

HALLIBURTON

iCem[®] Service

Terra Energy Partners

For: Terra

Date: Friday, September 01, 2017

GM 33-10

API #: 05-045-22700-00

Sincerely,

Grand Junction Cement Engineering

2.0 Real-Time Job Summary

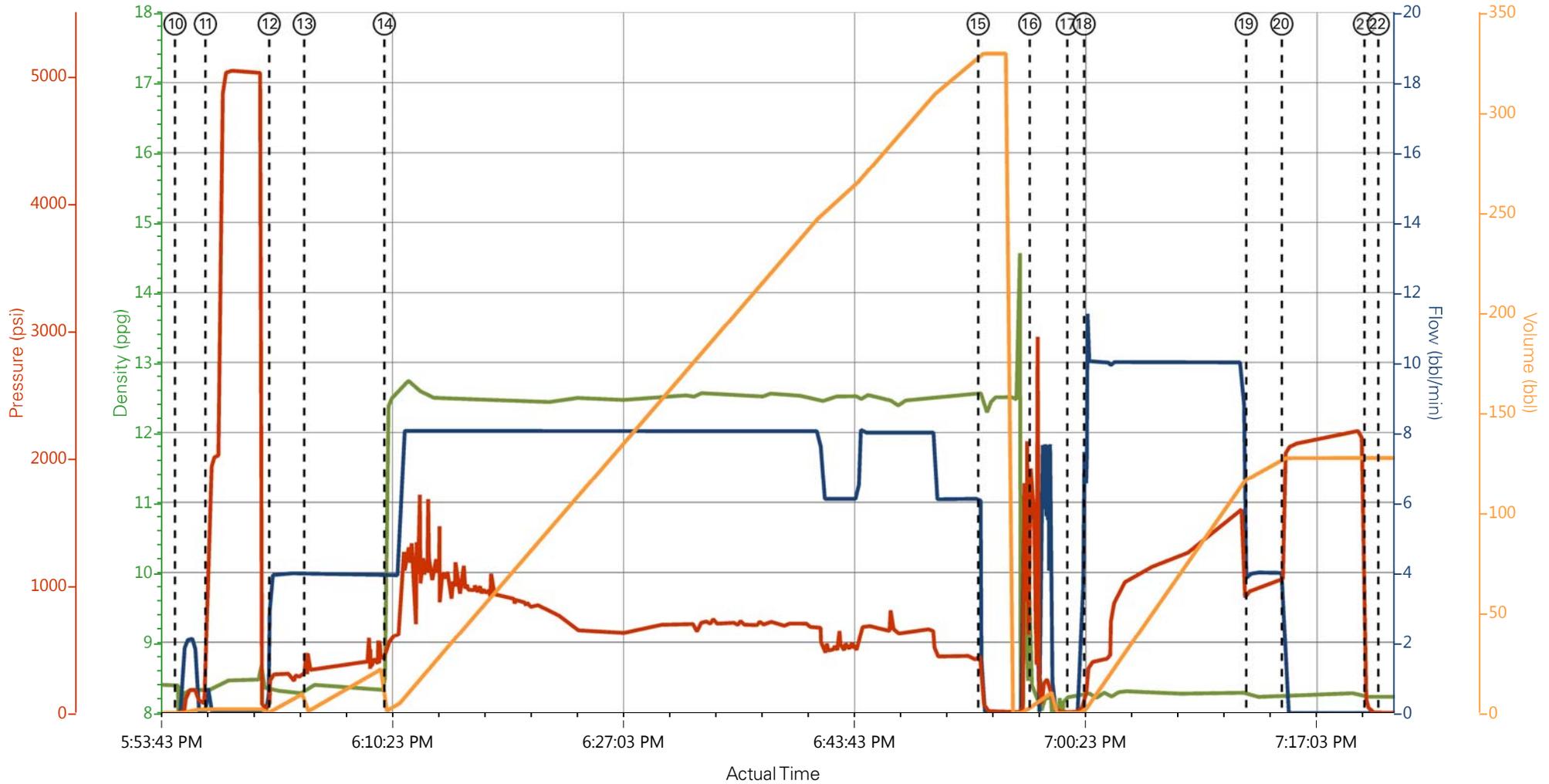
2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	PS Pump Press <i>(psi)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	9/1/2017	10:30:00	USER					
Event	2	Pre-Convoy Safety Meeting	9/1/2017	12:25:00	USER					
Event	3	Crew Leave Yard	9/1/2017	12:30:00	USER					
Event	4	Arrive At Loc	9/1/2017	14:30:00	USER					
Event	5	Assessment Of Location Safety Meeting	9/1/2017	14:35:00	USER					
Event	6	Spot Equipment	9/1/2017	14:45:00	USER					
Event	7	Pre-Rig Up Safety Meeting	9/1/2017	14:55:00	USER					
Event	8	Rig-Up Equipment	9/1/2017	15:00:00	USER					
Event	9	Pre-Job Safety Meeting	9/1/2017	17:30:00	USER					
Event	10	Start Job	9/1/2017	17:55:00	COM5					TD: 7862 TP: 7855 SJ: 29 MW: 10.0PPG 4 1/2" 11.6#/FT CSG IN 8 3/4" OH WATER TEST: PH: 7 POTASSIUM: 700 CHLORIDES: 0 SULFATES: <200 TEMP: 64 DEGREES
Event	11	Test Lines	9/1/2017	17:57:11	COM5	8.33	0.00	5000.00	0.0	5000 PSI TEST
Event	12	Fresh H2O Spacer	9/1/2017	18:01:47	COM5	8.33	4.00	304.00	10.0	FRESH H2O SPACER
Event	13	Mudflush Spacer	9/1/2017	18:04:19	COM5	8.40	4.00	376.00	20.0	MUDFLUSH SPACER
Event	14	Pump Cement	9/1/2017	18:10:05	COM5	12.50	8.00	760.00	312.4	895 SKS @ 12.5 PPG 1.96

YLD 9.38 GAL/SK H2O

Event	15	Shutdown	9/1/2017	18:52:54	USER					
Event	16	Clean Lines	9/1/2017	18:56:37	COM5					
Event	17	Drop Top Plug	9/1/2017	18:59:19	COM5					PLUG AWAY
Event	18	Pump Displacement	9/1/2017	19:00:32	COM5	8.48	10.00	1240.00	121.3	FRESH H2O DISPLACEMENT W/ MMCR, KCL, BE-6
Event	19	Slow Rate	9/1/2017	19:12:13	USER	8.48	4.00	960.00	110.0	PRESSURE PRIOR TO SLOWING RATE WAS 1475.
Event	20	Bump Plug	9/1/2017	19:14:47	COM5	8.48	4.00	2046.0	121.3	PLUG BUMPED AT CALCULATED DISPLACEMENT
Event	21	Check Floats	9/1/2017	19:20:45	COM5					FLOATS HELD, GAINED 1 BBL BACK TO PUMP. FINAL CIRCULATING PRESSURE WAS 1048.
Event	22	End Job	9/1/2017	19:21:45	USER					
Event	23	Post-Job Safety Meeting (Pre Rig-Down)	9/1/2017	19:25:00	USER					PIPE WAS RECIPROCATED DURING JOB. LOST RETURNS AT BEGINNING OF DISPLACEMENT. NO ADD HOURS CHARGED. USED 4 BOXES TUF-FIBER (60 LBS), USED CUSTOMER SUPPLIED LATCH DOWN PLUG.
Event	24	Rig-Down Equipment	9/1/2017	19:30:00	USER					
Event	25	Pre-Convoy Safety Meeting	9/1/2017	20:25:00	USER					
Event	26	Crew Leave Location	9/1/2017	20:30:00	USER					THANK YOU FOR CHOOSING HALLIBURTON CEMENTING OF GRAND JUNCTION, COLORADO ANTHONY ANDREWS AND CREW

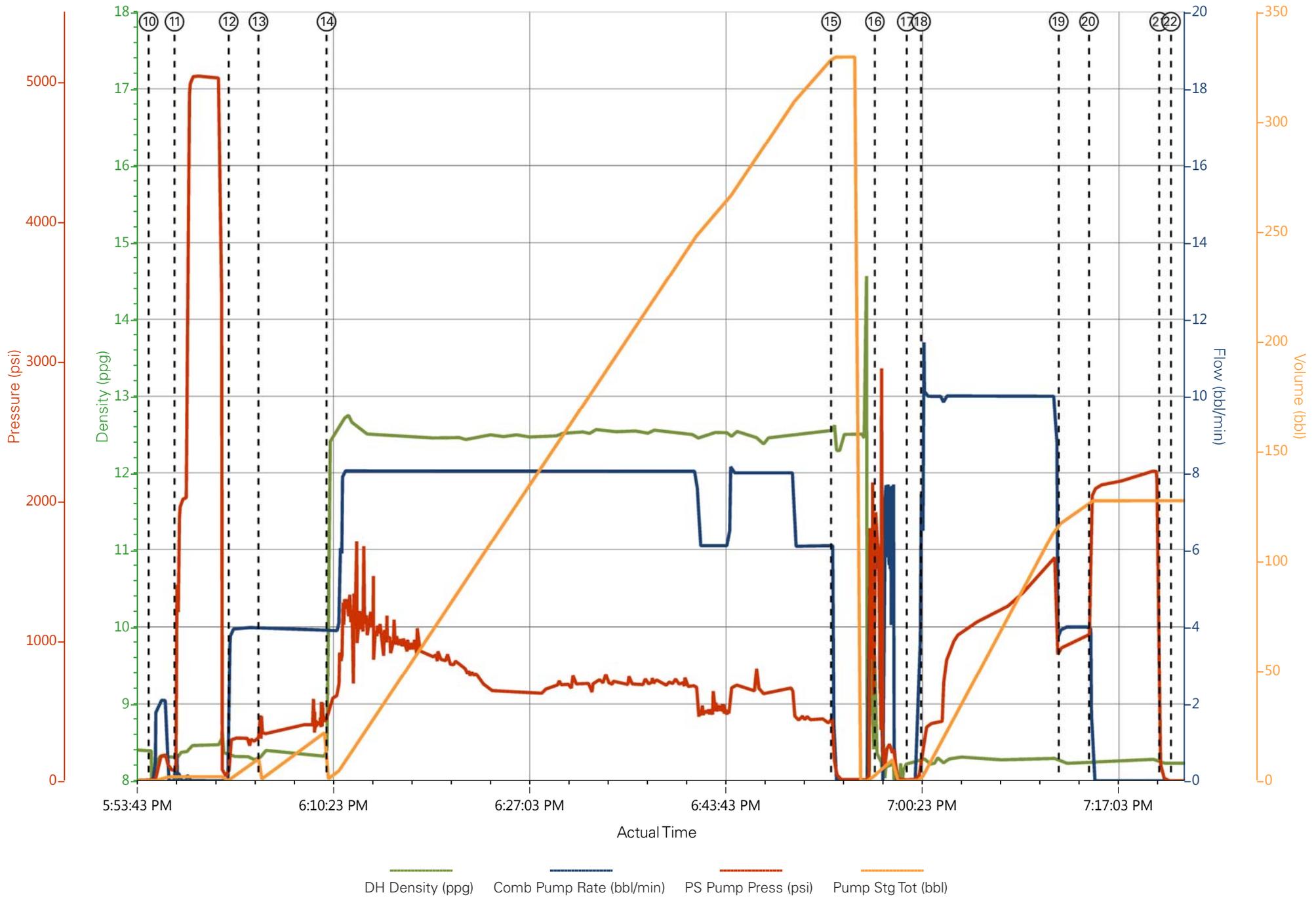
TEP - GM 33-10 - 4 1/2" PRODUCTION



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

- | | | | |
|---|--------------------------|---------------------|--|
| ① Call Out | ⑧ Rig-Up Equipment | ⑮ Shutdown | ⑳ End Job |
| ② Pre-Convoy Safety Meeting | ⑨ Pre-Job Safety Meeting | ⑯ Clean Lines | ㉑ Post-Job Safety Meeting (Pre Rig-Down) |
| ③ Crew Leave Yard | ⑩ Start Job | ⑰ Drop Top Plug | ㉒ Rig-Down Equipment |
| ④ Arrive At Loc | ⑪ Test Lines | ⑱ Pump Displacement | ㉓ Pre-Convoy Safety Meeting |
| ⑤ Assessment Of Location Safety Meeting | ⑫ Fresh H2O Spacer | ⑲ Slow Rate | ㉔ Crew Leave Location |
| ⑥ Spot Equipment | ⑬ Mudflush Spacer | ㉀ Bump Plug | |
| ⑦ Pre-Rig Up Safety Meeting | ⑭ Pump Cement | ㉁ Check Floats | |

TEP - GM 33-10 - 4 1/2" PRODUCTION



Job Information

Request/Slurry	2413662/2	Rig Name	H&P 273	Date	29/AUG/2017
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	GM 33-10

Well Information

Casing/Liner Size	4.5 in	Depth MD	7889 ft	BHST	91°C / 196°F
Hole Size	8.75 in	Depth TVD	6841 ft	BHCT	55°C / 131°F
Pressure	4090 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	
						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 2413662/2

Thickening Time - ON-OFF-ON

01/SEP/2017

Test Temp (°F)	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)
131	4090	36	2:27	2:48	3:04	3:53	14	46	15	13

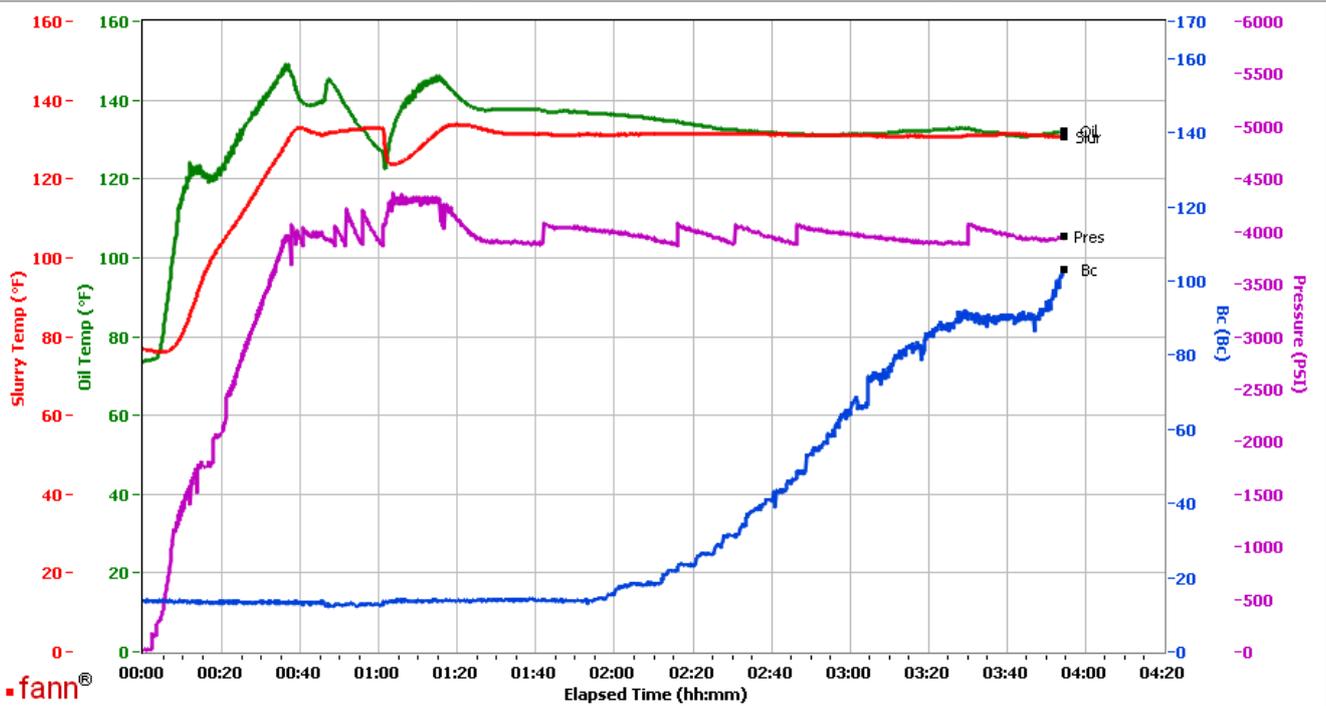
Total sks = 840
 CS2341, Trailer 7094, 55 sks
 No deflection

Grand Junction Colorado

Fields	Values
Project Name	2413662-2 TERRA ENERGY BULK PRODUCTI
Test ID	34828990 - TT
Request ID	2413662-2
Tested by	CT
Customer	TERRA ENERGY
Well No	GM 33-10
Rig	H8P 273
Casing/Liner Size	4.5 INCH

Fields	Values
Job Type	PRODUCTION CASING
Cement Type	TYPE I-II
Cement Weight	Standard
Test Date	08/31/17
Test Time	09:41 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	02h:27m
40.00 Bc	02h:38m
50.00 Bc	02h:48m
70.00 Bc	03h:04m
100.00 Bc	03h:53m
00h:30m	13.44
01h:00m	12.67
01h:30m	13.79



Data File C:\Documents and Settings\M290\Desktop\Test Data\GJ2413662-2 TERRA ENERGY BULK PRODUCTION PRIMARY.tdms

Comments CS2341, TRAILER 7094, 55 SKS

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Operation Test Results Request ID 2413662/1

Thickening Time - ON-OFF-ON

30/AUG/2017

Test Temp (°F)	Pressure (psi)	Reached in (min)	30 Bc (hh:min)	70 Bc (hh:min)	100 Bc (hh:min)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
131	4090	36	4:16	4:37	6:17	8	46	15	8

Total sks = 840

Composite:

CS2324 TR#1513 370 SKS

CS2325 TR#1656 370 SKS

CS2326 TR#7094 100 SKS

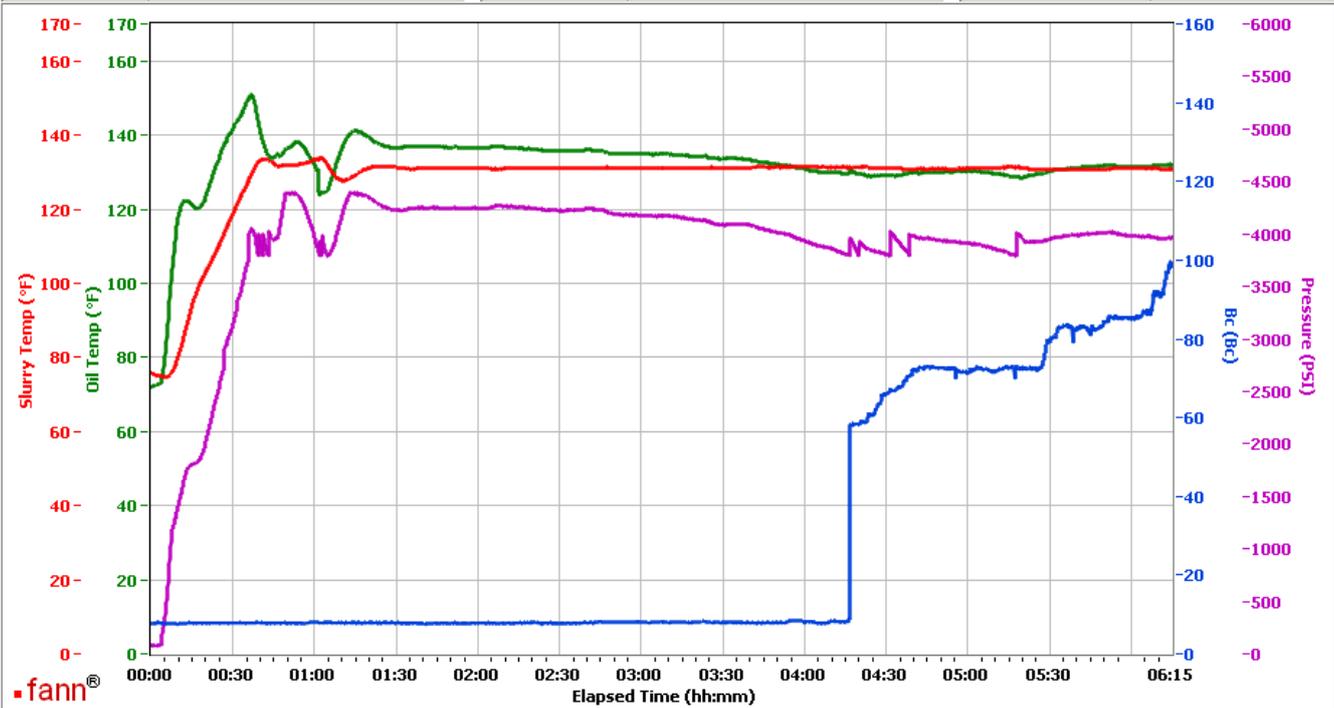
no deflection 8Bc--- > 8Bc

Grand Junction Colorado

Fields	Values
Project Name	GJ2413662-1 TERRA PRODUCTION BULK PI
Test ID	34823142
Request ID	GJ2413662-1
Tested by	DEBA
Customer	TERRA ENERGY PARTNERS
Well No	GM 33-10
Rig	H&P 318
Casing/Liner Size	4.5"

Fields	Values
Job Type	PRODUCTION CASING
Cement Type	HOLCIM TYPE I/II
Cement Weight	Standard
Test Date	08/30/17
Test Time	06:24 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	04h:16m
40.00 Bc	04h:16m
50.00 Bc	04h:16m
70.00 Bc	04h:37m
100.00 Bc	06h:17m
00h:30m	7.72
01h:00m	8.00
01h:30m	7.84



Data File C:\Documents and Settings\M290\Local Settings\Temporary Internet Files\Content.IE5\0HU9OBIZ\GJ2413662-1 TERRA PRODUCTION BULK PRIMARY[1].tdms

Comments COMPOSITE: CS2324 TR#1513 370 SKS AND CS2325 TR#1656 370 SKS AND CS2326 TR#7094 100 SKS

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