

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS-EBUS

For: Terra

Date: Sunday, November 26, 2017

PA 342-26 Production

API#05-045-23661-00

Sincerely,

Grand Junction Cement Engineering

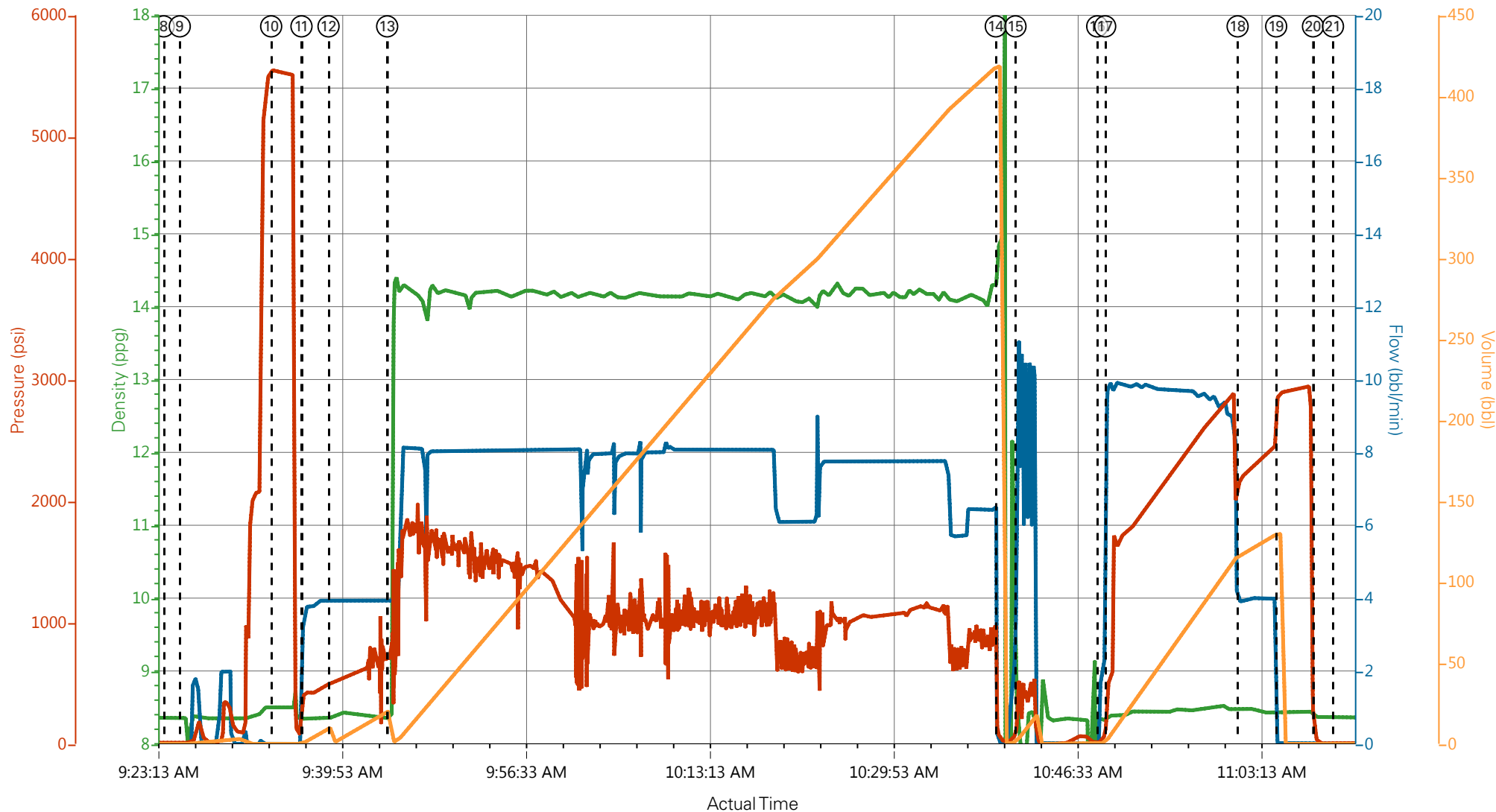
2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DH Density (ppg)	Comb Pump Rate (bbl/min)	PS Pump Press (psi)	Pump Stg Tot (bbl)	Comments
Event	1	Call Out	11/25/2017	23:40:00	USER					
Event	2	Pre-Convoy Safety Meeting	11/26/2017	02:00:00	USER					ALL HES PERSONNEL
Event	3	Crew Leave Yard	11/26/2017	02:30:00	USER					
Event	4	Arrive At Loc	11/26/2017	03:30:00	USER					RIG RUNNING CASING, THEN CIRCULATED FOR AROUND 3 HOURS.
Event	5	Assessment Of Location Safety Meeting	11/26/2017	03:45:00	USER					ALL HES PERSONNEL
Event	6	Pre-Rig Up Safety Meeting	11/26/2017	04:00:00	USER					ALL HES PERSONNEL
Event	7	Pre-Job Safety Meeting	11/26/2017	07:30:00	USER					ALL HES PERSONNEL
Event	8	Start Job	11/26/2017	09:24:00	COM5					4.5, 11.6# TP- 8309, TD- 8317, S.J.-33.33, HOLE- 8 3/4, MUD# 12.2, 9 5/8 SET @ 1145
Event	9	Prime Pumps	11/26/2017	09:25:27	COM5					FRESH WATER
Event	10	Test Lines	11/26/2017	09:33:44	COM5			5552.00		5552 PSI
Event	11	Pump Spacer 1	11/26/2017	09:36:29	COM5	8.33	4.00	457.00	10.00	FRESH WATER
Event	12	Pump Spacer 2	11/26/2017	09:38:56	COM5	8.33	4.00	501.00	20.00	MUD FLUSH
Event	13	Pump Lead Cement	11/26/2017	09:44:15	COM5	14.2	8.00	1100	403.5	1630 SKS EXPANDACEM, 14.2 PPG, 1.39 FT3/SK, 6.36 GAL/SK
Event	14	Shutdown	11/26/2017	10:39:26	USER					TO WASH UP AND DROP TOP PLUG
Event	15	Clean Lines	11/26/2017	10:41:13	COM5					WASH PUMPS AND LINES TO PIT, BLEW AIR FROM RIG FLOOR TO PIT

Event	16	Drop Top Plug	11/26/2017	10:48:37	COM5					AWAY
Event	17	Pump Displacement	11/26/2017	10:49:20	COM5	8.33	9.90	2870	128.3	KCL WATER WITH 3 BAGS BE-6, 1 GAL MMCR
Event	18	Slow Rate	11/26/2017	11:01:21	USER	8.33	4.00	2200	118.00	TO BUMP PLUG
Event	19	Bump Plug	11/26/2017	11:04:51	COM5	8.33	4.00	2458	128.3	BUMPED
Event	20	Check Floats	11/26/2017	11:08:11	USER			2947		FLOATS HELD, 1.5 BBLS BACK TO TRUCK
Event	21	End Job	11/26/2017	11:10:00	COM5					FULL RETURNS THROUGHOUT JOB, WORKED PIPE 10 FEET THROUGHOUT JOB.
Event	22	Post-Job Safety Meeting (Pre Rig-Down)	11/26/2017	11:33:38	USER					ALL HES PERSONNEL
Event	23	Rig Down Lines	11/26/2017	11:50:00	USER					BLEW DOWN IRON ON LOCATION FROM RIG FLOOR
Event	24	Pre-Convoy Safety Meeting	11/26/2017	12:45:00	USER					ALL HES PERSONNEL
Event	25	Crew Leave Location	11/26/2017	13:00:00	USER					THANK YOU FOR USING HALLIBURTON CEMENT, JAMES LEIST AND CREW

TEP PA 342-26 4.5 PRODUCTION CASING



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

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

▼ **HALLIBURTON** | iCem® Service

Created: 2017-11-26 01:47:24, Version: 4.2.393

Edit

Customer : TERRA ENERGY PARTNERS-EBUS

Job Date : 11/26/2017 5:18:09 AM

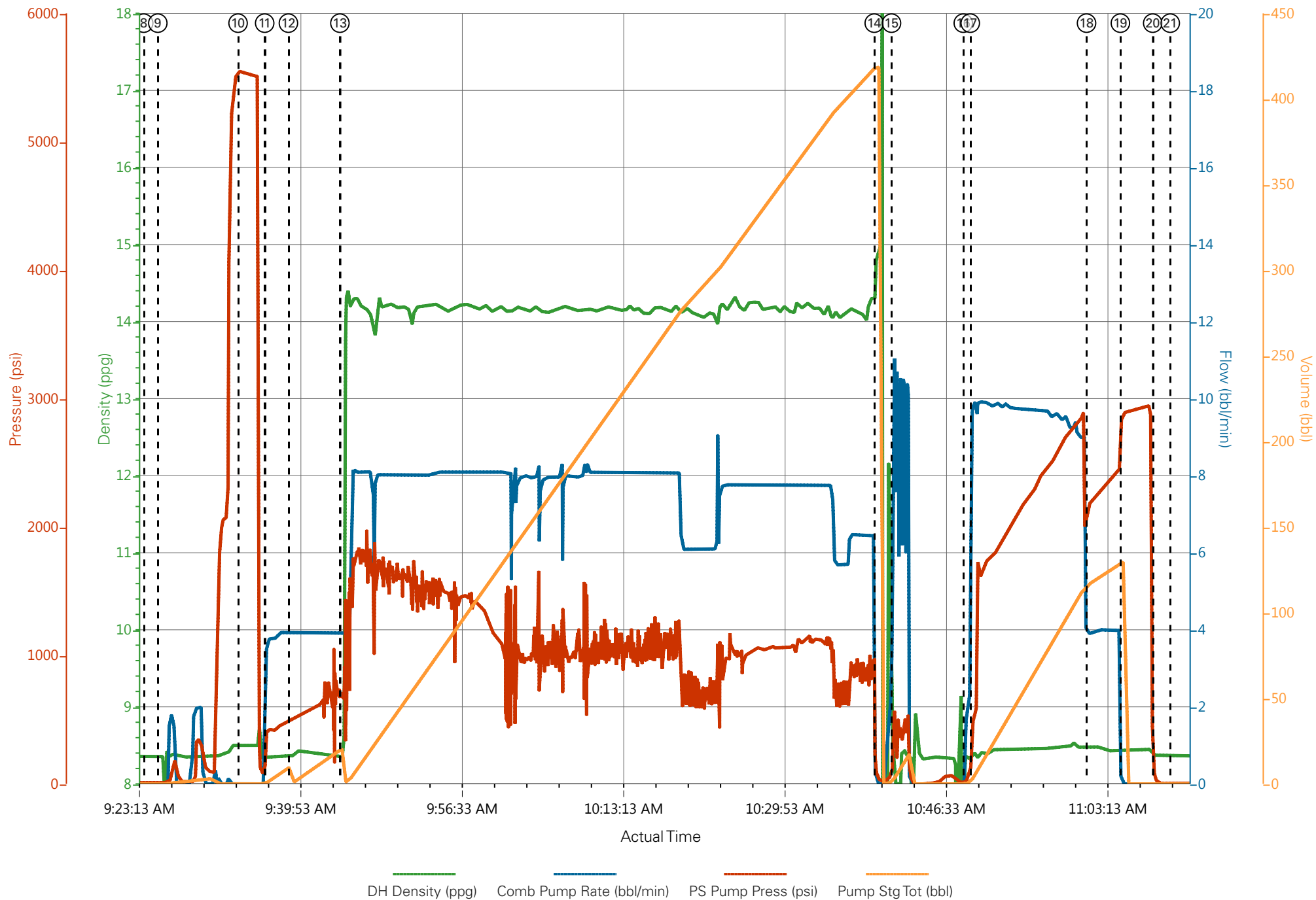
Well : pa 342-26

Representative : MATT HUTSON

Sales Order # : 904457911

ELITE 1 : WES GOWEN

TEP PA 342-26 4.5 PRODUCTION CASING



Job Information

Request/Slurry	2431880/1	Rig Name	H&P 271	Date	21/NOV/2017
Submitted By	Patrick Ealey	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	PA 342-26

Well Information

Casing/Liner Size	4.5 in	Depth MD	8319 ft	BHST	102°C / 215°F
Hole Size	8.75 in	Depth TVD	7918 ft	BHCT	63°C / 145°F
Pressure	4843 psi				

Drilling Fluid Information

Mud Supplier Name	AMC	Mud Trade Name		Density	
--------------------------	-----	-----------------------	--	----------------	--

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		
		HalCem Primary				Slurry Density	14.2	lbm/gal
						Slurry Yield	1.387	ft3/sack
						Water Requirement	6.36	gal/sack
						Total Mix Fluid	6.36	gal/sack
						Water Source	Fresh Water	
						Water Chloride		

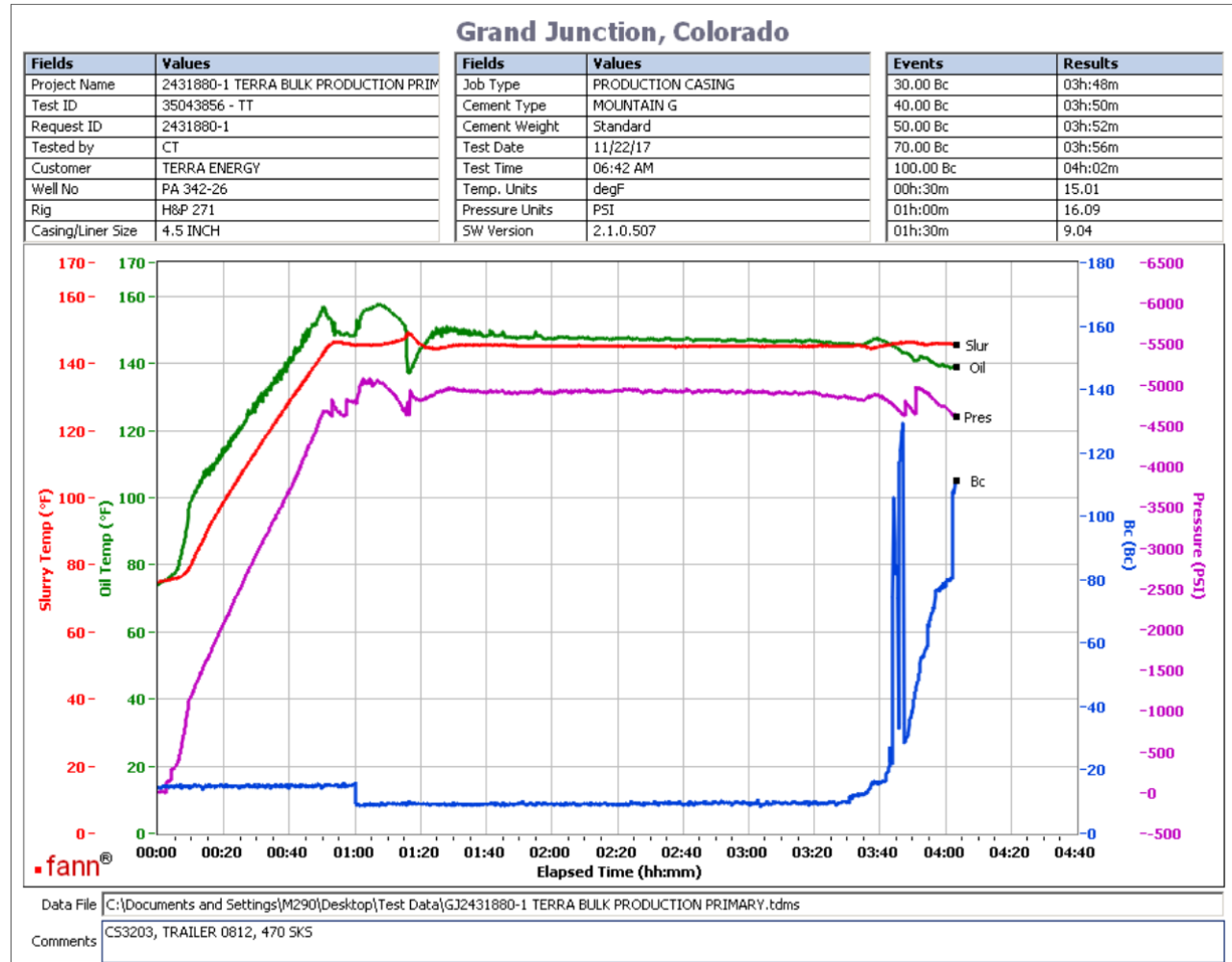
This report is the property of Halliburton Energy Services and neither it nor any part thereof, nor a copy thereof, is to be published or disclosed without first securing the expressed written approval of Halliburton. It may however be used in the course of regular business operations by any person or concern receiving such report from Halliburton. This report is for information purposes only and the content is limited to the sample described. Halliburton makes no warranties, expressed or implied, as to the accuracy of the contents or results. Any user of this report agrees Halliburton shall not be liable for any loss or damage regardless of cause, including any act or omission of Halliburton, resulting from the use hereof.

Operation Test Results Request ID 2431880/1

Thickening Time - ON-OFF-ON

22/NOV/2017

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)
145	4843	50	3:48	3:52	3:56	4:02	15	60	15	9



Total sks = 1630

CS3203, Trailer 0812, 470 sks

No deflection. Heat of hydration started around 3:40 and results were taken from graph due to mechanical spikes.

This report is the property of Halliburton Energy Services and neither it nor any part thereof, nor a copy thereof, is to be published or disclosed without first securing the expressed written approval of Halliburton. It may however be used in the course of regular business operations by any person or concern receiving such report from Halliburton. This report is for information purposes only and the content is limited to the sample described. Halliburton makes no warranties, expressed or implied, as to the accuracy of the contents or results. Any user of this report agrees Halliburton shall not be liable for any loss or damage regardless of cause, including any act or omission of Halliburton, resulting from the use hereof.

Operation Test Results Request ID 2431880/2

Thickening Time - ON-OFF-ON

22/NOV/2017

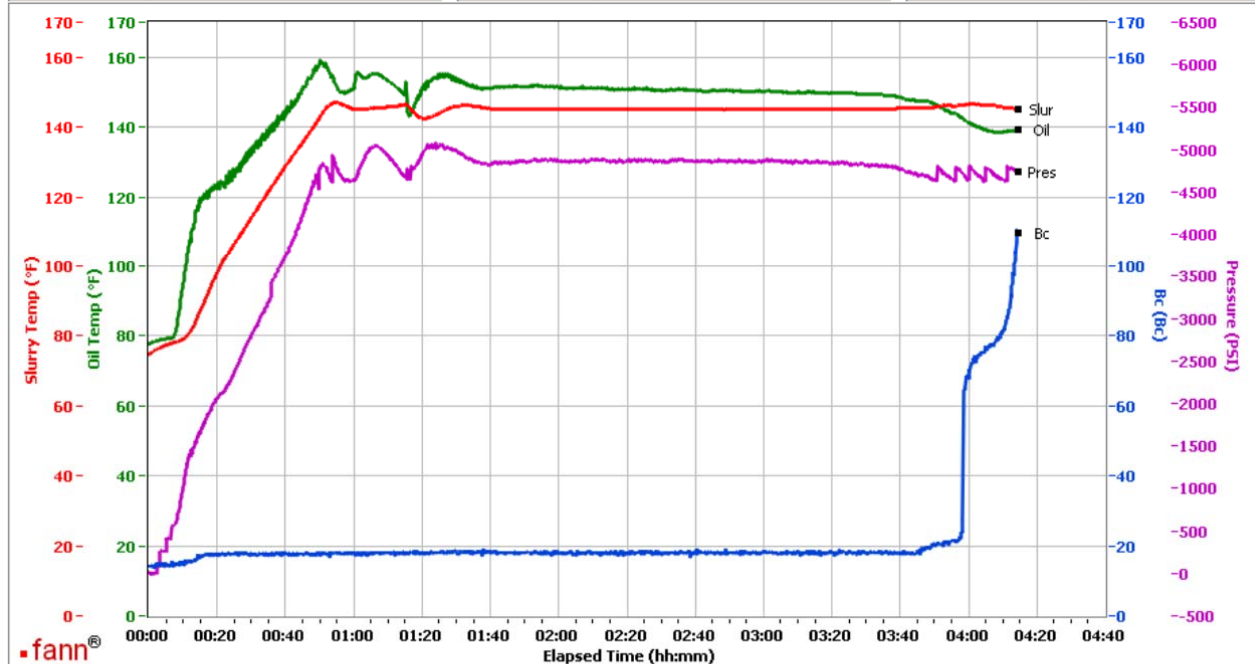
Test Temp (degF)	Pressure (psi)	Reached in (min)	30 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
145	4843	50	3:58	3:58	4:00	4:13	14	60	15	18

Grand Junction Colorado

Fields	Values
Project Name	2431880-2 TERRA BULK PRODUCTION PRIM
Test ID	35044600 - TT
Request ID	2431880-2
Tested by	CT
Customer	TERRA ENERGY PARTNERS
Well No	PA 342-26
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	11/22/17
Test Time	01:00 AM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	03h:58m
40.00 Bc	03h:58m
50.00 Bc	03h:58m
70.00 Bc	04h:00m
100.00 Bc	04h:13m
00h:30m	17.80
01h:00m	17.86
01h:30m	18.06



Data File C:\Documents and Settings\M290\Desktop\Test Data\GJ2431880-2 TERRA BULK PRODUCTION PRIMARY.tdms

Comments CS3204, TRAILER 0813, 470 SKS

Total sks = 1630

CS3204, Trailer 0813, 470 sks

No deflection. Heat of hydration started around 3:50.

This report is the property of Halliburton Energy Services and neither it nor any part thereof, nor a copy thereof, is to be published or disclosed without first securing the expressed written approval of Halliburton. It may however be used in the course of regular business operations by any person or concern receiving such report from Halliburton. This report is for information purposes only and the content is limited to the sample described. Halliburton makes no warranties, expressed or implied, as to the accuracy of the contents or results. Any user of this report agrees Halliburton shall not be liable for any loss or damage regardless of cause, including any act or omission of Halliburton, resulting from the use hereof.

Operation Test Results Request ID 2431880/3

Thickening Time - ON-OFF-ON

22/NOV/2017

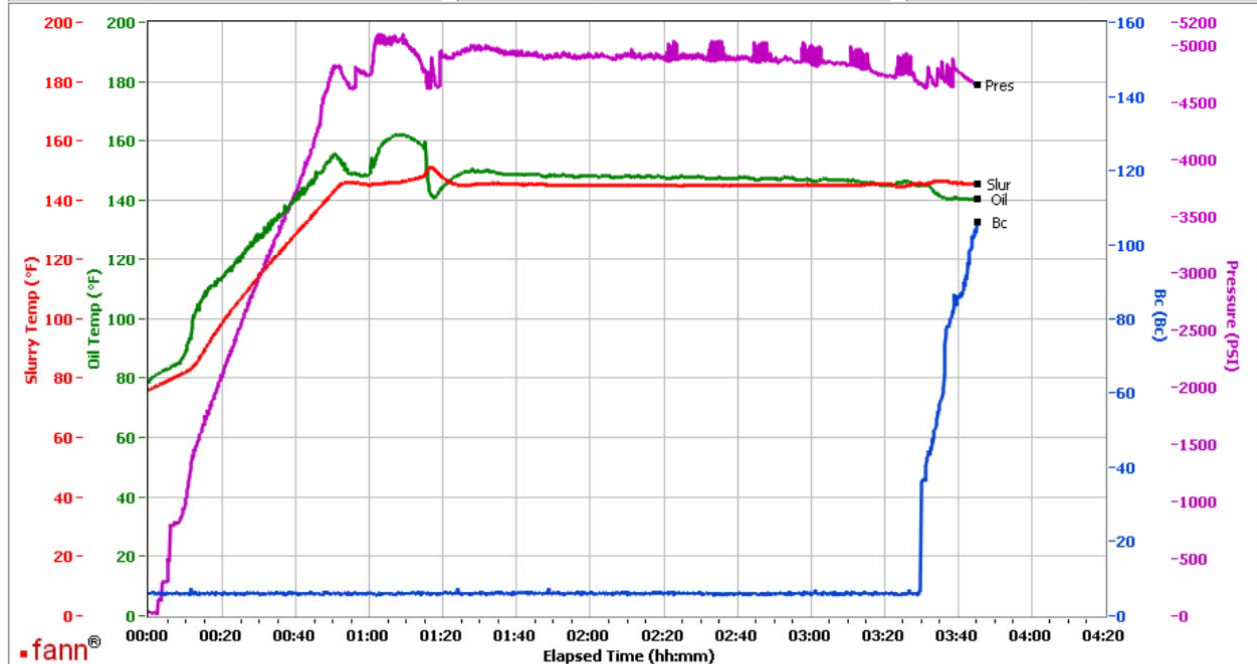
Test Temp (degF)	Pressure (psi)	Reached in (min)	30 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
145	4843	50	3:30	3:33	3:36	3:43	6	60	15	6

Grand Junction, Colorado

Fields	Values
Project Name	GJ2431880-3 TERRA BULK PRODUCTION PR
Test ID	35046501
Request ID	2431880-3
Tested by	JASON
Customer	TERRA ENERGY PARTNERS
Well No	PA 342-26
Rig	H&P 271
Casing/Liner Size	4.5"

Fields	Values
Job Type	PRODUCTION
Cement Type	MOUNTAIN G
Cement Weight	Standard
Test Date	11/22/17
Test Time	05:28 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	03h:30m
40.00 Bc	03h:31m
50.00 Bc	03h:33m
70.00 Bc	03h:36m
100.00 Bc	03h:43m
00h:30m	5.92
01h:00m	5.68
01h:30m	6.59



Data File C:\Documents and Settings\M290\Local Settings\Temporary Internet Files\Content.IE5\4TJ89YN\GJ2431880-3 TERRA BULK PRODUCTION PRIMARY[1].tdms

Comments CS3206 TR 2878 470 SK5

CS3200 TR 2878 470 SKS

Deflection: 6 – 6

This report is the property of Halliburton Energy Services and neither it nor any part thereof, nor a copy thereof, is to be published or disclosed without first securing the expressed written approval of Halliburton. It may however be used in the course of regular business operations by any person or concern receiving such report from Halliburton. This report is for information purposes only and the content is limited to the sample described. Halliburton makes no warranties, expressed or implied, as to the accuracy of the contents or results. Any user of this report agrees Halliburton shall not be liable for any loss or damage regardless of cause, including any act or omission of Halliburton, resulting from the use hereof.

Operation Test Results Request ID 2431880/4

Thickening Time - ON-OFF-ON

22/NOV/2017

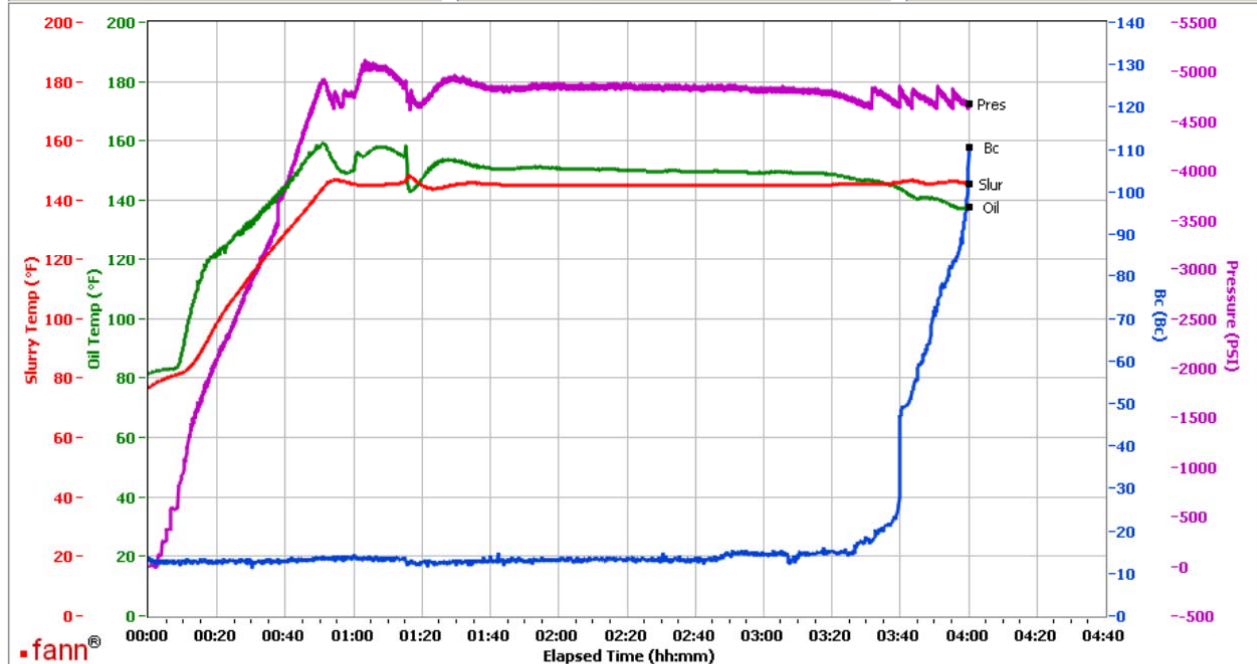
Test Temp (degF)	Pressure (psi)	Reached in (min)	30 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)	Start Bc	Stirring before stop (mins)	Static Period (min)	Peak reading (BC)
145	4843	50	3:39	3:42	3:49	3:59	14	60	15	13

Grand Junction Colorado

Fields	Values
Project Name	GJ2431880-4 TERRA BULK PRODUCTION PR
Test ID	35046642
Request ID	2431880-4
Tested by	JASON
Customer	TERRA ENERGY PARTNERS
Well No	PA 342-26
Rig	H&P 271
Casing/Liner Size	4.5"

Fields	Values
Job Type	PRODUCTION
Cement Type	MOUNTAIN G
Cement Weight	Standard
Test Date	11/22/17
Test Time	11:51 AM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	03h:39m
40.00 Bc	03h:39m
50.00 Bc	03h:42m
70.00 Bc	03h:49m
100.00 Bc	03h:59m
00h:30m	12.77
01h:00m	14.28
01h:30m	11.82



Data File C:\Documents and Settings\M290\Local Settings\Temporary Internet Files\Content.IE5\0HU90BIZ\GJ2431880-4 TERRA BULK PRODUCTION PRIMARY[1].tdms

Comments CS3207 TR 4549 220 SK5

CS3207 TR 4549 220 SK5

Deflection: 13 - 13

This report is the property of Halliburton Energy Services and neither it nor any part thereof, nor a copy thereof, is to be published or disclosed without first securing the expressed written approval of Halliburton. It may however be used in the course of regular business operations by any person or concern receiving such report from Halliburton. This report is for information purposes only and the content is limited to the sample described. Halliburton makes no warranties, expressed or implied, as to the accuracy of the contents or results. Any user of this report agrees Halliburton shall not be liable for any loss or damage regardless of cause, including any act or omission of Halliburton, resulting from the use hereof.