

HALLIBURTON

iCem[®] Service

TERRA ENERGY PARTNERS

United States of America, COLORADO

For: Terra

Date: Saturday, May 05, 2018

RU 314-17 Production

API# 05-045-23744

Sincerely,

Grand Junction Cement Engineering

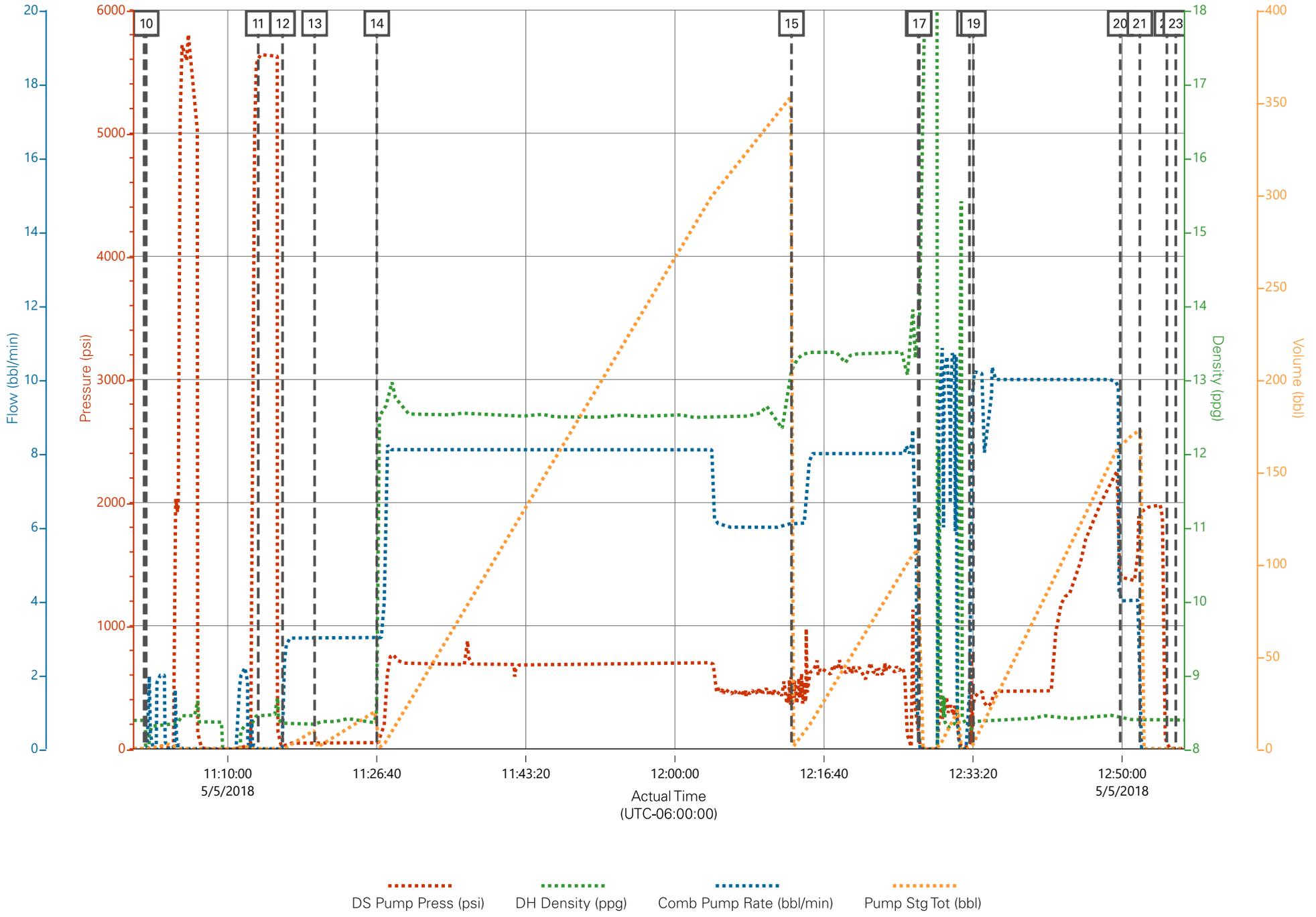
2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	DS Pump Press <i>(psi)</i>	DH Density <i>(ppg)</i>	Comb Pump Rate <i>(bbl/min)</i>	Pump Stg Tot <i>(bbl)</i>	Comments
Event	1	Call Out	5/5/2018	01:30:00	USER					
Event	2	Pre-Convoy Safety Meeting	5/5/2018	04:00:00	USER					JSA COMPLETE
Event	3	Crew Leave Yard	5/5/2018	04:15:00	USER					
Event	4	Arrive at Location from Service Center	5/5/2018	06:00:00	USER					RIG RUNNIN CASING
Event	5	Other	5/5/2018	06:15:00	USER					4.5 11.6# TP- 10732.87, TD-10738, F.C.- 10697.71, HOLE- 8 3/4, MUD#-9, 9 5/8 32# SET@ 1125, WATER TEST: PH- 6.8, TEMP- 60, CL-0
Event	6	Pre-Rig Up Safety Meeting	5/5/2018	07:00:00	USER					JSA COMPLETE
Event	7	Rig-Up Equipment	5/5/2018	07:15:00	USER					
Event	8	Pre-Job Safety Meeting	5/5/2018	10:30:00	USER					JSA COMPLETE
Event	9	Start Job	5/5/2018	11:00:39	COM4					
Event	10	Prime Pumps	5/5/2018	11:00:53	COM4					FRESH WATER
Event	11	Test Lines	5/5/2018	11:13:25	COM4					5642 PSI
Event	12	Pump Spacer 1	5/5/2018	11:16:08	COM4	48.00	8.33	3.00	10.00	FRESH WATER
Event	13	Pump Spacer 2	5/5/2018	11:19:43	COM4	44.00	8.33	3.00	20.00	MUD FLUSH
Event	14	Pump Lead Cement	5/5/2018	11:26:40	COM4	720.0	12.5	8.00	324.8	940 SKS NEOCEM, 12.5 PPG, 1.94 FT3/SK, 9.6 GAL/SK
Event	15	Pump Tail Cement	5/5/2018	12:13:02	COM4	630.0	13.30	8.00	81.6	265 SKS THERMACEM, 13.3 PPG, 1.73 FT3/SK, 7.81 GAL/SK
Event	16	Shutdown	5/5/2018	12:27:12	COM4					TO CLEAN LINES AND DROP TOP PLUG

Event	17	Clean Lines	5/5/2018	12:27:19	COM4					FLUSHED FROM FLOOR WITH AIR TO PIT, THEN CLEANED UP PUMP.
Event	18	Pump Displacement	5/5/2018	12:32:56	COM4	2180.0	8.34	10.00	165.8	KCL DISPLACEMENT WITH 3 BAGS BE-6, 1 GAL MMCR
Event	19	Drop Top Plug	5/5/2018	12:33:22	COM4					AWAY
Event	20	Slow Rate	5/5/2018	12:49:47	COM4	1375.0	8.34	4.00	155.0	TO BUMP PLUG
Event	21	Bump Plug	5/5/2018	12:51:59	COM4	1368.0	8.34	0.00	165.8	PLUG BUMPED ON CALULATED
Event	22	Check Floats	5/5/2018	12:55:00	USER	1960				FLOATS HELD, 1.25 BBLS BACK TO TRUCK
Event	23	End Job	5/5/2018	12:56:00	USER					RETURNS WERE CAUGHT AT 100 TOTAL BBLS GONE IN JOB, THEN MAINTAINED GOOD RETURNS THROUGHOUT JOB, PIPE WAS RECIPROCATED
Event	24	Post-Job Safety Meeting (Pre Rig-Down)	5/5/2018	13:20:00	USER					JSA COMPLETE
Event	25	Rig Down Lines	5/5/2018	14:00:00	USER					
Event	26	Crew Leave Location	5/5/2018	14:30:00	USER					THANK YOU FOR USING HALLIBURTON CEMENT, JAMES LEIST AND CREW

TEP - RU 314-17 - 4.5 PRODUCTION CASING



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

Job Information

Request/Slurry	2470835/1	Rig Name	H&P 318	Date	27/APR/2018
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	RU 314-17

Well Information

Casing/Liner Size	4.5 in	Depth MD	10952 ft	BHST	127°C / 260°F
Hole Size	8.75 in	Depth TVD	10572 ft	BHCT	92°C / 198°F
Pressure	6700 psi				

Drilling Fluid Information

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

Cement Information - Lead 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>		
		NeoCem				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		

Operation Test Results Request ID 2470835/1

Mixability (0 - 5) - 0 is not mixable	30/APR/2018
Mixability rating (0 - 5)	Avg rpm mixing under load (~12,000)
5	12000

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.

Thickening Time - ON-OFF-ON

01/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)
198	6700	52	4:25	4:34	4:41	4:49	11	62	15	12

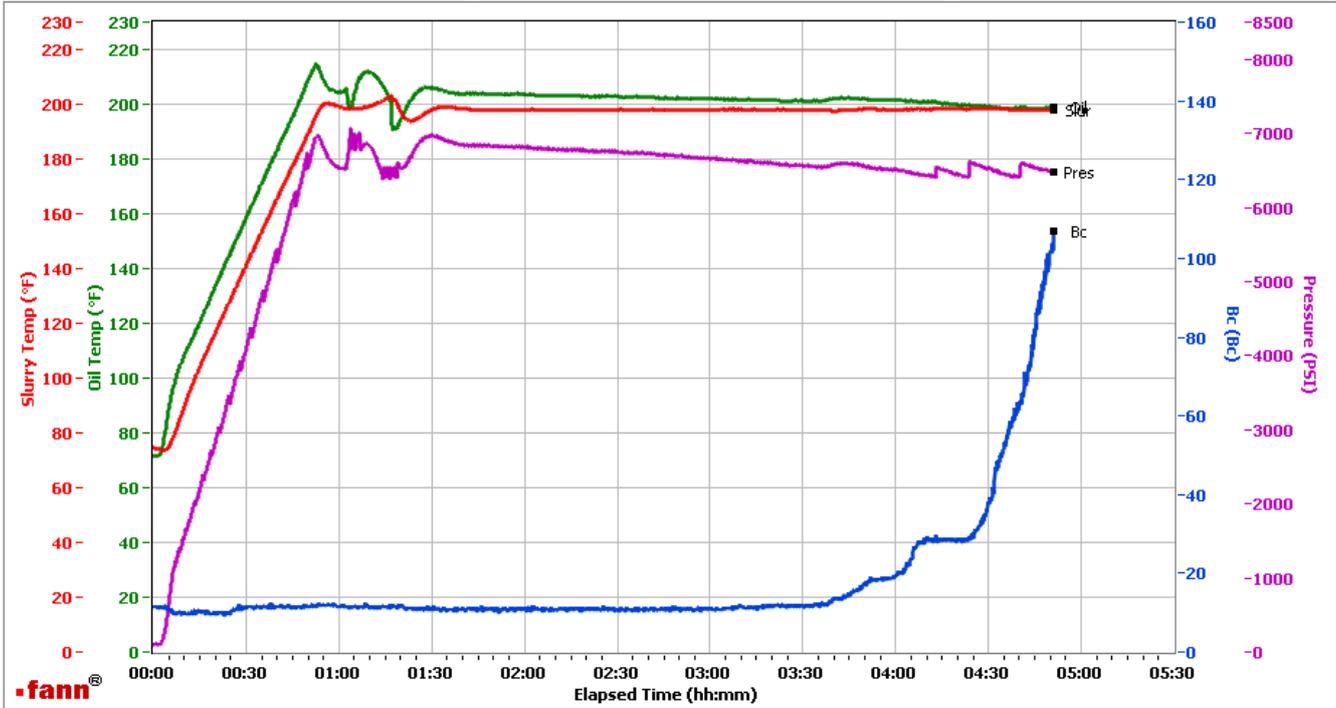
Total sks =940
 CS0970 TR# 8677 400 SKS
 CS0971 TR# 8658 400 SKS
 CS0972 TR#7428 400 SKS
 No deflection.

Grand Junction Colorado

Fields	Values
Project Name	GJ2470835-1 TERRA PRODUCTION BULK LE
Test ID	35452279
Request ID	GJ2470835-1
Tested by	DEBA
Customer	TERRA ENERGY PARTNERS
Well No	RU 314-17
Rig	H&P 318
Casing/Liner Size	4.5"

Fields	Values
Job Type	PRODUCTION CASING
Cement Type	GCC TYPE I/II
Cement Weight	Standard
Test Date	05/01/18
Test Time	06:33 AM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	04h:25m
40.00 Bc	04h:31m
50.00 Bc	04h:34m
70.00 Bc	04h:41m
100.00 Bc	04h:49m
00h:30m	11.51
01h:00m	11.74
01h:30m	10.62



Data File C:\Documents and Settings\Administrator\Local Settings\Temporary Internet Files\Content.IE5\AFG5UB25\GJ2470835-1 TERRA PRODUCTION BULK LEAD[1].tdms
 Comments CS0970 TR# 8677 400 SKS AND CS0971 TR#8658 400 SKS AND CS0972 TR#7428 140 SKS

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.

Job Information

Request/Slurry	2470836/1	Rig Name	H&P 318	Date	27/APR/2018
Submitted By	Aaron Katz	Job Type	Production Casing	Bulk Plant	Grand Junction
Customer	Terra Energy Partners	Location	Garfield	Well	RU 314-17

Well Information

Casing/Liner Size	4.5 in	Depth MD	10952 ft	BHST	127°C / 260°F
Hole Size	8.75 in	Depth TVD	10572 ft	BHCT	92°C / 198°F
Pressure	6700 psi				

Drilling Fluid Information

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

Cement Information - Tail Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
		ThermaCem				Slurry Density	13.3	lbm/gal
						Slurry Yield	1.733	ft ³ /sack
						Water Requirement	7.799	gal/sack
						Total Mix Fluid	7.799	gal/sack
						Water Source	Fresh Water	
						Water Chloride		

Operation Test Results Request ID 2470836/1

Mixability (0 - 5) - 0 is not mixable	01/MAY/2018
Mixability rating (0 - 5)	Avg rpm mixing under load (~12,000)
4	12000

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.

Thickening Time - ON-OFF-ON

01/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)
198	6700	52	6:03	6:20	6:44	6:53	15	62	15	14

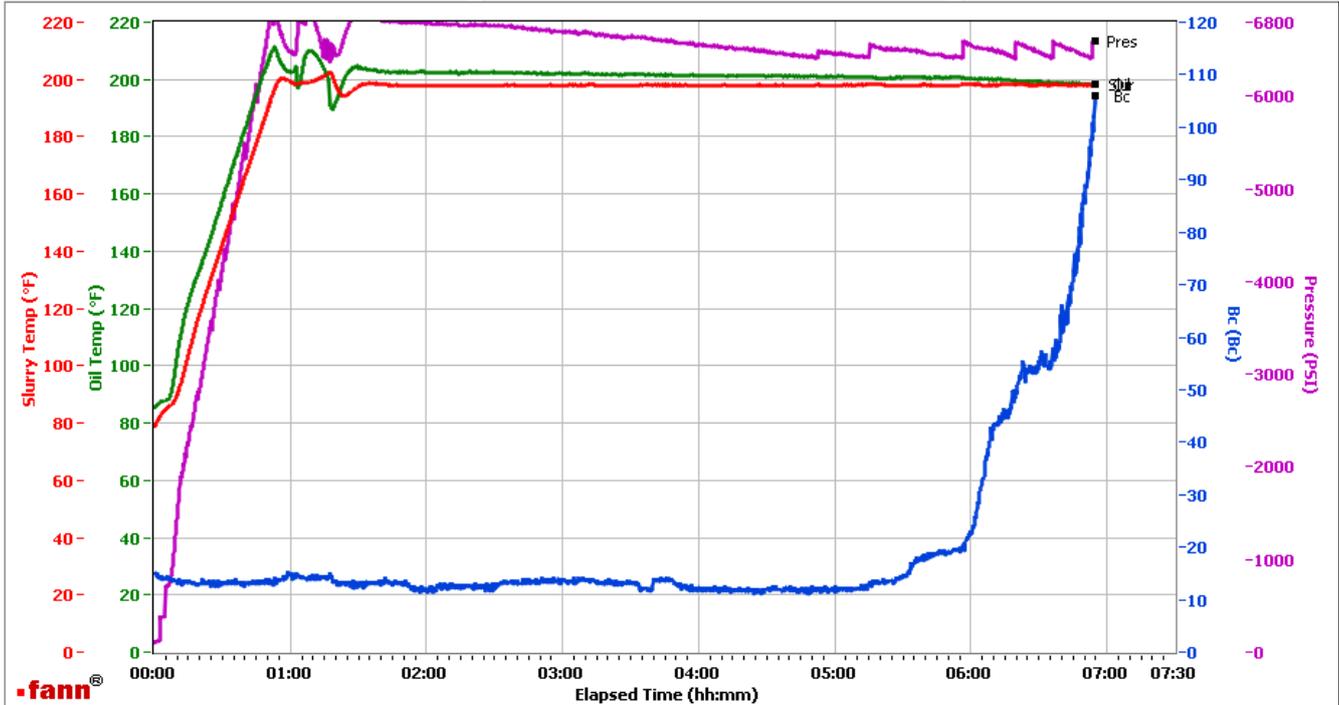
Total sks = 265
 CS0975 TR 8321 265 SKS
 no deflection, 14Bc--- > 14Bc

Grand Junction Colorado

Fields	Values
Project Name	GJ2470836-1 TERRA PRODUCTION BULK TA
Test ID	35452281
Request ID	2470836-1
Tested by	JASON
Customer	TERRA ENERGY PARTNERS
Well No	RU 314-17
Rig	H&P 318
Casing/Liner Size	4.5 INCH

Fields	Values
Job Type	PRODUCTION
Cement Type	MOUNTAIN G
Cement Weight	Light Weight
Test Date	05/01/18
Test Time	10:39 PM
Temp. Units	degF
Pressure Units	PSI
SW Version	2.1.0.507

Events	Results
30.00 Bc	06h:03m
40.00 Bc	06h:08m
50.00 Bc	06h:20m
70.00 Bc	06h:44m
100.00 Bc	06h:53m
00h:30m	13.26
01h:00m	14.85
01h:30m	12.48



Data File C:\Documents and Settings\Administrator\Local Settings\Temporary Internet Files\Content.IE5\O3KLGZYZ\GJ2470836-1 TERRA PRODUCTION BULK TAIL[1].tdms
 Comments CS0975 TR 8321 265 SKS

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.