

HALLIBURTON

iCem[®] Service

TEP ROCKY MOUNTAIN LLC-EBUS

For: Terra

Date: Friday, October 20, 2017

GM 423-4 Production

API#05-045-23508

Sincerely,

Grand Junction Cement Engineering

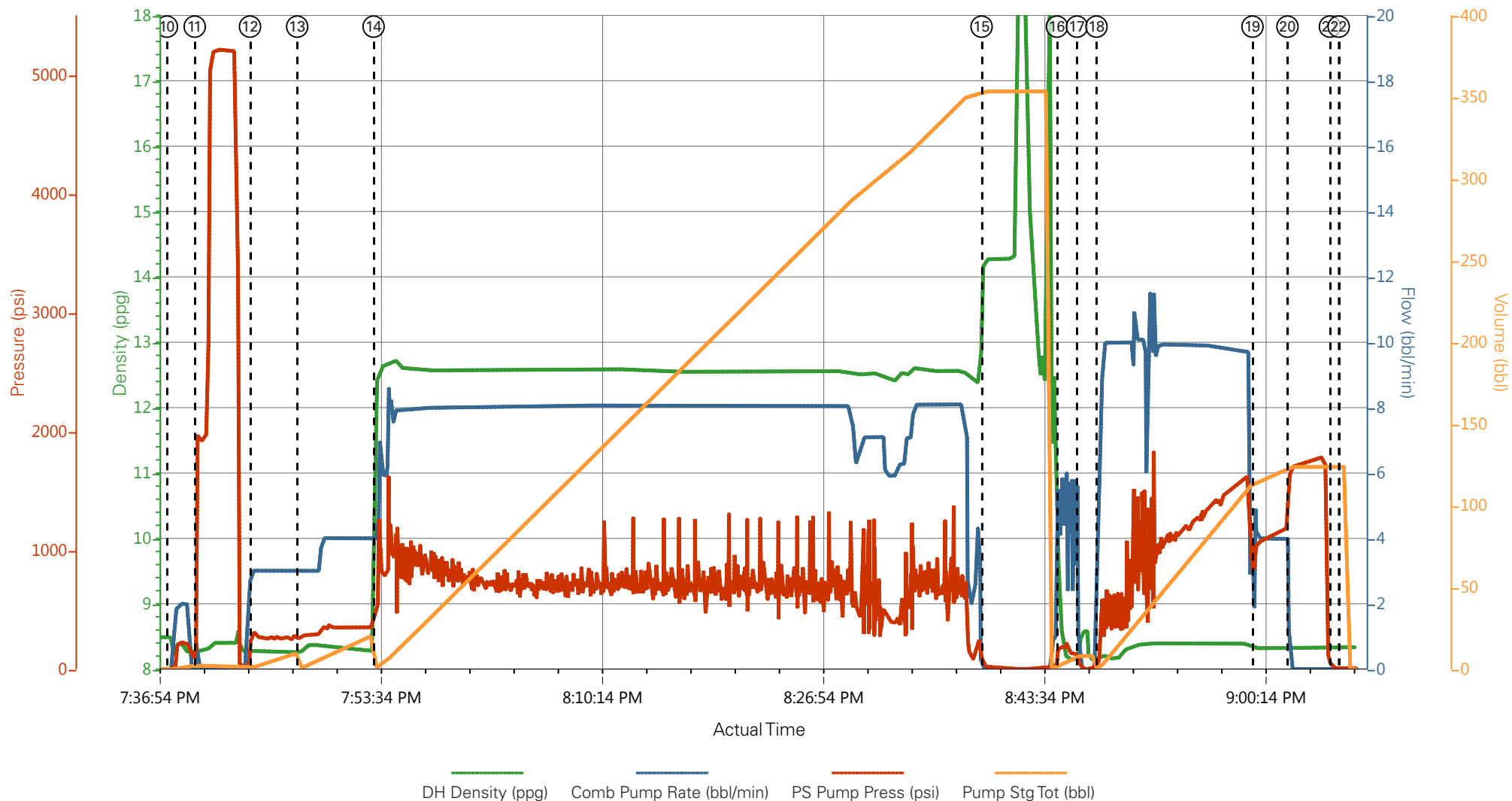
2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Activity	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	Call Out	10/20/2017	10:00:00	USER					
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	10/20/2017	12:00:00	USER					
Event	3	Crew Leave Yard	Crew Leave Yard	10/20/2017	12:05:00	USER					
Event	4	Arrive At Loc	Arrive At Loc	10/20/2017	13:30:00	USER					
Event	5	Assessment Of Location Safety Meeting	Assessment Of Location Safety Meeting	10/20/2017	13:35:00	USER					
Event	6	Other	Spot Equipment	10/20/2017	13:40:00	USER					
Event	7	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	10/20/2017	13:45:00	USER					
Event	8	Rig-Up Equipment	Rig-Up Equipment	10/20/2017	13:50:00	USER					
Event	9	Pre-Job Safety Meeting	Pre-Job Safety Meeting	10/20/2017	18:15:56	USER					TD 7325', TP 7315', SJ 35.6', MUD 9.8 PPG, 4 1/2" CASING IN 8 3/4" OPEN HOLE, WATER TEMP 62, PH 6.4, CHLORIDES 0, SULFATES <200, POTASSIUM 450.
Event	10	Start Job	Start Job	10/20/2017	19:37:41	COM5					
Event	11	Test Lines	Test Lines	10/20/2017	19:39:47	USER			5000.00		5000 PSI TEST
Event	12	Pump Spacer 1	Pump Spacer 1	10/20/2017	19:43:57	COM5	8.33	3.00	200.00	10.00	10 BBL FRESH H2O SPACER
Event	13	Pump Spacer 2	Pump Spacer 2	10/20/2017	19:47:30	COM5	8.4	4.00	350.00	20.00	20 BBL MUDFLUSH SPACER
Event	14	Pump Cement	Pump Cement	10/20/2017	19:53:16	COM5	12.50	8.00	800.00	303.7	870 SKS @ 12.5 PPG 1.96 YLD 9.38 GAL/SK H2O
Event	15	Shutdown	Shutdown	10/20/2017	20:39:05	USER					

Event	16	Clean Lines	Clean Lines	10/20/2017	20:44:46	COM5						
Event	17	Drop Top Plug	Drop Top Plug	10/20/2017	20:46:16	COM5						PLUG AWAY
Event	18	Pump Displacement	Pump Displacement	10/20/2017	20:47:44	COM5	8.40	10.00	1050	112.8		112.8 BBL KCL WATER DISPLACEMENT
Event	19	Slow Rate	Slow Rate	10/20/2017	20:59:30	USER	8.40	4.00	1600	102.0		SLOW RATE AT 102 TO 4 BBL/MIN
Event	20	Bump Plug	Bump Plug	10/20/2017	21:02:08	COM5	8.40	4.00	1170	112.8		PLUG BUMPED
Event	21	Check Floats	Check Floats	10/20/2017	21:05:20	USER						FLOATS HELD, 1 BBL BACK
Event	22	End Job	End Job	10/20/2017	21:06:00	COM5						GOOD CIRCULATION THROUGHOUT, PIPE LEFT STATIC, 30 LBS SUGAR USED, NO ADD HOURS CHARGED
Event	23	Pre-Rig Down Safety Meeting	Pre-Rig Down Safety Meeting	10/20/2017	21:15:00	USER						
Event	24	Rig-Down Equipment	Rig-Down Equipment	10/20/2017	21:20:00	USER						THANK YOU FOR CHOOSING HALLIBURTON CEMENTING
Event	25	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	10/20/2017	21:55:00	USER						OF GRAND JUNCTION, CO – ANTHONY ANDREWS AND
Event	26	Crew Leave Location	Crew Leave Location	10/20/2017	22:00:00	USER						CREW

TEP - GM 423-4 - 4 1/2" PRODUCTION



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|-----------------------------------------|--------------------------|---------------------|--------------------------------|
| ① Call Out | ⑧ Rig-Up Equipment | ⑮ Shutdown | 22 End Job |
| ② Pre-Convoy Safety Meeting | ⑨ Pre-Job Safety Meeting | ⑯ Clean Lines | 23 Pre-Rig Down Safety Meeting |
| ③ Crew Leave Yard | ⑩ Start Job | ⑰ Drop Top Plug | 24 Rig-Down Equipment |
| ④ Arrive At Loc | ⑪ Test Lines | ⑱ Pump Displacement | 25 Pre-Convoy Safety Meeting |
| ⑤ Assessment Of Location Safety Meeting | ⑫ Pump Spacer 1 | ⑲ Slow Rate | 26 Crew Leave Location |
| ⑥ Spot Equipment | ⑬ Pump Spacer 2 | 20 Bump Plug | |
| ⑦ Pre-Rig Up Safety Meeting | ⑭ Pump Cement | 21 Check Floats | |

▼ **HALLIBURTON** | iCem® Service

Created: 2017-10-20 15:29:13, Version: 4.2.393

Edit

Customer: TEP ROCKY MOUNTAIN LLC-EBUS

Job Date: 10/20/2017 3:29:45 PM

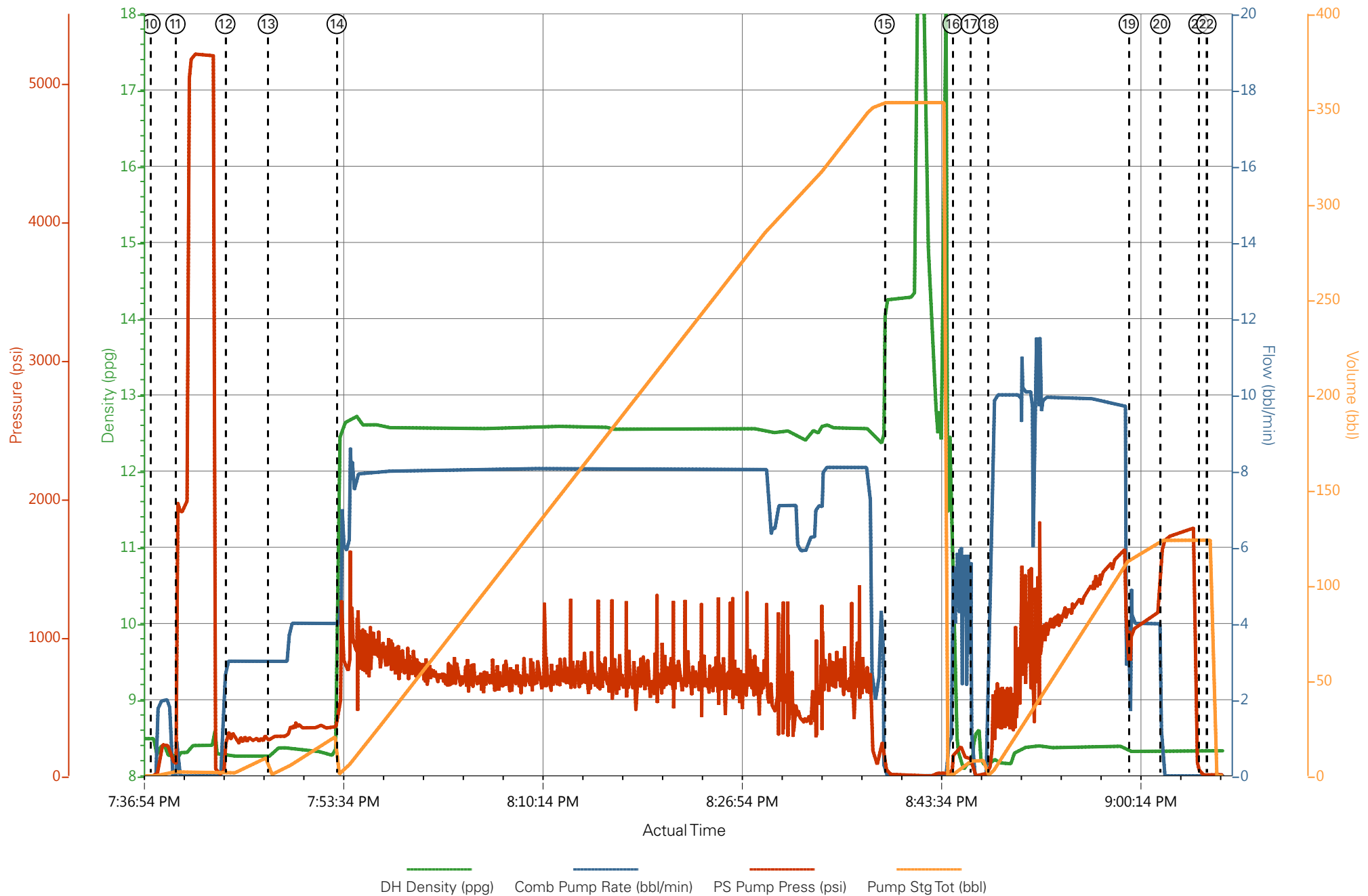
Well: GM 423-4

Representative: CRAIG BORGSTEDE

Sales Order #: 904375449

ELITE 8: TRAVIS BROWN / ANTHONY ANDREWS

TEP - GM 423-4 - 4 1/2" PRODUCTION



HALLIBURTON

Rockies, Grand Junction

Lab Results- Primary

Job Information

Request/Slurry	2423798/1	Rig Name	H&P 271	Date	17/OCT/2017
Submitted By	Patrick Ealey	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	GM 423-4

Well Information

Casing/Liner Size	4.5 in	Depth MD	7337 ft	BHST	89°C / 193°F
Hole Size	8.75 in	Depth TVD	6671 ft	BHCT	54°C / 129°F
Pressure	3970 psi				

Drilling Fluid Information

Mud Supplier Name	Baroid	Mud Trade Name	BARADRIL-N	Density	9.2 lbm/gal
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Cement Information - Primary 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 Primary				Slurry Density	12.5	lbm/gal
						Slurry Yield	1.962	ft ³ /sack
						Water Requirement	9.434	gal/sack
						Total Mix Fluid	9.434	gal/sack
						Water Source	Fresh Water	
						Water Chloride		

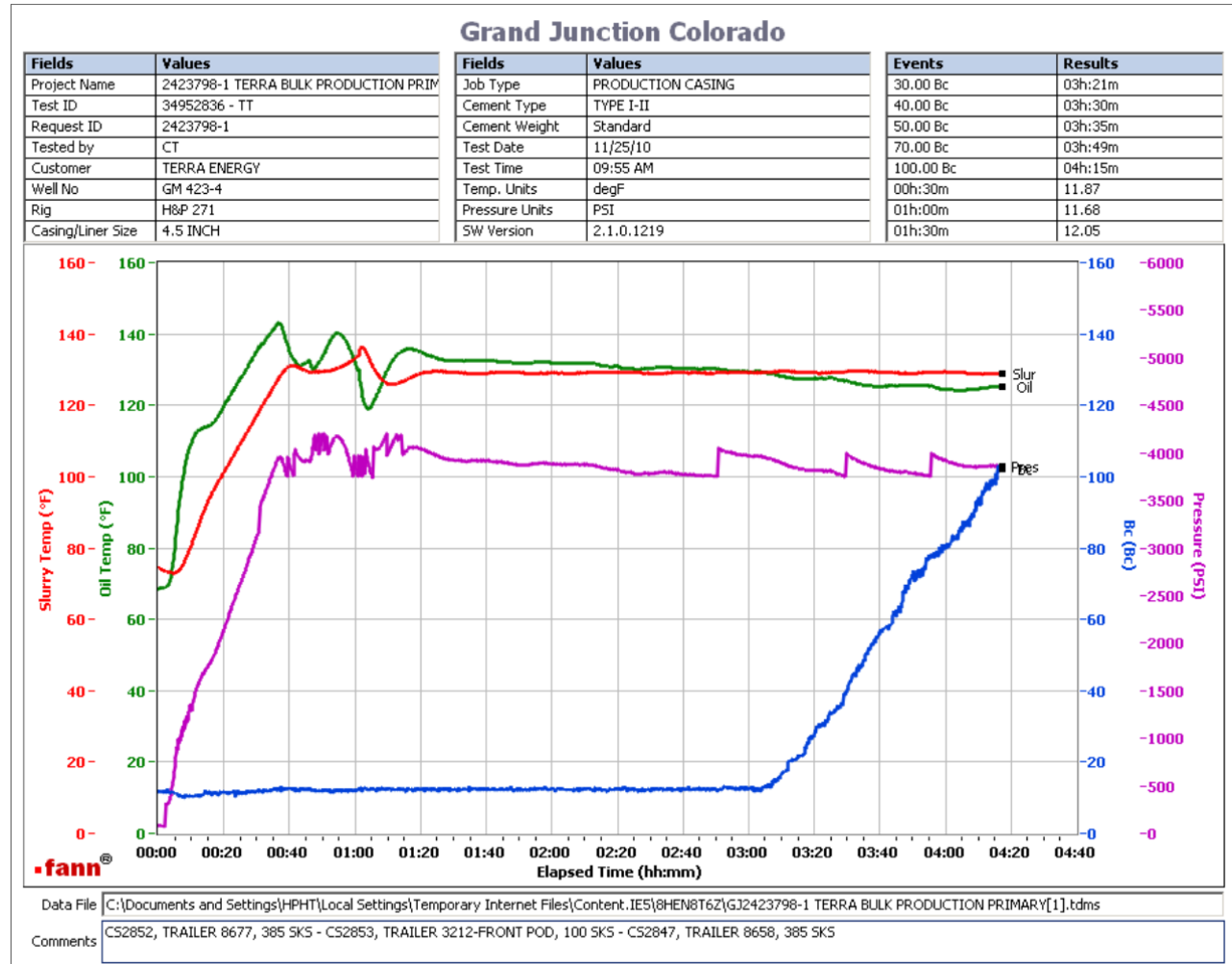
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Operation Test Results Request ID 2423798/1

Thickening Time - ON-OFF-ON

18/OCT/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)
129	3970	36	3:21	3:35	3:49	4:15	12	46	15	12



Total sks = 870

Composite:

CS2847 TR#8658 385 sks

CS2852 TR#8677 385 sks

CS2853, Trailer 3212-Front Pod, 100 sks

Deflection: 12 - 12

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