

# HALLIBURTON

iCem<sup>®</sup> Service

## **LARAMIE ENERGY LLC**

Date: Wednesday, March 28, 2018

## **GUNDERSON 994-14-10E**

API #

Laramie Gunderson 994-14-10E Production

Job Date: Monday, March 26, 2018

Sincerely,

**Grand Junction Cement Engineering**

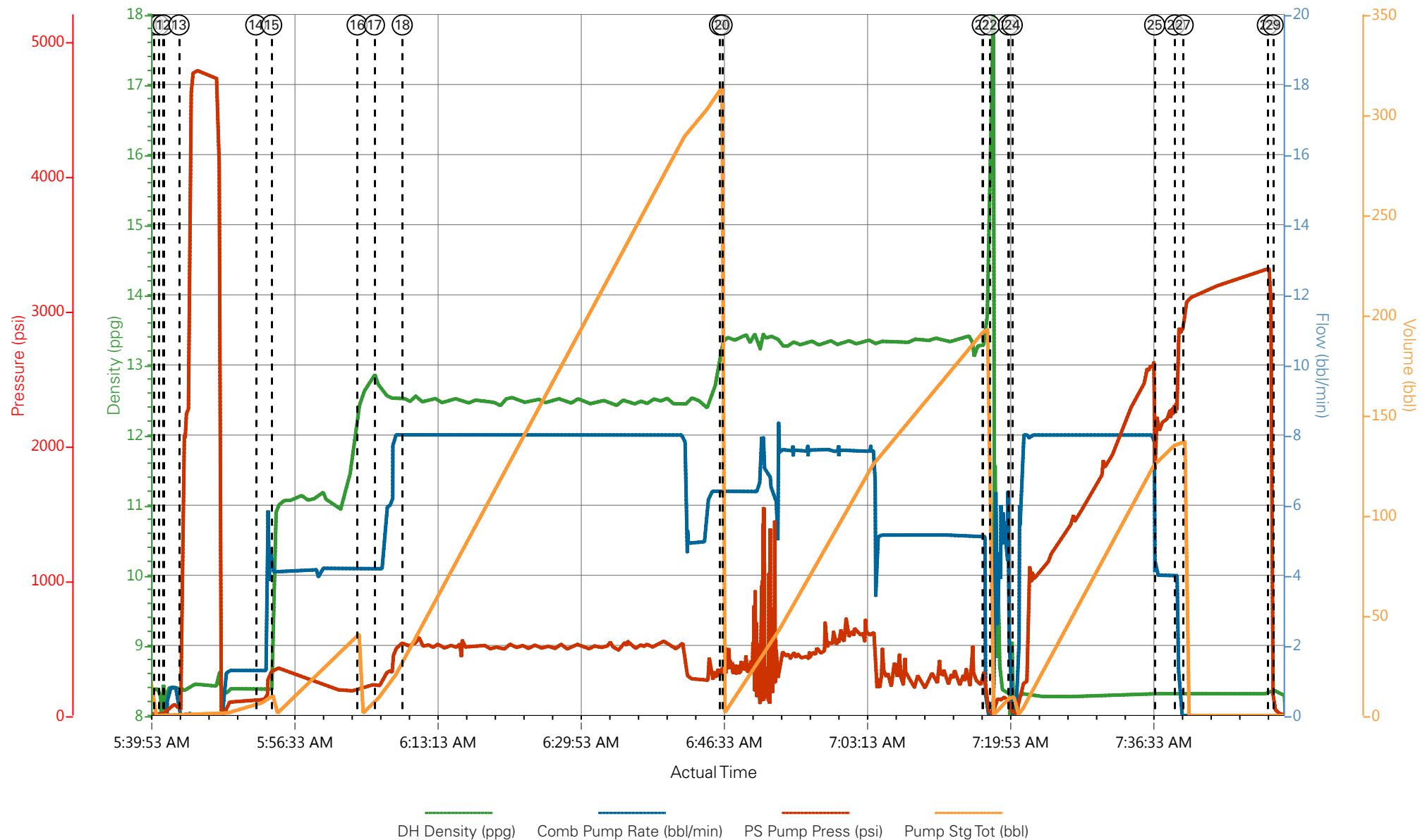
## 1.0 Real-Time Job Summary

## 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	3/25/2018	23:00:00	USER					ON LOCATION REQUESTED 5:00
Event	2	Pre-Convoy Safety Meeting	3/26/2018	01:30:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	3/26/2018	01:40:00	USER					
Event	4	Arrive at Location from Service Center	3/26/2018	03:00:00	USER					RIG ON BOTTOM
Event	5	Assessment Of Location Safety Meeting	3/26/2018	03:15:00	USER					MET WITH COMPANY REP DISCUSSED PROCEDURE, SDS OFFERED
Event	6	Pre-Rig Up Safety Meeting	3/26/2018	03:30:00	USER					ALL HES PRESENT
Event	7	Rig-Up Completed	3/26/2018	04:54:00	USER					1-ELITE, 1-660 BULK TRAILER, 2-FIELD SILO, 4.5" QL, 2" PUMP IRON, 4" SUCTION HOSE
Event	8	Pre-Job Safety Meeting	3/26/2018	05:15:00	USER					ALL HES AND RIG CREW PRESENT
Event	9	Other	3/26/2018	05:35:00	USER					RIG CIRCULATED 1.5 HOUR 420 GPM 680 PSI, WATER: TEMP-60, CL-0, PH-7
Event	10	Start Job	3/26/2018	05:40:30	USER	8.37	0.00	12.00	0.0	TD-8870', TP-8865', SJ-86.8', OH-7.875", CSG-4.5" 11.6# P110, SCSG-8.625" 24# SHOE@ 1562', MUD-9.5PPG
Event	11	Prime Pumps	3/26/2018	05:41:06	USER	8.40	2.00	90.00	3.0	FRESH WATER
Event	12	Drop Bottom Plug	3/26/2018	05:41:38	USER					PLUG AWAY
Event	13	Test Lines	3/26/2018	05:43:28	COM5	8.39	0.00	4790.00	3.0	ALL PRESSURE HELD

Event	14	Check weight	3/26/2018	05:52:24	COM5					WEIGHT VERIFIED BY PRESSURIZED MUD SCALES
Event	15	Pump Tuned Spacer	3/26/2018	05:54:15	COM5	11.00	4.10	341.00	40.0	TUNED SPACER III 40BBLS, 11.0PPG, 4.86CF/SK, 31.9GL/SK
Event	16	Pump Lead Cement	3/26/2018	06:04:12	COM5	12.50	8.00	561.00	302.0	NEOCER 874SKS, 12.5PPG, 1.94CF/SK, 9.6GL/SK
Event	17	Check weight	3/26/2018	06:06:13	COM5					WEIGHT VERIFIED BY PRESSURIZED MUD SCALES
Event	18	Check weight	3/26/2018	06:09:27	COM5					WEIGHT VERIFIED BY PRESSURIZED MUD SCALES
Event	19	Pump Tail Cement	3/26/2018	06:46:23	COM5	13.30	7.50	600.00	155.8	THERMACER 500SKS, 13.3PPG, 1.73CF/SK, 7.81GL/SK
Event	20	Check weight	3/26/2018	06:46:41	COM5					WEIGHT VERIFIED BY PRESSURIZED MUD SCALES
Event	21	Shutdown	3/26/2018	07:16:58	USER					END OF CEMENT
Event	22	Clean Lines	3/26/2018	07:17:50	COM5					CLEANED PUMPS AND LINES TO CELLAR
Event	23	Drop Top Plug	3/26/2018	07:20:00	USER					PLUG AWAY
Event	24	Pump Displacement	3/26/2018	07:20:28	COM5	8.36	8.00	2620.00	136.1	FRESH WATER. 5GAL CLA WEB, 1 GAL MMCR ADDED
Event	25	Slow Rate	3/26/2018	07:37:02	USER	8.31	4.00	2127.00	127.3	SLOW RATE LAST 10 BBLS
Event	26	Bump Plug	3/26/2018	07:39:22	COM5	8.30	4.00	2350.00	136.1	PLUG BUMPED 2350PSI
Event	27	Casing Test	3/26/2018	07:40:22	COM5	8.32	0.00	3069.00	0.0	10 MINUTE CASING TEST
Event	28	Check Floats	3/26/2018	07:50:10	USER	8.31	0.00	3315.00	0.0	FLOATS HELD 1.5 BBLS BACK
Event	29	End Job	3/26/2018	07:50:50	COM5					GOOD RETURNS THROUGH OUT JOB, 25BBLS TUNED SPACER TO SURFACE
Event	30	Post-Job Safety Meeting (Pre Rig-Down)	3/26/2018	07:55:00	USER					ALL HES PRESENT
Event	31	Rig-Down Completed	3/26/2018	08:30:00	USER					
Event	32	Pre-Convoy Safety Meeting	3/26/2018	08:45:00	USER					ALL HES PRESENT
Event	33	Crew Leave Location	3/26/2018	09:00:00	USER					THANK YOU FOR CHOOSING HALLIBURTON, ANDREW BRENNER AND CREW

# LARAMIE - GUNDERSON 994-14-10E - 4.5" PRODUCTION



① Call Out	⑤ Assessment Of Location Safety Meeting	⑨ Other	⑬ Test Lines	⑰ Check weight	21 Shutdown	25 Slow Rate
② Pre-Convoy Safety Meeting	⑥ Pre-Rig Up Safety Meeting	⑩ Start Job	⑭ Check weight	⑱ Check weight	22 Clean Lines	26 Bump Plug
③ Crew Leave Yard	⑦ Rig-Up Completed	⑪ Prime Pumps	⑮ Pump Tuned Spacer	⑲ Pump Tail Cement	23 Drop Top Plug	27 Casing Test
④ Arrive at Location from Service Center	⑧ Pre-Job Safety Meeting	⑫ Drop Bottom Plug	⑯ Pump Lead Cement	20 Check weight	24 Pump Displacement	28 Check Floats

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Created: 2018-03-26 00:30:23, Version: 4.2.393

Edit

Customer : LARAMIE ENERGY II LLC

Job Date : 3/26/2018 4:50:58 AM

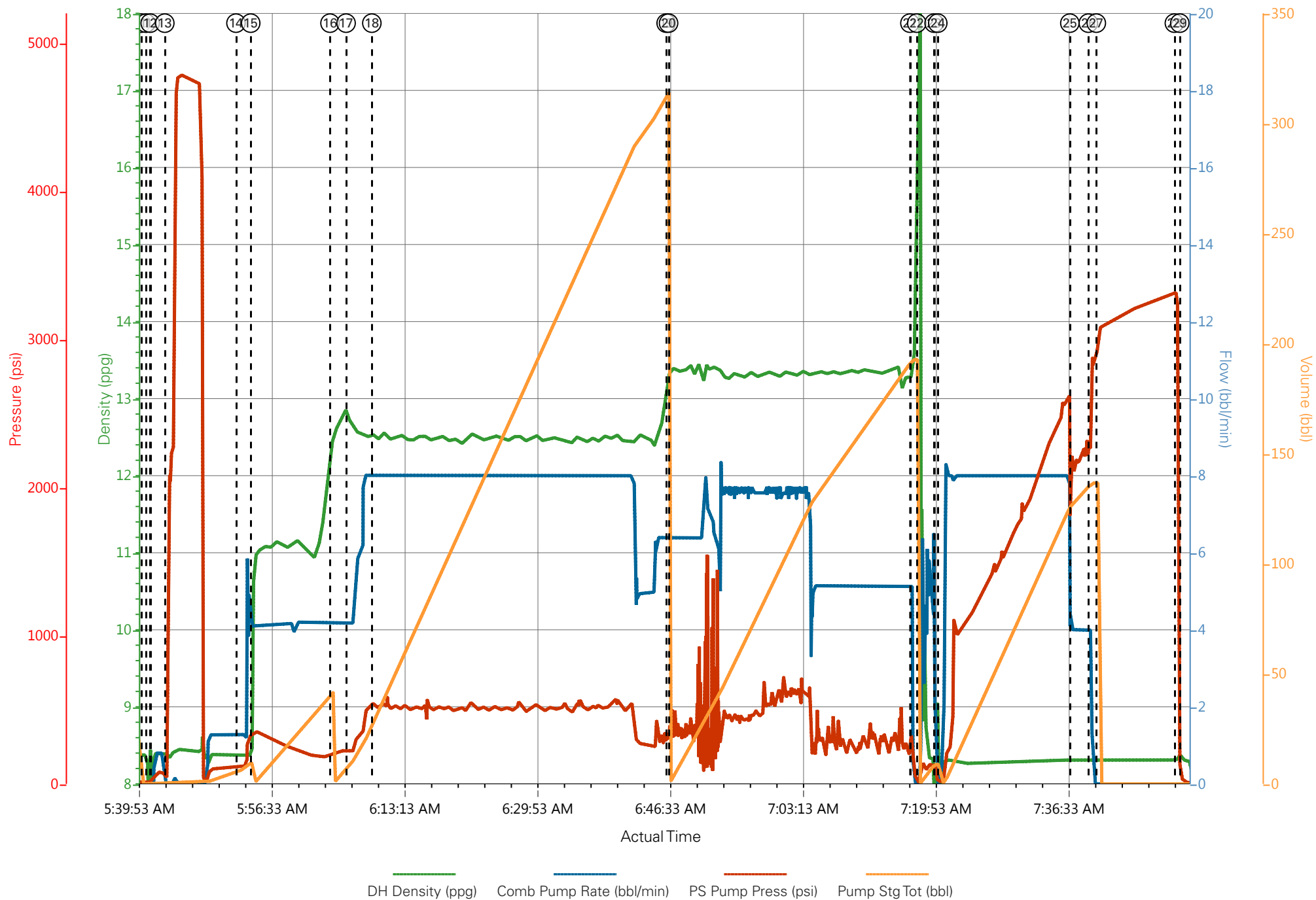
Well : GUNDERSON 994-14-10E

Representative : SHANE HEARD

Sales Order # : 904732785

ELITE #2 : A.ANGELO

# LARAMIE - GUNDERSON 994-14-10E - 4.5" PRODUCTION



## Job Information

Request/Slurry	2462180/1	Rig Name	H&P 522	Date	22/MAR/2018
Submitted By	Connor Matthews	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Gunderson 994-14-10E

## Well Information

Casing/Liner Size	4.5 in	Depth MD	8892 ft	BHST	119°C / 247°F
Hole Size	7.875 in	Depth TVD	8052 ft	BHCT	81°C / 177°F
Pressure	4936 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		
		NeoCem				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	Fresh Water	
						Water Chloride		

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# Operation Test Results Request ID 2462180/1

## Thickening Time - ON-OFF-ON

23/MAR/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)
177	4936	41	3:19	4:21	4:33	4:46	19	51	15	25

Total sks = 874

CS0699, Trailer 8658, 437 sks

CS0701, Trailer 8677, 437 sks

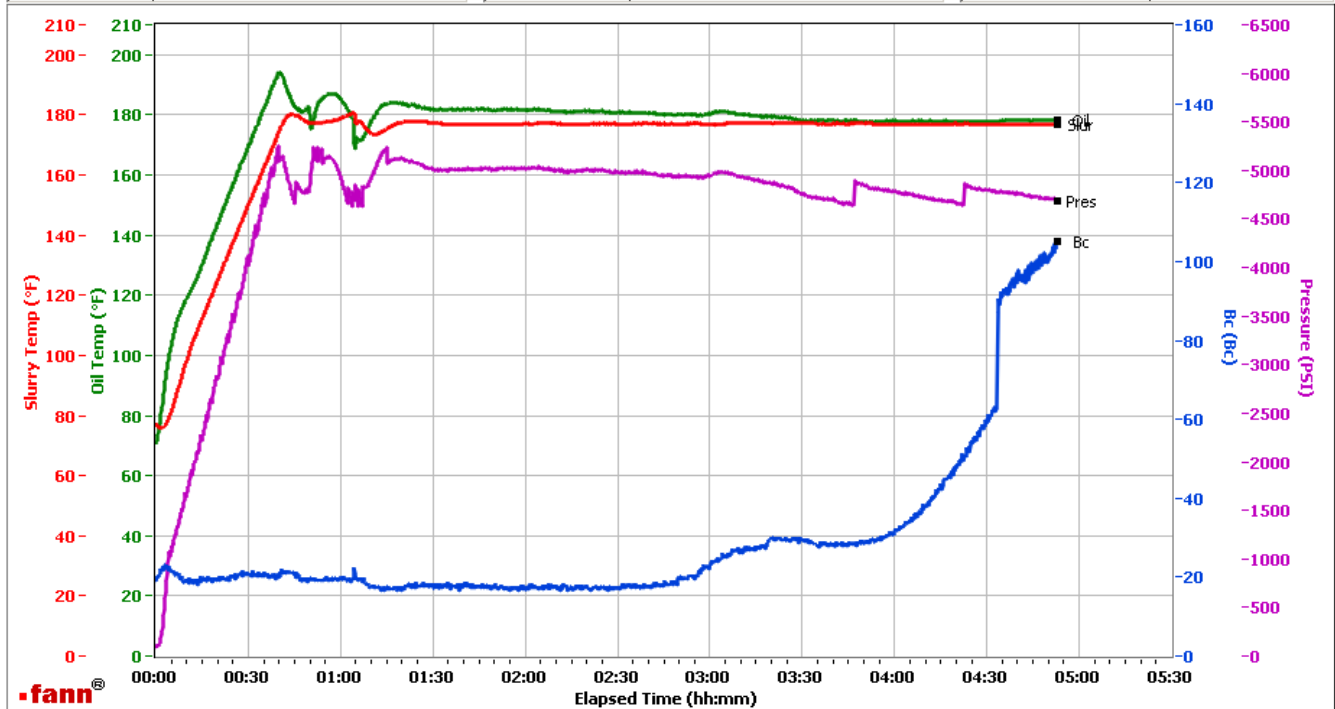
Deflected 20-- > 25

## Grand Junction Colorado

Fields	Values
Project Name	2462180-1 LARAMIE BULK PRODUCTION LE
Test ID	35354981 - TT
Request ID	2462180-1
Tested by	CT
Customer	LARAMIE ENERGY
Well No	GUNDERSON 994-14-10E
Rig	H&P 522
Casing/Liner Size	4.5 INCH

Fields	Values
Job Type	PRODUCTION CASING
Cement Type	HOLCIM TYPE I-II
Cement Weight	Standard
Test Date	03/23/18
Test Time	02:52 AM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	03h:19m
40.00 Bc	04h:12m
50.00 Bc	04h:21m
70.00 Bc	04h:33m
100.00 Bc	04h:46m
00h:30m	20.39
01h:00m	19.49
01h:30m	17.82



Data File C:\Documents and Settings\Administrator\Desktop\Test Data\GJ2462180-1 LARAMIE BULK PRODUCTION LEAD.tdms

Comments CS0699, TRAILER 8658, 437 SKS - CS0701, TRAILER 8677, 437 SKS

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# HALLIBURTON

## Rockies, Grand Junction

## Lab Results- Tail

### Job Information

Request/Slurry	2462181/1	Rig Name	H&P 522	Date	22/MAR/2018
Submitted By	Connor Matthews	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Gunderson 994-14-10E

### Well Information

Casing/Liner Size	4.5 in	Depth MD	8892 ft	BHST	119°C / 247°F
Hole Size	7.875 in	Depth TVD	8052 ft	BHCT	81°C / 177°F
Pressure	4936 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



Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
		ThermaCem				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	Fresh Water	
						Water Chloride		

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# Operation Test Results Request ID 2462181/1

## Thickening Time - ON-OFF-ON

23/MAR/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)
177	4936	41	3:14	3:29	3:29	3:32	17	51	15	14

Total sks = 500

CS0697, Trailer 4053, 100 sks

CS0700, Trailer 8678, 400 sks

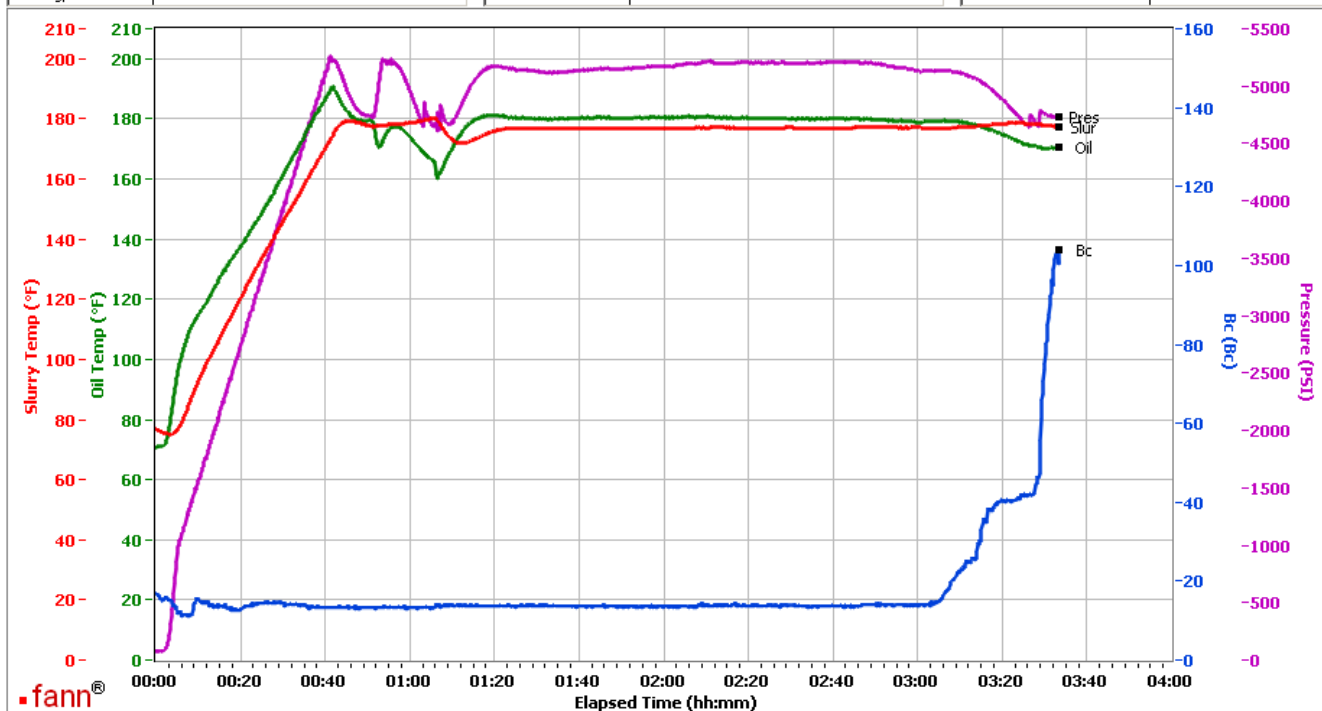
No deflection.

## Grand Junction Colorado

Fields	Values
Project Name	2462181-1 LARAMIE BULK PRODUCTION TA
Test ID	35354983 - TT
Request ID	2462181-1
Tested by	CT
Customer	LARAMIE ENERGY
Well No	GUNDERSON 994-14-10E
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	03/23/18
Test Time	12:31 AM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	03h:14m
40.00 Bc	03h:19m
50.00 Bc	03h:29m
70.00 Bc	03h:29m
100.00 Bc	03h:32m
00h:30m	14.16
01h:00m	13.36
01h:30m	13.72



Data File C:\Documents and Settings\M290\Desktop\Test Data\2462181-1 LARAMIE BULK PRODUCTION TAIL.tdms

Comments CS0697, TRAILER 4053, 100 SKS - CS0700, TRAILER 8678, 400 SKS

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