

HALLIBURTON

iCem[®] Service

Terra Energy Partners

For: Terra Energy Partners

Date: Saturday, March 11, 2017

TR 324-21-597 Production PJR

API/UWI #: 05-045-23351-00

Sincerely,

Grand Junction Cement Engineering

1.0 Real-Time Job Summary

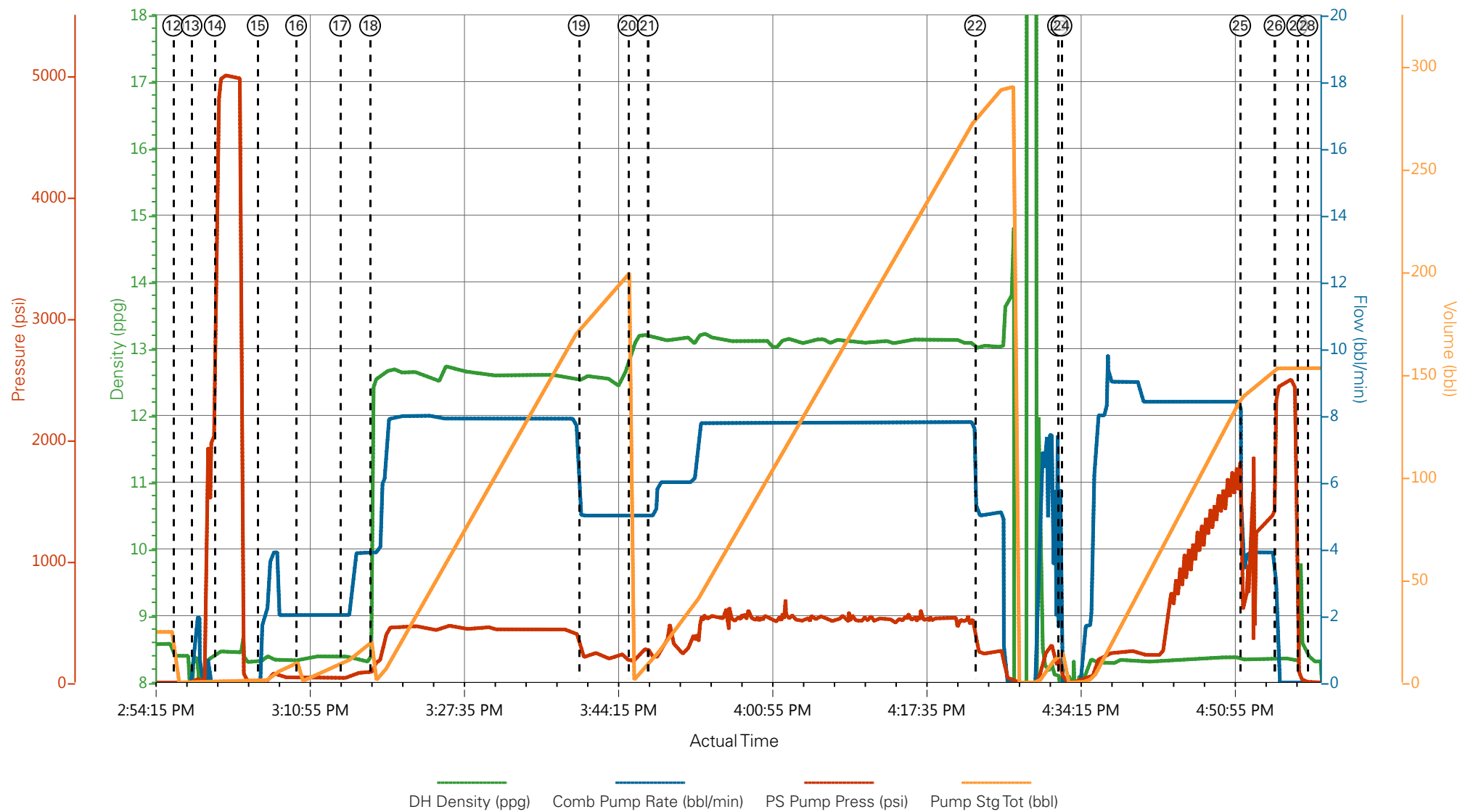
1.1 Job Event Log

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	3/11/2017	05:30:00	USER					Requested on Location @ 1300
Event	2	Pre-Convoy Safety Meeting	3/11/2017	08:45:00	USER					With all HES Personnel
Event	3	Crew Leave Yard	3/11/2017	09:00:00	USER					1 Elite Pump, 1 660 Bulk Truck, 1 pickup
Event	4	Arrive At Loc	3/11/2017	13:00:00	USER					Rig Circulating on Bottom upon HES Arrival
Event	5	Assessment Of Location Safety Meeting	3/11/2017	13:10:00	USER					With all HES Personnel
Event	6	Spot Equipment	3/11/2017	13:15:00	USER					1 Elite Pump, 1 660 Bulk Truck, 1 pickup
Event	7	Meet With Company Rep	3/11/2017	13:25:00	USER					Verified Job Calculations, Offered MSDS, Water Test 50 Degrees, PH 7.5, Chlorides 200
Event	8	Pre-Rig Up Safety Meeting	3/11/2017	13:30:00	USER					With all HES Personnel
Event	9	Rig-Up Equipment	3/11/2017	13:40:00	USER					2" iron to ground manifold, standpipe, hardline to pit. Water hoses to upright and day tank, bulk hoses to silo and 660.
Event	10	Pre-Job Safety Meeting	3/11/2017	14:40:39	USER					With all Personnel
Event	11	Prime Pumps	3/11/2017	14:42:59	COM6					Fresh Water
Event	12	Start Job	3/11/2017	14:56:29	COM6					Rig Circulated for 2 Hours, 383 BBLS, at 350 PSI, no gas. TD 9871 FT, TP 9865.01 FT, SJ 31.81 FT, SFC CSG 9 5/8 IN 36 LB/FT SET @ 2714 FT, CSG 4 1/2 IN 11.6 LB/FT, OH 8 3/4 IN, MUD WT 8.9 PPG, 1500 CFM ON

PARASITE STRING.										
Event	13	Prime Lines	3/11/2017	14:58:29	COM6	8.4				Fresh Water
Event	14	Test Lines	3/11/2017	15:00:59	COM6	8.4	5004.0			Tested lines to 5004 PSI, Pressure Holding
Event	15	Pump Fresh Water Spacer	3/11/2017	15:05:38	COM6	8.4	2.0	28.0	10.0	Fresh Water
Event	16	Pump Mud Flush Spacer	3/11/2017	15:09:47	COM6	8.4	4.0	40.0	20.0	Mud Flush
Event	17	Check weight	3/11/2017	15:14:32	COM6					Density verified via mud cup
Event	18	Pump Lead Cement	3/11/2017	15:17:47	COM6	12.5	8.0	450.0	198.7	575 sks, 12.5 ppg, 1.94 ft3/sk, 9.58 gal/sk, with 45 LBS Tuff Fiber
Event	19	Slow Rate	3/11/2017	15:40:20	USER	12.5	5.00	250.0	173.6	Slowed to Finish Lead Cement
Event	20	Pump Tail Cement	3/11/2017	15:45:42	COM6	13.0	8.0	550.0	276.5	750 sks, 13.0 ppg, 2.07 ft3/sk, 9.43gal/sk
Event	21	Check weight	3/11/2017	15:47:47	COM6					Density verified via mud cup
Event	22	Slow Rate	3/11/2017	16:23:11	USER	13.0	5.00	400.0	276.2	Slowed to Finish Tail Cement
Event	23	Drop Top Plug	3/11/2017	16:32:09	USER					Verified Plug Away, Used Company Provided Latch Down Plug
Event	24	Pump Displacement	3/11/2017	16:32:31	COM6	8.4	10.0	1520.0	152.4	Fresh Water with 15 sks KCL, 3 LBS BE-6, 1 Gal MMCR
Event	25	Slow Rate	3/11/2017	16:51:50	USER	8.4	4.0	1300.0	142.4	Slow Rate 10 bbls to Calculated Displacement
Event	26	Bump Plug	3/11/2017	16:55:33	COM6	8.4	4.0	2450.0	152.4	Plug Bumped at 1430 PSI, Took to 2490 PSI
Event	27	Check Floats	3/11/2017	16:58:00	USER			2490.0		Floats Held, 1 BBL Back to Pump
Event	28	End Job	3/11/2017	16:59:06	COM6					Worked Pipe throughout job. Had good circulation throughout spacer and cement, had no returns during displacement. No Sugar, No Add Hours.
Event	29	Safety Meeting - Pre Rig-Down	3/11/2017	17:10:00	USER					With All HES Personnel
Event	30	Rig-Down Equipment	3/11/2017	17:30:00	USER					

Event	31	Pre-Convoy Safety Meeting	3/11/2017	19:00:00	USER	With All HES Personnel
Event	32	Crew Leave Location	3/11/2017	19:15:00	USER	
Event	33	Comment	3/11/2017	19:30:00	USER	Thank You For Using Halliburton Cement, Steven Wardell and Crew.

TERRA ENERGY - CHEVRON - TR 324-21-597 - PRODUCTION



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|---|-----------------------------|---------------------------|----------------------|----------------------------------|
| ① Call Out | ⑧ Pre-Rig Up Safety Meeting | ⑮ Pump Fresh Water Spacer | 22 Slow Rate | 29 Safety Meeting - Pre Rig-Down |
| ② Pre-Convoy Safety Meeting | ⑨ Rig-Up Equipment | ⑯ Pump Mud Flush Spacer | 23 Drop Top Plug | 30 Rig-Down Equipment |
| ③ Crew Leave Yard | ⑩ Pre-Job Safety Meeting | ⑰ Check weight | 24 Pump Displacement | 31 Pre-Convoy Safety Meeting |
| ④ Arrive At Loc | ⑪ Prime Pumps | ⑱ Pump Lead Cement | 25 Slow Rate | 32 Crew Leave Location |
| ⑤ Assessment Of Location Safety Meeting | ⑫ Start Job | ⑲ Slow Rate | 26 Bump Plug | 33 Comment |
| ⑥ Spot Equipment | ⑬ Prime Lines | 20 Pump Tail Cement | 27 Check Floats | |
| ⑦ Meet With Company Rep | ⑭ Test Lines | 21 Check weight | 28 End Job | |

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Created: 2017-03-11 13:38:36, Version: 4.2.393

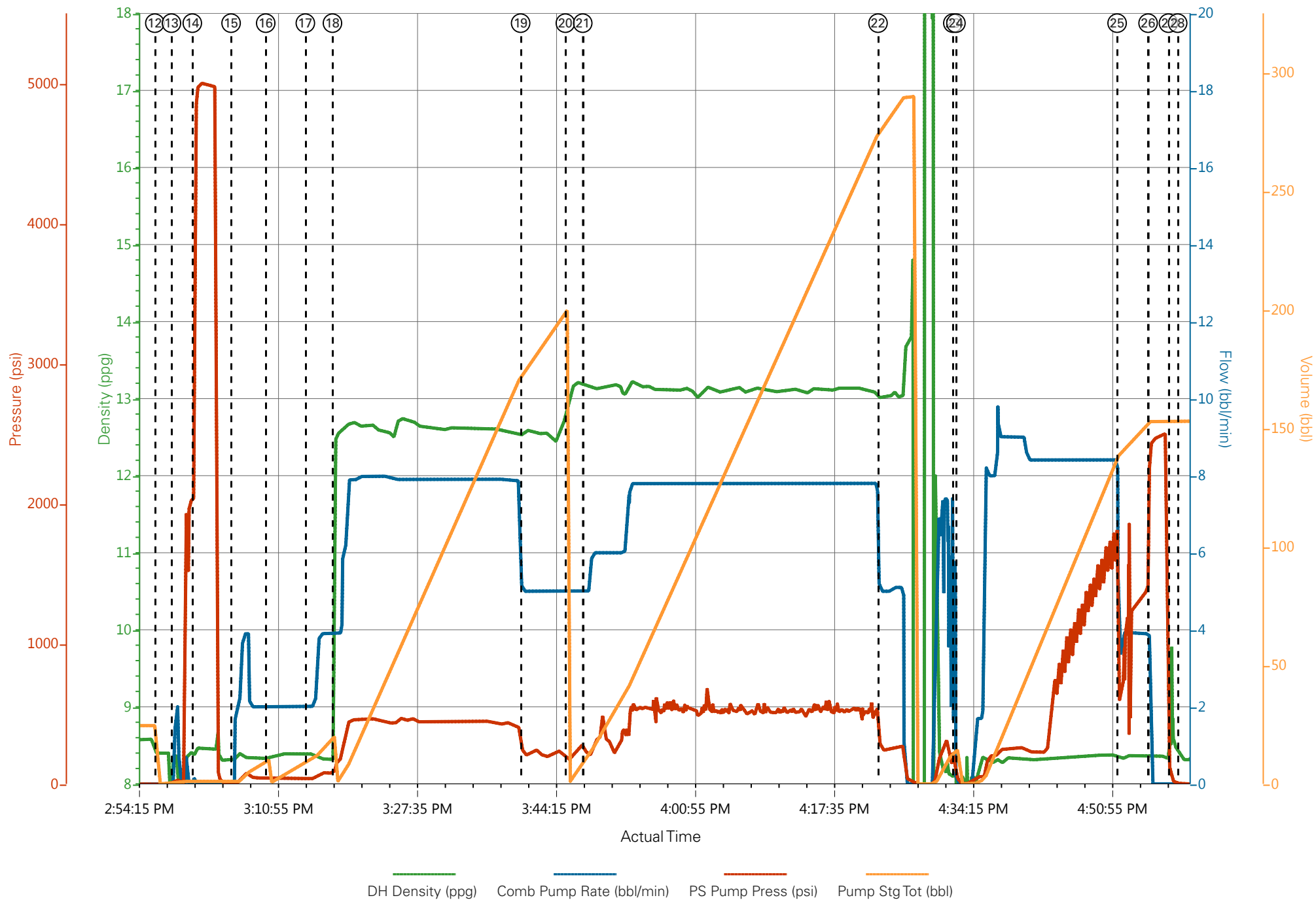
Edit

Customer: TEP ROCKY MOUNTAIN LLC
Representative: JASON BOEBERT

Job Date: 3/11/2017 2:00:52 PM
Sales Order #: 903894868

Well: TR 324-21-597
ELITE #1: STEVE WARDELL / DIRK BRENNKE

TERRA ENERGY - CHEVRON - TR 324-21-597 - PRODUCTION



HALLIBURTON

Rockies, Grand Junction

Lab Results- Lead

Job Information

Request/Slurry	2373211/1	Rig Name	H&P 271	Date	07/MAR/2017
Submitted By	Philip Readle	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	TR 324-21-597

Well Information

Casing/Liner Size	4.5 in	Depth MD	9876 ft	BHST	116°C / 240°F
Hole Size	8.75 in	Depth TVD	9432 ft	BHCT	77°C / 170°F
Pressure	5900 psi				

Drilling Fluid Information

Mud Supplier Name	Baroid	Mud Trade Name	BARADRIL-N	Density	10.4 lbm/gal
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Cement Information - Lead Design



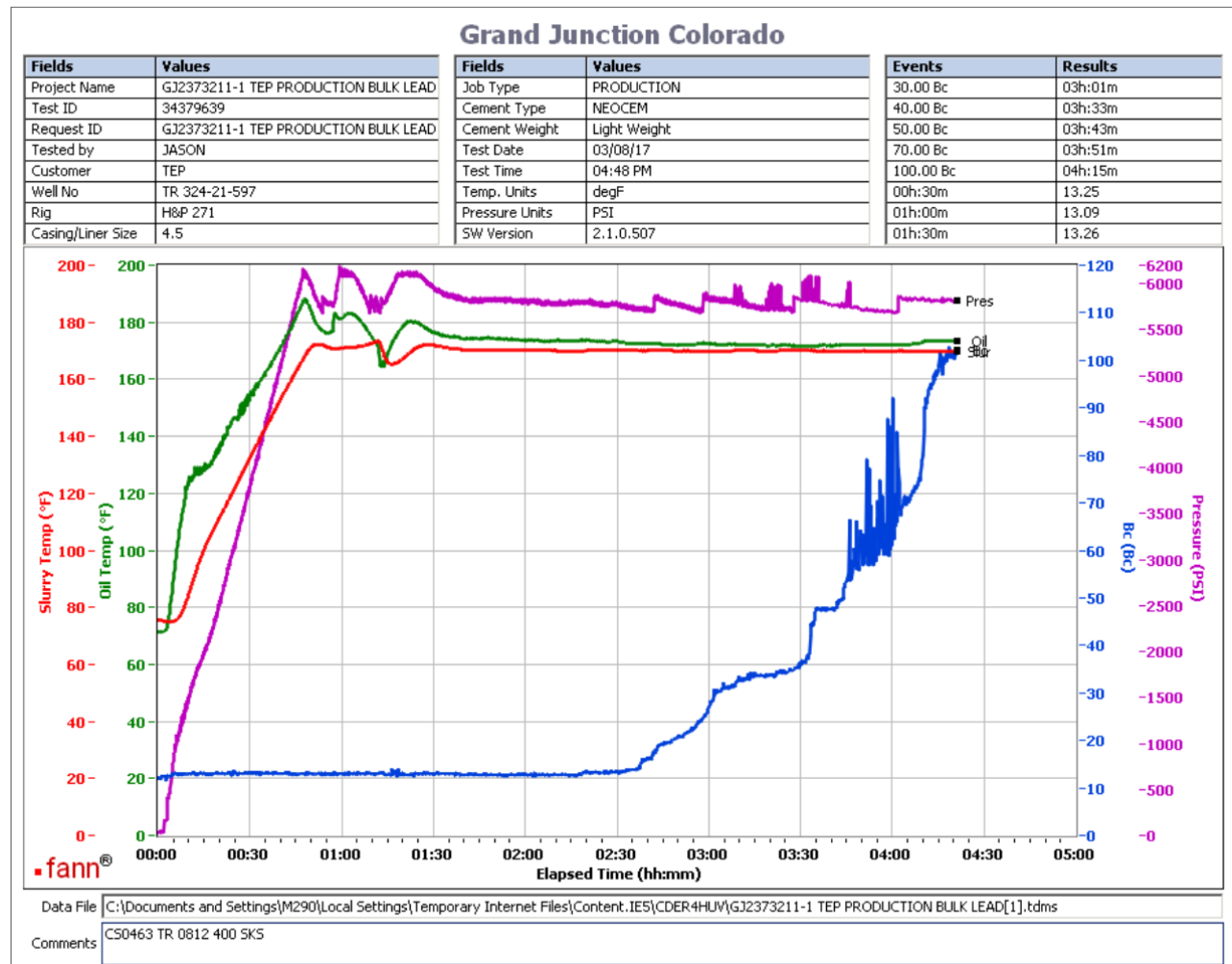
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		NeoCem Lead				Slurry Density	12.5	lbm/gal
						Slurry Yield	1.941	ft3/sack
						Water Requirement	9.623	gal/sack
						Total Mix Fluid	9.623	gal/sack
						Water Source	Fresh Water	
						Water Chloride		

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Thickening Time - ON-OFF-ON

09/MAR/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)
170	5900	47	3:01	3:43	4:05	4:15	12	57	15	13



Total Sacks= 575

CS0463 TR# 0812 400 SKS

no deflection was observed when the stirring was resumed.

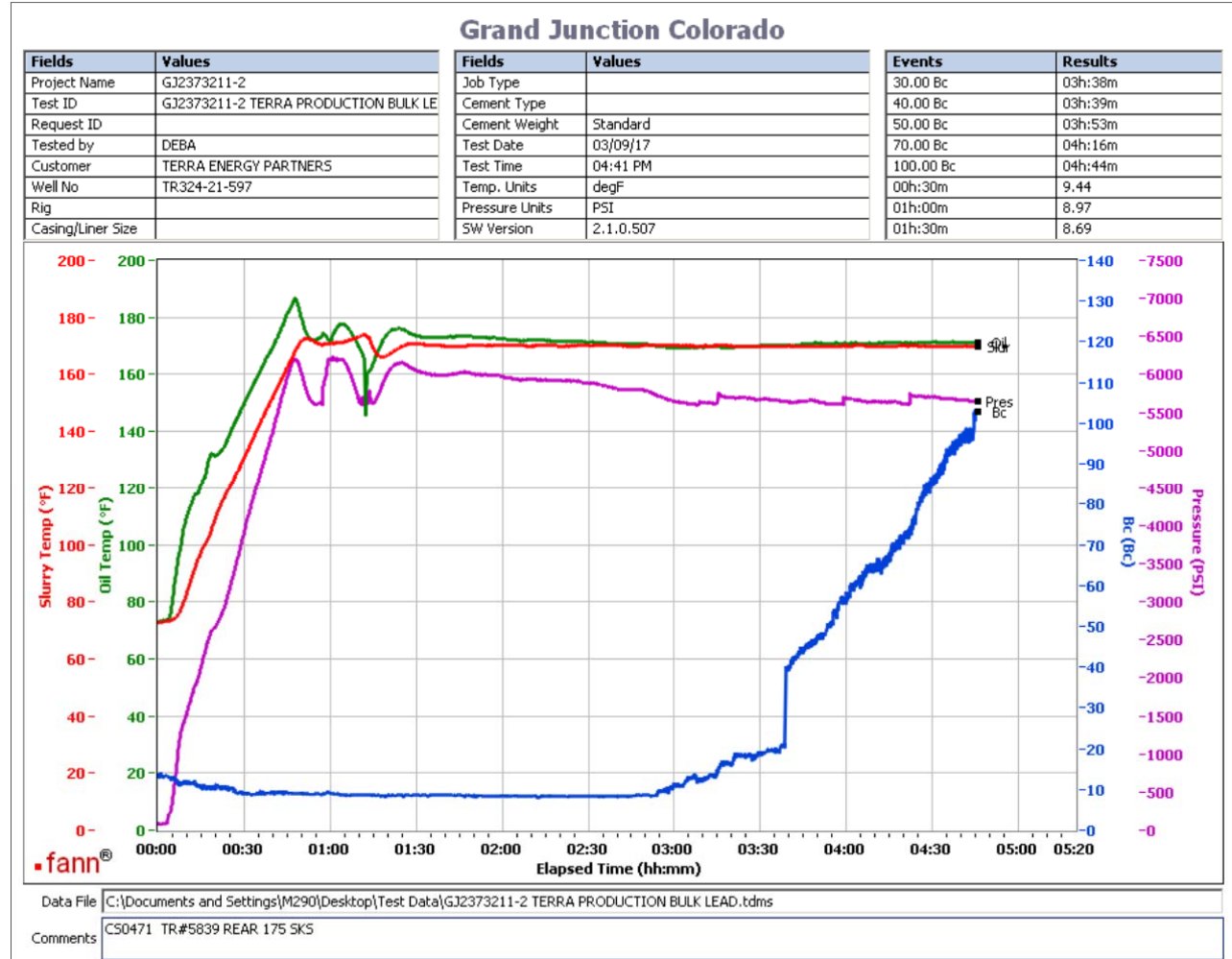
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Operation Test Results Request ID 2373211/2

Thickening Time - ON-OFF-ON

09/MAR/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)
170	5900	47	3:38	3:53	4:16	4:44	13	57	15	8



Total Sacks= 575
 CS0471 TR# 5839 Rear 175 SKS
 No deflection

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HALLIBURTON

Rockies, Grand Junction

Lab Results- Tail

Job Information

Request/Slurry	2373212/1	Rig Name	H&P 271	Date	07/MAR/2017
Submitted By	Philip Readle	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	TR 324-21-597

Well Information

Casing/Liner Size	4.5 in	Depth MD	9876 ft	BHST	116°C / 240°F
Hole Size	8.75 in	Depth TVD	9432 ft	BHCT	77°C / 170°F
Pressure	5900 psi				

Drilling Fluid Information

Mud Supplier Name	Baroid	Mud Trade Name	BARADRIL-N	Density	10.4 lbm/gal
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Cement Information - Tail Design



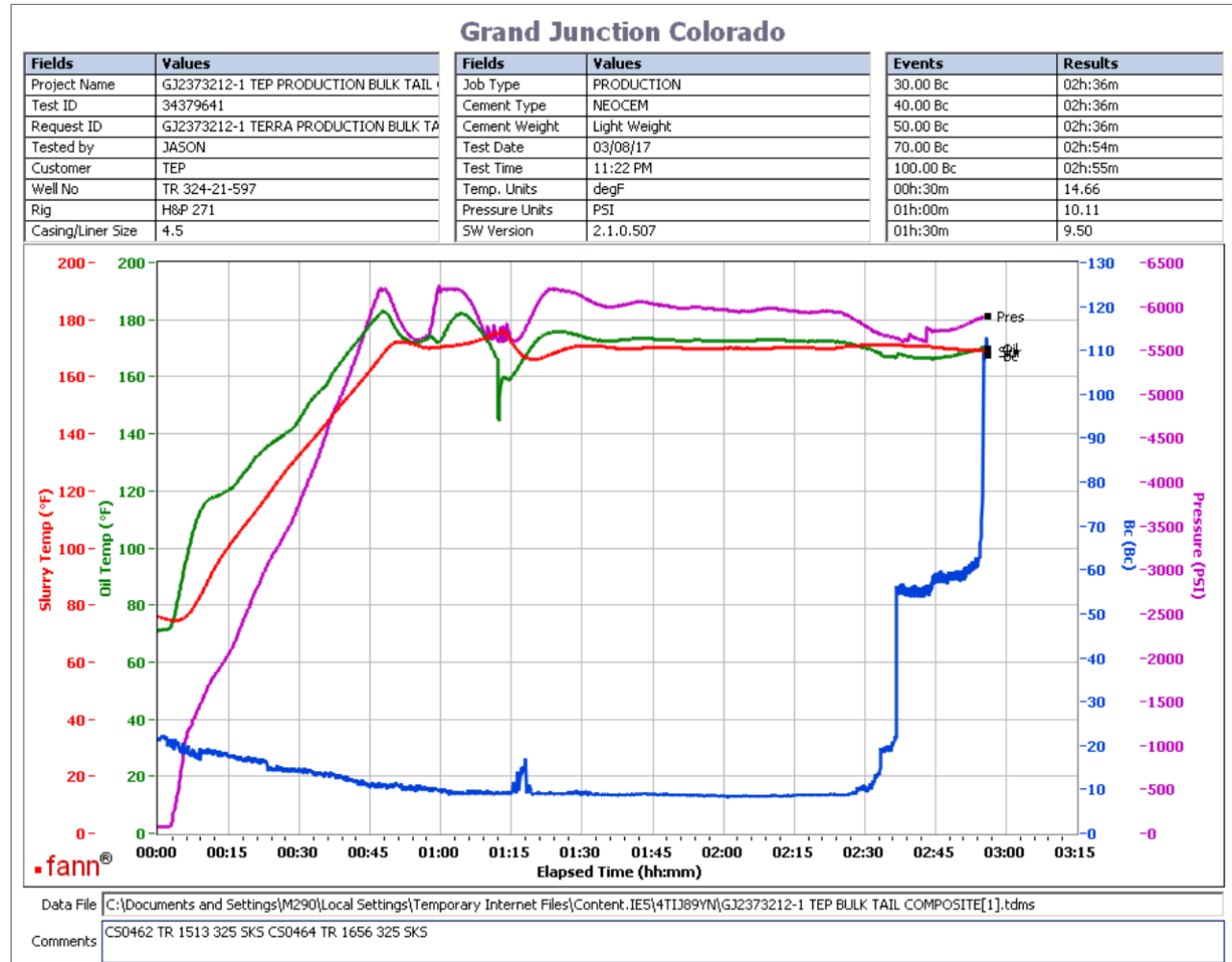
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		NeoCem Tail				Slurry Density	13	lbm/gal
						Slurry Yield	2.065	ft3/sack
						Water Requirement	9.429	gal/sack
						Total Mix Fluid	9.429	gal/sack
						Water Source	Fresh Water	
						Water Chloride		

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Thickening Time - ON-OFF-ON

09/MAR/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)
170	5900	47	2:36	2:36	2:54	2:55	22	57	15	9



Total sks = 750
 CS0462 TR 1513 325 SKS
 CS0464 TR 1656 325 SKS
 no deflection was observed.

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Operation Test Results Request ID 2373212/2

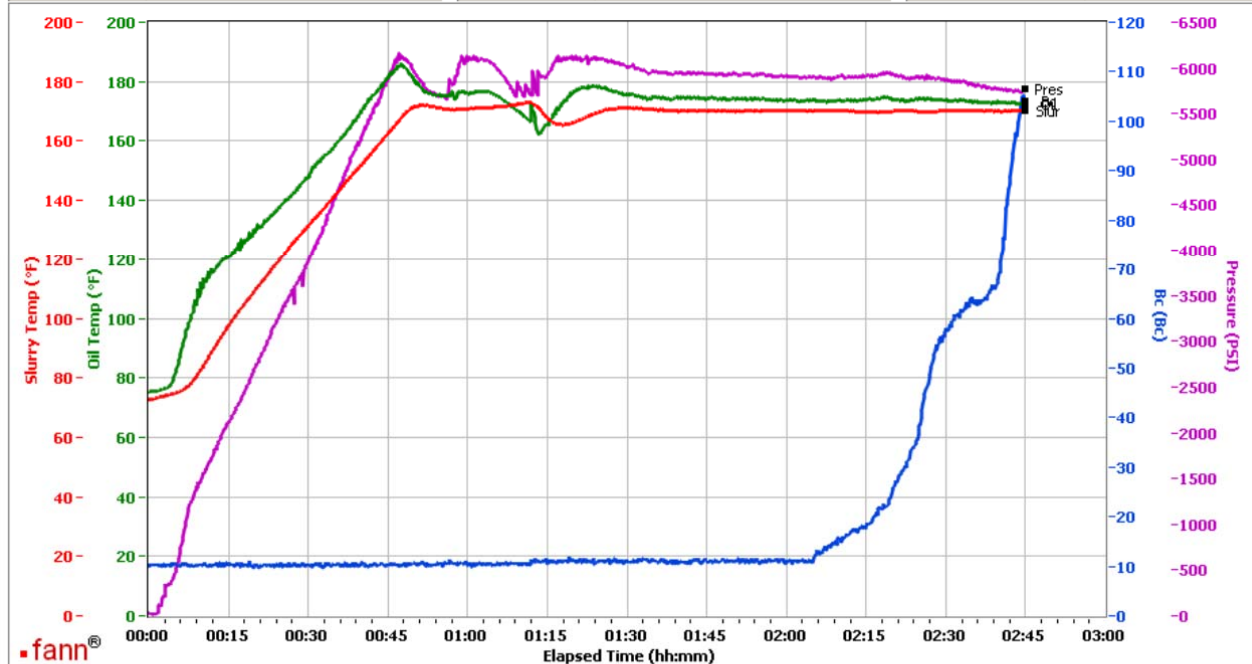
Thickening Time - ON-OFF-ON

09/MAR/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)
170	5900	47	2:22	2:27	2:40	2:43	9	57	15	10

Grand Junction, Colorado

Fields	Values	Fields	Values	Events	Results
Project Name	GJ2373212-1	Job Type		30.00 Bc	02h:22m
Test ID	GJ2373212-1 TERRA BULK TAIL	Cement Type		40.00 Bc	02h:25m
Request ID		Cement Weight	Standard	50.00 Bc	02h:27m
Tested by	DEBA	Test Date	03/09/17	70.00 Bc	02h:40m
Customer	TERRA ENERGY PARTNERS	Test Time	06:02 PM	100.00 Bc	02h:43m
Well No	TR324-21-597	Temp. Units	degF	00h:30m	10.27
Rig		Pressure Units	PSI	01h:00m	10.17
Casing/Liner Size		SW Version	2.1.0.507	01h:30m	10.99



Data File C:\Documents and Settings\M290\Local Settings\Temporary Internet Files\Content.IE5\4TIJ89YN\GJ2373212-1 TERRA BULK TAIL[1].tdms

Comments CS0472 TR#5839 FRONT 100 SKS

Total sks = 750
CS0472 TR 5839 front 100 SKS
no deflection

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