

HALLIBURTON

iCem[®] Service

LARAMIE ENERGY II LLC

For: Laramie

Date: Wednesday, January 31, 2018

BRUTON 30-21E Surface

API #: 05-077-10466

Sincerely,

Grand Junction Cement Engineering

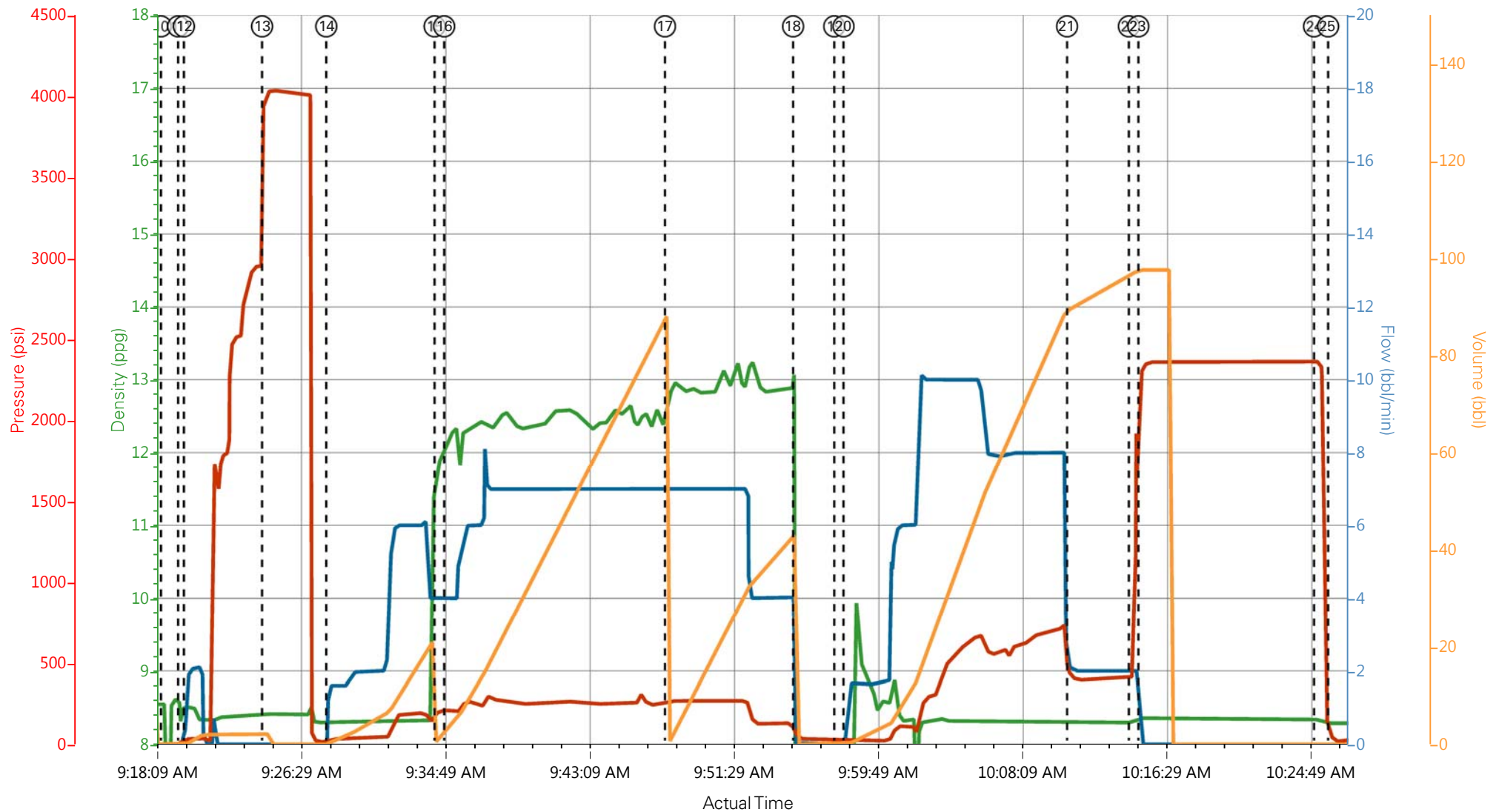
2.0 Real-Time Job Summary

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	1/31/2018	03:30:00	USER					ON LOCATION REQUESTED 9:00
Event	2	Pre-Convoy Safety Meeting	1/31/2018	05:45:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	1/31/2018	06:00:00	USER					
Event	4	Arrive at Location from Service Center	1/31/2018	08:00:00	USER					RIG SENDING UP LANDING JOINT
Event	5	Assessment Of Location Safety Meeting	1/31/2018	08:10:00	USER					MET WITH COMPANY REP SDS OFFERED
Event	6	Pre-Rig Up Safety Meeting	1/31/2018	08:15:00	USER					ALL HES PRESENT
Event	7	Rig-Up Completed	1/31/2018	08:44:26	USER					1-ELITE, 1-660 BULK TRAILER, 8.625" QL, 2" PUMP IRON, 4" SUCTION HOSE
Event	8	Other	1/31/2018	08:44:30	USER					RIG CIRCULATED 35 MINS 450 GPM 200 PSI. WATER:TEMP-42, CL-0,PH-7
Event	9	Pre-Job Safety Meeting	1/31/2018	08:44:42	USER					ALL HES AND RIG CREW PRESENT
Event	10	Start Job	1/31/2018	09:18:35	USER	8.40	0.00	1.00	0.0	TD-1576', TP-1571', SJ-43.39', CSG-8.625" J55 24#, OH-11", MUD-9.2PPG
Event	11	Drop Bottom Plug	1/31/2018	09:19:34	USER	8.43	0.00	18.00	0.0	PLUG AWAY
Event	12	Prime Pumps	1/31/2018	09:19:54	USER	8.41	1.60	52.00	3.0	FRESH WATER

Event	13	Test Lines	1/31/2018	09:24:25	USER	8.42	0.00	4015.00	3.1	ALL PRESSURE HELD ON LINES
Event	14	Pump Spacer	1/31/2018	09:28:07	USER	8.30	6.00	170.00	20.0	FRESH WATER
Event	15	Pump Lead Cement	1/31/2018	09:34:23	USER	12.30	7.00	275.00	86.3	VARICEM 197SKS, 12.3PPG, 2.46CF/SK, 14.17GAL/SK
Event	16	Check weight	1/31/2018	09:34:56	COM5					WEIGHT VERIFIED BY PRESSURIZED MUD SCALES
Event	17	Pump Tail Cement	1/31/2018	09:47:41	COM5	12.80	7.00	261.00	42.3	VARICEM 109SKS, 12.8PPG, 2.18CF/SK, 12.11GAL/SK
Event	18	Shutdown	1/31/2018	09:55:05	USER					WASHED UP ON TOP OF PLUG
Event	19	Drop Top Plug	1/31/2018	09:57:27	USER					PLUG AWAY
Event	20	Pump Displacement	1/31/2018	09:57:59	USER	8.35	10.00	725.00	97.2	FRESH WATER
Event	21	Slow Rate	1/31/2018	10:10:54	USER	8.31	2.10	380.00	87.0	SLOW RATE LAST 10 BBLS
Event	22	Bump Plug	1/31/2018	10:14:28	USER	8.30	2.00	400.00	97.2	PLUG BUMPED 400 PSI
Event	23	Casing Test	1/31/2018	10:15:01	USER	8.36	0.00	2301.00	97.6	10 MINUTE CASING TEST
Event	24	Check Floats	1/31/2018	10:25:10	USER	8.34	0.00	2361.00	0.0	FLOATS HELD, 1 BBL BACK
Event	25	End Job	1/31/2018	10:25:58	COM5					GOOD RETURNS THROUGHOUT JOB, 45 BBLS CEMENT TO SURFACE
Event	26	Post-Job Safety Meeting (Pre Rig-Down)	1/31/2018	10:27:56	USER					ALL HES PRESENT
Event	27	Rig-Down Completed	1/31/2018	11:00:00	USER					
Event	28	Pre-Convoy Safety Meeting	1/31/2018	11:10:00	USER					ALL HES PRESENT
Event	29	Crew Leave Location	1/31/2018	11:30:00	USER					THANK YOU FOR CHOOSING HALLIBURTON, ANDREW BRENNECKE AND CREW

LARAMIE - BRUTON 30-21E - 8.625" SURFACE



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

▼ **HALLIBURTON** | iCem® Service

Created: 2018-01-31 08:36:52, Version: 4.2.393

Edit

Customer : LARAMIE ENERGY II LLC

Job Date : 1/31/2018 8:42:05 AM

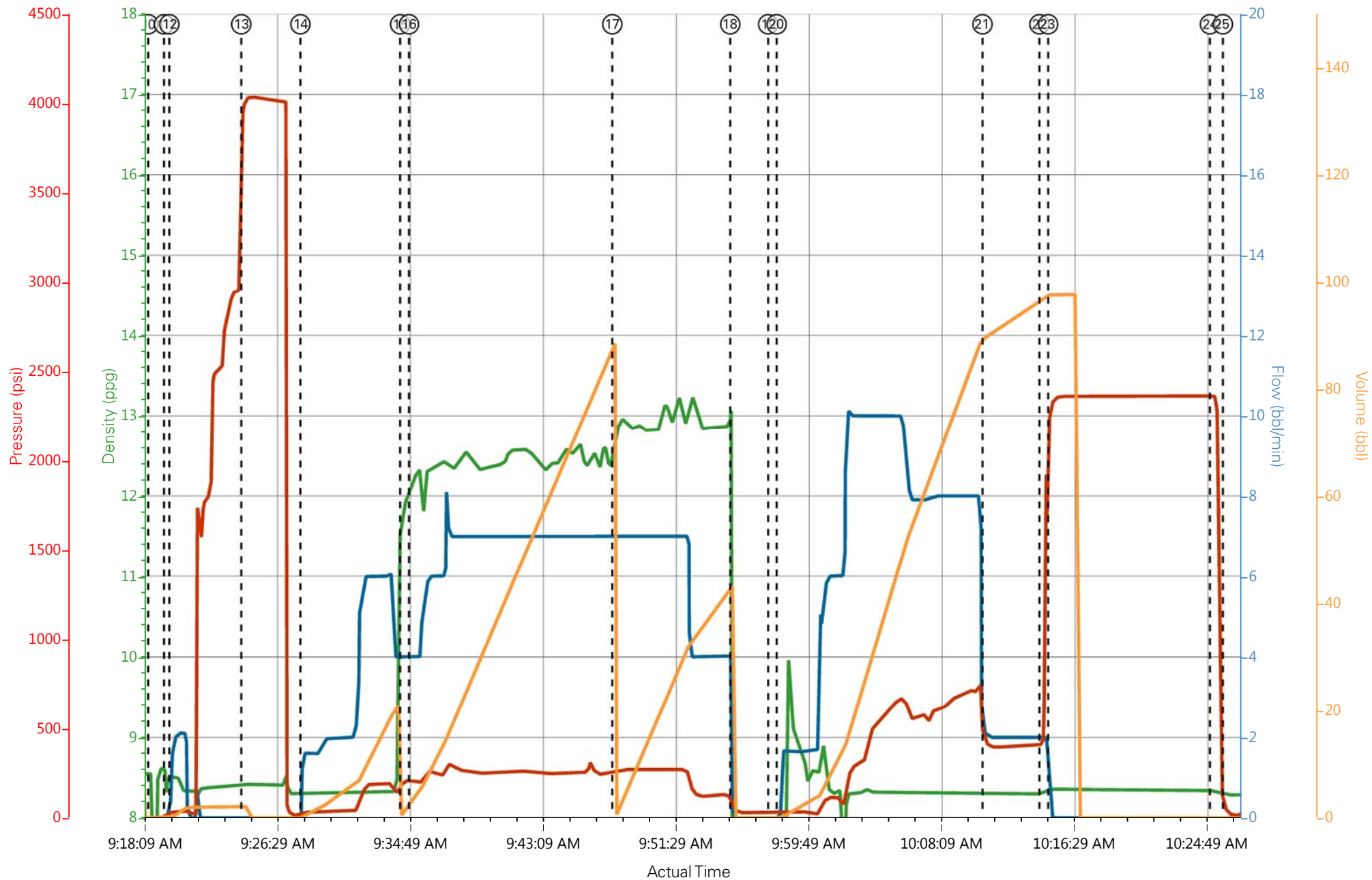
Well : BRUTON 30-21E

Representative : TYLER HALE

Sales Order # : 904609101

ELITE #1 : J.DIAMANTI/A.BRENNECKE

LARAMIE - BRUTON 30-21E - 8.625" SURFACE



DH Density (ppg) 8.3 Comb Pump Rate (bbl/min) 8.9 PS Pump Press (psi) 278 Pump Stg Tot (bbl) 21.3

HALLIBURTON

iCem[®] Service

LARAMIE ENERGY II LLC

For: Laramie

Date: Saturday, February 03, 2018

BRUTON 30-21E Production PJR

API #: 05-077-10466

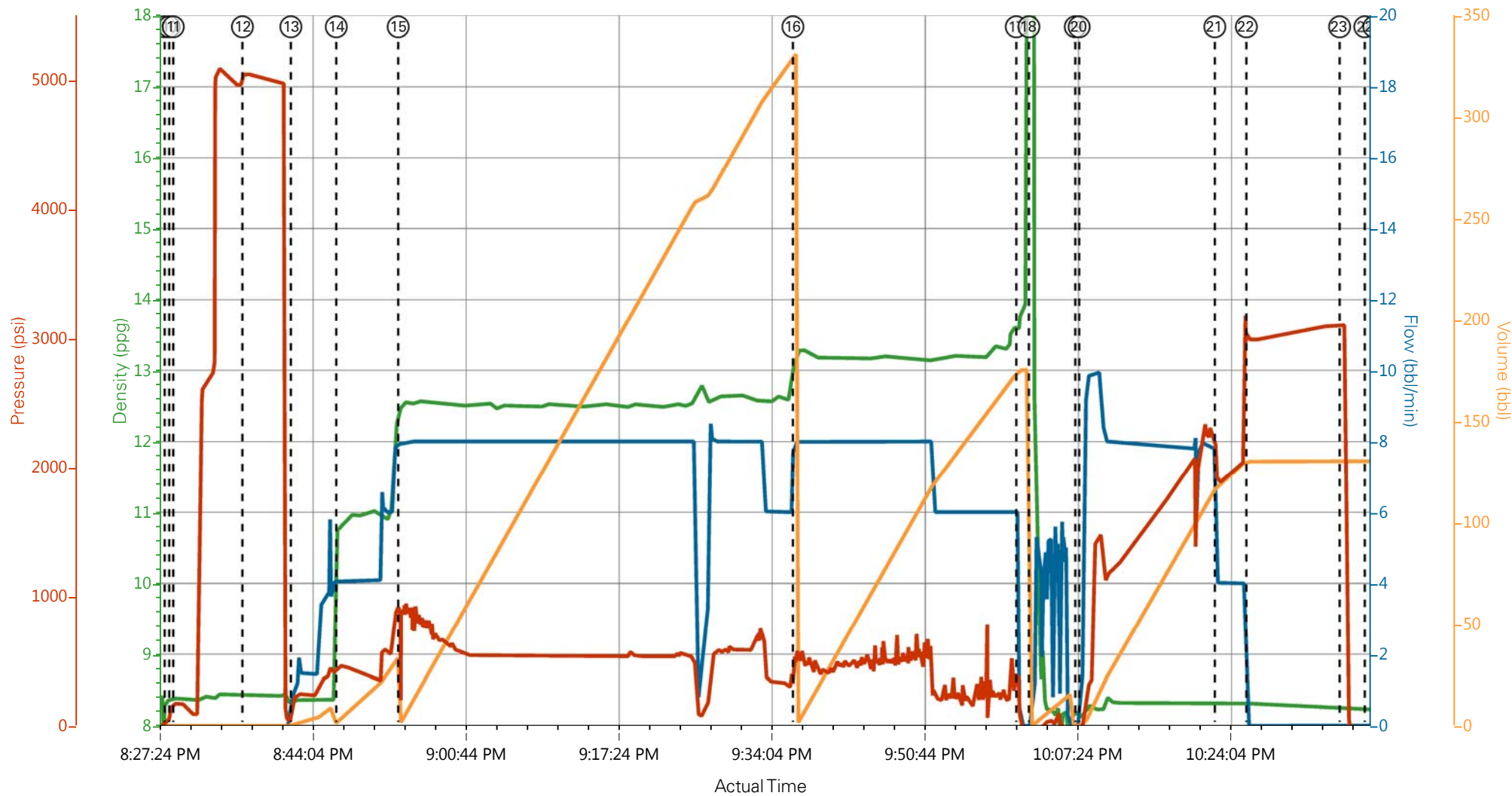
Sincerely,

Grand Junction Cement Engineering

Event	10	Drop Bottom Plug	2/3/2018	20:28:49	USER					PLUG WENT, VERIFIED BY CO REP.
Event	11	Prime Pumps	2/3/2018	20:29:16	COM6	172.00	8.39	1.00	2.0	8.33 PPG FRESH WATER
Event	12	Test Lines	2/3/2018	20:36:47	COM6	5054.00	8.33	0.50	0.5	ALL LINES HELD PRESSURE AT 5054 PSI
Event	13	Pump Spacer 1	2/3/2018	20:42:04	COM6	224.00	8.37	4.00	10.3	FRESH WATER (10 BBL) 8.33 PPG
Event	14	Pump Spacer 2	2/3/2018	20:47:01	COM6	480.00	10.96	8.10	40.0	TUNED SPACER III (40 BBL), 11 PPG
Event	15	Pump Lead Cement	2/3/2018	20:53:45	COM6	877.00	12.51	7.90	314.6	NEOCEM CEMENT 912 SKS (315 BBLS), 12.5 PPG, 1.94 FT3/SK, 9.6 GAL/SK
Event	16	Pump Tail Cement	2/3/2018	21:36:44	COM6	567.00	13.28	8.00	142.1	THERMACEM CEMENT 461 SKS (142 BBLS), 13.3 PPG, 1.73 FT3/SK, 7.81 GAL/SK.
Event	17	Shutdown	2/3/2018	22:01:03	USER					END OF CMT
Event	18	Clean Lines	2/3/2018	22:02:25	USER					WASH UP PUMPS AND LINES
Event	19	Drop Top Plug	2/3/2018	22:07:28	USER					PLUG WENT, VERIFIED BY CO REP.
Event	20	Pump Displacement	2/3/2018	22:07:53	COM6	2320.00	8.39	10.00	119.4	8.34 PPG FRESH WATER (129.4 BBLS) 5 GAL CLA WEB & 1 GAL MMCR
Event	21	Slow Rate	2/3/2018	22:22:40	USER	1960.00	8.39	4.00	10.0	SLOW RATE TO 4 BPM PER CO REP TO LAND PLUG
Event	22	Bump Plug	2/3/2018	22:26:06	USER	3102.00	8.35	4.00	129.5	LAND PLUG AT 2000 PSI, BROUGHT UP TO 3101 PSI FOR A 10 MIN CSG TEST.
Event	23	Check Floats	2/3/2018	22:36:15	USER	3111.00	8.37	0.00	129.5	FLOATS HELD, 1 BBL BACK TO TRUCK
Event	24	End Job	2/3/2018	22:39:00	USER					PIPE WAS NOT RECIPROCATED DURING

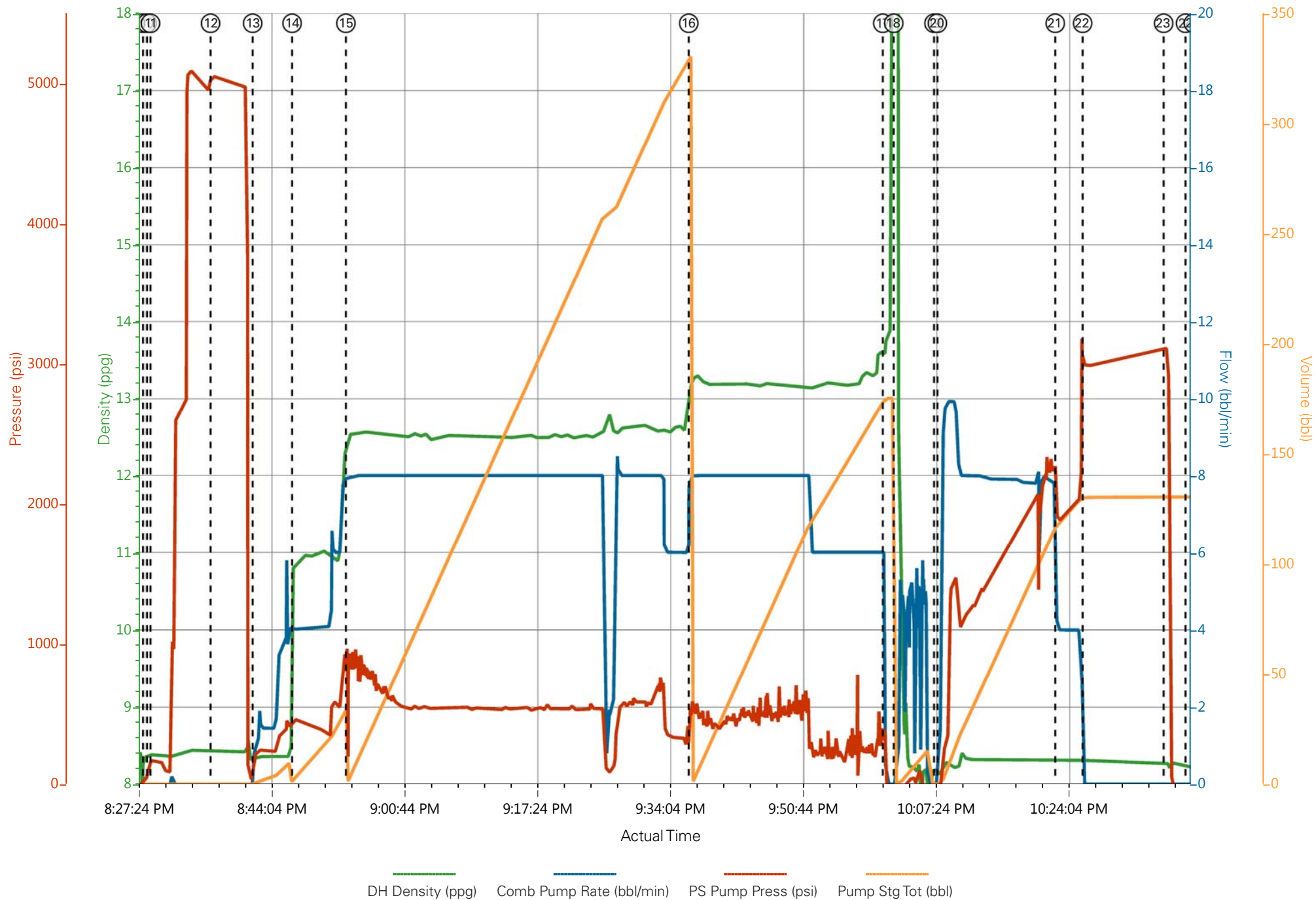
						THE JOB, 40 BBL OF TUNED SPACER BACK TO SURFACE
Event	25	Post-Job Safety Meeting (Pre Rig-Down)	2/3/2018	22:40:00	USER	ALL HES PRESENT
Event	26	Rig-Down Equipment	2/3/2018	22:50:00	USER	ALL HES PRESENT
Event	27	Pre-Convoy Safety Meeting	2/3/2018	23:30:00	USER	ALL HES PRESENT
Event	28	Crew Leave Location	2/3/2018	23:45:00	USER	THANK YOU FOR CHOOSING HALLIBURTON CEMENT, CHRIS SMITH AND CREW

LARAMIE - BRUTON 30-21E - 4.5" PRODUCTION



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

LARAMIE - BRUTON 30-21E - 4.5" PRODUCTION



Job Information

Request/Slurry	2450472/1	Rig Name	H&P 522	Date	01/FEB/2018
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Bruton 30-21E

Well Information

Casing/Liner Size	4.5 in	Depth MD	8452 ft	BHST	114°C / 238°F
Hole Size	7.875 in	Depth TVD	7678 ft	BHCT	77°C / 170°F
Pressure	4666 psi				

Drilling Fluid Information

Mud Supplier Name	Mud Trade Name	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	Fresh Water	
						Water Chloride		

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Operation Test Results Request ID 2450472/1

Thickening Time - ON-OFF-ON

02/FEB/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)
170	4660	48	3:42	4:10	4:25	4:57	8	58	15	8

Total sks = 912

Composite:

CS0327 TR#8678 459 SKS

CS0328 TR#8476 459 SKS

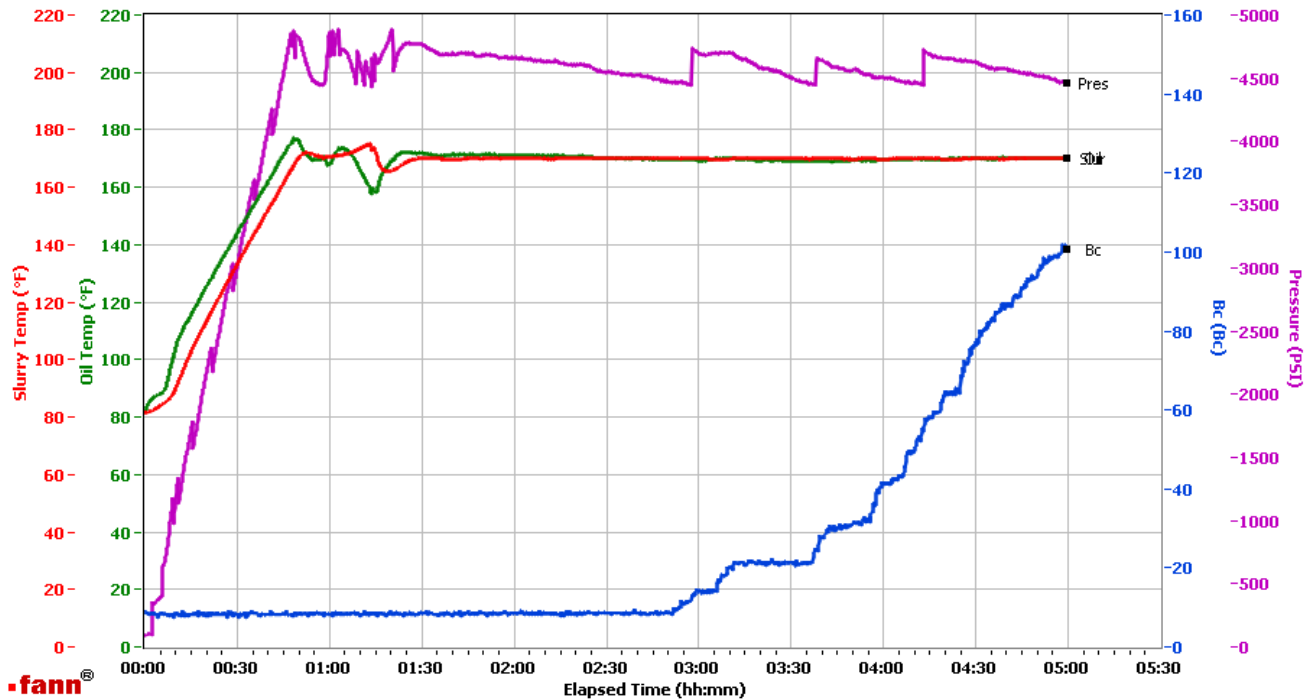
Deflection: 8 - 8

Grand Junction Colorado

Fields	Values
Project Name	GJ2450472-1 LARAMIE PRODUCTION BULK
Test ID	35222768
Request ID	GJ2450472-1
Tested by	DEBA
Customer	LARAMIE ENERGY
Well No	BRUTON 30-21 E
Rig	H&P 522
Casing/Liner Size	4.5"

Fields	Values
Job Type	PRODUCTION CASING
Cement Type	HOLCIM TYPE I-II
Cement Weight	Light Weight
Test Date	03/11/11
Test Time	10:27 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.1219

Events	Results
30.00 Bc	03h:42m
40.00 Bc	03h:58m
50.00 Bc	04h:10m
70.00 Bc	04h:25m
100.00 Bc	04h:57m
00h:30m	8.17
01h:00m	8.49
01h:30m	8.69



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Comments COMPOSITE: CS0327 TR#8678 459 SKS & CS0328 TR# 8476 459 SKS

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HALLIBURTON

Rockies, Grand Junction

Lab Results- Tail

Job Information

Request/Slurry	2450473/1	Rig Name	H&P 522	Date	01/FEB/2018
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Laramie Energy	Location	Garfield	Well	Bruton 30-21E

Well Information

Casing/Liner Size	4.5 in	Depth MD	8452 ft	BHST	114°C / 238°F
Hole Size	7.875 in	Depth TVD	7678 ft	BHCT	77°C / 170°F
Pressure	4666 psi				

Drilling Fluid Information

Mud Supplier Name	Mud Trade Name	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	Fresh Water
						Water Chloride	

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Operation Test Results Request ID 2450473/1

Thickening Time - ON-OFF-ON

03/FEB/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)
170	4666	48	3:56	3:59	3:59	4:00	13	58	15	19

Total sks = 461

Composite:

CS0330 TR 4549 100 SKS

CS0335 TR 8678 361 SKS

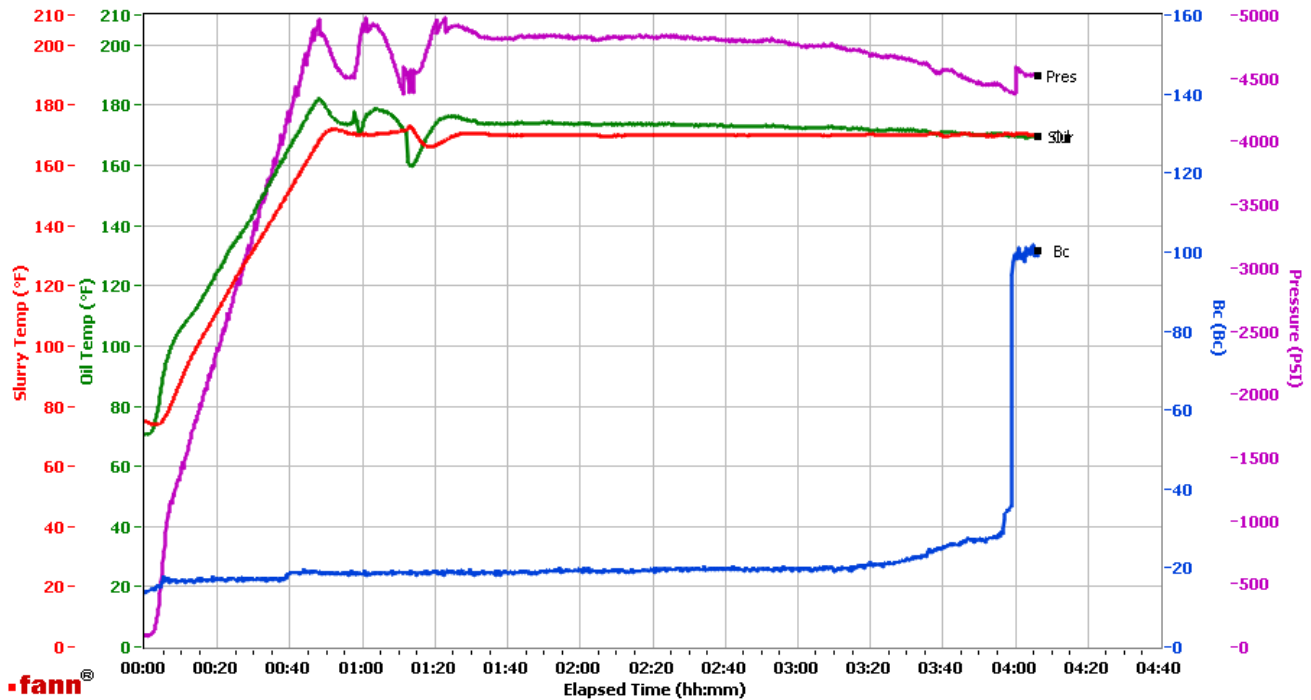
Deflection: 19 – 19

Grand Junction Colorado

Fields	Values
Project Name	2450473-1 LARAMIE BULK PRODUCTION TA
Test ID	35222768 - TT
Request ID	2450473-1
Tested by	JASON
Customer	LARAMIE ENERGY
Well No	BRUTON 30-21E
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	02/03/18
Test Time	02:38 AM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	03h:56m
40.00 Bc	03h:59m
50.00 Bc	03h:59m
70.00 Bc	03h:59m
100.00 Bc	04h:00m
00h:30m	17.14
01h:00m	18.19
01h:30m	18.46



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Comments CS0330 TR 4549 100 SKS CS0335 TR 8678 361 SKS

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