

HALLIBURTON

iCem[®] Service

TEP ROCKY MOUNTAIN LLC

For: Terra

Date: Friday, April 14, 2017

TR 524-21-597 Production

Sincerely,

Grand Junction Cement Engineering

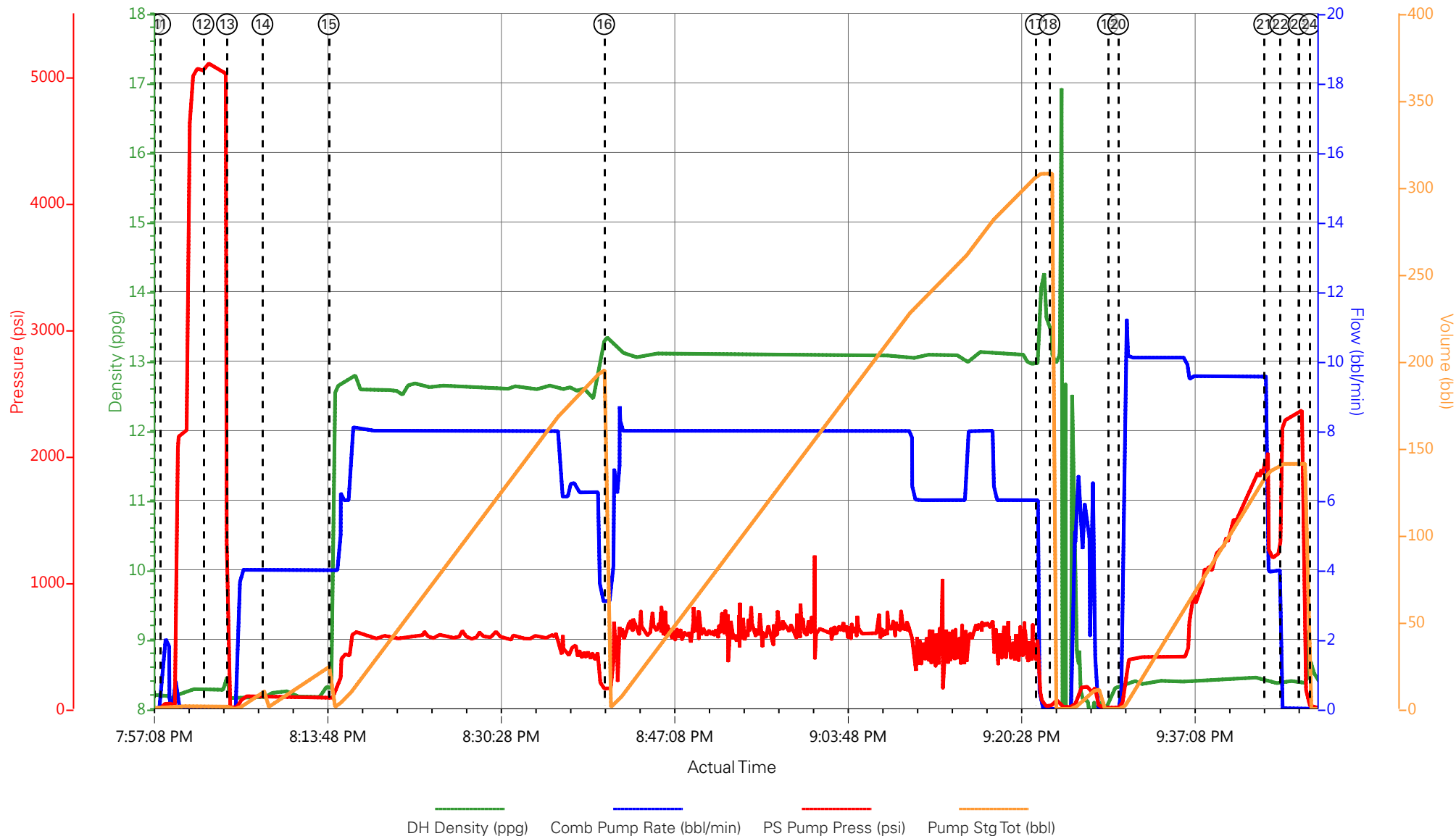
2.0 Real-Time Job Summary

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	Comment	4/12/2017	07:00:00	USER					CREW WAS RELEASED FROM LOCATION @ 07:00 ON 04/12/13 8 ADDITIONAL HOURS
Event	2	Call Out	4/14/2017	07:00:00	USER					ELITE #1
Event	3	Pre-Convoy Safety Meeting	4/14/2017	09:00:00	USER					ALL HES EMPLOYEES
Event	4	Arrive At Loc	4/14/2017	12:00:00	USER					ARRIVED ON LOCATION UPON REQUESTED TIME RESUMED CHARGING ADDITIONAL HOURS UPON ARRIVAL
Event	5	Assessment Of Location Safety Meeting	4/14/2017	12:15:00	USER					ALL HES EMPLOYEES
Event	6	Pre-Rig Up Safety Meeting	4/14/2017	12:30:00	USER					ALL HES EMPLOYEES
Event	7	Rig-Up Equipment	4/14/2017	12:45:00	USER					1 HT-400 PUMP TRUCK (ELITE #1) 1 660 BULK TRUCK 1 F550 PICKUP 2 SILO'S
Event	8	Comment	4/14/2017	12:55:00	USER					CUSTOMER WAS OFFERED SDS WATER TEMP @ 57 F PH: 7 CHLORIDES:0 PPM
Event	9	Pre-Job Safety Meeting	4/14/2017	19:00:00	USER					ALL HES EMPLOYEES AND RIG CREW RIG CIRCULATED FOR 1 1/2 HRS PRIOR TO JOB 1000 CFM PRIOR TO JOB
Event	10	Start Job	4/14/2017	19:57:30	COM5					TD: 9330 TP:9330 SJ:19.65 CSG: 4 1/2 11.6# P-110 OH: 8 3/4 MW: 9.0 PPG SURFACE CSG: 9 5/8 36# SET @ 2579
Event	11	Prime Lines	4/14/2017	19:58:02	COM5	8.33	2.0	59	2.0	PRIME LINES FRESH WATER
Event	12	Test Lines	4/14/2017	20:02:12	COM5			5074		PRESSURE TEST OK
Event	13	Fresh Water Spacer	4/14/2017	20:04:27	COM5	8.33	4.0	90	10.0	FRESH WATER SPACER
Event	14	Mud Flush III	4/14/2017	20:07:52	COM5	8.44	4.0	94	20.0	20 BBL (80 LBS) MUD FLUSH III

Event	15	Pump Lead Cement	4/14/2017	20:14:14	COM5	12.5	8.0	620	191.7	555 SKS NeoCem (191.7 BBLS) 12.5 PPG 1.94 YIELD 9.58 GAL/SK LEAD CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES 60 LBS TUFF FIBER ADDED THROUGHOUT LEAD
Event	16	Pump Tail Cement	4/14/2017	20:40:42	COM5	13.0	8.0	650	278.4	755 SKS NeoCem (278.4 BBLS) 13.0 PPG 2.07 YIELD 9.43 GAL/SK TAIL CEMENT WEIGHT VERIFIED VIA PRESSURIZED MUD SCALES
Event	17	Shutdown	4/14/2017	21:22:11	USER					
Event	18	Clean Lines	4/14/2017	21:23:29	COM5					CLEAN LINES FRESH WATER
Event	19	Drop Top Plug	4/14/2017	21:29:07	COM5					PLUG AWAY NO ISSUES PLUG SUPPLIED BY CUSTOMER
Event	20	Pump Displacement	4/14/2017	21:30:05	COM5	8.4	10.0	2000	144.4	144.4 BBL KCL DISPLACEMENT 1 GAL MMCR 3 LBS BE-6 ADDED INTO DISPLACEMENT
Event	21	Slow Rate	4/14/2017	21:44:07	USER	8.4	4.0	1300	134.4	SLOW RATE PRIOR TO BUMPING PLUG
Event	22	Bump Plug	4/14/2017	21:45:39	COM5	8.4	4.0	1300	144.4	PRESSURE PRIOR TO BUMPING PLUG @ 1300 PSI BUMPED PLUG UP TO 2360 PSI
Event	23	Check Floats	4/14/2017	21:47:24	COM5	8.4		2360	144.4	FLOATS HOLDING 1 1/4 BBLS BACK TO TRUCKS TANK
Event	24	End Job	4/14/2017	21:48:29	COM5					GOOD RETURNS THROUGHOUT CEMENT NO RETURNS THROUGHOUT DISPLACEMENT PIPE WAS WORKED THROUGHOUT JOB
Event	25	Pre-Rig Down Safety Meeting	4/14/2017	22:15:00	USER					ALL HES EMPLOYEES
Event	26	Rig-Down Equipment	4/14/2017	22:30:00	USER					
Event	27	Pre-Convoy Safety Meeting	4/14/2017	22:55:00	USER					ALL HES EMPLOYEES
Event	28	Crew Leave Location	4/14/2017	23:00:00	USER					THANK YOU FOR USING HALLIBURTON CEMENT DAVID CAMPBELL AND CREW

TERRA - TR 524-21-597 - 4 1/2 PRODUCTION



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

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Created: 2017-04-11 10:30:32, Version: 4.2.393

Edit

Customer: TEP ROCKY MOUNTAIN LLC

Job Date: 4/14/2017

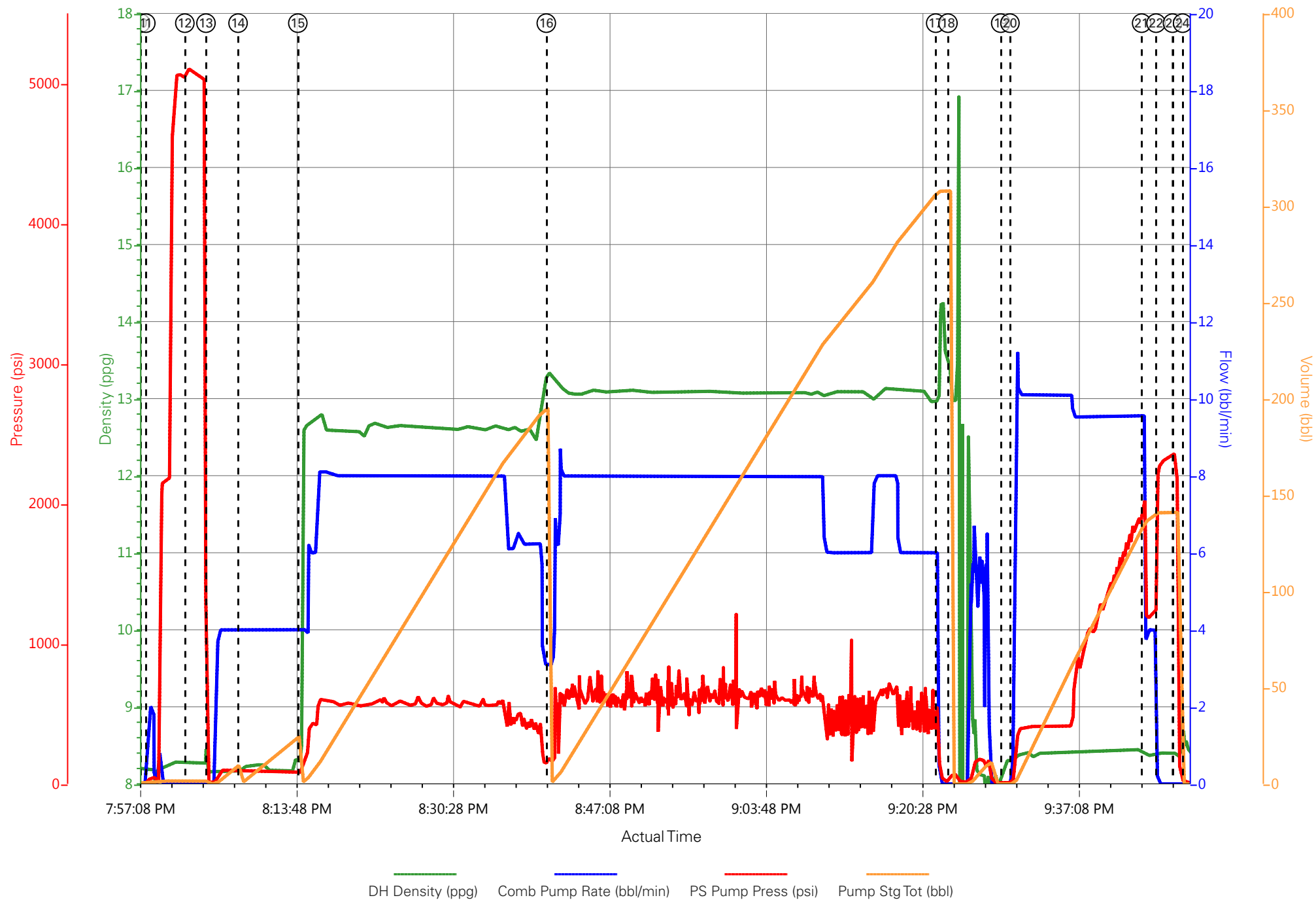
Well: TR 524-21-597

Representative: JARVIS ABBEY

Sales Order #: 0903962529

ELITE #1: DAVID CAMPBELL / RYAN MARTIN

TERRA - TR 524-21-597 - 4 1/2 PRODUCTION



Job Information

Request/Slurry	2378985/1	Rig Name	H&P 271	Date	07/APR/2017
Submitted By	Patrick Ealey	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	TR 524-21-597

Well Information

Casing/Liner Size	4.5 in	Depth MD	9382 ft	BHST	115°C / 239°F
Hole Size	8.75 in	Depth TVD	9368 ft	BHCT	76°C / 169°F
Pressure	5860 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		

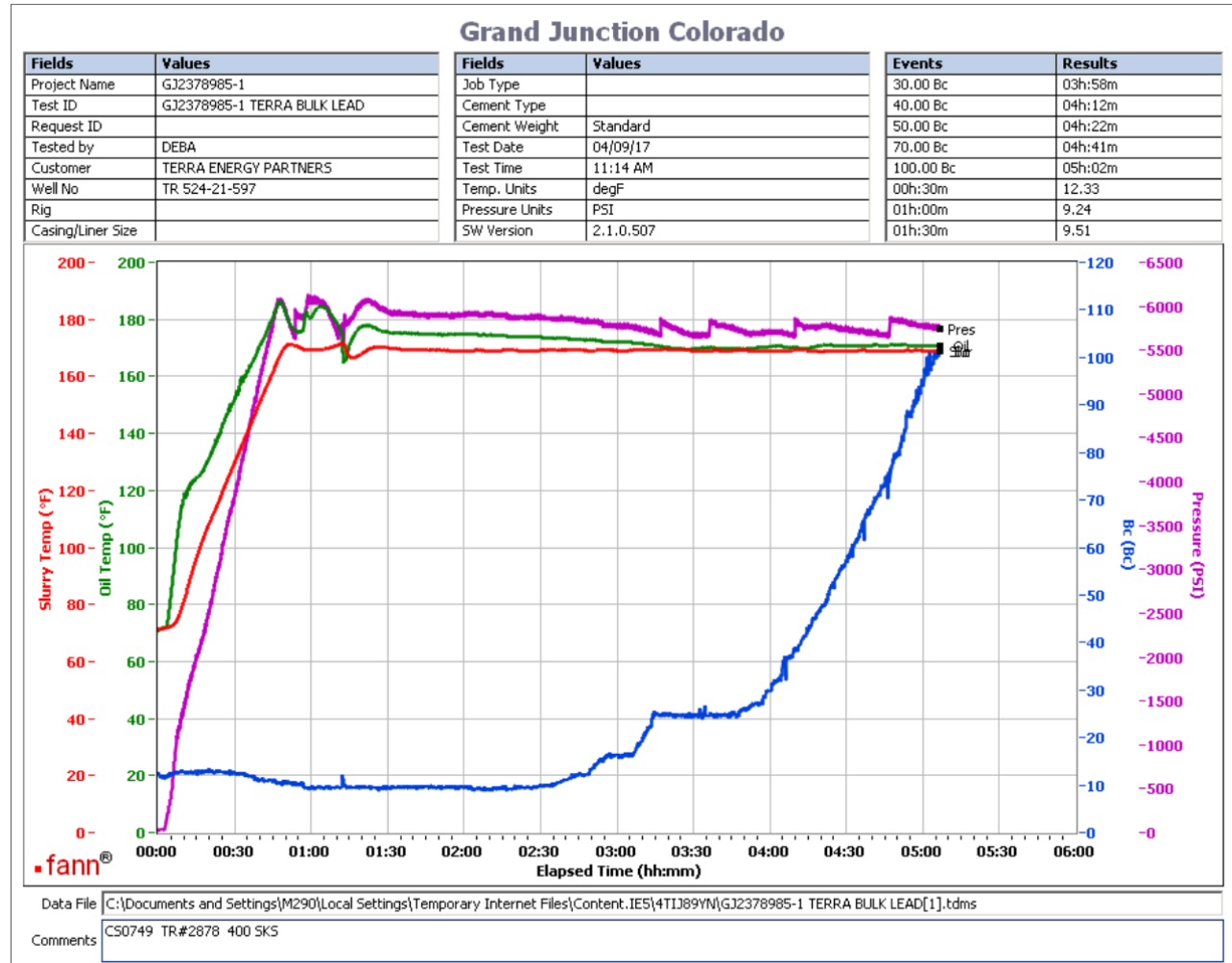
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Operation Test Results Request ID 2378985/1

Thickening Time - ON-OFF-ON

09/APR/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)
169	5860	47	3:58	4:22	4:41	5:02	12	57	15	9



Total Sacks= 555

CS0749 TR#2878 400 SKS

no significant deflection was observed from 9Bc to 10Bc

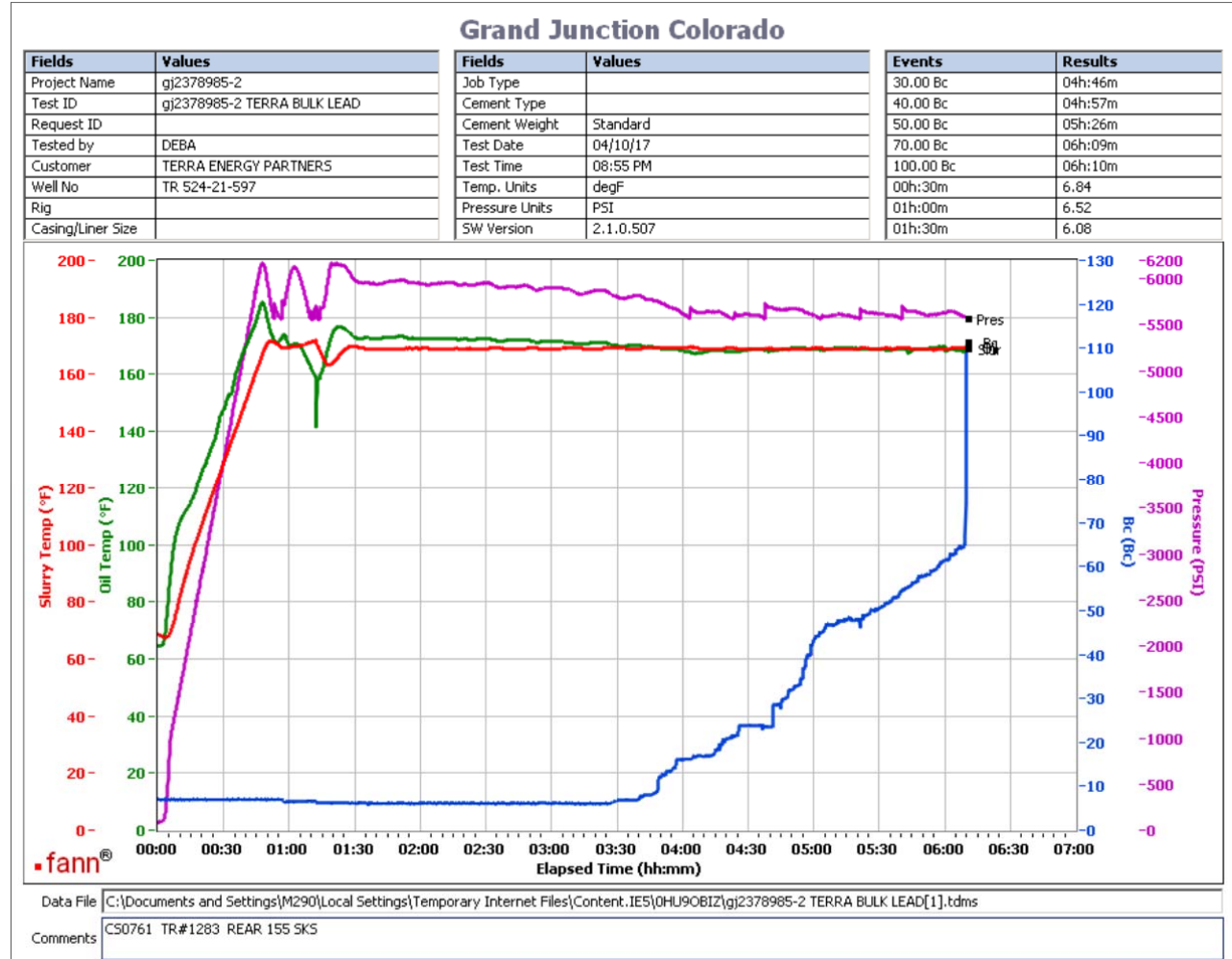
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Operation Test Results Request ID 2378985/2

Thickening Time - ON-OFF-ON

10/APR/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)
169	5860	47	4:46	5:26	6:09	6:10	7	57	15	6



Total Sacks= 555
 CS0761 TR# 1283 Rear 155 SKS
 no deflection was observed

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HALLIBURTON

Rockies, Grand Junction

Lab Results- Tail

Job Information

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Submitted By	Patrick Ealey	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	TR 524-21-597

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Hole Size	8.75 in	Depth TVD	9368 ft	BHCT	76°C / 169°F
Pressure	5860 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



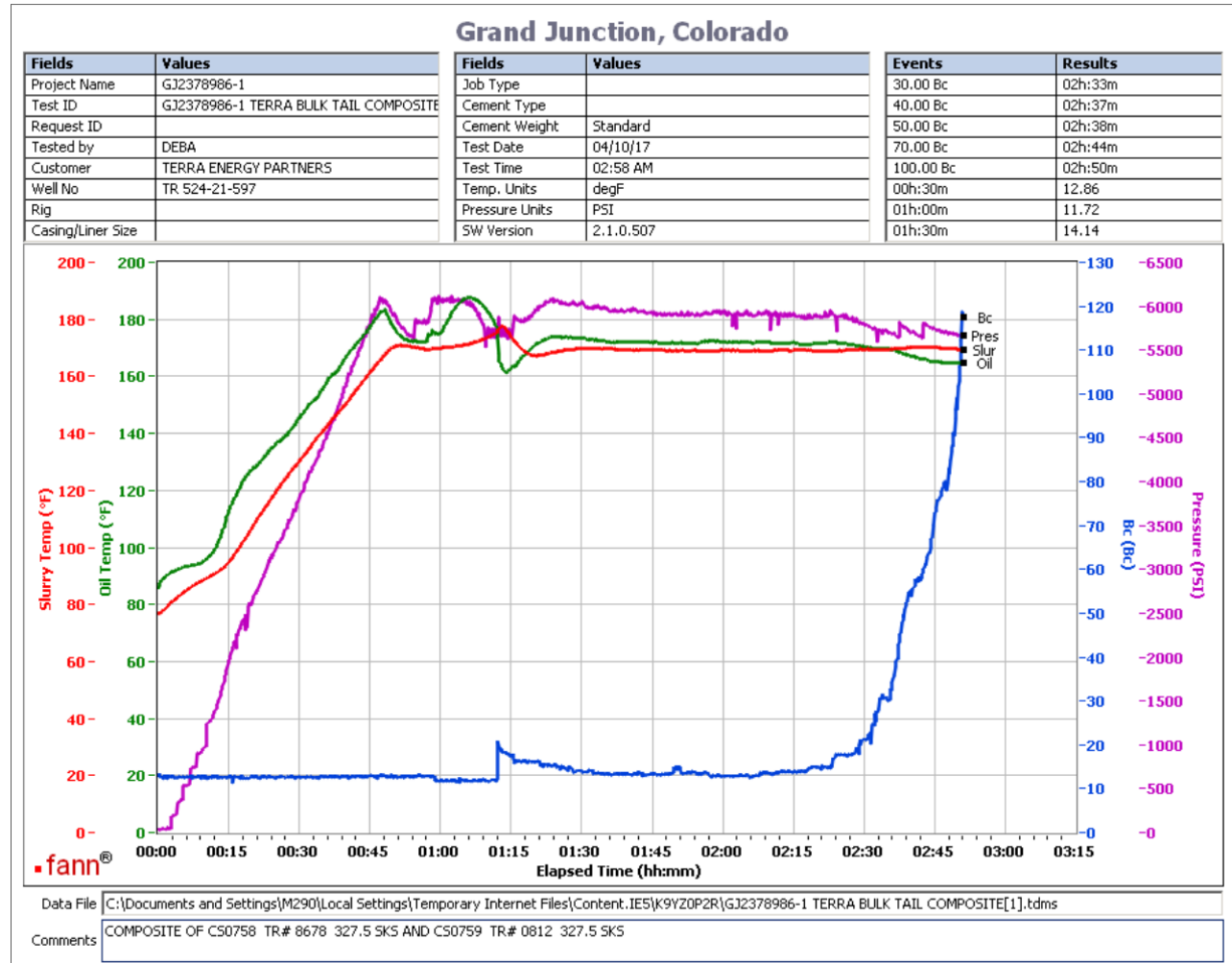
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		NeoCem Tail				Slurry Density	13	lbm/gal
						Slurry Yield	2.065	ft3/sack
						Water Requirement	9.429	gal/sack
						Total Mix Fluid	9.429	gal/sack
						Water Source	Fresh Water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

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Thickening Time - ON-OFF-ON

10/APR/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)
169	5960	47	2:33	2:38	2:44	2:50	12	57	15	21



Total sks = 755

CS0758 TR#8678 327.5 SKS

CS0759 TR#812 327.5 SKS

no deflection was observed

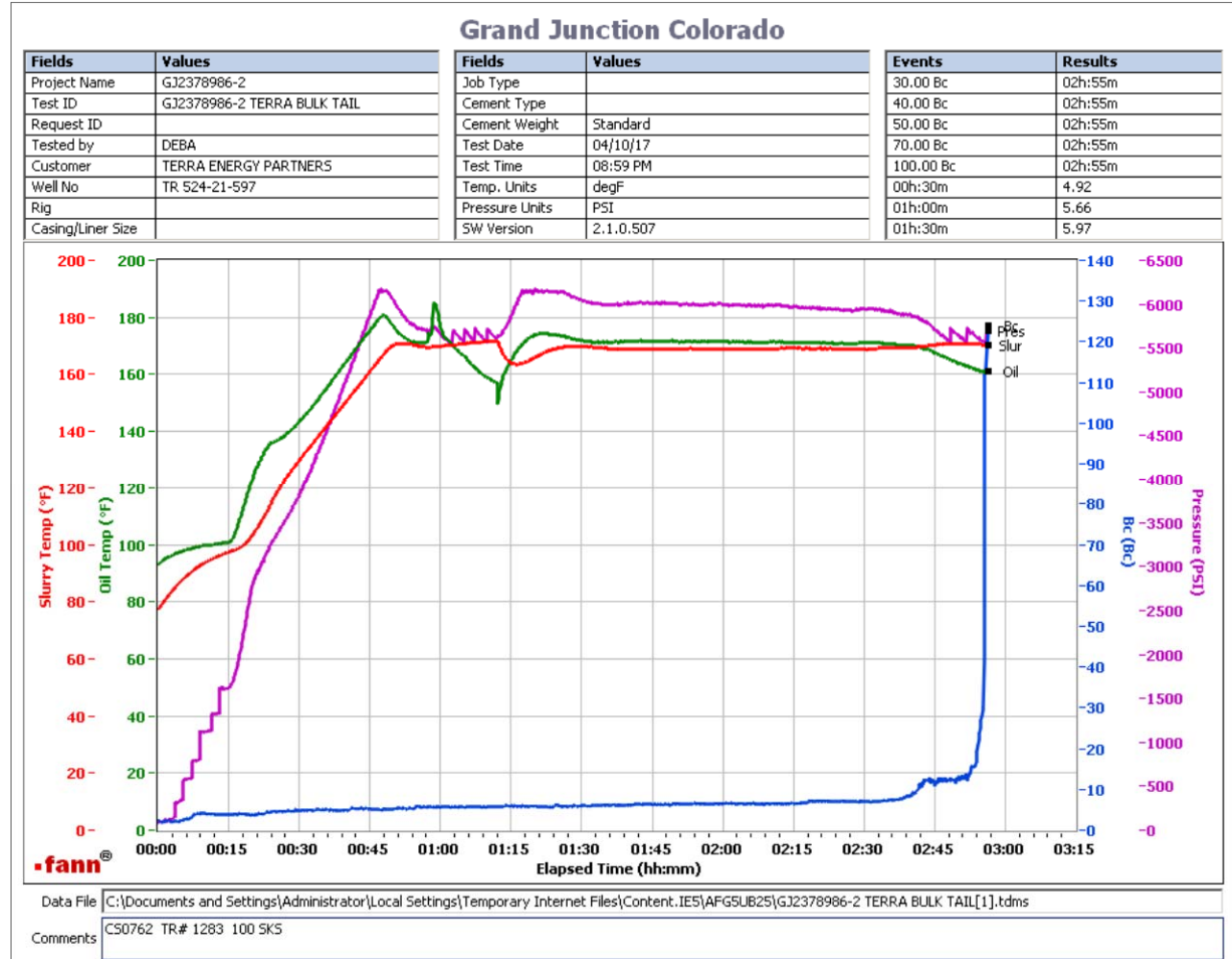
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Operation Test Results Request ID 2378986/2

Thickening Time - ON-OFF-ON

10/APR/2017

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169	5860	47	2:55	2:55	2:55	2:55	2	57	15	5



Total sks = 755

CS0762 TR# 1283 100 SKS

no deflection was observed

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