

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

United States of America, COLORADO

For: Terra

Date: Friday, May 25, 2018

Federal PA 433-26 Production PJR

API #: 05-045-23729

Sincerely,

Grand Junction Cement Engineering

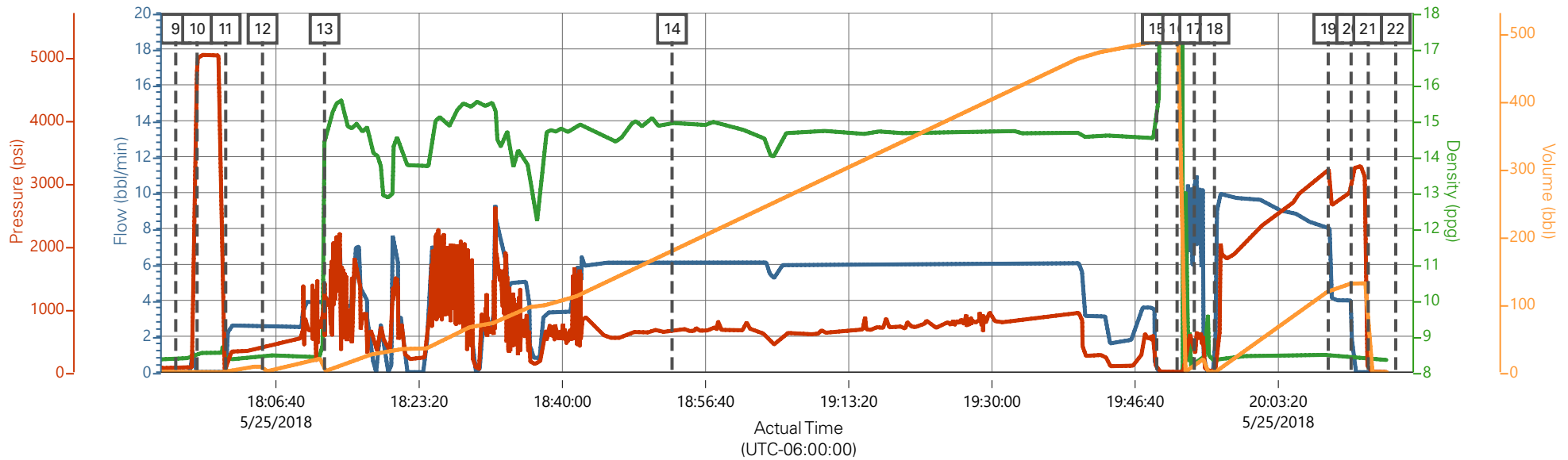
2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	DH Density (ppg)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	5/25/2018	09:00:00	USER					REQUESTED ON LOCATION 5/25/2018 @ 15:00
Event	2	Depart Yard Safety Meeting	5/25/2018	10:55:00	USER					JSA COMPLETED
Event	3	Crew Leave Shop	5/25/2018	11:00:00	USER					
Event	4	Arrive At Loc	5/25/2018	12:00:00	USER					RIG RUNNING CASING
Event	5	Assessment Of Location Safety Meeting	5/25/2018	12:05:00	USER					JSA COMPLETED
Event	6	Pre-Rig Up Safety Meeting	5/25/2018	12:25:00	USER					JSA COMPLETED
Event	7	Rig-Up Equipment	5/25/2018	12:30:00	USER					
Event	8	Pre-Job Safety Meeting	5/25/2018	17:30:00	USER					JSA COMPLETED
Event	9	Start Job	5/25/2018	17:55:00	COM4					CASING 4 1/2" - 11.6#, TD 8470', TP 8464', SJ 28.7', OH 8 3/4", MUD 12.6 PPG, WATER TEMP 65, PH 7, CHLORIDES 0
Event	10	Test Lines	5/25/2018	17:57:29	COM4	0.00	8.33	5000.00	0.00	TEST LINES TO 5000 PSI
Event	11	Pump Spacer 1	5/25/2018	18:00:49	COM4	2.00	8.33	275.00	10.00	10 BBL FRESHWATER
Event	12	Pump Spacer 2	5/25/2018	18:05:06	COM4	4.00	8.40	392.00	20.00	20 BBL MUDFLUSH
Event	13	Pump Cement	5/25/2018	18:12:19	COM4	6.00	14.50	656.00	432.6	432.6 BBL PRIMARY, 1840 SKS @ 14.5 PPG / 1.32 YLD / 5.85 GAL/SK

Event	14	Check Weight	5/25/2018	18:52:46	COM4	14.60				WEIGHED IN SCALES AT 14.6 PPG
Event	15	Shutdown	5/25/2018	19:49:11	COM4					
Event	16	Clean Lines	5/25/2018	19:51:33	COM4					CLEAN LINES TO PIT
Event	17	Drop Top Plug	5/25/2018	19:53:33	COM4					PLUG AWAY
Event	18	Pump Displacement	5/25/2018	19:55:54	COM4	10.00	8.40	3220.00	130.70	130.7 BBL KCL WATER DISPLACEMENT, 1 GALLON MMCR AND 3# BE-6 USED
Event	19	Other	5/25/2018	20:09:09	COM4	4.00	8.40	3220.00	120.00	SLOW RATE AT 120 BBL AWAY TO 4 BBL/MIN, 3220 PSI TO 2700 PSI
Event	20	Bump Plug	5/25/2018	20:11:48	COM4	4.00	8.40	2865.00	130.70	PLUG BUMPED AT CALCULATED, FINAL CIRCULATING PRESSURE 2850 PSI, BROUGHT TO 3275 PSI
Event	21	Other	5/25/2018	20:13:48	COM4					FLOATS HELD, 1 1/2 BBL BACK TO PUMP
Event	22	End Job	5/25/2018	20:17:00	COM4					GOOD RETURNS THROUGHOUT, PIPE RECIPRICATED, NO SUGAR USED, NO ADD HOURS CHARGED
Event	23	Pre-Rig Down Safety Meeting	5/25/2018	20:45:00	USER					JSA COMPLETED
Event	24	Rig-Down Equipment	5/25/2018	20:50:00	USER					
Event	25	Pre-Convoy Safety Meeting	5/25/2018	21:25:00	USER					JSA COMPLETED
Event	26	Crew Leave Location	5/25/2018	21:30:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENTING OF GRAND JUNCTION, CO - RYAN MARTIN AND CREW

TEP - PA 433-26 - 4 1/2" PRODUCTION CASING



Description	Actual Time (UTC-06:00:00)	Comb Pump Rate (bbl/min)	DH Density (ppg)	PS Pump Press (psi)	Pump Stg Tot (bbl)	
10 Test Lines	17:57:29	0.00	8.51	4820.00	0.00	
11 Pump Spacer 1	18:00:49	0.00	8.38	30.00	0.00	
12 Pump Spacer 2	18:05:06	2.60	8.39	392.00	0.00	
13 Pump Cement	18:12:19	3.90	14.43	656.00	1.10	
14 Check Weight	18:52:46	6.10	14.94	684.00	179.20	
15 Shutdown	19:49:11	0.00	15.22	55.00	488.10	
16 Clean Lines	19:51:33	0.00	22.45	-3.00	488.10	
17 Drop Top Plug	19:53:33	10.30	8.33	543.00	9.20	
18 Pump Displacement	19:55:54	0.00	8.34	11.63	0.00	
19 Other	20:09:09	8.00	8.48	3201.00	119.50	
20 Bump Plug	20:11:48	4.00	8.40	2865.00	130.90	
21 Other	20:13:48	0.00	8.33	53.00	131.30	
22 End Job	20:17:00	n/a	n/a	n/a	n/a	

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Created: 2018-05-25 14:42:38, (UTC-06:00), Version: 4.5.139

Edit

Customer : TERRA ENERGY PARTNERS

Job Date : 5/25/2018

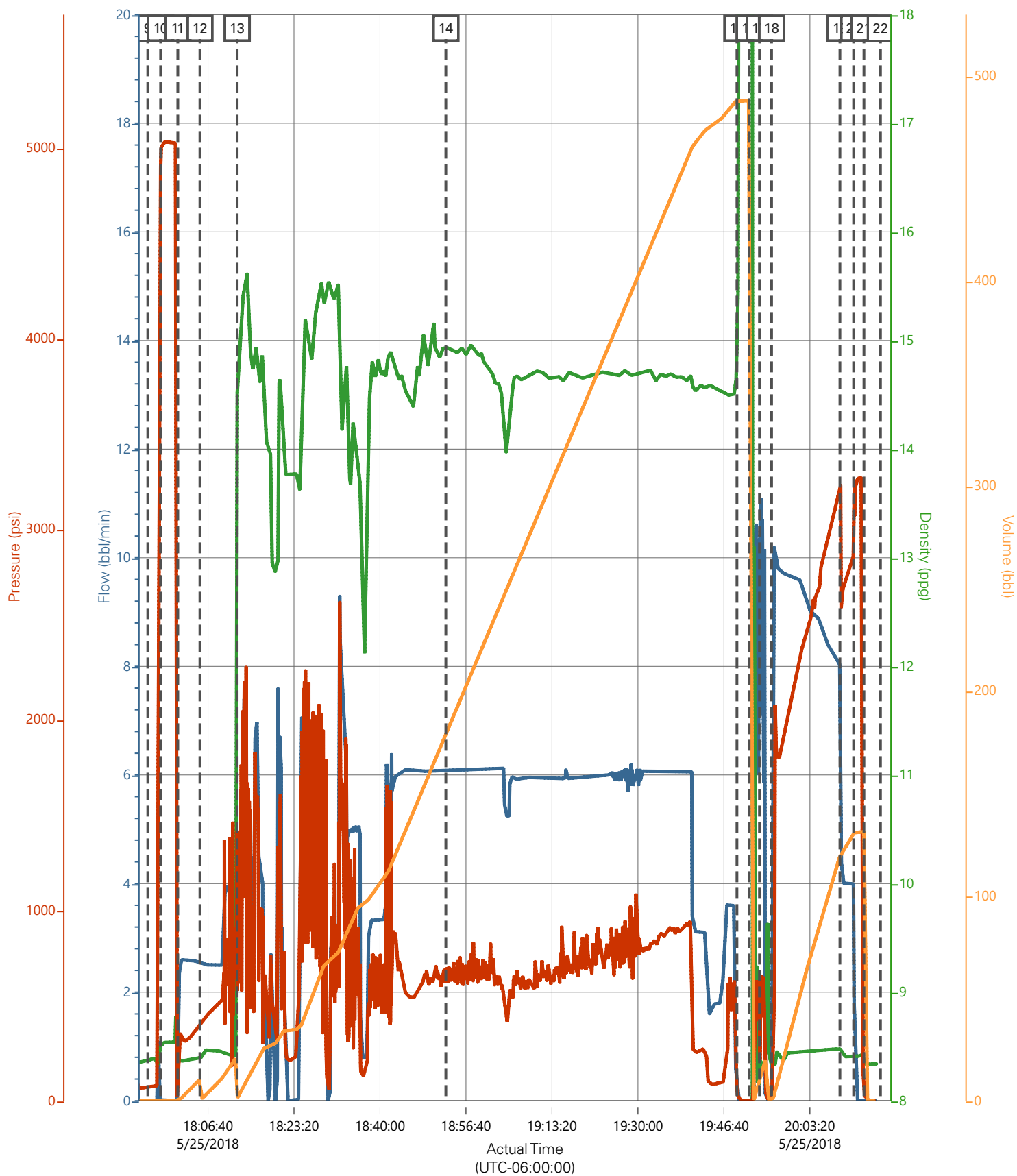
Well : FEDERAL

Representative : COY BURR

Sales Order # : 904864990

ELITE #1 : WES GOWEN / RYAN MARTIN

TEP - PA 433-26 - 4 1/2" PRODUCTION CASING



Comb Pump Rate (bbl/min) 0

DH Density (ppg) 8.34

PS Pump Press (psi) 2

Pump Stg Tot (bbl) 0

Job Information

Request/Slurry	2474825/1	Rig Name	H&P 271	Date	15/MAY/2018
Submitted By	Lukas Van Zyl	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	PA 433-26

Well Information

Casing/Liner Size	4.5 in	Depth MD	8518 ft	BHST	105°C / 221°F
Hole Size	8.75 in	Depth TVD	8320 ft	BHCT	66°C / 151°F
Pressure	5124 psi				

Drilling Fluid Information

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



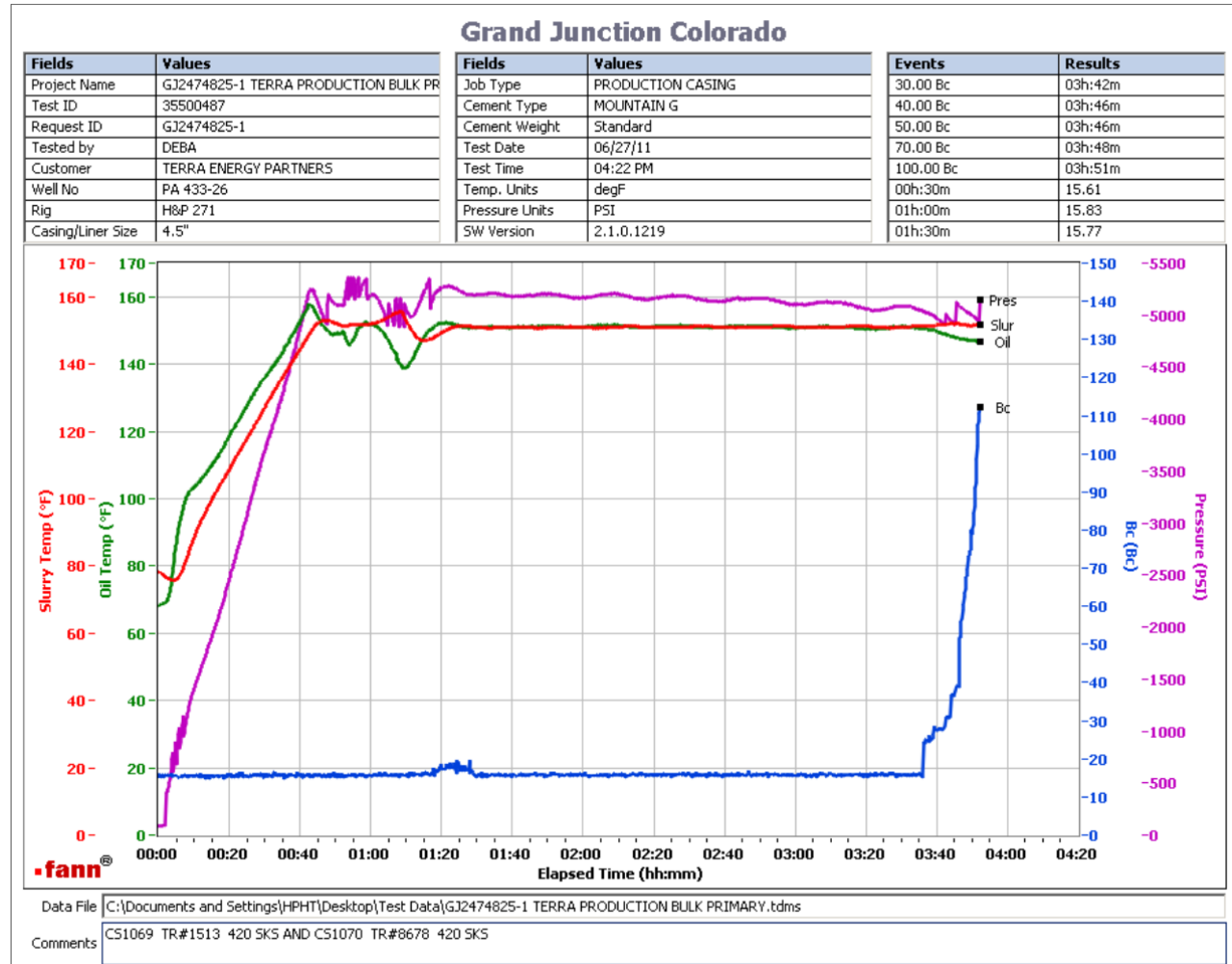
<u>Conc</u>	<u>UOM</u>	<u>Cement/Additive</u>	<u>Sample Type</u>	<u>Sample Date</u>	<u>Lot No.</u>	Cement Properties		
		VariCem Primary				Slurry Density	14.5	lbm/gal
						Slurry Yield	1.32	ft3/sack
						Water Requirement	5.849	gal/sack
						Total Mix Fluid	5.849	gal/sack
						Water Source	Fresh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

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Thickening Time - ON-OFF-ON

21/MAY/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)
151	5124	42	3:42	3:46	3:48	3:51	15	52	15	16



total sks=1840
 CS1069 TR# 1513 420 SKS
 CS1070 TR# 8678 420 SKS
 No deflection.

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Thickening Time - ON-OFF-ON

21/MAY/2018

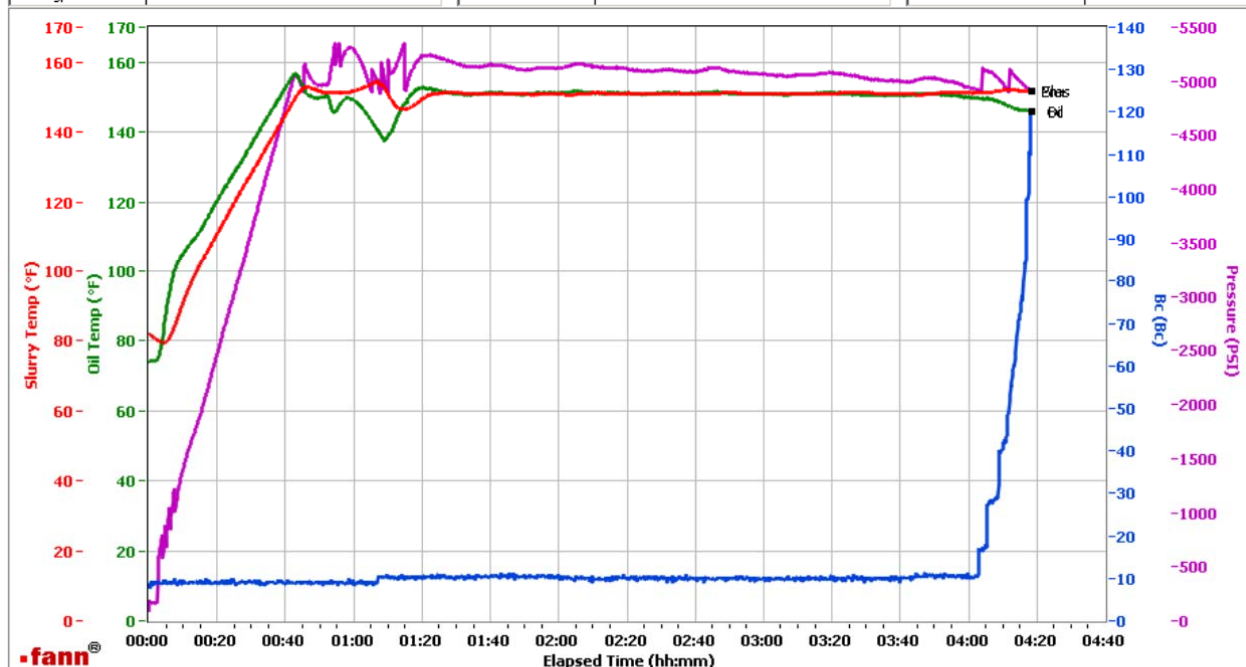
Test Temp (degF)	Pressure (psi)	Reached in (min)	30 Bc (hh:min)	50 Bc (hh:min)	70 Bc (hh:min)	100 Bc (hh:min)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
151	5124	42	4:08	4:12	4:14	4:17	8	52	15	10

Grand Junction Colorado

Fields	Values
Project Name	GJ2474825-2 TERRA PRODUCTION BULK PR
Test ID	35516446
Request ID	GJ2474825-2
Tested by	DEBA
Customer	TERRA ENERGY PARTNERS
Well No	PA 433-26
Rig	H&P 271
Casing/Liner Size	4.5"

Fields	Values
Job Type	PRODUCTION CASING
Cement Type	MOUNTAIN G
Cement Weight	Standard
Test Date	06/28/11
Test Time	01:15 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.1219

Events	Results
30.00 Bc	04h:08m
40.00 Bc	04h:09m
50.00 Bc	04h:12m
70.00 Bc	04h:14m
100.00 Bc	04h:17m
00h:30m	9.24
01h:00m	8.93
01h:30m	10.44



Data File C:\Documents and Settings\HPHT\Local Settings\Temporary Internet Files\Content.IE5\09ERK9UN\GJ2474825-2 TERRA PRODUCTION BULK PRIMARY[1].tdms

Comments CS1071 TR#2878 420 SKS , CS1072 TR#8476 420 SKS AND CS1076 TR#7094 160 SKS

total sks=1840
 CS1071 TR#2878 420 SKS
 CS1072 TR#8476 420
 CS1076 TR#7094 160 sks
 deflected from 9Bc-- > 10Bc

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