

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

For: Terra

Date: Friday, June 23, 2017

TR 322-23-597 Production

API# 05-045-23470-00

Sincerely,
Grand Junction Cement Engineering

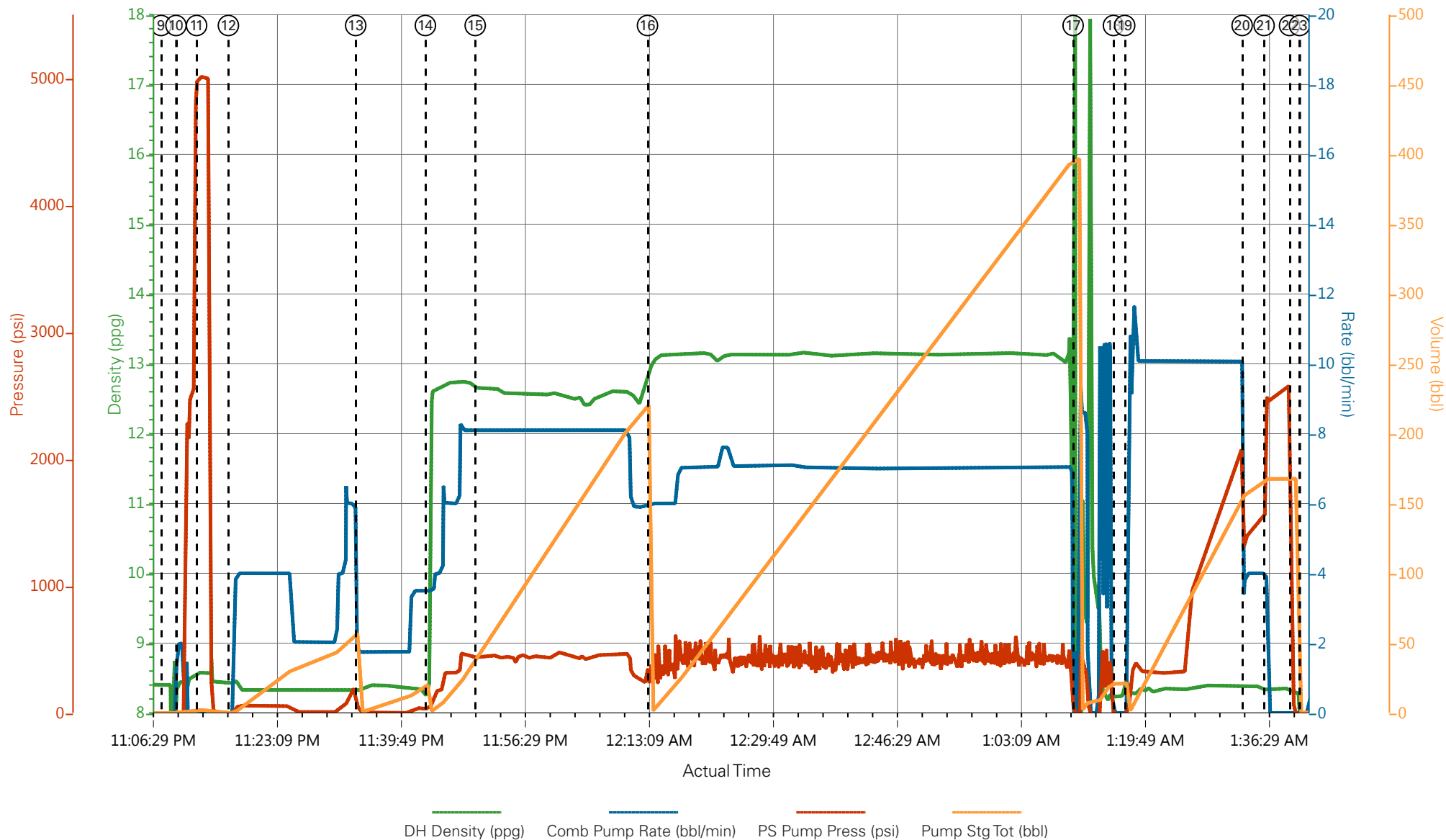
1.0 Real-Time Job Summary

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	6/22/2017	15:30:00	USER					O/L time 2130
Event	2	Pre-Convoy Safety Meeting	6/22/2017	17:15:00	USER					
Event	3	Crew Leave Yard	6/22/2017	17:30:00	USER					1 Elite, 1 660, 1 pickup
Event	4	Arrive at Location	6/22/2017	21:00:00	USER					Rig running casing
Event	5	Assessment Of Location Safety Meeting	6/22/2017	21:15:00	USER					JSA completed - customer offered/received SDS - water test pH 7.5, Cl 0, temp 70 degrees
Event	6	Pre-Rig Up Safety Meeting	6/22/2017	21:30:00	USER					
Event	7	Rig-Up Equipment	6/22/2017	21:45:00	USER					Manifold on ground, hard line to standpipe, manifold off cement head for air, hard line to pit, water hoses to uprights, bulk hoses to silos and 660
Event	8	Pre-Job Safety Meeting	6/22/2017	22:45:00	USER					All HES personnel, rig crew, and company rep - rig circulating 8.5 bpm w/ 850 psi for 45 min.
Event	9	Start Job	6/22/2017	23:08:00	USER					TD 10458', TP 10452.64, SJ 28.27', 8 3/4" OH, Mud 8.6 ppg, Surf csg @ 3013', 4 1/2" 11.6# P110 casing
Event	10	Prime Pumps	6/22/2017	23:10:00	USER	8.33	2.0	26	2.0	Fresh water
Event	11	Test Lines	6/22/2017	23:12:46	COM5			5031		Pressure held well
Event	12	Pump H2O Spacer	6/22/2017	23:17:02	COM5	8.33	6.0	225	60.0	Fresh water - pump until returns established - air started on parasite
Event	13	Pump Mud Flush	6/22/2017	23:34:09	COM5	8.33	3.5	46	20.0	80 lbs Mud Flush III
Event	14	Pump Lead Cement	6/22/2017	23:43:31	COM5	12.5	8.0	480	198.7	575 sks, 12.5 ppg, 1.94 yield, 9.58 gal/sk - Tuf Fiber added on fly
Event	15	Check weight	6/22/2017	23:50:13	COM5	12.5				Recirc matched mud scales

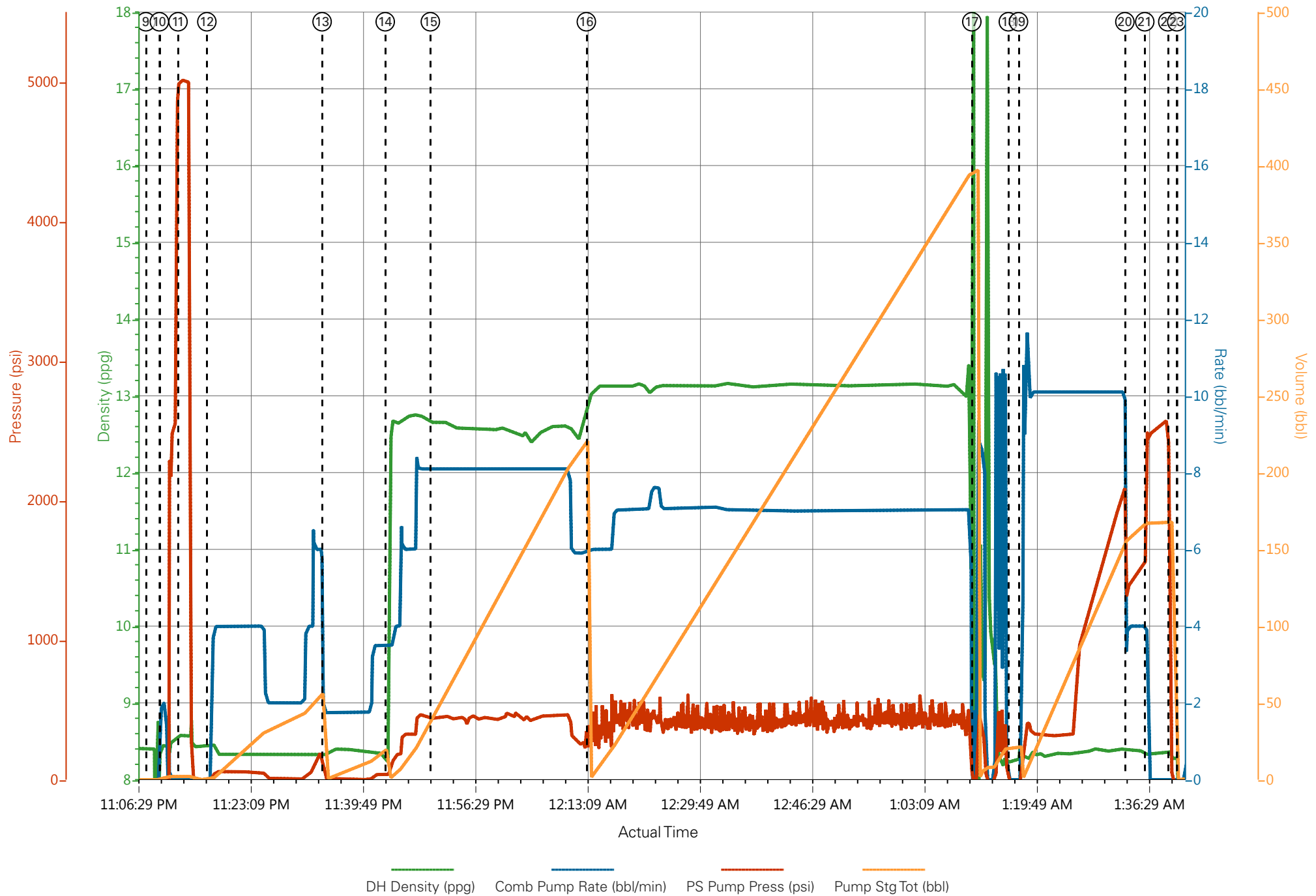
Event	16	Pump Tail Cement	6/23/2017	00:13:22	COM5	13.0	7.0	450	326.3	885 sks, 13.0 ppg, 2.07 yield, 9.43 gal/sk
Event	17	Shutdown	6/23/2017	01:10:34	USER					Blow down and wash lines to pit
Event	18	Drop Top Plug	6/23/2017	01:16:00	USER					Rig supplied latch down plug - Plug launched – verified by driller – air to parasite cut off
Event	19	Pump Displacement	6/23/2017	01:17:30	COM5	8.4	10.0	2080	161.6	1 gal MMCR, 3 lbs BE-6, 2% KCl
Event	20	Slow Rate	6/23/2017	01:33:17	USER	8.4	4.0	1370	@ 150	Returns lost at beginning of displacement
Event	21	Bump Plug	6/23/2017	01:36:14	COM5			1580		
Event	22	Check Floats	6/23/2017	01:39:39	COM5			2460		Floats held – 1 ¼ bbl flowback
Event	23	End Job	6/23/2017	01:41:00	USER					No sugar used, no HES plug
Event	24	Pre-Rig Down Safety Meeting	6/23/2017	02:00:00	USER					
Event	25	Rig-Down Equipment	6/23/2017	02:15:00	USER					
Event	26	Pre-Convoy Safety Meeting	6/23/2017	02:45:00	USER					
Event	27	Crew Leave Location	6/23/2017	03:00:00	USER					Thank you for using Halliburton - Ed Deussen and crew

TERRA ENERGY - TR 322-23-597 - 4 1/2" Production



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|---|-----------------------------|--------------------|---------------------|--------------------------------|------------------------------|
| ① Call Out | ⑥ Pre-Rig Up Safety Meeting | ⑪ Test Lines | ⑯ Pump Tail Cement | 21 Bump Plug | 26 Pre-Convoy Safety Meeting |
| ② Pre-Convoy Safety Meeting | ⑦ Rig-Up Equipment | ⑫ Pump H2O Spacer | ⑰ Shutdown | 22 Check Floats | 27 Crew Leave Location |
| ③ Crew Leave Yard | ⑧ Pre-Job Safety Meeting | ⑬ Pump Mud Flush | ⑱ Drop Top Plug | 23 End Job | |
| ④ Arrive at Location | ⑨ Start Job | ⑭ Pump Lead Cement | ⑲ Pump Displacement | 24 Pre-Rig Down Safety Meeting | |
| ⑤ Assessment Of Location Safety Meeting | ⑩ Prime Pumps | ⑮ Check weight | 20 Slow Rate | 25 Rig-Down Equipment | |

TERRA ENERGY -TR 322-23-597 - 4 1/2" Production



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Rockies, Grand Junction

Lab Results- Lead

Job Information

Request/Slurry	2395088/1	Rig Name	H&P 271	Date	19/JUN/2017
Submitted By	Patrick Ealey	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	TR 322-23-597

Well Information

Casing/Liner Size	4.5 in	Depth MD	10476 ft	BHST	123°C / 254°F
Hole Size	8.75 in	Depth TVD	10228 ft	BHCT	89°C / 193°F
Pressure	6460 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



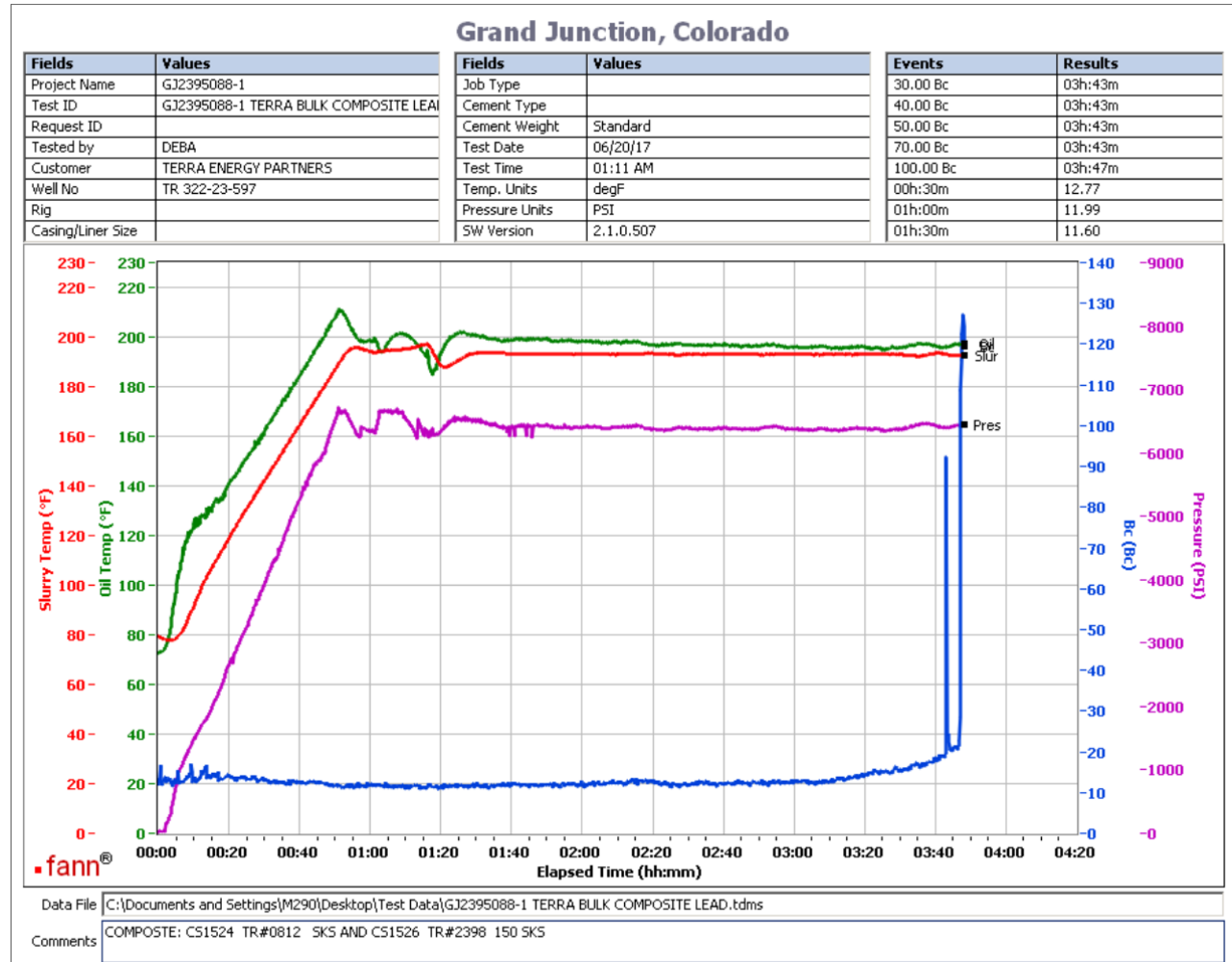
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		NeoCem Lead				Slurry Density	12.5	lbm/gal
						Slurry Yield	1.941	ft3/sack
						Water Requirement	9.623	gal/sack
						Total Mix Fluid	9.623	gal/sack
						Water Source	Fresh Water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

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Thickening Time - ON-OFF-ON

20/JUN/2017

Test Temp (°F)	Pressure (psi)	Batch Mix (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)
193	6460	51	3:46	3:46	3:46	3:46	11	61	15	12



Total sks = 575
 Composite:
 CS1524 TR#0812 425 SKS
 CS1526 TR#2398 150 SKS
 Deflection: 12 - 12

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Rockies, Grand Junction

Lab Results- Tail

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Cement Information - Tail Design



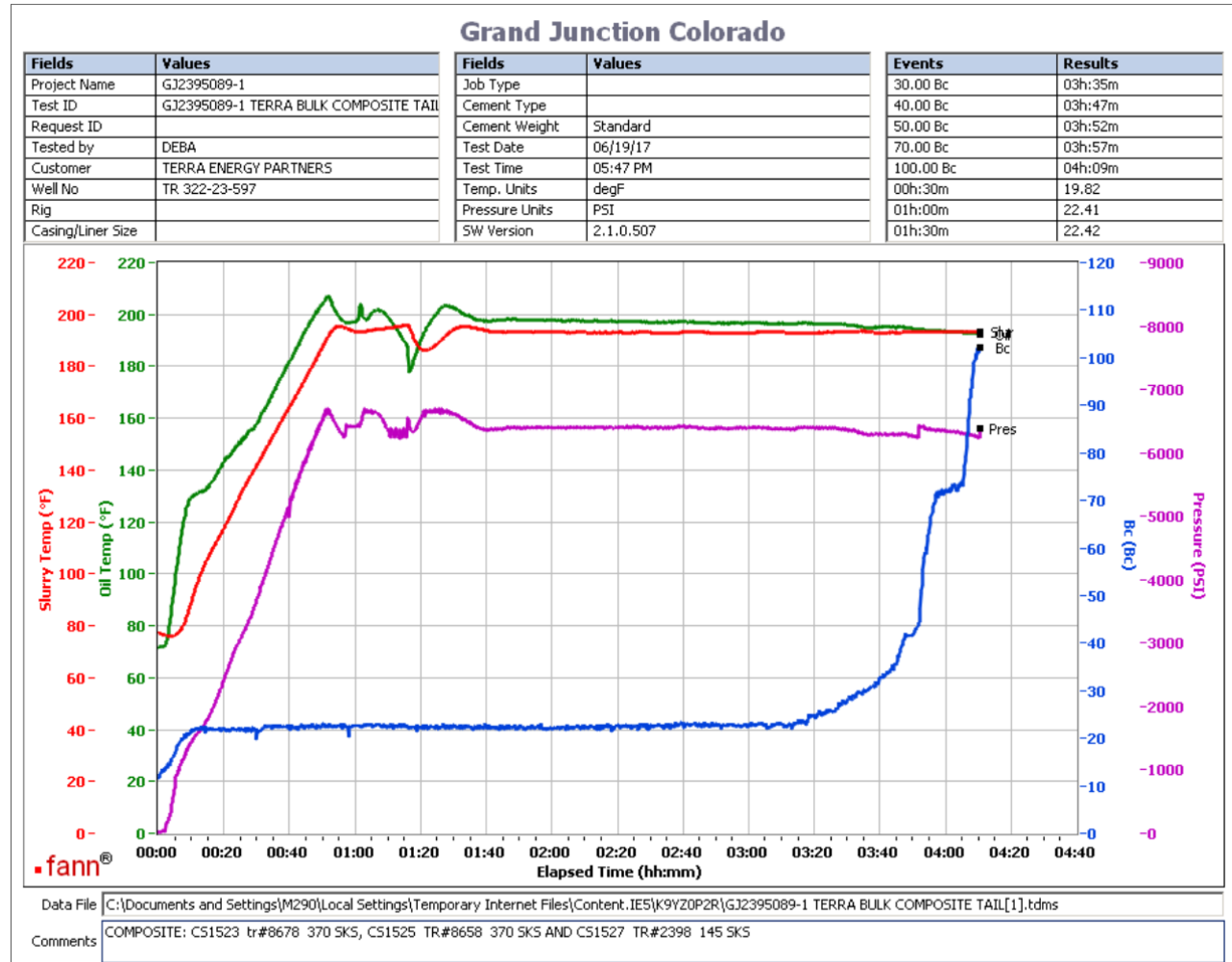
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		NeoCem Tail				Slurry Density	13	lbm/gal
						Slurry Yield	2.065	ft3/sack
						Water Requirement	9.424	gal/sack
						Total Mix Fluid	9.424	gal/sack
						Water Source	Fresh Water	
						Water Chloride		

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Thickening Time - ON-OFF-ON

20/JUN/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)
193	6460	51	3:35	3:52	3:57	4:09	12	16	15	22



Total sks = 885
 CS1523 TR#8678 370 SKS
 CS1525 TR#8658 370 SKS
 CS1527 TR#2398 145 SKS
 Deflection: 22 - 22

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