

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

United States of America, COLORADO

For: Terra

Date: Monday, April 30, 2018

PA 532-26 Production PJR

API# 05-045-23707-00

Sincerely,

Grand Junction Cement Engineering

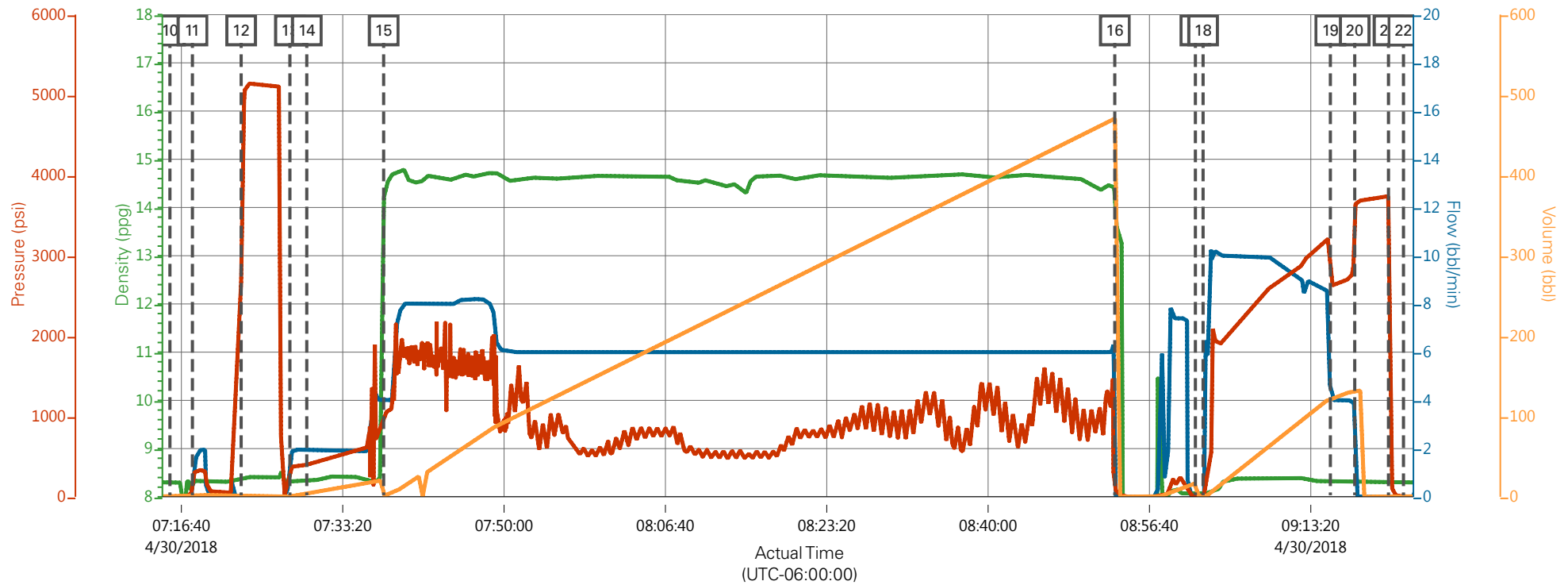
1.0 Real-Time Job Summary

1.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	4/30/2018	00:01:00						Requested on Location @ 05:00
Event	2	Pre-Convoy Safety Meeting	4/30/2018	03:00:00						
Event	3	Crew Leave Yard	4/30/2018	03:20:00						1 Elite, 1 660, 1 pickup
Event	4	Arrive at Rig	4/30/2018	05:00:00						Rig running casing
Event	5	Assessment Of Location Safety Meeting	4/30/2018	05:10:00						JSA completed - Customer offered/received SDS - water test pH 7.0, Cl <200, temp 60 degrees
Event	6	Pre-Rig Up Safety Meeting	4/30/2018	05:15:00						
Event	7	Rig-Up Equipment	4/30/2018	05:20:00						1 hardline to standpipe, water hoses to upright, bulk hose to Silos and 660.
Event	8	Other	4/30/2018	05:30:00						Rig Circulated 1 hour prior to cement job at 500 gpm 1900 psi
Event	9	Pre-Job Safety Meeting	4/30/2018	06:27:39						All HES personnel, rig crew, and company rep
Event	10	Start Job	4/30/2018	07:15:29						TD 8541', TP 8531, SJ 31.17', FC 8499.83 OH 8 3/4", Csg 4 1/2" 11.6#, Surface Csg 9.625" 36# @ 1135', Mud 12.6 ppg.
Event	11	Fill Lines	4/30/2018	07:17:48		8.33	2	360	5	Fresh Water
Event	12	Test Lines	4/30/2018	07:22:50		8.33		5153		Held pressure 2 minutes no leaks
Event	13	Pump Spacer	4/30/2018	07:27:53		8.33	2	440	5	Fresh Water

Event	14	Pump Mud Flush	4/30/2018	07:29:37	8.4	4	1000	20	80 lbs. Mud Flush III
Event	15	Pump Cement	4/30/2018	07:37:34	14.5	6	1800	430.2	1830 Sks 14.5 ppg 1.32 yield 5.85 gal/sk
Event	16	Shutdown	4/30/2018	08:53:05					Wash lines to pit
Event	17	Drop Top Plug	4/30/2018	09:01:25					Co-Rep Verify Plug Launched
Event	18	Pump Displacement	4/30/2018	09:02:12	8.4	10	3120	131.8	3 lbs BE-6, 1 gal MMCR, 2% KCl
Event	19	Slow Rate	4/30/2018	09:15:21	8.4	4	2800	121	Slow Rate 10 bbls to calculated displacement
Event	20	Bump Plug	4/30/2018	09:17:52			3810		Plug Bumped at 2800 psi, Brought up to 3810 psi
Event	21	Check Floats	4/30/2018	09:21:22					Floats held – 1 ½ bbl back to the truck
Event	22	End Job	4/30/2018	09:22:54					Good returns throughout job. Pipe was reciprocated during job.
Event	23	Pre-Rig Down Safety Meeting	4/30/2018	09:50:36					90 lbs sugar used, HES top plug used, 0 add hours
Event	24	Rig-Down Equipment	4/30/2018	09:58:56					
Event	25	Pre-Convoy Safety Meeting	4/30/2018	10:13:04					
Event	26	Crew Leave Location	4/30/2018	10:17:20					Thanks For Using Halliburton Cement. Chris Martinez And Crew.

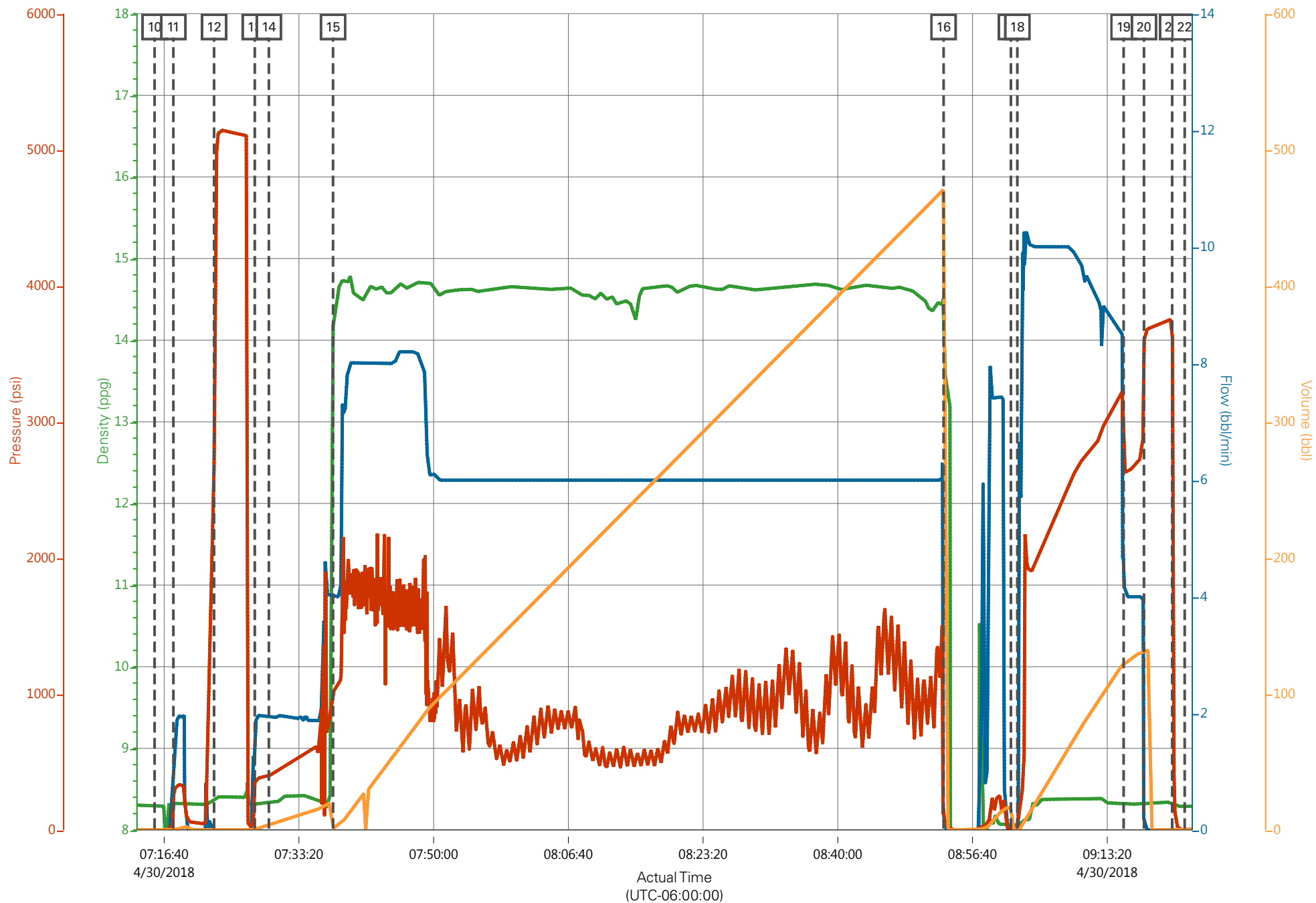
PA 532-26 Production



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

Description	Actual Time (UTC-06:00:00)	DH Density (ppg)	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	Pump Stg Tot (bbl)
11 Fill Lines	07:17:48	8.33	0.80	199.00	0.10
12 Test Lines	07:22:50	8.36	0.00	2665.00	0.00
13 Pump Spacer	07:27:53	8.33	1.50	349.00	0.30
14 Pump Mud Flush	07:29:37	8.35	2.00	388.00	3.70
15 Pump Cement	07:37:34	14.13	4.00	942.00	1.10
16 Shutdown	08:53:05	14.37	0.00	113.00	470.70
17 Drop Top Plug	09:01:25	8.06	0.00	0.00	0.00
18 Pump Displacement	09:02:12	7.91	0.00	13.00	0.00
19 Slow Rate	09:15:21	8.32	4.60	2637.00	122.30
20 Bump Plug	09:17:52	8.34	0.00	3593.00	132.20
21 Check Floats	09:21:22	8.34	0.00	3723.00	0.00
22 End Job	09:22:54	8.30	0.00	0.00	0.00

PA 532-26 Production



Job Information

Request/Slurry	2469772/2	Rig Name	H&P 271	Date	22/APR/2018
Submitted By	Patrick Ealey	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	PA 532-26

Well Information

Casing/Liner Size	4.5 in	Depth MD	8590 ft	BHST	106°C / 222°F
Hole Size	8.75 in	Depth TVD	8356 ft	BHCT	67°C / 152°F
Pressure	5149 psi				

Drilling Fluid Information

Mud Supplier Name	AMC	Mud Trade Name	Density
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Cement Information - Primary Design



Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
						Slurry Density	14.5	lbm/gal
						Slurry Yield	1.32	ft3/sack
						Water Requirement	5.849	gal/sack
						Total Mix Fluid	5.849	gal/sack
						Water Source	Fresh Water	
						Water Chloride		

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Operation Test Results Request ID 2469772/2

Thickening Time - ON-OFF-ON

27/APR/2018

Test Temp (degF)	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)
152	5149	43	4:13	4:17	4:24	4:25	10	53	15	14

total sks=1830

CS0952, Trailer 8678, 425 sks

CS0953, Trailer 2878, 425 sks

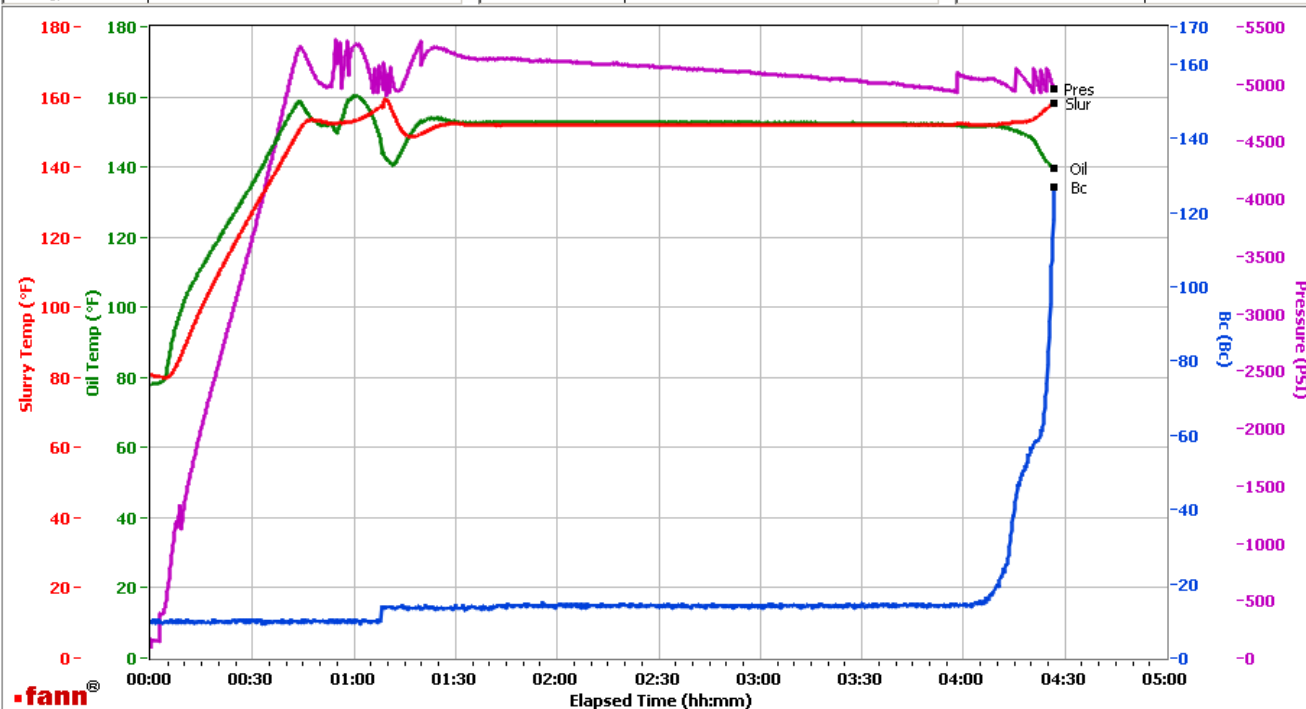
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Grand Junction Colorado

Fields	Values
Project Name	2469772-2 TERRA BULK PRODUCTION PRIM
Test ID	35450357 - TT
Request ID	2469772-2
Tested by	CT
Customer	TERRA ENERGY PARTNERS
Well No	PA 532-26
Rig	H&P 271
Casing/Liner Size	4.5 INCH

Fields	Values
Job Type	PRODUCTION CASING
Cement Type	MOUNTAIN G
Cement Weight	Standard
Test Date	06/03/11
Test Time	04:13 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.1219

Events	Results
30.00 Bc	04h:13m
40.00 Bc	04h:15m
50.00 Bc	04h:17m
70.00 Bc	04h:24m
100.00 Bc	04h:25m
00h:30m	10.49
01h:00m	10.46
01h:30m	14.04



Data File C:\Documents and Settings\HPHT\Desktop\Test Data\GJ2469772-2 TERRA BULK PRODUCTION PRIMARY.tdms

Comments CS0952, TRAILER 8678, 425 SKS - CS0953, TRAILER 2878, 425 SKS

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Operation Test Results Request ID 2469772/1

Thickening Time - ON-OFF-ON

27/APR/2018

Test Temp (degF)	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)
152	5149	43	4:46	4:46	4:49	4:54	15	53	15	12

total sks=1830

CS0949, Trailer 8476, 425 sks

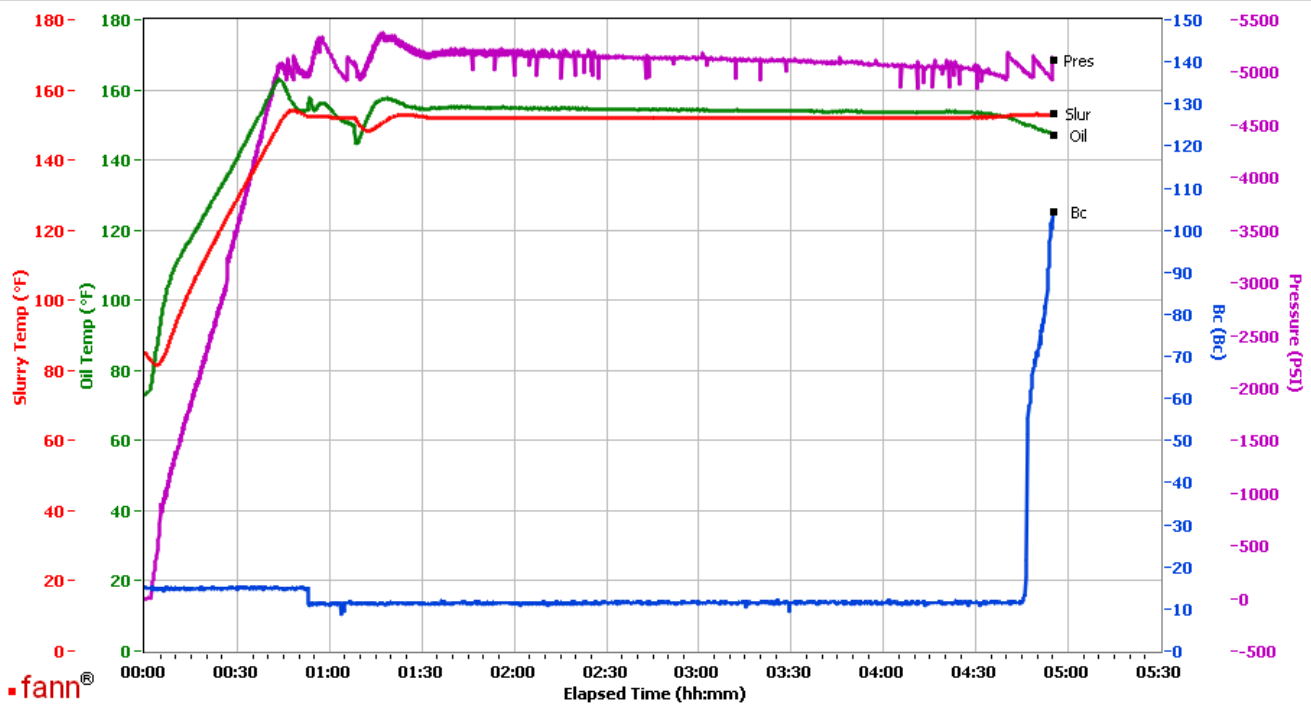
CS0950, Trailer 1513, 425 sks

CS0951, Trailer 4053, 130 sks

No deflection.

Grand Junction Colorado

Fields	Values	Fields	Values	Events	Results
Project Name	2469772-1 TERRA BULK PRODUCTION PRIM	Job Type	PRODUCTION CASING	30.00 Bc	04h:46m
Test ID	35439187 - TT	Cement Type	MOUNTAIN G	40.00 Bc	04h:46m
Request ID	2469772-1	Cement Weight	Standard	50.00 Bc	04h:46m
Tested by	CT	Test Date	04/26/18	70.00 Bc	04h:49m
Customer	TERRA ENERGY PARTNERS	Test Time	03:29 PM	100.00 Bc	04h:54m
Well No	PA 532-26	Temp. Units	degF	00h:30m	15.21
Rig	H8P 271	Pressure Units	PSI	01h:00m	11.35
Casing/Liner Size	4.5 INCH	SW Version	2.1.0.507	01h:30m	11.31



Data File C:\Documents and Settings\M290\Local Settings\Temporary Internet Files\Content.IE5\4TIJ89YN\GJ2469772-1 TERRA BULK PRODUCTION PRIMARY[1].tdms

Comments CS0949, TRAILER 8476, 425 SKS - CS0950, TRAILER 1513, 425 SKS - CS0951, TRAILER 4053, 130 SKS

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