

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

For: Terra

Date: Saturday, April 08, 2017

TR 434-21-597 Production

API# 05-045-23343-00

Sincerely,
Grand Junction Cement Engineering

2.0 Real-Time Job Summary

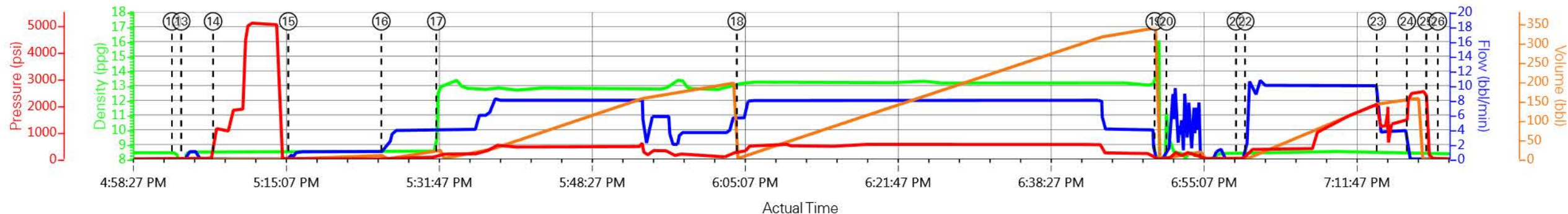
2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	Driv-Side Pump Pressure (psi)	Downhole Density (ppg)	Combined Pump Rate (bbl/min)	Pump Stage Total (bbl)	Comments
Event	1	Call Out	4/8/2017	07:00:00	USER					crew called out to Terra 4.5" production, 1 e4 pump truck, 1 job trk, 1 crew pick
Event	2	Arrive at Location from Service Center	4/8/2017	11:30:00	USER					met with Jarvis Abby with Terra and went over job numbers and water sources, company rep signed hes work order
Event	3	Assessment Of Location Safety Meeting	4/8/2017	11:31:00	USER					water temp 70, ph7, chlo 0, tp9743, sj25.2, fc 9717.8, sp2854, 9.625 36# surface casing, 4.5" 11.6#, wf9ppg,
Event	4	Pre-Rig Up Safety Meeting	4/8/2017	12:00:00	USER					meeting with all hes personnel to discuss safety/hazards associated with rigging up equipment.
Event	5	Rig-Up Equipment	4/8/2017	12:15:00	USER					
Event	6	Standby - Other - see comments	4/8/2017	13:00:00	USER					hes went into wait mode waiting on rig to land casing
Event	7	Rig-Up Equipment	4/8/2017	15:25:00	USER					hes finished rigging up iron in the red zone
Event	8	Casing on Bottom	4/8/2017	15:30:00	USER					rig landed casing, circulated at 45gbpm and psi at 600
Event	9	Pre-Job Safety Meeting	4/8/2017	16:20:00	USER	18.00	8.42	0.00	22.6	meeting with all personnel to discuss safety/hazards associated with job in hand and also covered job procedures. all personnel signed a jsa
Event	10	Break Circulation	4/8/2017	16:35:00	USER	16.00	8.43	0.00	22.6	rig kicked out mud pumps and hes stabbed hes plug container
Event	11	Prime Pumps	4/8/2017	16:40:38	COM10					prime mixing unit prior to job
Event	12	Start Job	4/8/2017	17:03:00	COM10	-2.00	8.43	0.00	0.0	
Event	13	Fill Lines FW	4/8/2017	17:04:00	USER	3.00	2.40	0.00	0.0	fill lines with 3bbls of fw at 1.8bpm and top psi was 21.
Event	14	Test Lines	4/8/2017	17:07:28	USER	1150.00	8.51	0.00	1.3	test electronic kick outs, 5th gear stall out and tested lines to 5085, psi held at 1psi/3seconds

Event	15	Pump FW Spacer	4/8/2017	17:15:40	USER	5.00	8.45	0.10	0.0	hes pumped 10bbbls of fw at 1bpm and average psi was 10
Event	16	Pump Mud Flush Spacer	4/8/2017	17:25:48	USER					hes pumped 20bbbls of mud flush at 4 bpm and average pressure was 120
Event	17	Pump Lead Cement	4/8/2017	17:31:48	USER	148.00	12.92	3.90	22.1	hes pumped 188.3bbbls of lead cmt, 545sks, 12.5ppg, 1.94 yield, 9.58 gal/sk, pumped at 8bpm and average pressure was 525. weight was confirmed using high pressure mud scales, weigh was confirmed by hes supervisor. wet sample left on location. calculated top of lead at 1301.92ft
Event	18	Pump Tail Cement	4/8/2017	18:04:32	USER	290.00	13.13	5.60	3.0	pumped 278.3bbbls of tail cmt, 755sks, 13ppg, 2.07 yield, 9.43 gal/sk pumped at 8bpm and average pressure was 575. weight was confirmed using high pressure mud scales, weight was confirmed by hes supervisor. wet sample left on location, calculated top of tail cmt at 4662.57ft.
Event	19	Shutdown	4/8/2017	18:50:04	USER	10.00	13.69	0.00	0.0	done pumping cmt
Event	20	Clean Lines	4/8/2017	18:51:20	USER	20.00	9.29	1.40	0.5	clean lines to pit, pumped 10bbbls to clean lines and mixing unit
Event	21	Drop Top Latch Down Plug	4/8/2017	18:58:55	USER	13.00	8.39	0.00	1.1	hes supervisor dropped top plug witnessed by Terra company rep and h&p driller
Event	22	Pump KCL Displacement	4/8/2017	18:59:55	USER	145.00	8.43	6.10	2.2	hes calculated 150.6bbbls of kcl displacement
Event	23	Slow Rate	4/8/2017	19:14:16	USER	1178.00	8.41	3.60	144.0	slow rate from 10bpm 2100psi to 4bpm 1200psi
Event	24	Bump Plug	4/8/2017	19:17:32	USER	2426.00	8.40	0.00	156.0	plug bumped at calculated volume, bumped at 1400, kicked out pumps at 2450 and pressure climbed to 2515 and held soild
Event	25	Check Floats	4/8/2017	19:19:40	USER	127.00	8.36	0.00	0.0	floats held 1.5bbbls back to the pump trk
Event	26	End Job	4/8/2017	19:20:55	USER	8.00	8.37	0.00	0.0	offline
Event	27	Pre-Rig Down Safety Meeting	4/8/2017	19:25:00	USER					meeting with all hes personnel to discuss safety/hazards associated with rigging down equipment
Event	28	Rig-Down Equipment	4/8/2017	19:28:00	USER					
Event	29	Pre-Convoy Safety	4/8/2017	20:30:00	USER					meeting with all hes personnel to discuss safety/hazards

Meeting					associated with traveling back to service center	
Event	30	Depart Location for Service Center or Other Site	4/8/2017	20:45:00	USER	
Event	31	Other	4/8/2017	20:46:00	USER	Thank You for Choosing Halliburton Cement. Parker and Crew.(713)703-3283

TERRA ENERGY CHEVRON TR 434-21-597 4.5" PRODUCTION



DH Density (ppg) Comb Pump Rate (bbl/min) DS Pump Press (psi) Pump Stg Tot (bbl)

- | | | | |
|--|---|---|---|
| ① Call Out n/a,n/a;n/a;n/a | ⑨ Pre-Job Safety Meeting 8.42;0;18;22.6 | ⑰ Pump Lead Cement 12.92;3.9;152;22.2 | 25 Check Floats 8.35;0;116;0 |
| ② Arrive at Location from Service Center n/a,n/a;n/a;n/a | ⑩ Break Circulation 8.43;0;16;22.6 | ⑱ Pump Tail Cement 13.13;5.6;265;3.1 | 26 End Job 8.37;0;8;0 |
| ③ Assessment Of Location Safety Meeting n/a,n/a;n/a;n/a | ⑪ Prime Pumps 8.43;0;0;0 | ⑲ Shutdown 13.72;0;9;0 | 27 Pre-Rig Down Safety Meeting n/a,n/a;n/a;n/a |
| ④ Pre-Rig Up Safety Meeting n/a,n/a;n/a;n/a | ⑫ Start Job 8.43;0;-2;0 | 20 Clean Lines 9.23;2;20;0.5 | 28 Rig-Down Equipment n/a,n/a;n/a;n/a |
| ⑤ Rig-Up Equipment n/a,n/a;n/a;n/a | ⑬ Fill Lines FW 4.21;0;5;0 | 21 Drop Top Latch Down Plug 8.39;0;13;1.1 | 29 Pre-Convoy Safety Meeting n/a,n/a;n/a;n/a |
| ⑥ Standby - Other - see comments n/a,n/a;n/a;n/a | ⑭ Test Lines 8.51;0;1144;1.3 | 22 Pump KCL Displacement 8.43;6.1;145;2.2 | 30 Depart Location for Service Center or Other Site n/a,n/a;n/a;n/a |
| ⑦ Rig-Up Equipment 8.41;0;16;22.6 | ⑮ Pump FW Spacer 8.45;0.8;5;0 | 23 Slow Rate 8.41;3.6;1178;144 | 31 Other n/a,n/a;n/a;n/a |
| ⑧ Casing on Bottom 8.41;0;16;22.6 | ⑯ Pump Mud Flush Spacer 8.46;2;17;9.8 | 24 Bump Plug 8.4;0;2422;156 | |

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Created: 2017-04-08 09:29:52, Version: 4.2.393

Edit

Customer: TERRA ENERGY PARTNERS

Representative: Jarvis Abby

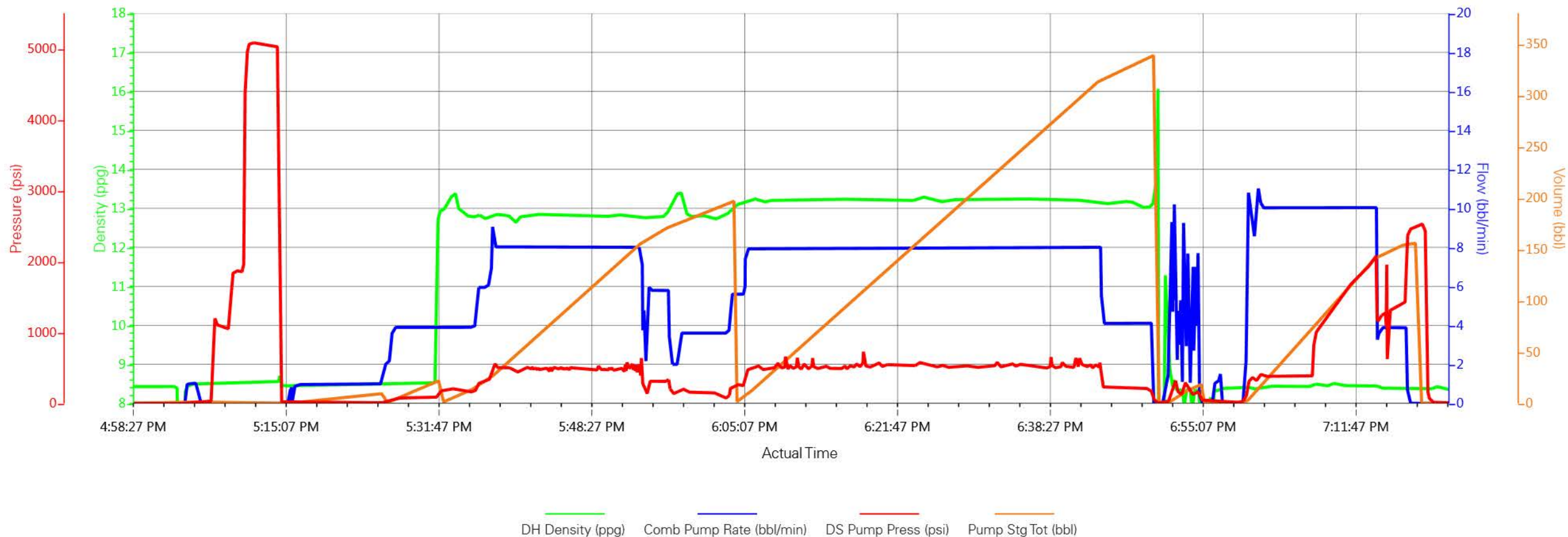
Job Date: 4/8/2017 1:41:04 PM

Sales Order #: 903953925

Well: Chevron TR 434-21-597

Pump/Operator: E4/Dane Porter

TERRA ENERGY CHEVRON TR 434-21-597 4.5" PRODUCTION



Job Information

Request/Slurry	2378124/1	Rig Name	H&P 271	Date	03/APR/2017
Submitted By	Patrick Ealey	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	TR 434-21-597

Well Information

Casing/Liner Size	4.5 in	Depth MD	9813 ft	BHST	116°C / 240°F
Hole Size	8.75 in	Depth TVD	9422 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		

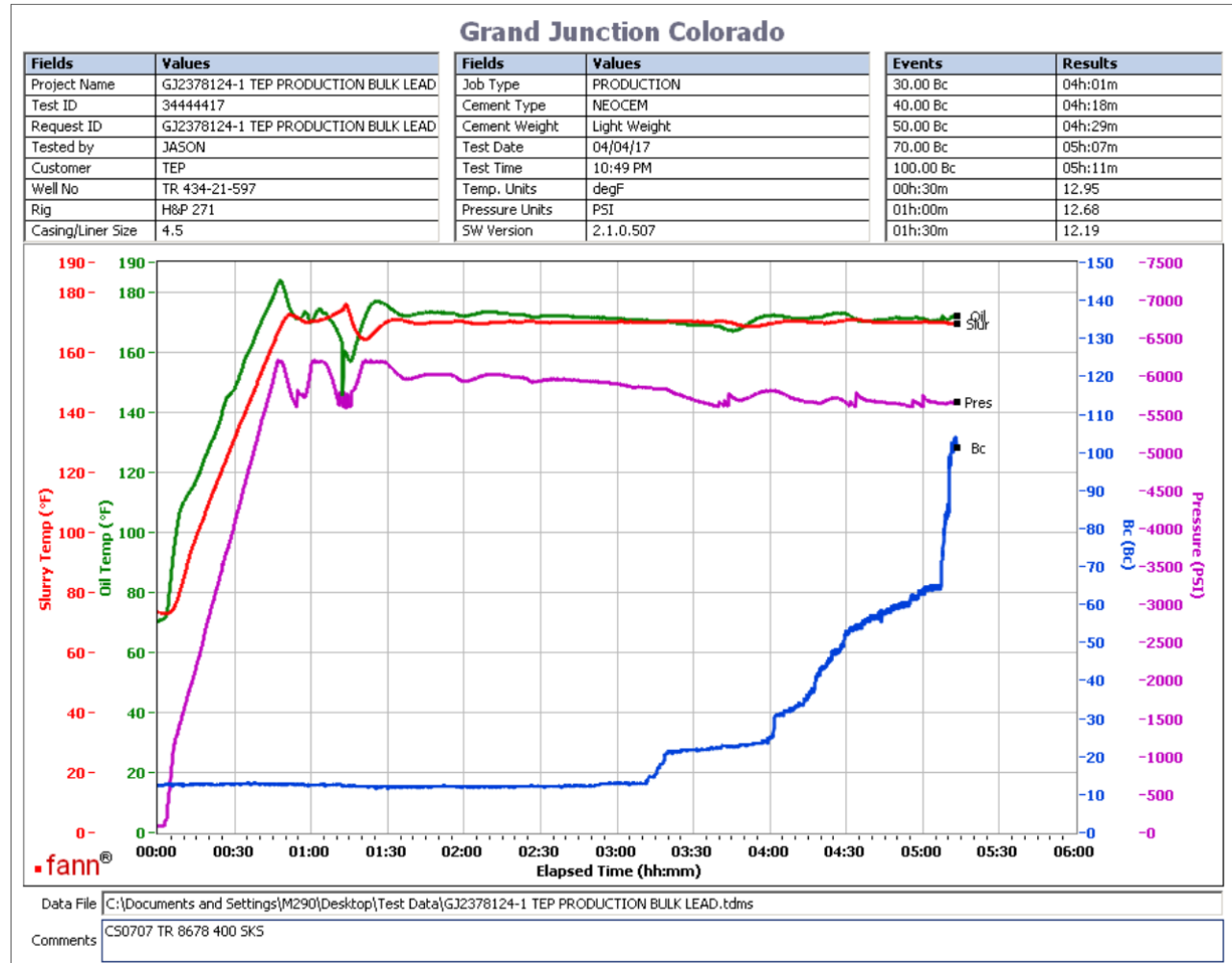
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Operation Test Results Request ID 2378124/1

Thickening Time - ON-OFF-ON

04/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)
170	5900	47	4:01	4:29	5:07	5:11	13	57	15	12



Total Sacks= 545
CS0707 TR 8678 400 SKS
No deflection

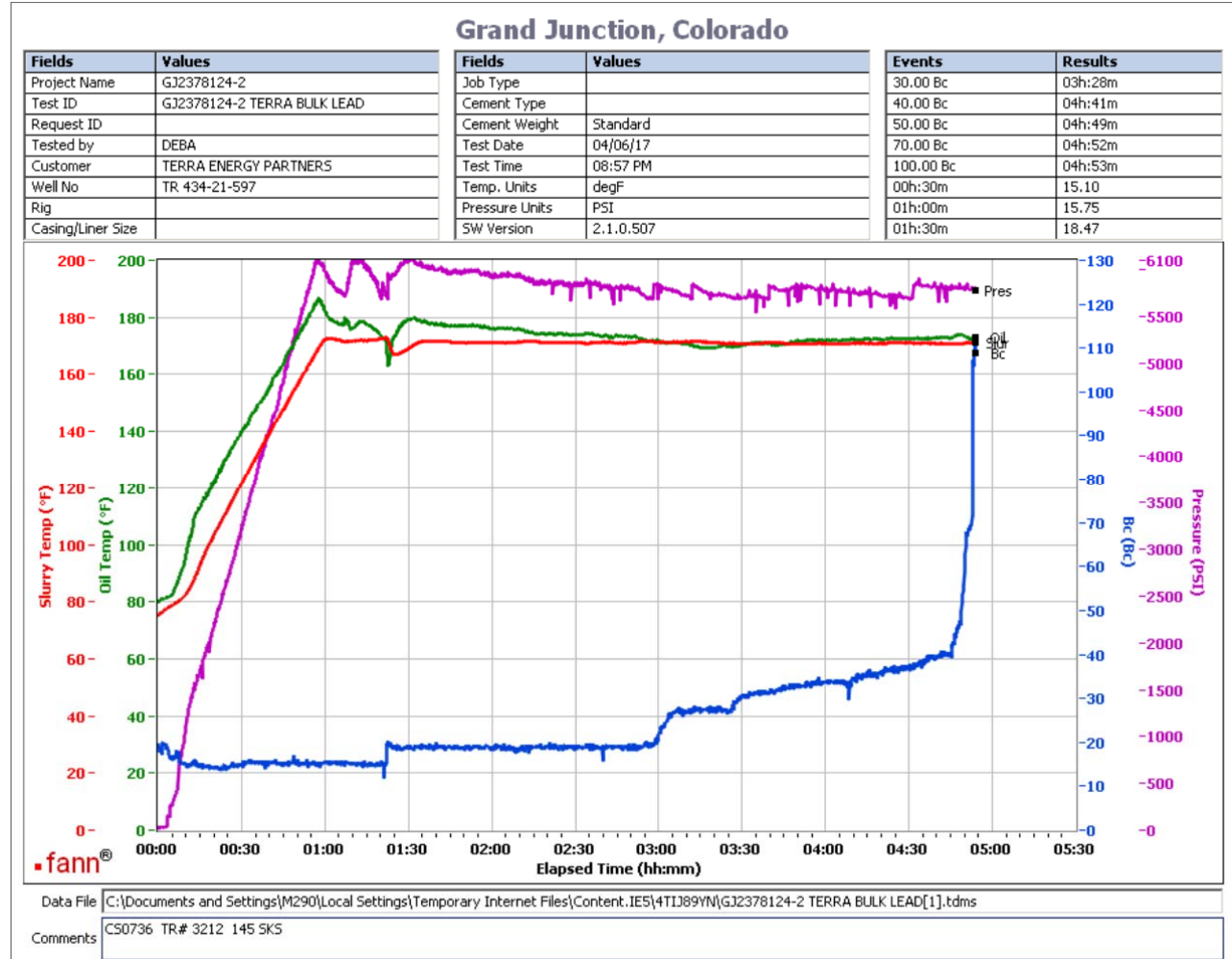
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Operation Test Results Request ID 2378124/2

Thickening Time - ON-OFF-ON

07/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)	Terminati on time (hh:min)	Terminati on Bc
170	5900	47	3:28	4:49	4:52	4:53	15	57	15	25	4:55	110



Total Sacks= 545
CS0736 TR 3212 145 SKS

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Rockies, Grand Junction

Lab Results- Tail

Job Information

Request/Slurry	2378125/1	Rig Name	H&P 271	Date	03/APR/2017
Submitted By	Patrick Ealey	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	TR 434-21-597

Well Information

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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



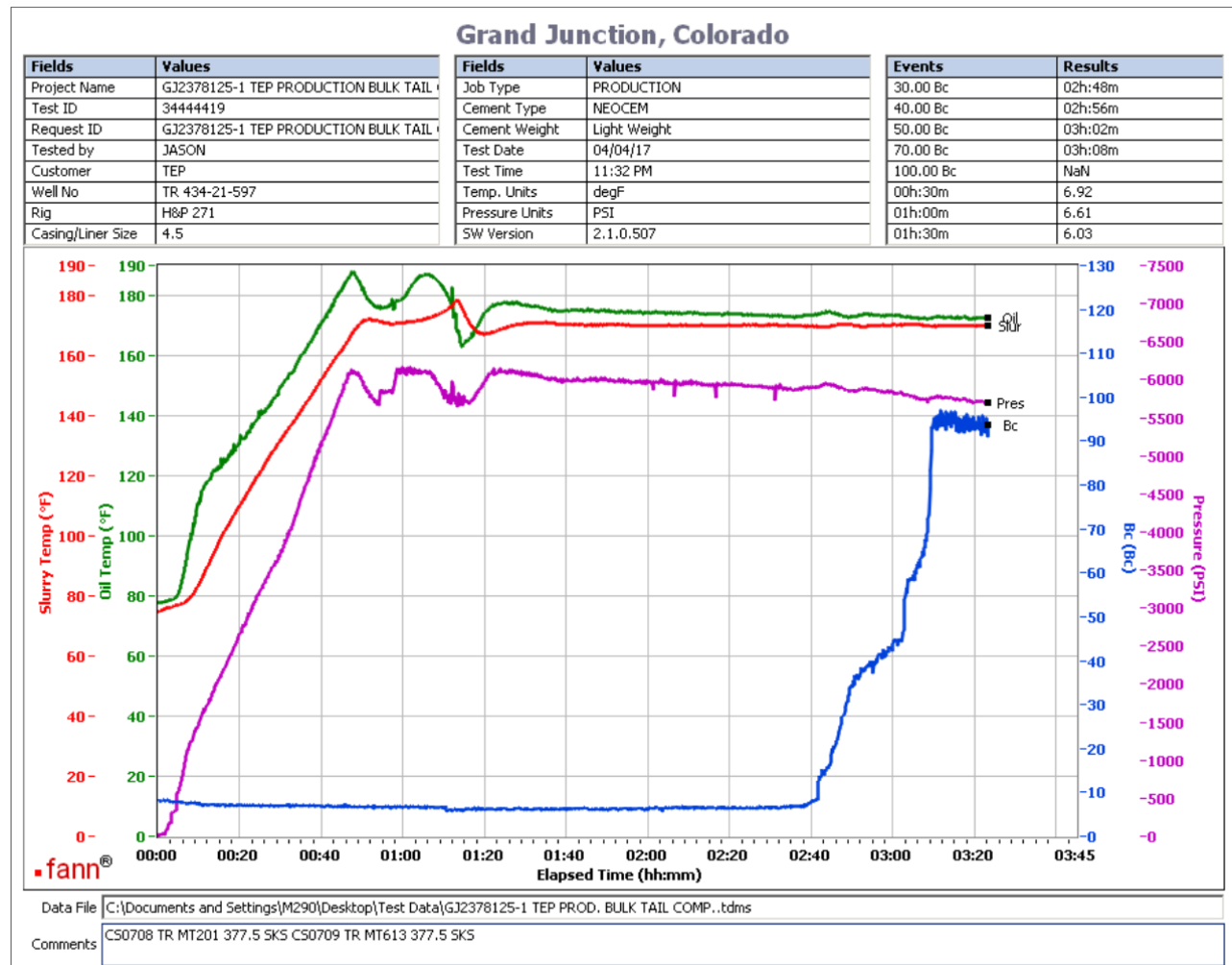
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		NeoCem Tail				Slurry Density	13	lbm/gal
						Slurry Yield	2.065	ft3/sack
						Water Requirement	9.429	gal/sack
						Total Mix Fluid	9.429	gal/sack
						Water Source	Fresh Water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

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Thickening Time - ON-OFF-ON

04/APR/2017

Test Temp (°F)	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)	Termination time (hh:mm)	Termination Bc
170	5900	47	2:48	3:02	3:08	8	57	15	6	3:23	95



Total sks = 755
 CS0708 TR MT201 377.5 SKS
 CS0709 TR MT613 377.5 SKS
 Composite
 No deflection

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