

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

For: Terra

Date: Wednesday, September 27, 2017

SR 42-12 Production

API# 05-045-23305

Sincerely,
Grand Junction Cement Engineering

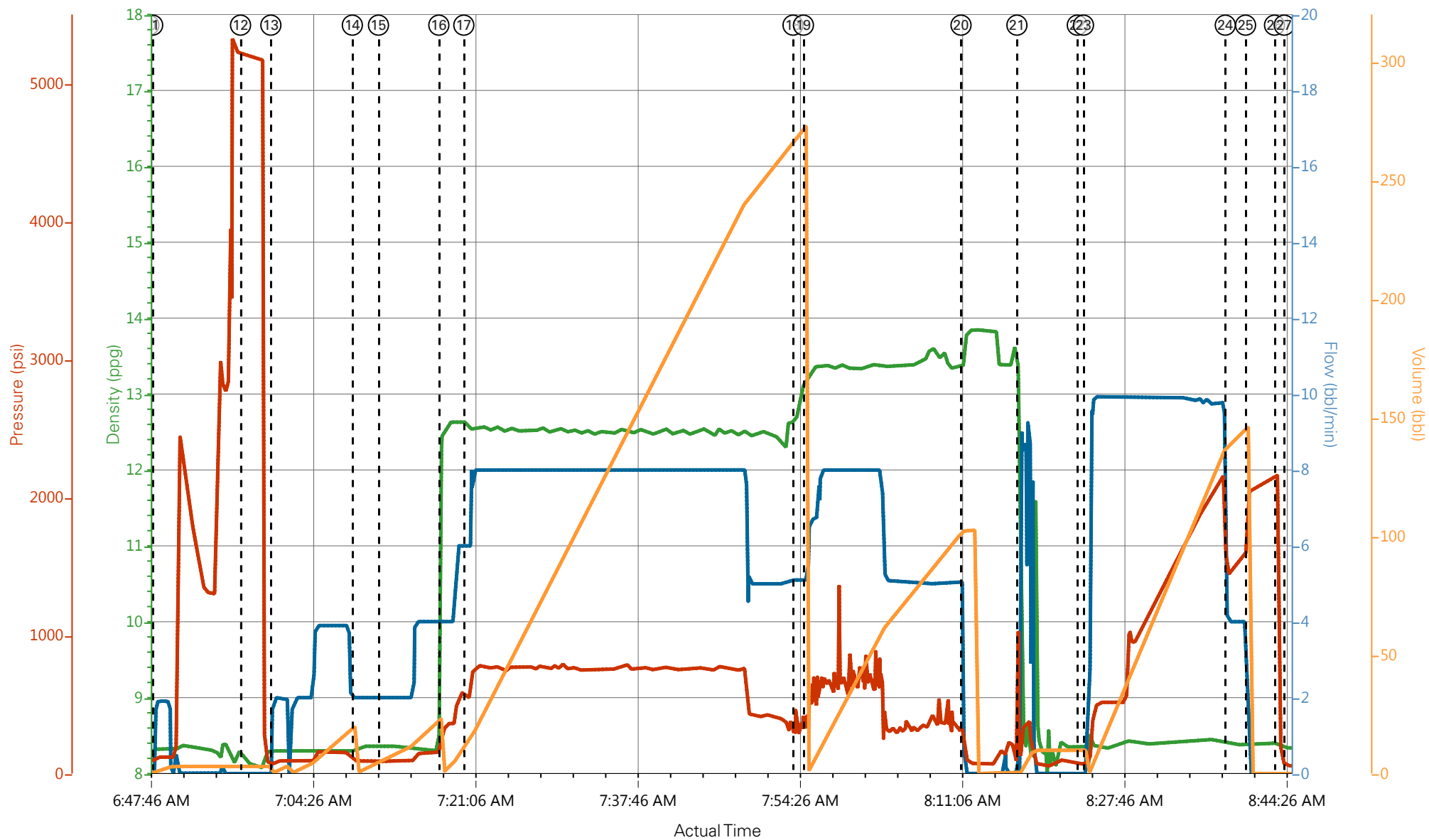
2.0 Real-Time Job Summary

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	Call Out	9/26/2017	22:00:00	USER					ON LOCATION TIME CHANGED FROM 4:00 TO 3:00 REQUESTED TIME
Event	2	Pre-Convoy Safety Meeting	9/27/2017	00:15:00	USER					ALL HES PRESENT
Event	3	Crew Leave Yard	9/27/2017	00:30:00	USER					
Event	4	Arrive at Location from Service Center	9/27/2017	02:15:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	9/27/2017	02:20:00	USER					MET WITH COMPANY REP DISCUSSED JOB PROCEDURE, SDS OFFERED
Event	6	Pre-Rig Up Safety Meeting	9/27/2017	02:35:00	USER					ALL HES PRESENT
Event	7	Rig-Up Completed	9/27/2017	04:37:06	USER					1-ELITE, 1-660 BULK TRAILER, 1-FIELD SILO, 4.5QL PLUG CONTAINER, 2" PUMP IRON, 4" SUCTION HOSE
Event	8	Pre-Job Safety Meeting	9/27/2017	05:00:07	USER					ALL HES AND RIG CREW PRESENT
Event	9	Other	9/27/2017	05:02:46	USER					WATER: TEMP-58, CL-0, PH-7. RIG CIRCULATED 1.5 HOURS 487GPM, 858PSI
Event	10	Start Job	9/27/2017	06:47:52	USER	8.29	0.00	5.00	0.0	TD-9552', TP-9542', SJ-29.82', CSG-4.5" 11.6# P110, OH-8.75", SCSG-9.625" 32.3#, MUD-9.7PPG. CASING RECIPROCATED THROUGH JOB.
Event	11	Prime Pumps	9/27/2017	06:48:15	USER	8.33	2.00	108.00	3.0	FRESH WATER
Event	12	Test Lines	9/27/2017	06:57:17	COM5	8.34	0.00	5204.00	3.0	VERIFIED NO LEAKS ON LINES
Event	13	Pump Fresh Water	9/27/2017	07:00:24	COM5	8.34	4.00	127.00	20.0	FRESH WATER AHEAD
Event	14	Pump Mud Flush III	9/27/2017	07:08:46	COM5	8.40	4.00	151.00	20.0	MUD FLUSH III
Event	15	Check weight	9/27/2017	07:11:27	COM5					WEIGHT VERIFIED BY PRESSURIZED MUD SCALES

Event	16	Pump Lead Cement	9/27/2017	07:17:39	COM5	12.50	8.00	780.00	273.0	NEOCER LEAD, 790SKS, 12.5PPG, 1.94CF/SK, 9.6GAL/SK
Event	17	Check weight	9/27/2017	07:20:13	COM5					WEIGHT VERIFIED BY PRESSURIZED MUD SCALES
Event	18	Check weight	9/27/2017	07:54:02	COM5					WEIGHT VERIFIED BY PRESSURIZED MUD SCALES
Event	19	Pump Tail Cement	9/27/2017	07:55:06	COM5	13.30	8.00	709.00	81.6	THERMACER TAIL, 265SKS, 13.3PPG, 1.73CF/SK, 7.81GAL/SK
Event	20	Shutdown	9/27/2017	08:11:17	USER					
Event	21	Clean Lines	9/27/2017	08:17:02	COM5					CLEANED AND BLEW AIR BACK THROUGH LINES TO PIT
Event	22	Drop Top Plug	9/27/2017	08:23:14	USER					PLUG AWAY
Event	23	Pump Displacement	9/27/2017	08:23:52	COM5	8.40	10.00	2180.00	147.4	KCL DISPLACEMENT, 1GAL MMCR AND 3-1#BE6 ADDED
Event	24	Slow Rate	9/27/2017	08:38:26	USER	8.41	4.00	1444.00	137.2	SLOW RATE LAST 10 BBLs
Event	25	Bump Plug	9/27/2017	08:40:31	COM5	8.40	4.00	1609.00	147.4	PLUG BUMPED 1609 PSI
Event	26	Check Floats	9/27/2017	08:43:30	USER	8.40	0.00	2168.00	0.0	FLOATS HELD 1 BBL BACK
Event	27	End Job	9/27/2017	08:44:30	USER	8.34	0.00	6.00	0.0	RETURNS THROUGH JOB
Event	28	Post-Job Safety Meeting (Pre Rig-Down)	9/27/2017	08:50:00	USER					ALL HES PRESENT
Event	29	Rig-Down Completed	9/27/2017	10:00:00	USER					
Event	30	Pre-Convoy Safety Meeting	9/27/2017	10:15:00	USER					ALL HES PRESENT
Event	31	Crew Leave Location	9/27/2017	10:30:00	USER					THANK YOU FOR CHOOSING HALLIBURTON, ANDREW BRENNECKE AND CREW

TEP - SR 42-12 - 4.5" PRODUCTION



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

- ① Call Out
- ② Pre-Convoy Safety Meeting
- ③ Crew Leave Yard
- ④ Arrive at Location from Service Center
- ⑤ Assessment Of Location Safety Meeting
- ⑥ Pre-Rig Up Safety Meeting
- ⑦ Rig-Up Completed
- ⑧ Pre-Job Safety Meeting
- ⑨ Other
- ⑩ Start Job
- ⑪ Prime Pumps
- ⑫ Test Lines
- ⑬ Pump Fresh Water
- ⑭ Pump Mud Flush I

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Created: 2017-09-27 03:23:15, Version: 4.2.393

Edit

Customer: TERRA ENERGY PARTNERS

Job Date: 9/27/2017 3:57:20 AM

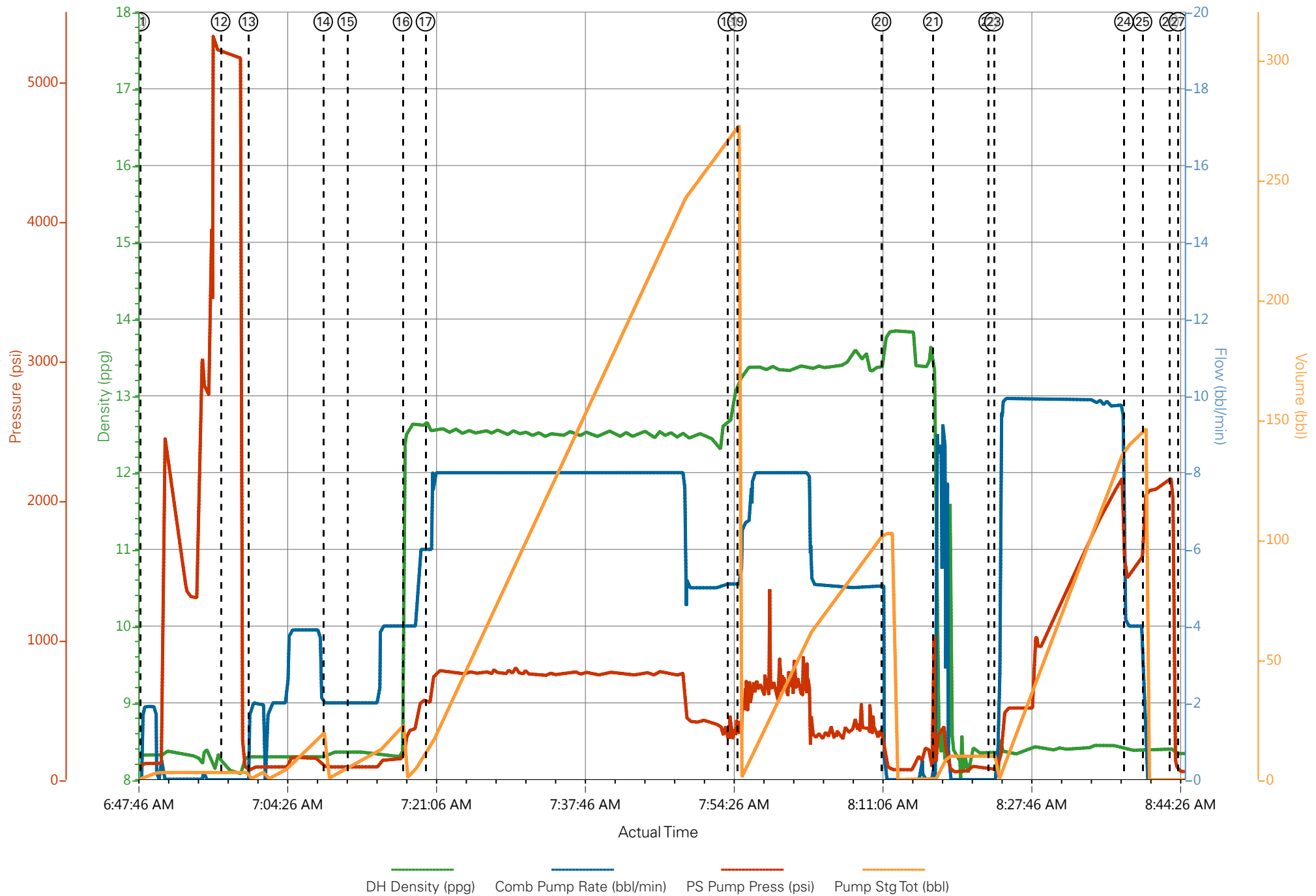
Well: SR 42-12

Representative: JOSH PHILLIPS

Sales Order #: 904323199

ELITE#1: A.BRENNECKE/A.ANGELO

TEP - SR 42-12 - 4.5" PRODUCTION



Job Information

Request/Slurry	2418900/1	Rig Name	H&P 318	Date	24/SEP/2017
Submitted By	Patrick Ealey	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	SR 42-12

Well Information

Casing/Liner Size	4.5 in	Depth MD	9569 ft	BHST	115°C / 239°F
Hole Size	8.75 in	Depth TVD	9327 ft	BHCT	76°C / 169°F
Pressure	5830 psi				

Drilling Fluid Information

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



Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
						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 2418900/1

Thickening Time - ON-OFF-ON

25/SEP/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	5830	47	3:39	3:40	3:49	4:36	18	57	15	18

Total sks= 790

Composite:

CS2639 TR# 8678 395 sks

CS2640 TR#2878 395 sks

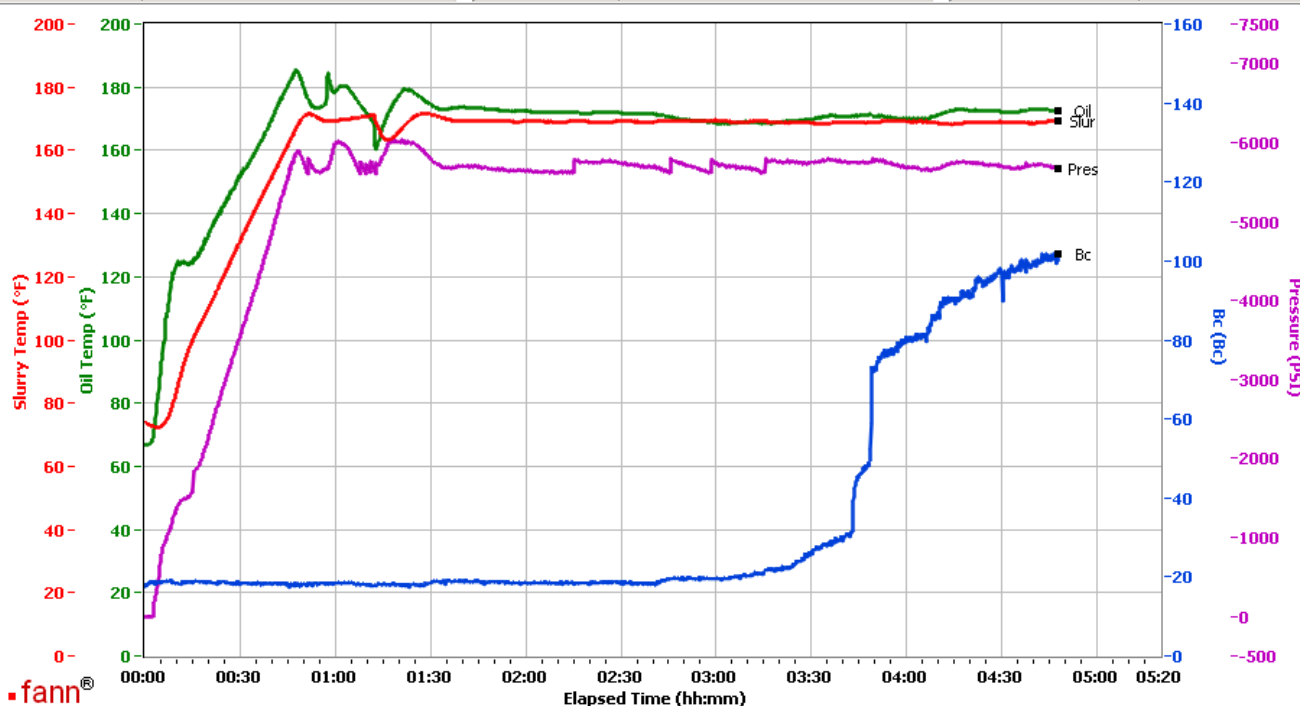
No deflection

Grand Junction Colorado

Fields	Values
Project Name	GJ2418900-1 TERRA PRODUCTION BULK CO
Test ID	34890483
Request ID	GJ2418900-1
Tested by	DEBA
Customer	TERRA ENERGY PARTNERS
Well No	SR 42-12
Rig	H&P 318
Casing/Liner Size	4.5"

Fields	Values
Job Type	
Cement Type	HOLCIM TYPE I/II
Cement Weight	Standard
Test Date	09/25/17
Test Time	12:29 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	03h:39m
40.00 Bc	03h:43m
50.00 Bc	03h:48m
70.00 Bc	03h:49m
100.00 Bc	04h:36m
00h:30m	18.63
01h:00m	18.31
01h:30m	18.65



Data File C:\Documents and Settings\M290\Local Settings\Temporary Internet Files\Content.IE5\CDER4HUV\GJ2418900-1 TERRA PRODUCTION BULK COMPOSITE LEAD[1].tdms

Comments COMPOSITE: cs2639 TR#8678 395 SKS AND CS2640 TR#2878 395 SKS

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Rockies, Grand Junction

Lab Results- Tail

Job Information

Request/Slurry	2418901/1	Rig Name	H&P 318	Date	24/SEP/2017
Submitted By	Patrick Ealey	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	SR 42-12

Well Information

Casing/Liner Size	4.5 in	Depth MD	9569 ft	BHST	115°C / 239°F
Hole Size	8.75 in	Depth TVD	9327 ft	BHCT	76°C / 169°F
Pressure	5830 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>	<u>Cement Properties</u>	
						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 2418901/1

Thickening Time - ON-OFF-ON

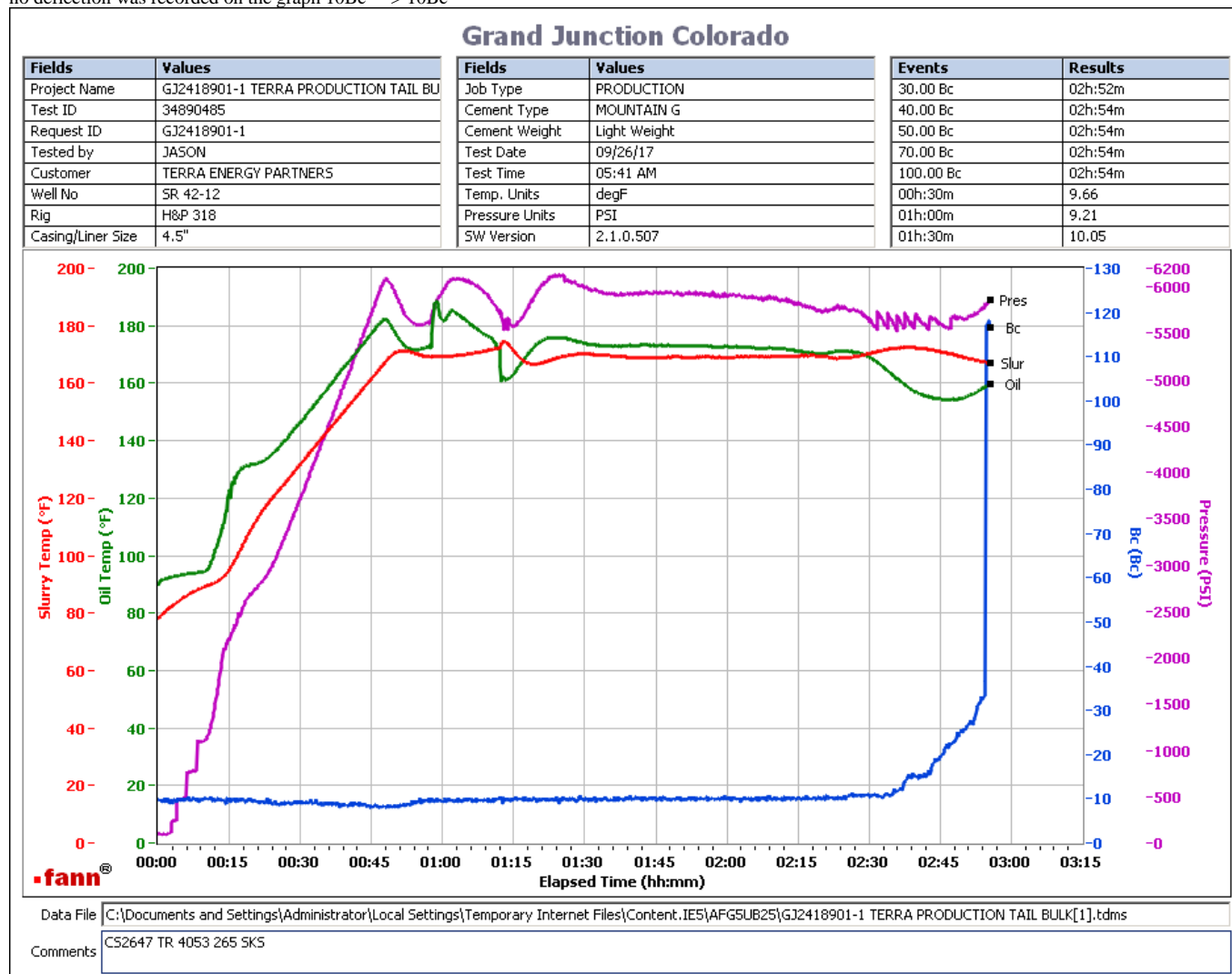
26/SEP/2017

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	5830	47	2:52	2:54	2:54	2:54	10	57	15	10

265 sks tail

CS2647 TR 4053 265 SKS

no deflection was recorded on the graph 10Bc--- > 10Bc



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