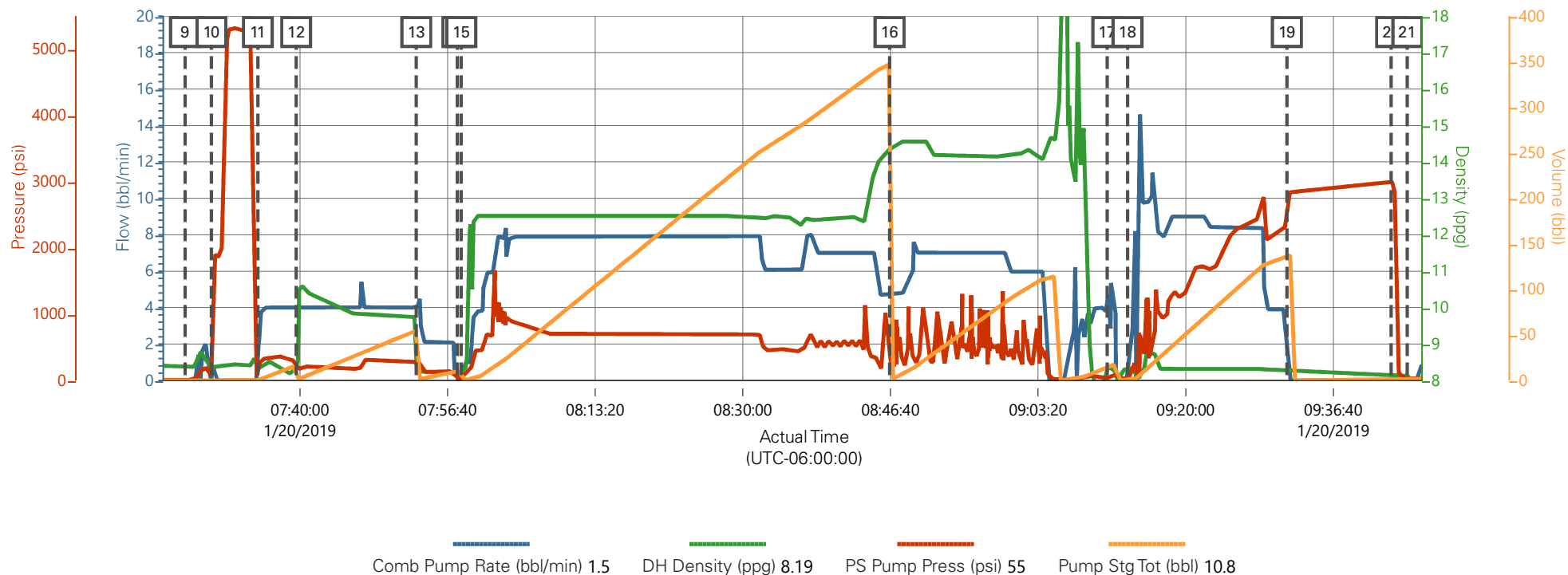
## 1.0 Real-Time Job Summary

## 1.1 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	1/19/2019	21:30:00	USER					REQUESTED ON LOCATION 1/20/19 @ 04:00
Event	2	Depart Yard Safety Meeting	1/19/2019	23:55:00	USER					JSA COMPLETED
Event	3	Crew Leave Shop	1/20/2019	00:00:00	USER					
Event	4	Arrive At Loc	1/20/2019	02:30:00	USER					RIG RUNNING CASING, COULD NOT GET PUMP TO LOCATION BLADE CALLED AT 03:30, ALL EQUIPMENT ON LOCATION @ 05:30
Event	5	Assessment Of Location Safety Meeting	1/20/2019	02:45:00	USER					JSA COMPLETED
Event	6	Pre-Rig Up Safety Meeting	1/20/2019	05:25:00	USER					JSA COMPLETED
Event	7	Rig-Up Equipment	1/20/2019	05:30:00	USER					
Event	8	Pre-Job Safety Meeting	1/20/2019	07:00:00	USER					JSA COMPLETED, PRESSURIZED MUD SCALES CALIBRATED TO FRESH WATER
Event	9	Start Job	1/20/2019	07:27:02	COM4					4 1/2"-11.6# CASING IN 7 7/8" OH, TD 8863', TP 8853', ST 79.2', WATER TEMP 50, PH 7, CHLORIDES 0
Event	10	Test Lines	1/20/2019	07:30:01	COM4			5000.00		TEST LINES TO 5000 PSI
Event	11	Pump Spacer 1	1/20/2019	07:35:15	COM4	4.00	8.33	340.00	15.00	15 BBLS FRESH WATER
Event	12	Pump Spacer 2	1/20/2019	07:39:35	COM4	4.00	10.00	230.00	40.00	40 BBLS SUPERFLUSH
Event	13	Pump Spacer 1	1/20/2019	07:53:08	COM4	4.00	8.33	230.00	10.00	10 BBLS FRESH WATER
Event	14	Drop Bottom Plug	1/20/2019	07:57:46	COM4					SHUT DOWN, DROP PLUG, PLUG AWAY
Event	15	Pump Lead Cement	1/20/2019	07:58:13	COM4	8.00	12.50	700.00	324.10	324.1 BBLS LEAD CEMENT, 938 SKS @ 12.5 PPG / 1.94 YLD / 9.59 GAL/SK

Event	16	Pump Tail Cement	1/20/2019	08:46:34	COM4	7.00	14.20	470.00	100.50	100.5 BBLS TAIL CEMENT, 330 SKS @ 14.2 PPG / 1.71 YLD / 7.51 GAL/SK
Event	17	Drop Top Plug	1/20/2019	09:11:08	COM4					PLUGS AWAY
Event	18	Pump Displacement	1/20/2019	09:13:26	COM4	8.50	8.33	2500.00	136.00	136 BBLS FRESH WATER DISPLACEMENT WITH 5# BE-6, 1 GAL MMCR AND 5 GAL CLA-WEB
Event	19	Bump Plug	1/20/2019	09:31:25	COM4	4.00	8.33	2300.00	136.00	PLUG BUMPED AT CALCULATED, FINAL CIRCULATING PRESSURE 2300 PSI @ 4 BBL/MIN, BROUGHT TO 2850 PSI FOR 10 MINUTE CASING TEST
Event	20	CHECK FLOATS	1/20/2019	09:43:12	COM4			3002.00		CASING TEST END PRESSURE 3000 PSI, FLOATS HELD, 1.5 BBLS BACK TO PUMP
Event	21	End Job	1/20/2019	09:45:00	COM4					PIPE LEFT STATIC, GOOD RETURNS THROUGHOUT, 5# BE-6, 1 GALLON MMCR AND 5 GALLONS CLA-WEB USED, ALL 3 PLUGS USED, NO ADD HOURS CHARGED
Event	22	Pre-Rig Down Safety Meeting	1/20/2019	09:55:00	USER					JSA COMPLETED
Event	23	Rig-Down Equipment	1/20/2019	10:00:00	USER					
Event	24	Pre-Convoy Safety Meeting	1/20/2019	10:25:00	USER					JSA COMPLETED
Event	25	Crew Leave Location	1/20/2019	10:30:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENTING OF GRAND JUNCTION, CO - RYAN MARTIN AND CREW

# LARAMIE - SUP & SHEP 993-25-19W - 4 1/2" PRODUCTION CASING



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	07:27:02	0.00	8.39	8.00	0.00
10 Test Lines	07:30:01	0.00	8.36	71.00	0.00
11 Pump Spacer 1	07:35:15	0.00	8.28	54.00	0.00
12 Pump Spacer 2	07:39:35	4.00	8.32	110.00	0.50
13 Pump Spacer 1	07:53:08	4.00	8.66	278.00	54.70
14 Drop Bottom Plug	07:57:46	0.00	8.20	28.00	10.20
15 Pump Lead Cement	07:58:13	0.00	8.20	14.00	10.20
16 Pump Tail Cement	08:46:34	4.80	14.37	408.00	347.10
17 Drop Top Plug	09:11:08	4.70	8.39	43.00	14.00
18 Pump Displacement	09:13:26	0.00	8.29	19.00	0.00
19 Bump Plug	09:31:25	0.00	8.28	2825.00	137.50
20 CHECK FLOATS	09:43:12	0.00	8.17	3002.00	0.00
21 End Job	09:45:00	0.00	8.13	30.00	0.00

▼ HALLIBURTON | iCem® Service

Created: 2019-01-19 23:47:18, (UTC-07:00), Version: 4.5.139

Edit

Customer : Laramie Energy LLC

Job Date : 1/20/2019

Well : SUP & SHEP 993-25-19W

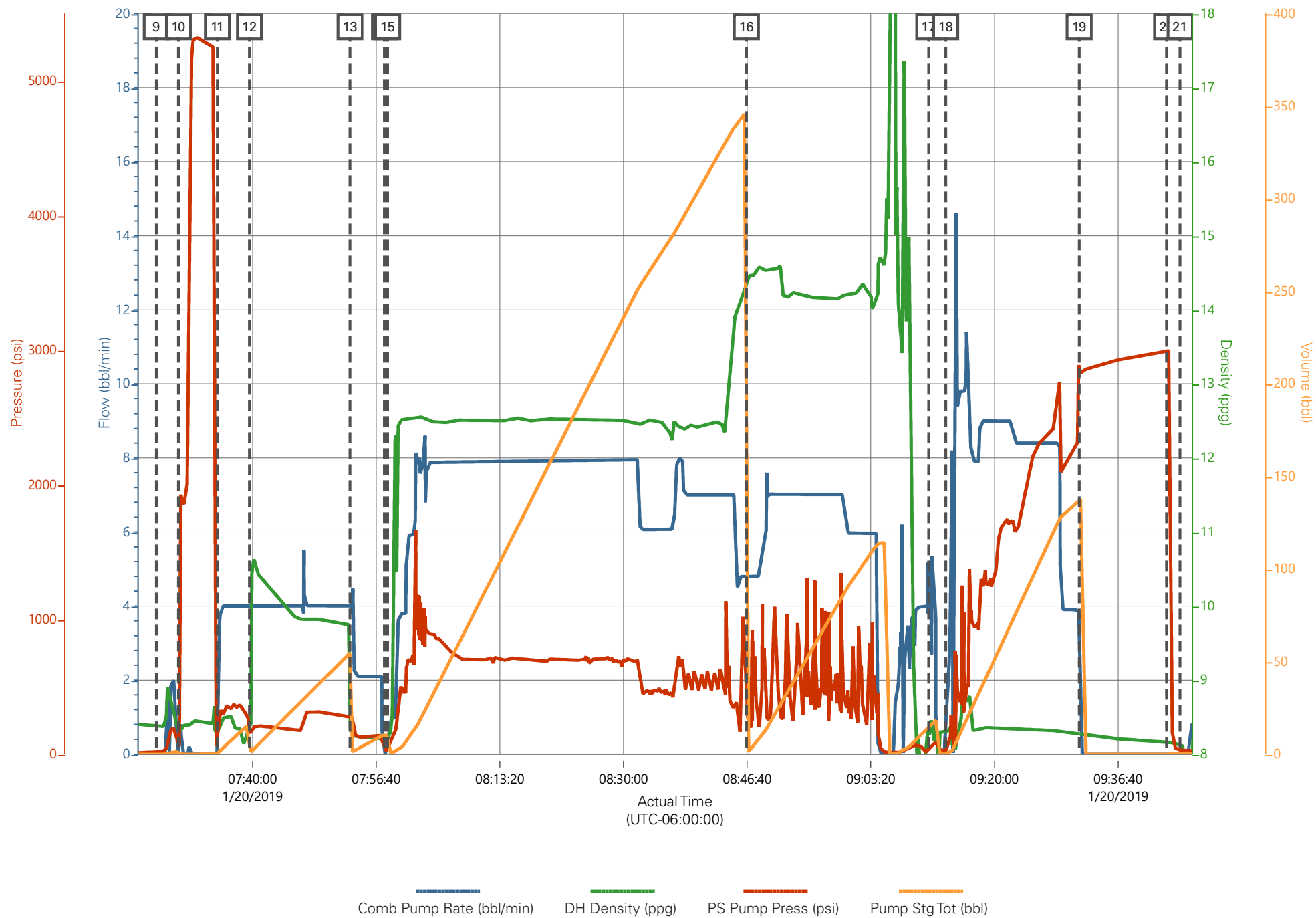
Representative : MATT SETTLES

Sales Order # : 905409161

ELITE #8 : WES GOWEN / RYAN MARTIN



# LARAMIE - SUP & SHEP 993-25-19W - 4 1/2" PRODUCTION CASING



## Job Information

Request/Slurry	2527388/1	Rig Name	H&P 522	Date	10/JAN/2019
Submitted By	Connor Matthews	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Sup & Shep 0993-25-19W

## Well Information

Casing/Liner Size	4.5 in	Depth MD	8917 ft	BHST	113°C / 236°F
Hole Size	7.875 in	Depth TVD	8583 ft	BHCT	73°C / 164°F
Pressure	5308 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>MP</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
							Slurry Density	12.5	lbm/gal
							Slurry Yield	1.95	ft3/sack
							Water Requirement	9.61	gal/sack
							Total Mix Fluid	9.61	gal/sack
							Water Source	Field (Fresh) Water	
							Water Chloride	N/A	

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 2527388/1

## Thickening Time - ON-OFF-ON, Request Test ID:36133069

17/JAN/2019

Test Temp (degF)	Pressure (psi)	Reached in (min)	30 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
164	5308	44	3:51	4:28	5:13	18	54	15	17

Total sks = 938

CS0069 TR#8658 400 SKS

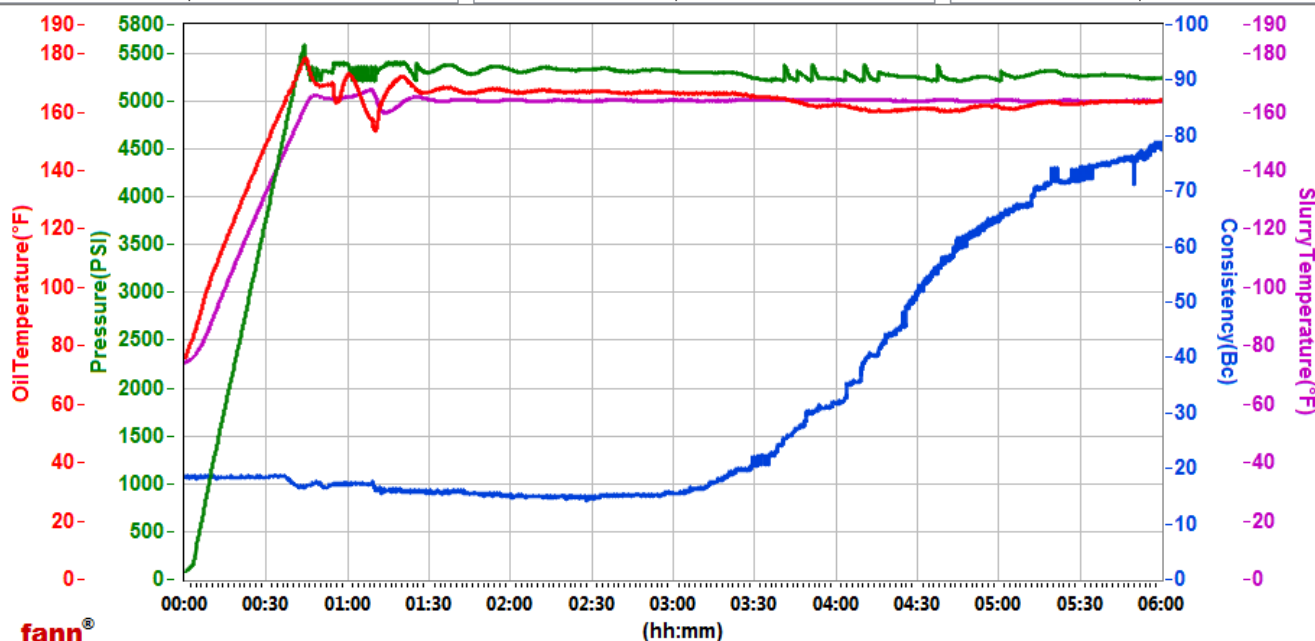
CS0071 TR#8678 400 SKS

CS0072 TR#7094 138SKS

no deflection, 17Bc--- > 17Bc

### GRAND JUNCTION

Fields	Values	Fields	Values	Events	Results
Project Name	TempTest	Rig	H&P522		
SW Version	1.0	Casing/Liner Size	4.5"		
Test ID	36133069-TT	Job Type	PRODUCTION CASING		
Request ID	2527388-1	Cement Weight	GCC TYPE III		
Tested by	DEBA	Comments	Light Weight		
Customer	LARAMIE ENERGY	Date Time	1/16/2019 08:41:09.463		
Well No	SUP & SHEP 0993-25-19	Temp. Units	degF		



Data File C:\Users\hx25273\Desktop\HPHT Graphs\GJ2527388-1 LARAMIE PRODUCTION BULK 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	2527389/1	Rig Name	H&P 522	Date	10/JAN/2019
Submitted By	Connor Matthews	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Sup & Shep 0993-25-19W

### Well Information

Casing/Liner Size	4.5 in	Depth MD	8917 ft	BHST	58°C / 136°F
Hole Size	7.875 in	Depth TVD	8583 ft	BHCT	73°C / 164°F
Pressure	5308 psi				

### Drilling Fluid Information

Mud Supplier Name	Mud Trade Name	Density
-------------------	----------------	---------

### Cement Information - Tail Design



<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>MP</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
							Slurry Density	14.2	lbm/gal
							Slurry Yield	1.71	ft3/sack
							Water Requirement	7.51	gal/sack
							Total Mix Fluid	7.51	gal/sack
							Water Source	Field (Fresh) Water	
							Water Chloride	N/A	

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 2527389/1

### Thickening Time - ON-OFF-ON, Request Test ID:36133071

16/JAN/2019

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)
164	5308	44	1:09	2:09	2:19	2:22	25	54	15	40

Total sks=330

CS0070 TR#2878 330 SKS

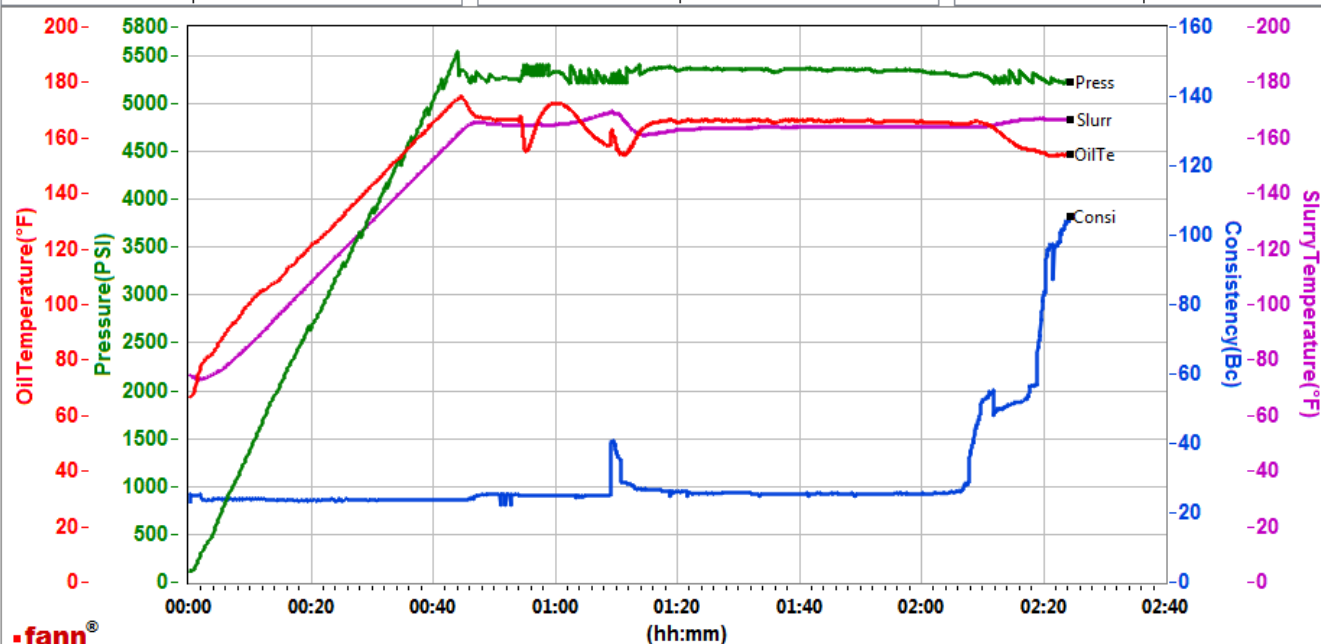
Deflection: 25 - 40 to 37 after one minute

### GRAND JUNCTION

Fields	Values
Project Name	2527389-1 H&P 522 Bulk
SW Version	1.0
Test ID	36133071 - TT
Request ID	2527389-1
Tested by	DS
Customer	LARAMIE ENERGY
Well No	SUP & SHEP 0993-25-19

Fields	Values
Rig	H&P 522
Casing/Liner Size	4.5 INCH
Job Type	PRODUCTION CASING
Cement Weight	MOUNTAIN G
Comments	Standard
Date Time	1/16/2019 06:10:35.307
Temp. Units	degF

Events	Results
30 BC	1:09
50 BC	2:09
70 BC	2:19
100 BC	2:22



Data File C:\Users\H185329\Desktop\000 Graphs\GJ2527389-1 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.