

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

For: Terra

Date: Thursday, December 07, 2017

SR 313-12 Production PJR

API# 05-045-23448-00

Sincerely,

Grand Junction Cement Engineering

2.0 Real-Time Job Summary

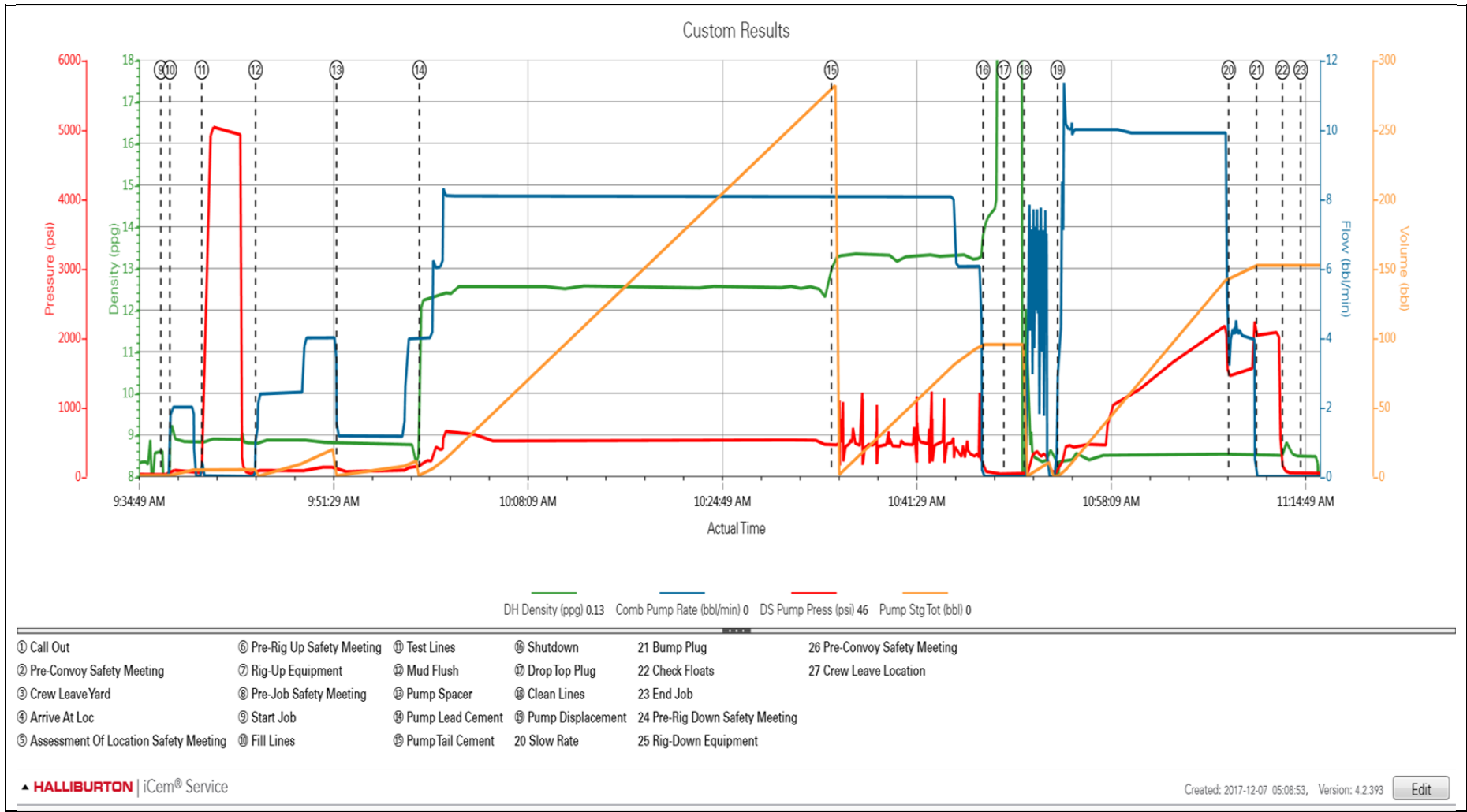
2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	Downhole Density (ppg)	Driv-Side Pump Pressure (psi)	Combined Pump Rate (bbl/min)	Pump Stage Total (bbl)	Comments
Event	1	Call Out	12/7/2017	00:00:00						Requested on Location @ 0400
Event	2	Pre-Convoy Safety Meeting	12/7/2017	02:00:00						
Event	3	Crew Leave Yard	12/7/2017	02:10:00						1 Elite, 1 660, 1 pickup
Event	4	Arrive At Loc	12/7/2017	04:00:00						04:00
Event	5	Assessment Of Location Safety Meeting	12/7/2017	04:10:00						JSA completed - Customer offered/received SDS - water test pH 7.0, Cl <200, temp 60 degrees
Event	6	Pre-Rig Up Safety Meeting	12/7/2017	04:15:00						
Event	7	Rig-Up Equipment	12/7/2017	04:20:00						
Event	8	Pre-Job Safety Meeting	12/7/2017	09:31:21						All HES personnel, rig crew, and company rep.
Event	9	Start Job	12/7/2017	09:36:52						TD 9883, TP 9876.5, SJ 32.22, CSG 4 1/2" 11.6#, OH 8 3/4", MUD# 9.3, SURFACE CSG 9 5/8" 32.3# @ 1141'
Event	10	Fill Lines	12/7/2017	09:37:38		8.33	95	2	5	Fresh Water
Event	11	Test Lines	12/7/2017	09:40:22			5050			Held For 2 Min, No Leaks
Event	12	Mud Flush	12/7/2017	09:44:59		8.4	180	4	20	80 lbs. Mud Flush III
Event	13	Pump Spacer	12/7/2017	09:51:56		8.33	100	2	10	Fresh Water
Event	14	Pump Lead Cement	12/7/2017	09:59:02		12.5	650	8	279.9	810 sks, 12.5 ppg, 1.94 yield, 9.6 gal/sk

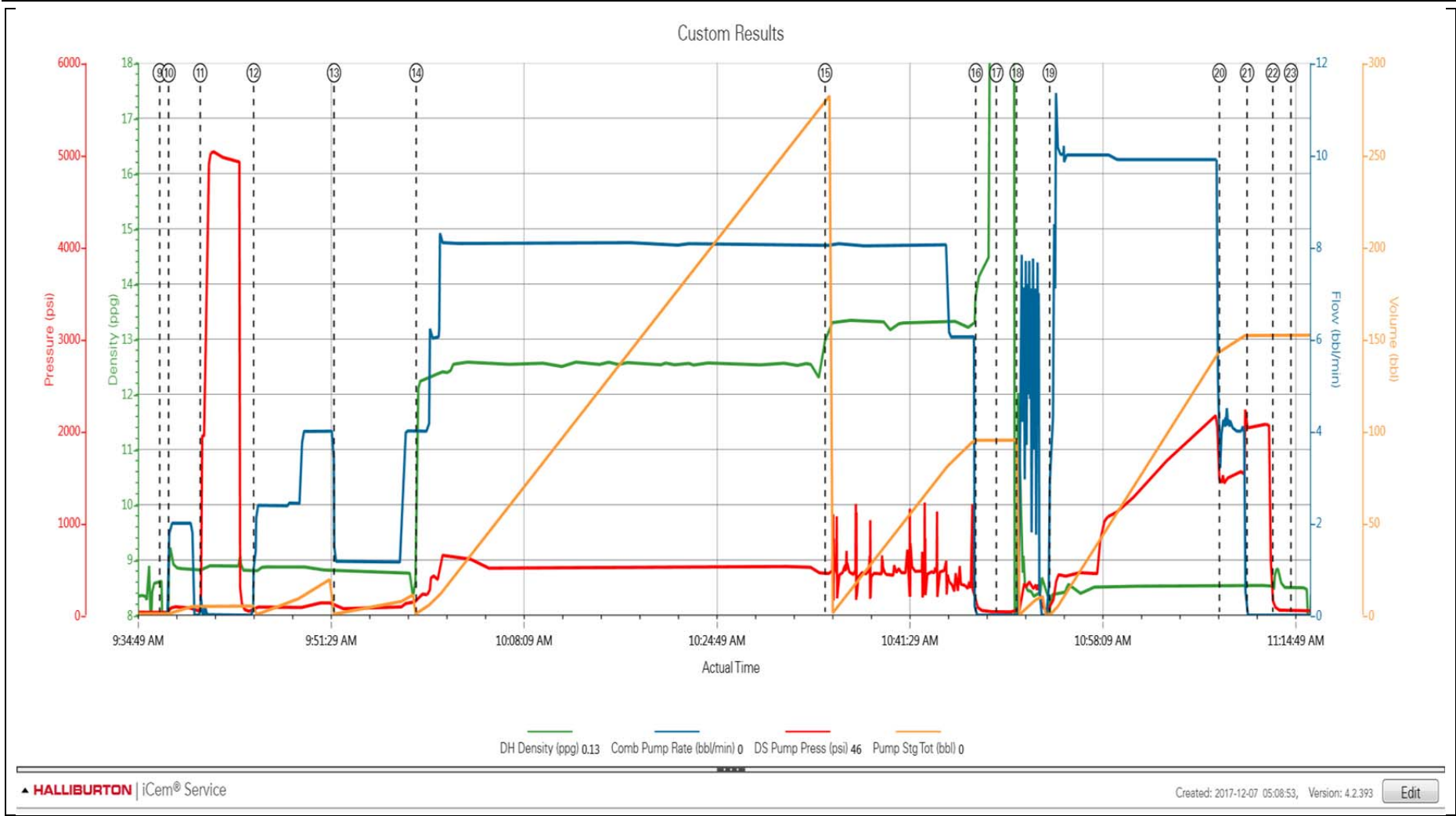
Event	15	Pump Tail Cement	12/7/2017	10:34:22	13.3	490	8	81.7	265 sks, 13.3 ppg, 1.73 yield, 7.81 gal/sk
Event	16	Shutdown	12/7/2017	10:47:22					Wash lines to pit
Event	17	Drop Top Plug	12/7/2017	10:49:09					
Event	18	Clean Lines	12/7/2017	10:50:54					
Event	19	Pump Displacement	12/7/2017	10:53:46	8.4	2170	10		3 lbs BE-6, 1 gal MMCR, 2% KCl
Event	20	Slow Rate	12/7/2017	11:08:26	8.4	1550	4	142	Slow Rate 10 bbls to Calculated Displacement
Event	21	Bump Plug	12/7/2017	11:10:49		2050		152.6	Plug Bumped at psi 1550, Brought up to psi 2050
Event	22	Check Floats	12/7/2017	11:13:02					Floats Held, 1BBL Back to Truck
Event	23	End Job	12/7/2017	11:14:36					Good returns throughout job. Pipe was reciprocated during job.
Event	24	Pre-Rig Down Safety Meeting	12/7/2017	11:35:41					No sugar, No add hours
Event	25	Rig-Down Equipment	12/7/2017	11:40:41					
Event	26	Pre-Convoy Safety Meeting	12/7/2017	11:56:24					
Event	27	Crew Leave Location	12/7/2017	12:02:12	USER				Thanks For Using Halliburton Cement. Chris Martinez And Crew

3.0 Attachments

3.1 SR 313-12-Custom Results.png



3.2 SR 313-12-Custom Results (1).png



Job Information

Request/Slurry	2435916/1	Rig Name	H&P 318	Date	02/DEC/2017
Submitted By	Patrick Ealey	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	SR 313-12

Well Information

Casing/Liner Size	4.5 in	Depth MD	9836 ft	BHST	116°C / 241°F
Hole Size	8.75 in	Depth TVD	9467 ft	BHCT	77°C / 171°F
Pressure	5927 psi				

Drilling Fluid Information

Mud Supplier Name	Mud Trade Name	Density
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Cement Information - Lead Design



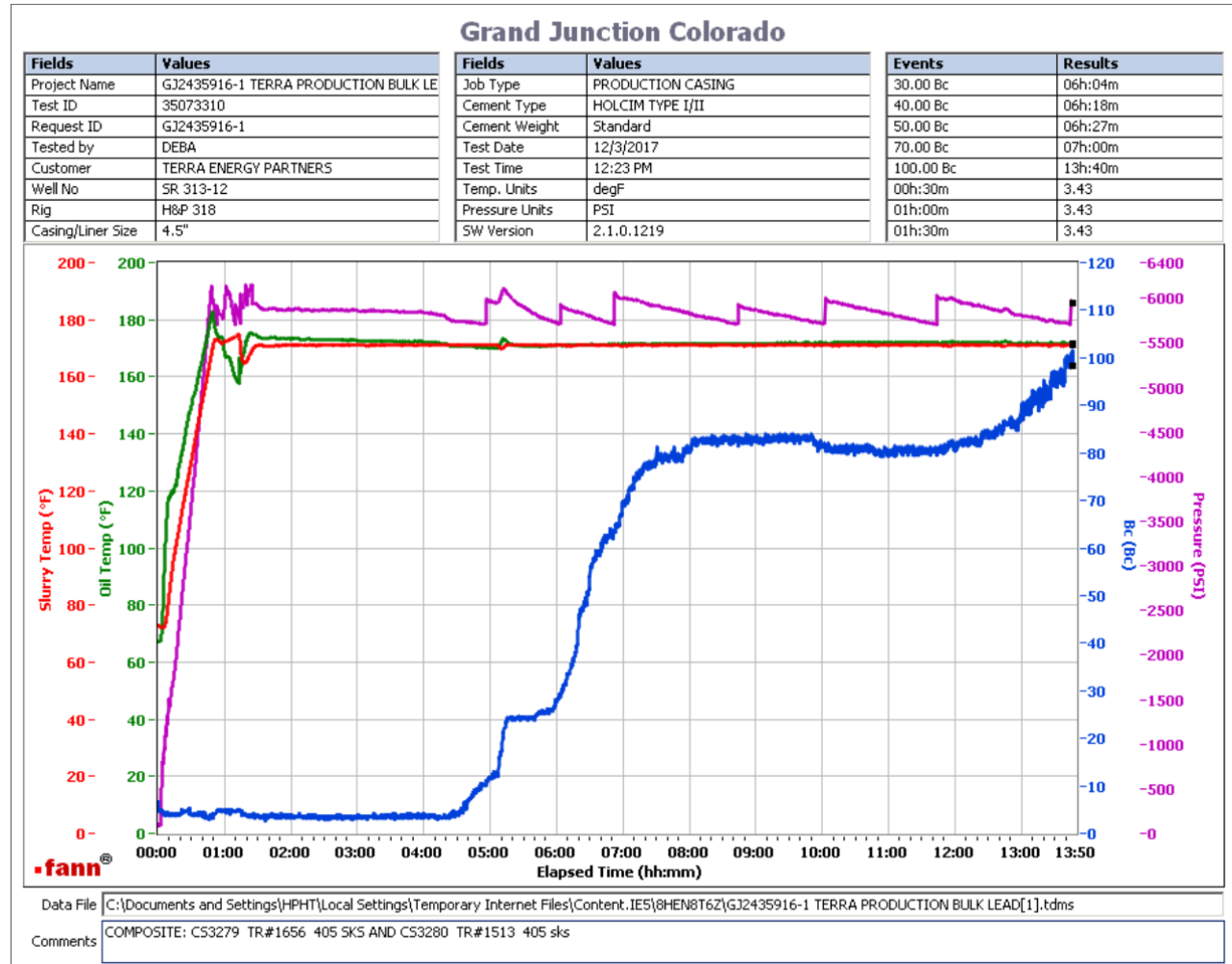
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		NeoCem Lead				Slurry Density	12.5	lbm/gal
						Slurry Yield	1.941	ft3/sack
						Water Requirement	9.623	gal/sack
						Total Mix Fluid	9.623	gal/sack
						Water Source	Fresh Water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

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Thickening Time - ON-OFF-ON

04/DEC/2017

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)
171	5927	48	6:04	6:27	7:00	13:40	6	58	15	3



Total sks= 810

Composite:

CS3279 TR#1656 405 SKS

CS3280 TR#1513 405 SKS

No deflection was observed. 3Bc--- > 3Bc

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Job Information

Request/Slurry	2435917/1	Rig Name	H&P 318	Date	02/DEC/2017
Submitted By	Patrick Ealey	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	SR 313-12

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Pressure	5927 psi				

Drilling Fluid Information

Mud Supplier Name	Mud Trade Name	Density
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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		
		ThermaCem Tail				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		

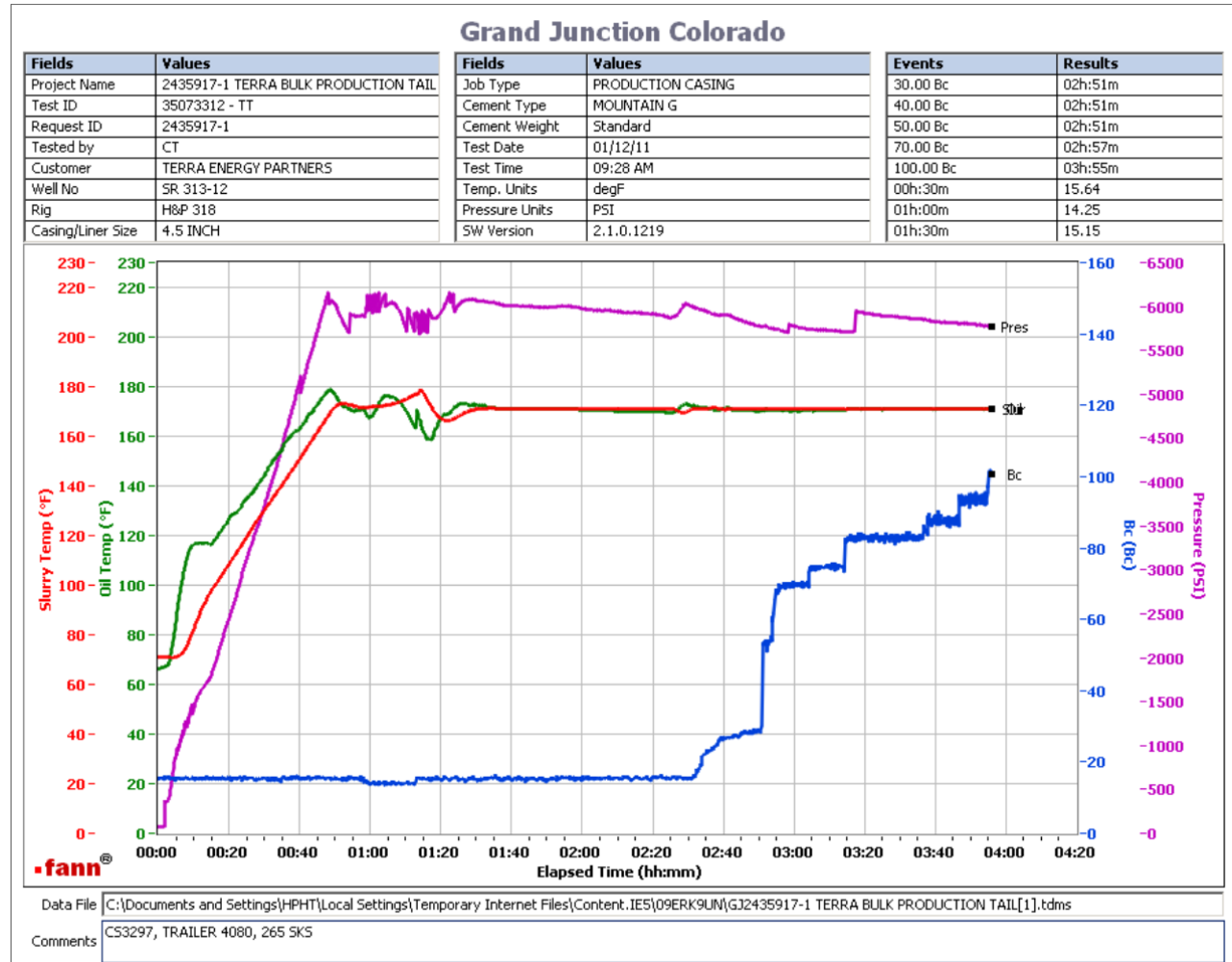
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Operation Test Results Request ID 2435917/1

Thickening Time - ON-OFF-ON

05/DEC/2017

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)
171	5927	48	2:51	2:51	2:57	3:55	15	58	15	15



265 sks tail
CS3297, Trailer 4080, 265 sks
Deflection: 14 - 15

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